

*Taking ‘ergativity’ out of split ergativity: A structural account of aspect and person splits**

Jessica Coon^a & Omer Preminger^b

Abstract

As ergativity has played an increasingly prominent role in discussions of case and agreement, a number of formal tools have been developed to represent the differences between ergative and accusative alignment systems. Overwhelmingly, these formal analyses fail to address the fact—often noted in the typological literature—that while many languages are consistently accusative, very few appear to be consistently ergative; rather, ergative systems are characterized by “splits”. This paper surveys the existing empirical and theoretical work on split ergativity and proposes that split ergativity is epiphenomenal, and that the factors which trigger the appearance of splits are not limited to ergative systems. In both aspectual and NP-type splits, we argue, the split is the result of a bifurcation of the clause into two distinct case/agreement domains; this bifurcation results in the subject being, in structural terms, an *intransitive subject*. Since intransitive subjects do not appear with ergative marking, this straightforwardly accounts for the absence of ergative morphology. The same factors exist in accusative-patterning systems but the fact that both transitive and intransitive subjects pattern alike (i.e., as nominatives) obscures the “split”. The proposed analysis is independent of any specific theory of how case assignment is determined, and casts doubt on the need for a third, “split” type of alignment system along side purely accusative and purely ergative, at least as far as the underlying syntax is concerned.

KEYWORDS: *ergativity, split ergativity, case, agreement, transitivity, aspect, salience hierarchies*

1. Introduction

In an ergative alignment system, intransitive subjects pattern with transitive objects, while transitive subjects pattern differently. This type of pattern contrasts with more familiar nominative-accusative systems, in which both subjects patterns like to the exclusion of transitive objects. According to some counts, roughly one quarter of the world’s languages have been characterized as “ergative” (Dixon 1994). Ergativity has played an increasingly important role in our understanding of the nature of case, agreement, argument structure, and the relationship among them—though to date, there is no general consensus on the formal mechanisms which set ergative-patterning systems apart from accusative-patterning ones.

Further questions are raised by the fact that ergative languages do not appear to be consistently ergative; rather, they show ergative patterns only in a subset of their grammar (Moravcsik 1978,

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^a McGill University.

^b MIT; Harvard University, Polinsky Language Sciences Lab; Syracuse University.

Silverstein 1976). This stands in stark contrast with the existence of plenty of languages which—at least in the verbal domain—appear to be consistently nominative-accusative.

“[N]o ergative language is fully consistent in carrying through the ergative principle throughout its entire morphology, syntax, and lexicon: all languages that exhibit ergative patterning in their commonest case-marking system also exhibit some accusative pattern somewhere in the rest of their grammar.”

[Moravcsik 1978:237]

Splits in case-marking and agreement may be triggered by certain aspects, by features of nominal arguments involved (e.g. 1st/2nd-person), or by the semantics of the verb. It is common to find languages whose case-marking follows an ergative pattern, but whose agreement systems (and other syntactic behavior) nonetheless follows a nominative-accusative pattern; but the reverse is unattested. Accounts for split ergativity have similarly varied and include different case-assigning properties of v^0 heads, structural differences between ergative and split environments, and functional notions like *affectedness* or *markedness*.

This paper offers a proposal for how split ergativity arises. The overarching theme is that the factors that trigger the appearance of split ergativity are not specific to ergative-patterning languages in particular; rather, these split-conditioning characteristics are simply obfuscated in nominative-accusative environments because—by definition—transitive and intransitive subjects pattern alike in those environments. Hence Moravcsik’s generalization, quoted above, does not reflect any deep instability of ergative systems or a real asymmetry between ergativity and accusativity (contra van de Visser 2006, for example). The resulting picture is instead one in which languages are either consistently ergative or consistently accusative in the underlying syntax of their core verbal domain.

We begin with a brief overview of ergativity and split ergativity in section 2. Here we offer a preview of the types of splits to be examined, along with the functional motivations which have been put forth in an attempt to account for them. Sections 3 and 4 describe the two main types of splits observed in the world’s languages: *aspectual splits* (also known as *TAM splits*) and *NP-type splits*. In each section, we review the data and previous analyses, and provide an alternative, structurally-based account for the split. For both aspectual and NP-type splits, we argue—building on Coon 2010a, Coon & Preminger 2012, and previous work cited below—that all splits can be reduced to a difference not in the underlying mechanisms of case assignment or agreement, but to structural differences between the portions of the grammar that exhibit “splits”, and those that do not. Section 5 concludes.

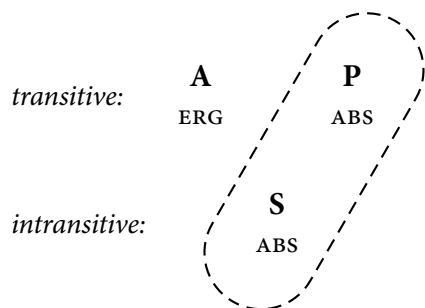
2. Ergativity and split ergativity: An overview

2.1. Ergativity

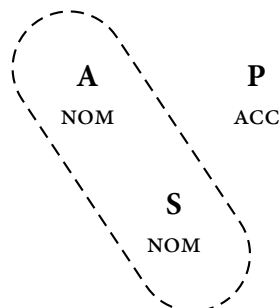
As noted above, the label “ergative” is used to refer to a system of marking grammatical relations in which the object of a transitive verb patterns with the single argument of an intransitive verb (*absolutive*), while the transitive subject patterns distinctly (*ergative*); see Comrie 1978, Dixon 1979, 1994, among many others. This contrasts with more familiar nominative-accusative (or simply, “accusative”) systems in which both transitive and intransitive subjects pattern alike (*nominative*), to the exclusion of transitive objects (*accusative*). Absolutive and nominative are sometimes referred to as “obligatory cases” (following Bobaljik 1993, Laka 1993), as they are found in transitive and

intransitive clauses alike. The obligatory cases are frequently morpho-phonologically unmarked, while the “dependent cases”, ergative and accusative, are typically marked. These systems are represented in (1) and (2), where we follow Dixon (1979) in using the following labels: **A**= transitive subject; **P**= transitive object; and **S**= intransitive subject.

(1) *ERGATIVE-ABSOLUTIVE SYSTEM*



(2) *NOMINATIVE-ACCUSATIVE SYSTEM*



The manner in which these alignment systems are manifested may vary from language to language. Here we concentrate on so-called “morphological ergativity”, which manifests itself in the case and agreement system of a language.¹ Ergative case patterns are exemplified by the Dyirbal and Niuean pairs in (3) and (4). In Dyirbal, transitive subjects (=ergative) are marked with *-ŋgu*, while both transitive objects and intransitive subjects (=absolutive) are unmarked. In Niuean, transitive subjects (=ergative) are marked with the pronominal case marker *e*, while both transitive objects and intransitive subjects (=absolutive) are marked with *a*.²

(3) *DYIRBAL (PAMA-NYUNGAN)*

- a. yabu ŋuma-**ŋgu** bura-n
 mother(ABS) father-ERG see-NONFUT
 ‘Father saw mother.’
- b. ŋuma banaga-nʔu
 father(ABS) return-NONFUT
 ‘Father returned.’

[Dixon 1994:10]

(4) *NIUEAN (POLYNESIAN)*

- a. Ko e tele **e** Sione **a** Sefa.
 PRES kick ERG Sione ABS Sefa
 ‘Sione is kicking Sefa.’
- b. Ne tohitohi **a** Sione.
 PST write ABS Sione
 ‘Sione was writing.’

[Massam 2001]

Ergativity is also seen in languages which mark grammatical relations via head marking on the predicate. This is common in the Mayan language family, as shown by the Chol forms in (5), and is also found in Abaza in (6). In Chol **P** and **S** arguments are cross-referenced by absolutive suffixes, while **A** subjects are marked with ergative prefixes.

¹Ergative alignment patterns are sometimes attested in other aspects of a language’s syntax—a phenomenon known as “syntactic ergativity”—in which certain operations (e.g. extraction) are sensitive to the **A** vs. **P/S** distinction. As discussed in Dixon 1994, ergative alignment may also be seen in constituent order. Wastek (Mayan), for example, has been claimed to have **A-V-P** order in transitives and **V-S** order in intransitives (Edmonson 1988). Dixon (1994:50) notes, however, that he knows of no language in which ergativity is attested *only* in the constituent order.

²Abbreviations in glosses are as follows: 1, 2, 3 – 1st-, 2nd-, 3rd-person; ABS – absolutive; AOR – aorist; ASP – aspect; AUX – auxiliary; DET – determiner; ERG – ergative; FEM – feminine; FUT – future; GEN – genitive; HON – honorific; IMPF – imperfective; LOC – locative; MASC – masculine; NML – nominal; NONFUT – non-future; PL – plural; PRES – present; PRFV – perfective; PROGRESSIVE; PREP – preposition; PST – past; POSS – possessive; PTCP – participle; SG – singular. In some cases, glosses have been simplified or modified from those of the original author for consistency. We follow the original authors’ choices regarding capitalization and punctuation.

- | | |
|--|--|
| <p>(5) <i>CHOL (MAYAN)</i></p> <p>a. Tyi i-kuchu-yety.
PRFV 3ERG-carry-2ABS
'He carried you.'</p> <p>b. Tyi juli-yety.
PRFV arrive-2ABS
'You arrived.'</p> | <p>(6) <i>ABAZA (NW CAUCASIAN)</i></p> <p>a. h-l-bád
1PL.ABS-3ERG-see
'She saw us.'</p> <p>b. h-pád
1PL.ABS-go
'We've gone.'</p> |
|--|--|
- [Allen 1956, via Dixon 1994]

Accounts of ergative case and agreement patterns within the generative tradition have been numerous, and we do not aim to adjudicate among them here. Some have proposed that ergative subjects are like nominative subjects in that they are licensed by T^0 , while absolutive objects are licensed by ν^0 on par with accusative (Bobaljik 1993, Chomsky 1995, Laka 1993, Levin & Massam 1985, Rezac 2003). Others maintain that ergative DPs are licensed lower in the structure, inherently in their base-generated position (Legate 2002, Mahajan 1989, Woolford 1997). Under other accounts, ergative is the mirror image of accusative: a “dependent case” assigned to subjects in the presence of another DP (Marantz 1991).

The nature of absolutive has also been called into question: it has been argued to be the same as nominative (Bittner 1994, Jelinek 1993, Marantz 1984a, Murasugi 1992, Ura 2000, 2006), or assigned by AgrO on par with accusative (Bobaljik 1993). Bittner & Hale (1996) propose that ergative is assigned by T^0 , accusative is assigned by ν^0 , and nominative and absolutive are *defaults*.

More recent work challenges the assumption that what we call “absolutive” has a consistent theoretical status (Aldridge 2004, Legate 2008b); and increasingly, there are suggestions that ergativity more generally may not be a unitary phenomenon (Johns 1996, Marantz 1984b, Woolford 2000). See also Aldridge 2008, Deal to appear for more detailed overviews.

In light of this wide array of approaches, we choose not to commit to any one particular analysis of ergativity itself, and instead aim to show how a structure-based account of split ergativity can account for non-ergative patterning in an otherwise ergative system, *regardless* of the specific theory of ergative case assignment adopted.

2.2. Split ergativity

We have been careful to speak of ergative *patterns*, rather than ergative *languages*. As Comrie notes:

“[I]t is rather misleading to speak of ergative languages, as opposed to nominative-accusative languages, since we have seen that it is possible for one phenomenon in a language to be controlled on an ergative-absolutive basis, while another phenomenon in the same language is controlled on a nominative-accusative basis. Thus one should ask rather to what extent a language is ergative-absolutive or nominative-accusative, or, more specifically, which constructions in a particular language operate on the one basis and which on the other...”

[Comrie 1978:351]

In fact, a given language rarely shows a consistent ergative pattern of alignment throughout its entire grammar. As noted above, it is common to find languages in which case exhibits an ergative alignment, but agreement exhibits a nominative-accusative alignment; the reverse seems to be unattested: no language has been found with a nominative-accusative case system but an ergative

agreement system (Anderson 1977, Comrie 1978, Dixon 1979/1994; and see Bobaljik 2008 for a recent account). This state of affairs is summarized in (7), adapted from Woolford 2000:

(7)

	NOM-ACC agreement	ERG-ABS agreement
NOM-ACC case	✓ English, Tamil	✗ <i>unattested</i>
unmarked case	✓ Swahili, Huichol	✓ Jakaltek, Selayarese
ERG-ABS case	✓ Warlpiri, Nez Perce	✓ Hindi, Kabardian

The label “split ergative”, however, is generally reserved for languages in which the split is found *within* the case marking system—i.e., languages with an ergative case marking pattern in one portion of the grammar, and a non-ergative pattern in another (Comrie 1978, DeLancey 1981, Moravcsik 1978, Silverstein 1976, Tsunoda 1981). Comrie continues:

“In fact, the situation is even more complex than this, because we sometimes find the same phenomenon in the same language operating in some instances on a nominative-accusative basis, in others on an ergative-absolutive basis.”

[Comrie 1978:351]

Using this as a heuristic for what counts as “split ergativity”, the four main triggers of splits are typically those listed in (8):

(8) *TYPES OF SPLIT ERGATIVITY* (Dixon 1994)

- I. Aspectual splits
- II. NP splits
- III. Clause type splits
- IV. Split intransitivity

The first two—aspectual splits (discussed in section 3), and person splits (discussed in section 4)—have garnered the bulk of attention in work on split ergativity and are the focus of the remainder of this paper. Both types of splits are areally widespread. Aspectual splits are found, for example, in Hindi and Kurmanji (Indo-Aryan), Basque, Chol (Mayan), Tongan (Polynesian), Georgian (Kartvelian), Avar and Adyghe (Caucasian), and Yukulta (Tangkic) (Tsunoda 1981). Examples of languages with person splits include Dyirbal and Yidin^y (Pama-Nyungan), Mocho’ (Mayan), Kham (Tibeto-Burman), Cashinawa (Panoan), and Halkomelem (Salish) (Dixon 1994).

Strikingly, these splits share a common property: their *directionality* is universally fixed (Dixon 1994, *inter alia*). In aspectual splits, the ergative pattern is always retained in the perfective aspect (pace Gildea & de Castro Alves 2010; see Coon 2012 for discussion); while in person splits, the ergative pattern is always retained with NPs ranked lower on a universal “prominence” hierarchy (Silverstein 1976; see section 4).

The present paper is by no means the first attempt to unify aspectual and person splits under a single proposal. As DeLancey notes:

“General linguistic theory must account for the association of ergative morphology with, on the one hand, perfective aspect, and, on the other, lower position of the agent on the [prominence hierarchy]; and for the association of accusative morphology with imperfective aspect and high [prominence] agents.”

[DeLancey 1981:630]

This is schematized in (9), below. While DeLancey speaks of the “split” (i.e., non-ergative) patterns as being *accusative* (as is commonly assumed), we will show in the sections that follow that there are reasons to doubt that this is the case.³ It is for these reasons that we use the more neutral term, *split-patterning*, in (9).

(9)		ergative-patterning	split-patterning
	aspect-split	perfective	non-perfective
	NP-split	low prominence	high prominence

The remaining two types of splits—clause type splits and split intransitivity—are not analyzed below. Clause-type splits are less common; Dixon (1994) cites Jakaltek (Mayan), Pàri (Nilotic), and Shokleng (Jê). At least in Mayan and in Jê, embedded clauses have been analyzed as nominalizations, which are independently shown to have a distinct person marking pattern (on Mayan, see Bricker 1981, Larsen & Norman 1979; on Jê, see Salanova 2007). In Mayan, for example, matrix clauses show an ergative pattern, while non-finite embedded clauses show what has been termed “extended ergativity”: intransitive subjects appear with the ergative marking normally reserved for transitive subjects. Crucially, ergative and possessive marking are identical in Mayan; thus, the marking of intransitive subjects is explained straightforwardly if the intransitive subject is in fact a possessor; see section 3.1 for a more detailed discussion.

Finally, as the labels suggest, *split-S* or *split intransitive* systems describe a general pattern in which intransitive subjects may pattern either with transitive subjects or with transitive objects, depending on different factors. For example, in an *Agent-Patient* split, agentive subjects pattern with **A**, while non-agentive subjects pattern with **P**. This type of split is seen for example in Lakhota (Siouan) and Central Pomo (Pomoan; Mithun 1991). In an *Active-Stative* split, exhibited for example in Guaraní (Velázquez-Castillo 1991), the split is between eventive and stative predicates. We follow Mithun (1991), who notes that these facts might not even belong with the phenomena labeled “split ergativity”, and that it is not clear that the two constitute a natural class; we therefore leave these aside for the purposes of the current paper. See Mithun 1991 for an overview, and Dixon 1994 for additional references.

³DeLancey contends that both NP-type and aspectually-based splits can be captured under psychological notions of ATTENTION FLOW and VIEWPOINT, and that overt case marking (such as ergative) arises to signal instances in which these two notions are misaligned. ATTENTION FLOW is taken to determine the linear order of NPs, “presented in the order in which the speaker wishes the hearer to attend to them” (which may or may not line up with the order of real-world stages of the event; this will depend, at least partially, on grammatical aspect). VIEWPOINT represents the perspective from which the speaker describes the event.

DeLancey’s claim is that in a ‘canonical’ transitive, ATTENTION FLOW proceeds from **A** to **P**, and VIEWPOINT begins locally, with the speaker (i.e., 1st-person). Thus, a 1st-person **A** argument represents an ‘natural’ state of affairs, requiring no overt marking. A 3rd-person **A** argument, on the other hand, creates a conflict between ATTENTION FLOW and VIEWPOINT, thus requiring overt marking (ergative case). Perfective aspect is associated, according to DeLancey, with ‘terminal viewpoint’—a perspective centered on the termination of an event—again requiring overt marking on the argument that is first with respect to ATTENTION FLOW, namely the subject (**A**).

In addition to the absence of empirical support for the ‘naturalness’ of certain utterances over others, DeLancey’s proposals relies on notions of *markedness* which will be shown below to fall short in accounting for the full array of ergative splits. We therefore do not consider this proposal further here.

3. Aspectual splits

Perhaps following in the footsteps of Dixon’s (1979) seminal work, splits of the type discussed in this section are most frequently referred to as TAM (i.e., *tense/aspect/mood*) splits. Of these three possibilities, however, aspect appears to be by far the most common. For example, in his survey on split ergativity, DeLancey (1981) refers simply to “aspectual splits”; Comrie (1978) discusses what he labels “tense/aspectual splits”, though none of the cited examples clearly involve tense to the exclusion of aspect.

The existence of purely mood- or tense-based splits is further called into question by Salanova, who concludes:

“As far as we can ascertain, then, so-called tense-aspect-mood splits essentially boil down to aspectually conditioned splits; in no case known to us are splits based unequivocally on tense (i.e., situating the proposition with respect to utterance time) or mood.”

[Salanova 2007:47]

Coon (2012) examines the cases of mood- and tense-based splits cited by Dixon (1979/1994), and concludes that these may be reducible to other types (either based on aspect or on clause-type).

In what follows, we assume that aspect is the only true trigger of this type of split—though in practice, of course, perfective aspect frequently overlaps with past tense. As (10) shows, while languages may make the split in different places, ergativity remains consistently anchored to the left (i.e., *perfective*) side of the scale:⁴

(10) *FIXED DIRECTIONALITY OF ASPECTUAL SPLITS*



Coon argues that aspectual splits have two underlying causes: (i) the introduction of complex syntactic structure associated with non-perfective aspects (discussed in section 3.1); and (ii) reduced transitivity—in the form of object demotion—triggered in non-perfective aspects (discussed in section 3.2). These have in common the result that the transitive subject of a “split” non-perfective construction does not receive ergative marking because it is, structurally speaking, no longer a transitive subject (i.e., it is not the subject of a single, non-bifurcated clause containing two non-oblique noun-phrases).

Furthermore, since the factors responsible for these splits are not limited to ergative-patterning languages, we no longer need to think of *split ergativity* as a phenomenon associated with “ergative languages” in particular. Rather, when the conditions for a split are met, the result is that transitive subjects pattern with intransitive subjects; in a nominative-accusative system, this goes unnoticed because since all subjects receive the same marking (nominative) in the first place.

3.1. Added structure

In Basque one finds an aspectual split that is demonstrably triggered by added structure (Laka 2006). In the perfective and imperfective aspects, Basque shows an ergative-absolutive alignment in the

⁴Note that since progressive aspect is a sub-type of imperfective aspect, the hierarchy in (10) is not surprising; the split can either target just the progressive, or also the imperfective, which properly contains the progressive; see Coon 2010a for discussion.

forms of the suffixal article. Taking singular noun-phrases as an illustration, **A** arguments take the article *-ak* (ergative sg.), while **P** and **S** arguments take the article *-a* (absolutive sg.):

(11) *BASQUE – PERFECTIVE*

- a. [_A Ehiztari-**ak**] [_P otso-**a**] harrapatu d-Ø-u-Ø.
 hunter-ART_{sg}.ERG wolf-ART_{sg}(ABS) caught 3.ABS-sg.ABS- $\sqrt{\text{AUX}}$ -3sg.ERG
 ‘The hunter has caught the wolf.’
- b. [_S Otso-**a**] etorri d-a.
 wolf-ART_{sg}(ABS) arrived 3.ABS- $\sqrt{\text{AUX}}$ (3sg.ABS)
 ‘The wolf has arrived.’

[Laka 1996]

In the progressive, however, the ergative marking is lost. Here all three core arguments take the *-a* suffix (in the singular), as shown in (12). Furthermore, while the auxiliary agrees with both the subject and the object in the ergative-patterning perfective (as in (11)), only the subject is agreed with in the progressive—even if the lexical verb is transitive, as in (12a):

(12) *BASQUE – PROGRESSIVE*

- a. [_A emakume-**a**] [_P ogi-**a**] ja-te-n ari d-a.
 woman-ART_{sg}(ABS) bread-ART_{sg}(ABS) eat-NML-LOC PROG 3.ABS- $\sqrt{\text{AUX}}$ (3sg.ABS)
 ‘The woman is eating the bread.’
- b. [_S emakume-**a**] dantza-n ari d-a.
 woman-ART_{sg}(ABS) dance-LOC PROG 3.ABS- $\sqrt{\text{AUX}}$ (3sg.ABS)
 ‘The woman is dancing.’

[Laka 1996]

Note that the split in the Basque progressive crucially does *not* involve the language switching from an ergative-absolutive to a nominative-accusative pattern, though this is frequently how such splits are characterized. While it is the case that both subjects pattern alike in (12), the pattern seen here is more accurately described as ‘neutral’—all core arguments are in the unmarked absolutive form, including the transitive object (*ogi-a* “bread-ART_{sg}(ABS)”).

Similar patterns are found in Nakh-Daghestanian and Indo-Aryan languages. Consider, for example, the behavior of transitive verbs in Tsez and Gujarati, as shown in (13–14). As in Basque, the “split” forms (given in the (b) examples) lack ergative morphology, but crucially, no new markers arise in either case. In particular, note that the transitive object in the (b) examples does not bear any new morphology that is not also found on the transitive object in the (a) examples, and which one might therefore consider to be an “accusative” marker.

(13) *TSEZ (NAKH-DAGHESTANIAN)*

a. *REGULAR TRANSITIVE*

- [_A uʒ-**ā**] [_P čorpa_i] b-iš-xo_i
 boy(I)-**ERG** soup.III(ABS) III-eat-PRES
 ‘The boy is eating soup.’

b. *“BI-ABSOLUTIVE” CONSTRUCTION*

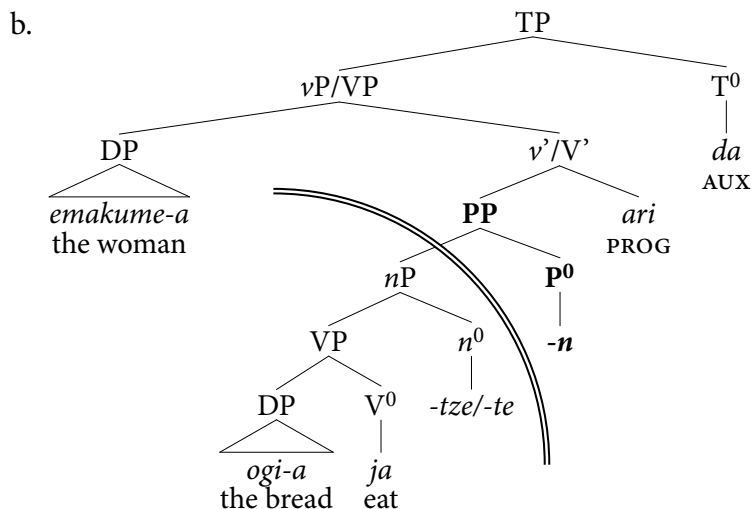
- [_A uʒi_i] [_P čorpa] b-iš-xosi Ø-ič-āsi_i yoł
 boy.I.ABS soup.III(ABS) III-eat-PTCP I-stay-PTCP be.PRES
 ‘The boy is eating soup.’

[Maria Polinsky, p.c.]

- A striking pattern emerges in all three of these (unrelated) languages: in the ergative-patterning transitives, schematized in (15a), the transitive subject (**A**) receives overt ergative marking, while the **P** argument is in the unmarked absolutive form. The verb either agrees with only the **P** argument (as in Indo-Aryan and Nakh-Daghestanian), or with both **A** and **P** (as in Basque). In the “split” pattern, schematized in (16a), we find a number of differences: 1. the **A** argument no longer receives ergative, but is now also in the unmarked absolutive form; 2. in most languages, we find a more complex *verb+auxiliary* construction (compare (11a)/(12a), (13a)/(13b), and (14a)/(14b)); 3. the agreement pattern changes—in Basque and Indo-Aryan, the **P** argument no longer triggers any agreement, while in Tsez the lexical verb (*iš* “eat”, in (13b)) agrees with **P** and the auxiliary agrees with **A**.

- For Basque, Laka (2006) argues that the progressive “split” forms are in fact *bi-clausal*, involving a progressive auxiliary (*ari*) which embeds a locative-marked subordinate clause containing the lexical verb and the object. This proposal accounts elegantly for the facts listed above. The **A** argument is not marked ergative, *because it is not a transitive subject*; it is the subject of an auxiliary whose complement is something other than a non-oblique nominal, and therefore, this auxiliary is *intransitive* (in Basque, this complement is an oblique locative, as shown in the glosses of (12a–b); in other languages, like Tsez, it is a participial clause). The **P** argument does not trigger agreement because it is in a separate, lower clause. The Basque progressive transitive repeated in (17a) (from (12a) above) has the structure in (17b).

- 9 –



Similar proposals have been made for Nakh-Daghestanian languages—for example, in [Kazenin 1998, 2001](#), [Kazenin & Testelec 1999](#), as discussed by [Forker \(2010\)](#).

This analysis is advanced further in [Coon 2010a](#), which develops the idea that such clausal bifurcation is always found in *non-perfective* aspects because it is precisely these aspects whose structure is constructed using locative building-blocks (see also [Bybee, Perkins & Pagliuca 1994](#), [Demirdache & Uribe-Etxebarria 2000](#)).

Note that the absence of ergative marking on the subject in (17) is derived **regardless of one's particular theory of case assignment**. Suppose that the brackets in (17a) (and accordingly, the double arc in (17b)) are boundaries for the calculus of case. In the *dependent case* system of [Marantz \(1991\)](#), this amounts to saying that the subject DP cannot “see” the object DP for the purposes of case-competition, and thus will not receive dependent (=ergative) marking—the same logic that applies to more familiar scenarios involving two DPs separate by a finite clause boundary, for example. In a *probe-goal* case assignment system ([Chomsky 2000, 2001](#)), we could simply consider the progressive *ari* to be an embedding predicate unto itself. Its transitivity will depend only on the category of its complement (which in (17) is PP), not on the valence of the lexical predicate, *jaten*.

Under either of these approaches, then, the result is that the case-marking of the subject will not alternate based on the valence of the embedded lexical predicate. The subject will therefore bear the same marking whether the embedded verb is transitive or intransitive—which is exactly what we saw in (12), above. Descriptively, this can be characterized as “shifting out of the language’s *normal* ergative alignment”; but crucially, it is derived without assuming any change in the fundamental case-assignment mechanisms operative in progressive vs. non-progressive aspects.

There are three important consequences of this analysis. **First**, as [Laka \(2006\)](#) notes, on this type of analysis there is no need for special case assignment or agreement rules particular to the progressive; the progressive subject behaves like any other intransitive subject in the language. Regardless of the specific theory of ergativity one assumes (e.g. ergative as inherent case, ergative as dependent case, etc.), the **A** argument will not receive ergative because it is the subject of a verbal head that is formally *intransitive*. **Second**, a natural explanation emerges for the absence of such “splits” in nominative-accusative languages. Just as in Basque and Tsez, the progressive and sometimes the imperfective are built on locative constructions in many nominative-accusative languages, as well; some examples are given in (18).

- (18) a. *FRENCH*
 Zazie est **en train de** jouer.
 Zazie is in along of play
 ‘Zazie is playing.’
 b. *DUTCH*
 Ik ben het huis **aan** het bouwen.
 I am the house at the build
 ‘I am building the house.’

[Demirdache & Uribe-Etxebarria 2000:178]

The difference is that in a nominative-accusative system the split has *no effect on the alignment of subjects*: A and S arguments in a nominative-accusative system receive the same marking (nominative) whether the clause is bifurcated or not. This is illustrated below:

- | | |
|--|---|
| <p>(19) <i>ENGLISH</i>
 a. I_{NOM} read the book.
 b. I_{NOM} am [PP at book reading].</p> | <p>(20) <i>IMAGINARY “ERGATIVE ENGLISH”</i>
 a. I_{ERG} read the book.
 b. I_{ABS} am [PP at book reading].</p> |
|--|---|

Third, examples like (18a–b), as well as their myriad cross-linguistic counterparts (see Bybee, Perkins & Pagliuca 1994, among others), illustrate another important virtue of the current proposal. These examples establish—independently of split ergativity, or even ergativity more generally—that it is typically the *non-perfective* aspects that are built using elements of locative morphosyntax, which are not found in the perfective. In conjunction with the clausal bifurcation analysis presented here, this provides an explanation for the cross-linguistically fixed *directionality* of aspectual splits (recall (10), above): given a language that is underlyingly ergative throughout, the perfective, in which no structure is added to the basic clausal skeleton, will reveal the underlying ergative pattern; but the structure added in a non-perfective aspect could, if it bifurcates the clause into two separate case/agreement domains, result in what looks like a ‘shift’ out of this underlyingly ergative pattern.

Importantly, nothing said so far dictates that the structure added in a non-perfective aspect *necessarily* bifurcate the clause in this manner. It is conceivable that the relevant locative elements used to form non-perfective aspects be syntactically opaque (e.g. phasal) in one language, but syntactically transparent in another. The parametric choice between these two options will yield, accordingly, the distinction between ‘split-ergative’ and ‘ergative’, now conceived of as descriptive, epiphenomenal labels.

The observation that non-perfective aspects may involve added structure also provides an explanation for the patterns found in aspectual splits in the Mayan family, for example Yucatec (Bricker 1981), Chol (Coon 2010a, Vázquez Álvarez 2002), and Q’anjob’al (Mateo Pedro 2009, Mateo-Toledo 2003); see Larsen & Norman 1979 and Dayley 1981 for overviews. In these languages, the “split” or “non-ergative” aspects follow what is known as an “extended ergative pattern”; this is illustrated in the Chol examples in (21–22).

(21) *CHOL – PERFECTIVE*

- a. Tyi k-mek'-e-yety.
PRFV 1ERG-TV-hug-2ABS
'I hugged you.'
- b. Tyi wäy-i-yety.
PRFV sleep-ITV-2ABS
'You slept.'

(22) *CHOL – IMPERFECTIVE*

- a. Choñkol k-mek'-ety.
PROG 1ERG-hug-2ABS
'I'm hugging you.'
- b. Choñkol a-wäy-el.
PROG 2ERG-sleep-NML
'You're sleeping.'

The head-marking found in the perfective forms in (21a–b) exhibits an ergative alignment (also shown in (5a–b), above). In non-perfective (imperfective and progressive) aspects, we find a deviation from this pattern. However, unlike Basque, Indo-Aryan, and Nakh-Daghestanian, the marking on transitive subjects (as in (22a)) remains identical; it is the *intransitive* marker that changes. In the “split” portion of the grammar, intransitive subjects appear not with absolutive, but with what appears to be ergative marking. Since A and S arguments pattern alike in these aspects, this has been described as a *nominative-accusative* pattern. Again, however, we actually find no new distinct “nominative” or “accusative” markers.

Strikingly, as above, the differences between the ergative pattern (in (21a–b)) and the “split” pattern (in (22a–b)) goes beyond just the argument alignment: the forms of the stems change, as well. In the perfective, the root appears with a “status suffix”, which varies with transitivity. These are absent in the non-perfective (“split”) forms, in (22a–b). Here, the transitive appears with no suffix, and the intransitive is suffixed with *-el*, a common nominalizing suffix across the Mayan family (see e.g. Bricker 1981).

As has been suggested by previous authors (Bricker 1981, Coon 2010b, Larsen & Norman 1979, Mateo Pedro 2009), this “split” behavior in the Mayan family can be straightforwardly accounted for if non-perfective aspect markers are predicates embedding a nominal or nominalized form. The unexpected “ergative” marker on the intransitive S argument in fact marks a grammatical possessor—ergative and possessive prefixes being identical across the entire Mayan family, known in Mayanist literature simply as “Set A”. Thus, what Chol’s split shares with Basque is the fact that the progressive aspect is expressed using a verbal element. In Basque, this verb takes a subject and a locative clause as its complement (~ ‘She is at sleeping’); in Chol, the progressive predicate combines with a nominalized clause containing the subject (~ ‘Her sleeping is happening’).

Again, as with Basque above, there is no real split in the underlying case/agreement system. The non-perfective portion of the grammar is characterized by aspect markers that function, syntactically, as predicates. These intransitive predicates combine with a single argument: the nominalized clause. Because 3rd-person absolutive is null across the Mayan family, we see no overt reflex of agreement with this single argument. See Coon 2010a for additional evidence and a more detailed discussion.

3.2. Reduced transitivity

Georgian (Kartvelian) shows a split between aorist and non-aorist aspects (abstracting away for certain verb-classes, such as psych-verbs, which behave differently). The aorist exhibits an ergative alignment in its case suffixes, as shown in (23a–b), and the non-aorist exhibits a “split”, as shown in (24a–b). Note that just as we saw for Basque, Hindi, and Tsez in §3.1, the ergative marking on the A argument is lost in the “split” pattern, and replaced with absolutive (as in (24a)). However,

while in those languages we saw absolutive marking retained on the **P** argument (furnishing what we described as a ‘neutral’ pattern, with both core arguments marked absolutive), here the **P** argument takes an oblique suffix. We will refer to this as an ‘ABS-OBL’ pattern.⁵

- (23) *GEORGIAN – AORIST*
- a. [A *Ṣtudent-ma*] [P *çeril-i*] *daçera*.
 student-ERG letter-ABS wrote
 ‘The student wrote the letter.’
- b. [*S* *Ṣtudent-i*] *mivida*.
 student-ABS went
 ‘The student went.’
- (24) *GEORGIAN – NON-AORIST*
- a. [A *Ṣtudent-i*] [P *çeril-s*] *çers*.
 student-ABS letter-DAT writes
 ‘The student writes the letter.’
- b. [*S* *Ṣtudent-i*] *midis*.
 student-ABS goes
 ‘The student goes.’ [Comrie 1978:351]

In Georgian, as in several other languages, the oblique case instantiated in the ABS-OBL pattern is the dative (also found, for example, on indirect objects and on the complements of postpositions; see Hewitt 2005).

A similar pattern is found in Samoan (Polynesian). The basic ergative pattern is shown in (25a–b), where the **A** argument in (25a) appears with the ergative case marker *e*; absolutive arguments, like the subject in (25b), are unmarked.

- (25) *SAMOAN (POLYNESIAN)*
- a. *Na fasi* [A *e* *le tama*] [P *Sina*].
 PST hit ERG DET boy Sina
 ‘The boy hit Sina.’
- b. *’olo’o moe* [*S* *le tama*].
 PRES.PROG sleep DET boy
 ‘The boy is sleeping.’ [Ochs 1988:89]

Samoan exhibits a “split” between perfective and imperfective aspects, illustrated by the pair of transitives in (26). Forms like those in (26a) are known as “ergative”, while those in (26b) are labeled “objective” (Milner 1973).⁶

- (26) a. *PERFECTIVE*
- na va’ai-a* [A *e* *le tama*] [P *le i’a*]
 PST look.at-PRFV ERG the boy the fish
 ‘The boy spotted the fish.’
- b. *IMPERFECTIVE*
- na va’ai* [A *le tama*] [P *i le i’a*]
 PST look.at the boy OBL the fish
 ‘The boy looked at the fish.’ [Milner 1973]

⁵Comrie actually glosses the case marking on **A** and **S** in (23a–b) as “NOM”, and the suffix on **P** as “ACC”, noting however that he glosses them “according to their role in the ergative-absolutive or nominative-accusative system” (Comrie 1978:352), in order to avoid confusion. In other sources, the absolutive is glossed consistently as nominative (e.g. Melikishvili 2008).

⁶Though the distinction between forms like (26a) and (26b) have previously been treated as a *voice* contrast, Milner (1973) argues that the distinction is aspectual, and that the English translations of some pairs are often best captured by using distinct lexical items—e.g. *spotted* vs. *looked at*; one which emphasizes the “totality” of the action (i.e., perfective), and the other which focuses on “the action itself” (i.e., imperfective); see Milner (1973:631).

The object in the “split” pattern in (26b) takes the oblique marker *i*: “Throughout Polynesian, *i* ‘at’ is used to indicate locatives, time expressions, sources, and objects of comparison” (Chung 1978:26).

This pattern is also found in Warrungu (Pama-Nyungan): the ABS-OBL pattern in (27b) (again, making use of the dative) emphasizes the “continuousness/progressiveness of the action” (Tsunoda 1981:417).

(27) WARRUNGU (PAMA-NYUNGAN)

- a. [A pama-**ngku**] [P yuri] nyaka-n.
 man-ERG kangaroo(ABS) see-NONFUT
 ‘A Man saw (found, etc.) a kangaroo.’

- b. [A pama] [P yuri-**wu**] naka-kali-n.
 man(ABS) kangaroo-DAT see-*kali*-NONFUT
 ‘A man was (or is) looking for a kangaroo.’

[Tsunoda 1981:417]

The Georgian, Samoan, and Warrungu case marking patterns look strikingly similar to the pattern in Adyghe (NW Caucasian), discussed in Tsunoda 1981 (citing Anderson 1976). Note, however, that here the difference between (28a) and (28b) is not one in aspect, but rather in the choice of lexical verb: *iwik’ib* (“killed”) follows an ergative pattern, while *jcpidziib* (“stabbed”) follows an ABS-OBL pattern.

(28) ADYGHE (NW CAUCASIAN)

- a. [A bojetsi-**m**] qamemk’e [P piji-**r**] iwik’ib
 warrior-ERG dagger-INST enemy-ABS killed
 ‘The warrior killed the enemy with his dagger.’

- b. [A bojetsi-**r**] qamemk’e [P piji-**m**] jcpidziib
 warrior-ABS dagger-INST enemy-OBL stabbed
 ‘The warrior stabbed the enemy with his dagger.’

[Tsunoda 1981:415]

Tsunoda (1981) proposes an *Effectiveness Condition* (EF-CON)—which appeals to notions like “effectiveness”, “conclusiveness”, “definiteness”, “actualness”, and many others—meant to account for both aspectual splits, like those in (23–27), and verb-type splits, as like those in (28a–b). The full range of parameters relevant to EF-CON are shown in (29); similar ideas have been developed independently by Hopper & Thompson (1980). See Malchukov 2005 for a more recent survey of these proposals.

(29) *EFFECTIVENESS CONDITION (EF-CON)*

	IS MET: (→ <i>ergative</i>)	IS NOT MET: (→ <i>non-ergative/split</i>)
a.	action	state
b.	impingement on P	non-impingement on P
c.	P attained	P not attained
d.	P totally affected	P partially affected
e.	completed	uncompleted, or in progress
f.	punctual	durative
g.	telic	atelic
h.	resultative	non-resultative
i.	specific or single activity or situation	customary/general/habitual activity or situation
j.	P definite/specific/referential	P indefinite/non-specific/non-referential

[*Tsunoda 1981:393*]

The idea behind EF-CON is that failures to meet some portion of the factors listed on the left-hand side of (29) have a common morpho-syntactic consequence—namely, an oblique **P** argument—regardless of whether these factors are related to grammatical aspect, or alternatively, tied to the specific meaning of a given verb.

In support of this idea, *Tsunoda (1981:407)* notes that both aspectual and verb-type splits frequently coexist in the same language. Warrungu shows a verb-type split *in addition* to the aspectual split illustrated in (27a–b). In Samoan, it is only verbs lower on the effectiveness scale, like “look at” (*Milner’s 1973 Category I*) which show the aspectual split illustrated in (26a–b); verbs higher on the effectiveness scale (*Milner’s Category II*), like “make”, show an invariant ergative-absolutive pattern, regardless of whether or not they take an overt aspectual suffix.

Tsunoda concludes: “Verb-split and TAM-split are fundamentally no different from each other, their semantics and case-marking mechanisms involving common principles” (*Tsunoda 1981:391*). In non-perfective aspects, objects are generally more likely to be indefinite, non-referential, and less affected; in the perfective the focus is on the culmination of the event, and objects are more likely to be affected. With respect to the type of aspectual splits examined in this section, this seems like a promising account, and as *Tsunoda* notes, is again not limited to languages with ergative morphology.

Take for example the English conative alternation in (30): in (30a) *the bear* receives accusative and is clearly affected; in (30b) the object is expressed as a PP and there is no requirement that the act of shooting was successful—that is, the bear may be totally unaffected. Of course in English, subjects carry unmarked nominative *regardless* of whether they are transitive subject or intransitive ones. If English were ergative, we would expect to find ergative on the (transitive) subject in (30a), but absolutive on the (intransitive) subject in (30b).

- (30) a. Sam shot [_P the bear].
b. Sam shot [_P at the bear].

A survey of the various proposals put forth to account for the conative alternation is beyond the scope of this paper (see, for example, [Levin 1993](#) and [Borer 2005](#)). Suppose, however, that an account of this sort is in place; this means we have a way of predicting that loss of *affectedness* (or some closely related notion) on the part of the **P** argument will correlate with oblique marking on that argument, as it does in (30a–b). Such oblique marking, in turn, furnishes a similar syntactic state of affairs to what we saw in [section 3.1](#): in the Basque progressive, for example, the **A** argument was the subject of a syntactically intransitive aspectual auxiliary (i.e., an auxiliary that selects a PP rather than a nominal complement); here, it is the main lexical verb that selects a PP complement (rather than a nominal one).

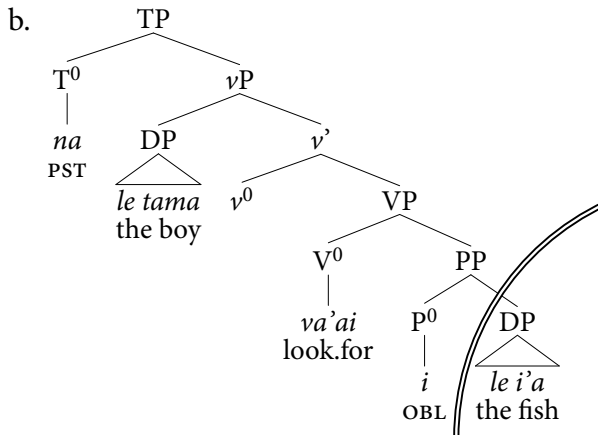
Thus, the absence of ergative marking on the subject of these split constructions simply reflects the fact that the **A** argument *is no longer a transitive subject* (in the sense of having a non-oblique clausemate object), as was the case in the “split” patterns surveyed in [§3.1](#). In other words, the pattern shown here is triggered by the very same syntactic factor that triggered the aspectual splits: **a PP layer separating the subject from the object.**

The Samoan “split” example from (26b) above is repeated in (31a). The **A** argument is not a *transitive* subject, syntactically speaking, because there is no other non-oblique clausemate argument. The fact that the object is a PP rather than a DP (i.e., appears in an “oblique” rather than “direct” case) is in turn derived from general notions of transitivity—for example, [Tsunoda’s](#) EF-CON in (29)—and is furthermore present in both ergative and non-ergative patterns (compare the English glosses of (26a–b) above: ‘**spot** the fish’ vs. ‘**look at** the fish’). Again, the absence of ergative here is derivable regardless of the particular theory of case assumed.

(31) SAMOAN ABS-OBL “SPLIT”

a. IMPERFECTIVE

na va'ai [A le tama] [P i le i'a]
 PST look.at the boy OBL the fish
 ‘The boy looked at the fish.’



While [Tsunoda’s](#) proposal accounts well for languages like Samoan and Warrungu, his intent is to connect all instances of aspectual split to a split in verb-type. We argue, however, that this extension is untenable—as we have seen above, aspectual splits take at least three different patterns, summarized in (32), only the third of which lends itself to [Tsunoda’s](#) analysis.⁷

(32) ASPECTUAL SPLITS

	A - P / S	
<i>neutral</i>	ABS - ABS / ABS	(Basque, Nakh-Daghestanian, Indo-Aryan)
<i>extended ergative</i>	ERG - ABS / ERG	(Mayan)
<i>ABS-OBL</i>	ABS - OBL / ABS	(Georgian, Polynesian, Warrungu)

It is not clear that any of these patterns actually instantiate a split between ergative-absolute and nominative-accusative *per se*; that verdict might ultimately be a matter of terminology, more than substance. What is clear is that in all three patterns, the subject bears the same case in transitive clauses as it does in intransitive ones (and therefore, in that narrow sense, it is “nominative”). In *neutral* and *ABS-OBL* splits, this arises because the transitive sentence has been detransitivized. In the Mayan case, recall that ergative and possessive morphology is identical; the second pattern in (32) may therefore be better characterized as “POSS - ABS / POSS” or “GEN - ABS / GEN” (see Bricker 1981, Coon 2010b, Larsen & Norman 1979, Mateo Pedro 2009, for arguments to that effect).

3.3. Summary and alternatives

3.3.1. Summary

In this section, we have looked at two main types of aspectual splits. While aspectual splits are frequently treated as a unified group (cf. DeLancey 1981, Tsunoda 1981, Ura 2006), we find in fact that the types of case-marking patterns one finds on the non-ergative side of these splits can be very different. Nonetheless, commonalities are found, even within unrelated languages.

We began with splits in which the ergative pattern is simply neutralized: all core arguments appear in absolutive, as in the first row of (32). Interestingly, most of these splits also involve the addition of an auxiliary, and a change in agreement consistent with a bi-clausal or subordinate-clause analysis. Under such an analysis, these languages follow a consistent pattern of ergative marking; the difference in the split forms is that the notional **A** argument is actually the subject of an *intransitive* auxiliary verb or clausal subordinator, making the absence of ergative marking entirely expected (since ergative marking canonically depends on transitivity).

In the latter part of section 3.1, we turned to Mayan languages—to our knowledge, the only aspectual split system which results in an “extended ergative” pattern, in which the **S** marking unexpectedly appears with ergative in the split aspects. Here too, the difference can be reduced to a structural one: across the Mayan family, non-perfective aspectual markers are derived from verbs. Mayan languages also require nominalization in many (possibly all) non-finite embedded clauses. The fact that ergative and possessive markings are systematically identical in Mayan naturally explains the extended use of “ergative” marking in specifically these split aspects.

We then discussed aspectual splits which result in an *ABS-OBL* pattern, as shown in the third row of (32), which are found in a number of languages. As discussed in Tsunoda 1981, this pattern is not limited to aspectual splits, but is a more general pattern found with certain *verb classes*. Even within some of the languages discussed, it is not only non-perfective aspects which trigger *ABS-OBL* patterning, but many verbs in which the object can be considered “less affected”, even in

⁷Tsunoda does not actually discuss aspectual splits in Mayan. As for Basque, while he does discuss split ergativity in Basque, he notes that Basque does not exhibit a split based on verb-type, and provides a separate account for why it is that Patients receive absolutive (rather than, e.g., dative) marking in the progressive.

the perfective. Since imperfectivity does not focus on the result or end-point of an event, it is no surprise that these aspects would pattern with other verbs low in Patient-affectedness. In the account outlined above, a parallel is drawn between ergative- and non-ergative-patterning languages; in both, factors involving telicity and aspect affect the ability of the object to appear in an oblique case (e.g. dative) vs. a non-oblique case (absolutive or accusative). If the object is oblique, the subject will be treated as an intransitive subject. In a language in which transitive subjects are marked ergative, the ergative marking will be absent.

The discussion above follows in certain respects the argumentation in Coon 2012, where it was argued that aspectual splits do not form a uniform group. Nonetheless, under the analyses described here, all of these splits share the following two properties. **First**, the split is not the result of special rules of case assignment or agreement, active only in certain aspects. The accounts above make it possible in principle to avoid positing different featural content for case-assigning functional heads in different aspects (cf. Anand & Nevins' 2006 analysis of Hindi). **Second**, the underlying mechanism responsible for these splits is not specific to *ergative*-patterning languages. The phenomena above are also found in predominantly nominative-accusative languages—for example, in progressive constructions in Dutch, and in English conative alternations. The difference between, e.g., Samoan on the one hand and, e.g., English on the other, is that by definition, transitive and intransitive subjects are marked alike in a nominative-accusative system, making it impossible to see what would otherwise be a split in subject marking.

Finally, this system was able to account for the universal *directionality* of aspectual splits: the observation that in aspect-conditioned split ergativity, it is always the perfective aspect that exhibits an ergative alignment, and (some or all) non-perfective aspects that exhibit a non-ergative alignment (Dixon 1994; (10), above). Independently of ergative languages or ergativity, it has been observed that it is *non-perfective* aspects that typically involve additional morpho-syntactic structure (Bybee, Perkins & Pagliuca 1994, Demirdache & Uribe-Etxebarria 2000)—structure that is not present in the perfective, and commonly taken from the locative vocabulary. On the current proposal, it is this added structure which is responsible (in languages in which it is syntactically opaque) for bifurcating the clause into two separate case/agreement domains, and creating the appearance of a 'shift' out of the underlyingly ergative pattern of the language. It follows from these premises that the 'shift' will only occur in non-perfective aspects.

3.3.2. An alternative

Before wrapping up this section, we briefly review the account in Ura 2006. Ura comes close to formalizing the idea presented in Tsunoda 1981, in that he attributes aspectual splits to differences in aspectual features of v^0 , drawing parallels between *lexical aspect* (e.g. telicity and boundedness) and *grammatical aspect* (perfective versus imperfective): "the aspectual feature appears on v^0 when the telicity due to the lexical aspect and/or the temporal boundedness due to the grammatical aspect is involved in the clause" (Ura 2006:138). Languages differ, according to Ura, in whether lexical or grammatical aspect introduces the relevant feature on v^0 . Furthermore, languages differ in which case it is (and on which argument) that the aspectual feature licenses: in a nominative-accusative language, this feature licenses the accusative object, while in an ergative language, it licenses the ergative subject.

This approach falls short for a couple of reasons. The first has to do with the cross-linguistically invariant directionality of aspectual splits (see (10), above): if different lexical/grammatical aspects

can be associated with different featural configurations on v^0 , why are there no languages in which telic or bounded lexical aspect, and/or imperfective grammatical aspect, happen to be associated with the opposite featural combination? (In a hypothetical language of this sort, v^0 would be *unable* to assign ergative when the lexical aspect was telic or bounded and/or the grammatical aspect was imperfective, but *able* to assign ergative in other instances.)

Second, Ura is left without a clear account of what happens in languages that show ergative patterning throughout, in all lexical and grammatical aspects. He suggests there is a parameter which permits some languages to license ergative subjects consistently, regardless of the aspect of the clause (Ura 2006:113). While an account which relies on different featural inventories in different aspects is not ruled out by anything stated so far, we suggest that a structure-based account is to be preferred where possible, since it relies on independently-observed differences, not specific to ergative languages.

4. Person splits

Person splits are conditioned by the properties of the **A**, **P**, and **S** arguments themselves. As noted above, while languages vary as to whether and where along the relevant scale they make these splits, person splits (like aspectual splits, discussed in section 3) exhibit a universally fixed directionality: arguments ranked lower on a “prominence hierarchy” follow an ergative-absolutive pattern, while those ranked higher follow a nominative-accusative pattern. Dixon’s version of the prominence scale, based on Silverstein 1976, is given in (33):

(33) *PROMINENCE HIERARCHY* (Dixon 1994:85)

				<i>common nouns</i>
1st-person pronouns	2nd-person pronouns	demonstratives, 3rd-person pronouns	proper nouns	human >> animate >> inanimate
<————— <i>more likely to be A than P</i> —————>				

The directionality of these splits is universal, just as with the aspectual splits in section 3; but just as with the aspectual splits in section 3, these NP splits also take different forms, and exactly what it means for a language to show an “NP split” varies. The picture is complicated, of course, by the fact that while a simple transitive clause has only a single value for *aspect* for example, it has two NPs for which prominence may be calculated.

While some splits track only subjects, others, as we will see below, appear to track both subjects and objects.⁸ For this reason, we will find it useful to talk about these two sub-systems in terms of “Differential Subject Marking” (**DSM**) and “Differential Object Marking” (**DOM**); on the former, see De Hoop & De Swart 2008; on the latter see Aissen 2003 and works cited therein. Because the focus here is on split-ergativity, we will use the label “DSM” in a very narrow sense, to refer specifically to the ergative vs. non-ergative marking of subjects (and not, for example, to dative-marked subjects found in Icelandic).

⁸Some languages track only the prominence of the object, of course—or in the terms of the current discussion, have only DOM, and no DSM. But because ergativity is *defined* in terms of the marking of subjects (and whether it varies across transitives/intransitives), DOM is not commonly brought under the umbrella of “split ergativity”, a matter we return to below.

Below we will examine languages in which the realization of both subjects and objects varies with respect to features such as those in (33), as well as languages in which only features of the subject are relevant. While much work focusing on split ergativity focuses only on the realization of subjects (ergative vs. non-ergative), others seek to unify DSM with DOM. These proposals will be summarized below.

Ultimately, we will suggest (following Woolford 2001) that DSM and DOM are fundamentally different phenomena, and should be treated as such in the grammar. In particular, we will argue that DSM can be analyzed in a parallel fashion to the aspectual splits above: subjects lack ergative marking when separated from objects by some intervening barrier; while DOM, found in ergative and non-ergative languages alike, is independent of the issue at hand (namely, the nature of split ergativity).

4.1. Dyirbal subjects and feature-based accounts

We begin with one of the most widely discussed noun-type splits, that of Dyirbal (Pama-Nyungan). In Dyirbal, the case marking on both **A** and **P** varies with their respective status on the hierarchy, as shown in (34). **A** receives special (*ergative*) marking only when it is a 3rd-person pronoun or a common noun. **P** receives special marking (*accusative*) only when it is a 1st/2nd-person pronoun. Note that **S** is consistently unmarked, regardless of its type.

(34) *DYIRBAL* (Dixon 1994:86)

	1/2 pronouns	3 pronouns	other nouns
A	-Ø	- <i>ŋgu</i>	- <i>ŋgu</i>
S	-Ø	-Ø	-Ø
P	- <i>na</i>	-Ø	-Ø

In (35), we find only 3rd-person arguments, and the ergative-absolutive pattern emerges; only the transitive subject receives a special marker, while both **P** and **S** arguments are unmarked.

(35) *DYIRBAL*

- a. [_P Numa] [_A yabu-**ŋgu**] bura-n
 father.ABS mother-ERG see-NONFUT
 ‘Mother saw father.’
- b. [_S yabu] banaga-n^yu
 mother.ABS return-NONFUT
 ‘Mother returned.’

In (36), all arguments are local—i.e., 1st/2nd-person—and a nominative-accusative pattern emerges: only the **P** argument receives an overt (accusative) suffix; both subjects are unmarked. They are glossed “nominative” here, but note that formally these are no different from the unmarked “absolutives” in the previous example.

(36) a. [_A Nana] [_P n^yurra-**na**] bura-n
 we.NOM you.PL-ACC see-NONFUT
 ‘We saw you_{pl}.’

- b. [s Nana] banaga-nʔu
 we.NOM return-NONFUT
 ‘We returned.’

[Dixon 1994:161]

To account for patterns like that of Dyirbal, many proposals rely on inventories of functional heads which differ in their capacities for case-assignment. Carnie (2005), for example, makes use of differences in the feature inventories of v^0 heads. He proposes that the v^0 which introduces local subjects is able to assign accusative, resulting in nominative-marked subjects, whereas the v^0 head which introduces 3rd-person subjects has no accusative; the object must instead get case from Infl⁰, while the subject receives ergative in situ. This approach might be likened to Ura’s (2006) proposal for aspectual splits, discussed in section 3.3 above. Alexiadou & Anagnostopoulou (2006) also offer a proposal of person splits that relies on different inventories of features between the functional heads of ergative and non-ergative systems. For reasons of space, we will not elaborate on these accounts here.

In contrast, Aldridge (2007) and Legate (2008b) propose that the abstract case features assigned to **A** and **P** remain consistent across the ergative languages discussed; the split in the morphological realization is instead controlled by post-syntactic insertion rules. In this type of approach, transitive subjects in Dyirbal, for example, are all *ergative* in the sense that they are all licensed inherently in their base position by transitive v^0 ; Dyirbal simply lacks a distinct morphological realization for the combination of features present on a 1st/2nd-person **A** argument.

Though feature-based approaches are clearly able to account for the facts at hand—and may be appropriate for some languages (see the historical discussion of Pama-Nyungan, below)—it is difficult to see how these can be constrained. For example, why should it be that only the v^0 that introduces 1st/2nd-person subjects assigns accusative while the one that introduces 3rd-person ones does not, rather than the other way around? Similarly, why wouldn’t we also find a *mirror-Dyirbal*, which lacks a distinct morphological realization for the combination of 3rd-person **A** arguments, but has a distinct morphological realization for 1st/2nd-person ones?

Ideally, we would like to attribute these asymmetries to independently observable principles; an approach that is able to capture these asymmetries is sketched at the end of this section.

4.2. Binary splits

A further complication arises in Dyirbal sentences involving combinations of local (1st/2nd-person) and non-local (3rd-person) arguments. Looking only at the forms in (35–36), it would be tempting to say that Dyirbal does have a split between an *ergative-absolutive* system and a *nominative-accusative* system. However, as the example in (37) illustrates, the two sets of markers are not in complementary distribution. Rather, as Dixon notes, we can think of **A** and **P** marking in Dyirbal as following “essentially independent parameters” (Dixon 1994:86). Silverstein (1976:123) calls this a “binary” split system, because the split operates over two subsystems. In (37), the **A** is marked because it is 3rd-person; the **P** is marked accusative because it is 1st-person (see (34), above).

- (37) [p ɲana-na] [A ɲuma-ŋgu] bura-n
 we-ACC father-ERG see-NONFUT
 ‘Father saw us.’

[Dixon 1994:130]

4.2.1. Splits and markedness

As discussed above, Silverstein (1976) and subsequent work (Comrie 1978, Dixon 1979) characterize person splits in terms of markedness: “This hierarchy expresses the semantic naturalness for a lexically-specified noun phrase to function as agent of a true transitive verb, and inversely the naturalness of functioning as patient of such” (Silverstein 1976:113). Cross-linguistically, *nominative* and *absolutive* tend to be morphologically unmarked, while *accusative* and *ergative* tend to be marked. NPs with higher prominence are more “natural” A arguments (e.g. *Agents*, *Experiencers*) than NPs with lower prominence; similarly, NPs with lower prominence are more likely to be P arguments (e.g. *Patients*, *Themes*) than NPs with higher prominence. The core idea, then, is that when an NP low on the hierarchy appears in an “unnatural” position for As, it should appear with marked (ergative) morphology; and when an NP high on the hierarchy appears in an “unnatural” position for Ps, it must appear with marked (accusative) morphology.

“It is natural for third persons to function as patient [(P)] and for first and second person to function as agent (A), but not vice-versa. The marked cases, ergative and accusative, formally express the violations of these principles”

[Silverstein 1976:152]

On this view, the sentence in (37), for example, represents a highly marked utterance, in which a 3rd-person nominal is the subject and a local (1st-person) nominal is the object; as such, both arguments are marked. These functional approaches thus treat the differential marking of subjects and objects as stemming from the same basic principle.

Wierzbicka (1981) challenges the idea on empirical grounds, providing some initial counts which do not support the claim that 1st/2nd-person agents are more frequent than 3rd-person agents. In his reply to her article, Silverstein (1981) disassociates himself with the notion of the hierarchy as reflecting “potential agentivity”, stating that this is based on a misinterpretation of his original work, and that scales such as the oft-cited one from Dixon (1994) (in (33), above) are an oversimplification of his original proposal. Goddard (1982:184–187) provides a useful summary of the discussion, concluding:

“The claim that there is a scale of potential agentivity corresponding to the ordering in the diagram [as in (33)] is clearly in serious trouble. If this hypothesis is not to lose all credibility, the onus is on Dixon and the many other linguists who accept this view, such as Comrie (1979) [see also Anderson (1985)], to produce some independent justification for it. Until this is done, it cannot be accepted that this putative account provides any explanation for the typological regularities in the occurrence of explicit ergative and accusative marking.”

[Goddard 1982:187]

Silverstein (1981) disavows the idea that 1st/2nd-person agents are in some sense more “natural”, focusing instead on the empirical claim of *markedness* (in the morphological sense). One strand of research that has picked up on Silverstein’s 1981 morphologically-oriented approach is Optimality Theoretic Syntax (see, for example, Legendre, Grimshaw & Vikner 2001). Aissen (1999b, 2003) provides an account of the hierarchy-driven person split for subjects couched within OT-Syntax; see also Woolford 2008 for discussion and an alternative OT-based approach; and see Alexiadou & Anagnostopoulou 2006 and Legate 2008b for a critique.

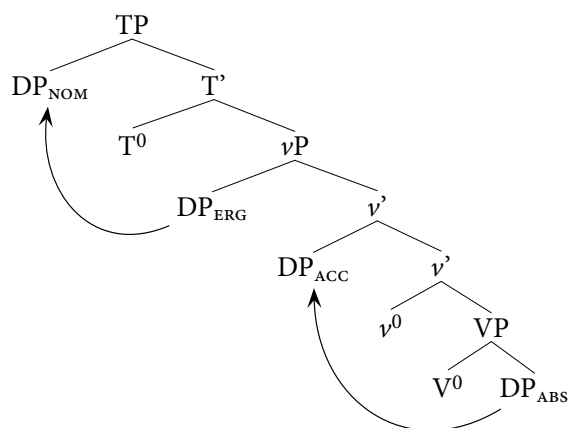
4.2.2. Merchant's Polyvalent Case

Merchant (2006) offers an alternative to the Optimality Theoretic accounts of Aissen (1999b, 2003) and of Woolford (2001). Rather than encoding Silverstein's hierarchy in a fixed scale of ranked constraints, he proposes that "prominence hierarchies are in fact directly coded in the geometry of the clause" (Merchant 2006:13). Merchant encodes the points of the scale in the form of functional projections, which appear in a fixed order along the clausal spine.

Citing evidence that there is not necessarily a one-to-one relationship between nominal arguments and morphological case (e.g. from instances of so-called "case-stacking"), Merchant proposes that ergative and absolutive are assigned in positions lower in the tree than nominative and accusative, respectively. On this approach, *all* **A** arguments start their derivational life with ergative case, and *all* **P** arguments start with absolutive. In a language that is consistently ergative-absolutive, **A** and **P** remain low, and thus retain their first-assigned case; conversely, in a language with consistent nominative-accusative marking, both subject and object consistently raise to higher positions, where their initially-assigned ergative and absolutive is overridden with nominative and accusative, respectively.

This is schematized in (38):

(38) THE POLYVALENT CASE DERIVATION OF NOM-ACC (Merchant 2006)



Person-based splits are then accounted for with the following ingredients: (i) the hierarchy of features relevant to the scale in (33) is *syntactically encoded* in the spine of the clause (e.g. there is a *1st/2nd-person-Phrase*, dominating a *3rd-person-Phrase*, dominating a *proper-noun-Phrase*, etc.); (ii) DP arguments are attracted to the specifier of the appropriate functional projection (i.e. 1st-person pronouns must raise to the specifier of *1/2P*, etc.); (iii) the relative position of nominative and accusative assigning heads (i.e. T^0 and v^0) may vary from language to language, accounting for the varying position of the actual split in a hierarchy like (33).

We illustrate with an example, focusing on the top half of the tree and the morphological marking of **A** arguments. In a language like Dyirbal, in which local pronouns receive nominative while 3rd-person pronouns receive ergative, the nominative-assigning T^0 head will be located between the "1/2" and "3" functional heads. A 1st-person pronoun will be generated low with ergative case features, but will be required to raise to the specifier of the 1/2-Phrase. Since the nominative-assigning T^0 head is located below 1/2 (in Dyirbal), the pronoun passes through it, thus receiving nominative case. A 3rd-person pronoun will raise to the 3P projection, crucially located *below* the domain of nominative case assignment. In a language which is consistently ergative, the

(39)

DP_{NOM} 1/2P 1/2' 1/2 TP T' T⁰_{NOM} 3P 3 ... vP DP_{ERG} ...

Turning to the variable assignment of case to objects, Merchant proposes an analogous mechanism lower in the tree, drawing on evidence from languages with Differential Object Marking (DOM), as discussed in detail in Aissen 2003 and below. In Hebrew, for example, only definite/specific objects are marked with overt accusative case:

[Givón 1978 in Aissen 2003]

– 24 –

marking, and thus do not immediately capture parallels between the different case marking on Hebrew definite and indefinite DPs and the different structural position of shifted objects in Yiddish.

(41) *YIDDISH*

- a. Maks hot **undz** gekent.
Max has **us** known
'Max knew us.'
- b. Maks hot **dos bukh** geleynt.
Max has **the book** read
'Max has read the book.'
- c. Maks hot geleynt **a bukh**.
Max has read **a book**
'Max has read a book.'

[Diesing 1997, via Merchant 2006]

This analysis has two apparent advantages. First, it correlates the different marking of subjects and objects with independently observed relative heights of nominative vs. ergative DPs, and accusative vs. absolutive DPs. Second, it unifies each half of the “binary split” in Dyirbal—that is, the choice of case assignment for **A** and **P** arguments—under a single system. In what remains of this section, however, we will question whether this unification is in fact the right move. This is based on the observation of a wide range of languages which provide the picture in (42). We return to the Dyirbal object split, which is apparently based on person features, below.

(42) *BINARY SPLIT GENERALIZATION*

In a *binary split* system...

- a. DSM: ERGATIVE marking of **A** is based on the presence or absence of 1/2 person features
- b. DOM: ACCUSATIVE marking of **P** is governed by definiteness, specificity, and animacy

Under approaches which unify DSM and DOM as part of a single system, we might expect to find splits in both DSM and DOM occurring in different points along the prominence hierarchy, repeated here:

(43) *PROMINENCE HIERARCHY* (Dixon 1994:85) [=(33)]

				<i>common nouns</i>
1st-person pronouns	2nd-person pronouns	demonstratives, 3rd-person pronouns	proper nouns	human >> animate >> inanimate
<—————more likely to be A than P —————>				

This, however, does not appear to be the actual state of affairs. Speaking of DSM, for example, Cocchi (2009:112) writes: “Intuitively we could expect the split to be found between humans and non-humans, or between animates and inanimates. Actually, no language places the split in such positions; most of them indeed single out 1/2 pronouns from the rest.”

On the flip-side, we find numerous languages in which DOM is controlled by definiteness and specificity, but exceedingly few where it is based on person distinctions. Woolford (2001) raises a similar concern with approaches which treat subject and object splits as parallel phenomena:⁹

“If [a unified approach is correct], we expect to find an equal diversity of types of subject and object splits in the world’s languages; however, that prediction is not borne out. Instead, there are very few kinds of subject splits, in contrast to an enormous diversity of object splits. For example, Comrie (1981:123) notes that while definiteness is frequently the basis of object splits, there is an embarrassing absence of clear attestations of the predicted marked indefinite subject”

[Woolford 2001:535]

Below we follow Woolford, who proposes that splits in object marking (i.e. accusative vs. unmarked) reflect differences in abstract case assignment mechanisms, and as such, are not limited to ergative systems (see also Aissen 2003, Goddard 1982).

4.3. DSM vs. DOM

While Dyirbal shows splits in the behavior of subjects and objects, in many languages described as having NP-based split ergativity, split person marking is governed only by features of the subject. An example of this is found in Halkomelem (Salish), where the split is seen in the form of the agreement markers on the predicate rather than the form of the noun-phrases themselves. In Halkomelem, 3rd-person subjects follow an ergative pattern: as seen in (44), transitive subjects trigger the agreement marker *-es*, but transitive objects and intransitive subjects do not.

(44) *HALKOMELEM (SALISH) – ERGATIVE PATTERN*

- a. q’ó:y-t-**es**_i [A te Strang]_i [p te sqelá:w]
kill-TRANS-3S DET Strang DET beaver
‘Strang killed the beaver.’
- b. í:mex [s te Strang]
walking DET Strang
‘Strang is walking.’

[Wiltschko 2006:197–199]

Wiltschko (2006) accounts for this split by arguing that 1st/2nd-person subjects are located in a higher position in the clause than 3rd-person subjects are; we return to this below.

1st/2nd-person subjects, in contrast, do not follow an ergative pattern: transitive subjects and intransitive subjects both trigger the agreement marker *-tsel*, while transitive objects still trigger no overt agreement marker.

(45) *HALKOMELEM (SALISH) – NON-ERGATIVE PATTERN*

- a. máy-t-**tsel**
help-TRANS-1SG.S
‘I help him.’
- b. yó:ys-**tsel**
work-1SG.S
‘I work.’

[Wiltschko 2006:197–199]

⁹On the “enormous diversity of object splits,” see the discussion below, and (57) in particular.

Mocho' is the only Mayan language to show a person split and the split again tracks whether subjects are local (1st/2nd-person) or non-local (3rd-person). As with the Mayan aspectual splits discussed above, the pattern it shows is again one of extended ergativity. In (46), we see the standard ergative pattern. However, as shown in (47), 1st- or 2nd-person subjects appear with the ergative prefix, even with intransitives (Larsen & Norman 1979, Palosaari 2011). As with Halkomelem, features of the object are apparently irrelevant.

MOCHO' (MAYAN)

- | | |
|---|---|
| <p>(46) a. x-muqu-Ø
 3ERG-bury-3ABS
 'He buried it.'</p> <p> b. maaqi-Ø
 go.up-3ABS
 'He went up.'</p> | <p>(47) a. ii-muqu-Ø
 1ERG-bury-3ABS
 'I buried it.'</p> <p> b. ii-maaqi
 1ERG-go.up
 'I went up.'</p> |
|---|---|
- [Larsen & Norman 1979]

Perhaps more common are languages in which the choice of ergative marking on the subject is governed by the 1/2-vs.-3 split, while marking of the object varies with definiteness, specificity, or animacy—that is, a language which shows both characteristics described in (42), above. In the Tibeto-Burman language Kham (discussed in DeLancey 1981 and Merchant 2006), for example, 3rd-person transitive subjects like the one in (48a) are marked with -e, while first and second person transitive subjects receive no marking (48b):

(48) KHAM (TIBETO-BURMAN)

- | | |
|--|--------------------------|
| <p>a. [A no-ye] [P la:] səih-ke-o
 he-ERG leopard.ABS kill-PRFV-3
 'He killed a leopard.'</p> <p>b. [A ŋa:] [P la:] ŋa-səih-ke
 I leopard.ABS 1-kill-PRFV
 'I killed a leopard.'</p> | <p>[Watters 2002:66]</p> |
|--|--------------------------|

As in Dyirbal, independently of subject marking, objects also may be marked or unmarked. In Kham, however, while the subject marking tracks the difference between 1st/2nd- vs. 3rd-person subjects, the object marker tracks *definiteness*. The “objective” suffix -lai occurs on all definite **P** arguments, but is absent on indefinite **P** arguments and is also absent from **S** arguments. As with Dyirbal above, the two systems operate independently of each other:

“In a language like Kham it is not enough to say that ergative-absolutive case marking occurs with 3rd person participants and nominative-accusative (nominative-objective) marking occurs with 1st and 2nd person participants. The two systems overlap in such a way that, under the right conditions, nominative-absolutive (two zero marked categories), and ergative-objective (two morphologically marked categories) are also possible”

[Watters 2002:68]

An example where both subject and object are marked is given in (49), and the pattern is summarized in (50):

- (49) [A gē:h-ye] [p ŋa-lai] duhp-na-ke-o
 OX-ERG I-OBJ butt-1-PRFV-3
 ‘The ox butted me.’

[Watters 2002:68]

- (50) *KHAM* (Watters 2002)

	1/2 pronouns	3 pronouns & definite nouns	indefinite nouns
A	-Ø	-(y)e	-(y)e
S	-Ø	-Ø	-Ø
P	-lai	-lai	-Ø

Balochi (NW Iranian) displays both an aspectual split and a person split. Dedicated marking (*ergative*) appears on **A** arguments only when the **A** argument is 3rd-person and only in the perfective aspect (Farrell 1995). (Note that while the glosses are given as “PST”, Farrell discuss this as a split in terms of aspect.) As the perfective examples in (51) illustrate, the 3rd-person **A** appears with the suffix *-a*, while the absolutive **P** and **S** arguments are unmarked.

- (51) *BALOCHI* (NW IRANIAN)

- a. [A jinik-a] [p dar]_i dist-ā_i
 girl-ERG wood.PL.ABS see.PST-3PL
 ‘The girl saw (some) wood.’

- b. [s jinik]_i ∫_o_i
 girl.ABS go.PST.3SG
 ‘The girl went.’

[Farrell 1995]

Transitive objects may also be marked dative, depending on definiteness (called “identified accusative”, in the study of Balochi). This does not affect the marking on the subject, as can be seen in the contrast between (51a) and (52). The verb does not agree with arguments marked ergative or dative (just as in Hindi, discussed earlier).

- (52) *BALOCHI – DIFFERENTIAL OBJECT MARKING*

- [A jinik-a] [p dar-anā] dist
 girl-ERG wood-DAT see.PST
 ‘The girl saw the wood.’

[Farrell 1995:224]

As the examples below illustrate, non 3rd-person subjects (53a) and subjects of non-perfective clauses (53b) do not receive ergative marking.

- (53) a. [A mən] [p tə-ra] gitt
 I.ABS you-DAT catch.PST
 ‘I caught you.’
 b. [A bəci] [p jinik-a] jənā
 boy.ABS girl-DAT hit.PRES
 ‘The boys hit the girl.’

[Farrell 1995:224]

The same kind of pattern is also found in Cashinawa (Panoan), described in Dixon 1994. As the table in (54) shows, the split in the marking of **A** arguments divides local from non-local persons, while for objects the distinction is between pronouns (regardless of person) and all other nouns.

(54) CASHINAWA (Dixon 1994:86)

	1st/2nd-person pronouns	3rd-person pronouns	other nouns
A	-Ø	<i>habũ</i>	NASALIZATION
S	-Ø	<i>habu</i>	-Ø
P	-a	<i>haa</i>	-Ø

Finally, even among Australian languages, not all languages exhibit the Dyirbal pattern—a pattern which has been described in terms of both **A** and **P** markings being sensitive to the same featural distinction of 1st/2nd-person vs. 3rd-person (a view which we challenge, even for Dyirbal, below). In Duungidjawa (Pama-Nyungan), for example, all subjects are marked ergative, but accusative appears only on “proper nouns, all common nouns with human reference, and just a few common nouns with non-human reference” (Dixon 1994:86).

4.4. Separating DOM from ergativity, and a new take on Dyirbal objects

As we hope to have shown throughout section 4.3, the situation described for Dyirbal—in which both subjects and objects are said to be sensitive to the distinction between 1st/2nd-person and 3rd-person—is not well represented cross-linguistically. Rather, as argued by Woolford (2001), most subject splits are sensitive to local vs. non-local person, while object marking is sensitive to definiteness/specificity and animacy—as schematized in (55), repeated from earlier:

(55) BINARY SPLIT GENERALIZATION

[=(42)]

In a *binary split* system...

- a. DSM: ERGATIVE marking of **A** is based on the presence or absence of 1/2 person features
- b. DOM: ACCUSATIVE marking of **P** is governed by definiteness, specificity, and animacy

The observation that the differential marking of objects in these languages is independent of (split) ergativity is perhaps best articulated by Goddard (1982), in his survey of case marking in Australian languages. Goddard cites Hopper & Thompson (1980), who discuss the role of *individuation* in special accusative marking in a variety of languages, a notion which “refers both to the distinctness of the patient from the **A** and to its distinctness from its own background” (Hopper & Thompson 1980:253). According to Hopper & Thompson, noun-phrases with properties listed on the left of the table in (56) are more highly *individuated*—and thus more likely to receive special accusative marking—than those on the right (recall also the discussion of Tsunoda’s 1981 ‘EF-CON’, in §3.2 above):

(56)	INDIVIDUATED	NON-INDIVIDUATED
	proper	common
	human, animate	inanimate
	concrete	abstract
	singular	plural
	count	mass
	referential, definite	non-referential

Goddard discusses object marking in a number of Australian languages, concluding:

“My key point is simply that Hopper & Thompson clearly establish that special accusative marking tends to occur with proper nouns, human and animate nouns, and definite, referential usages *in many language families*. **There is no reason to link this phenomenon when it occurs in Australian languages with the incidental fact that Australian languages have ergative case**”

[Goddard 1982:191, *emphasis added*]

A similar point is articulated by Aissen (2003), who surveys the features DOM is sensitive to in order to provide an Optimality Theoretic ranking of constraints. She provide the following representative examples of the relevant types of features:

(57) *FEATURES OF DOM* (Aissen 2003:450)

Kalkatungu (Pama-Nyungan)	no objects case-marked
Catalan (Romance)	only pronouns case-marked
Pitjantjatjara (Pama-Nyungan)	only pronouns and proper names case-marked
Hebrew (Semitic)	only pronouns, proper names, and definite objects case-marked
Turkish (Turkic)	all objects except non-specifics
Japanese	all objects case marked

Note first that none of these attested “splits” in object marking makes reference to person features per se; and second, the list of languages includes both ergative (e.g. Pitjantjatjara) and non-ergative (e.g. Turkish) ones. An example from Hebrew was given in (40), above; Catalan examples are provided in (58).¹⁰ Pronouns such as the 3rd-person pronoun in (58a) are preceded by *a*, while all other nouns are not (as in (58b)).

(58) *CATALAN*

- a. [p A ell] no el vull.
ACC 3SG.MASC NEG CL I.want
‘Him, I don’t want.’

[Vallduví 1992:76]

- b. No havien vist [p l'alcalde].
NEG they.have seen the.mayor
‘They had not seen the mayor.’

[Comrie 1979:15]

¹⁰Comrie (1979) originally described the Catalan object split as one in which only 1st/2nd-person pronouns, but not 3rd-person ones, were marked with *a*; Aissen (2003:451) (citing other work) shows that the Catalan split is actually between all strong personal pronouns, on the one hand, and all other nouns, on the other.

Returning to Dyirbal, the behavior of objects in Dyirbal has been described as a split between 1st/2nd-person objects and 3rd-person ones (i.e., the same distinction relevant to the marking of Dyirbal subjects, as discussed earlier). Taken at face value, this would counter-exemplify the generalization given in (55) above, which states that only *subject* splits are sensitive to person distinctions proper. However, this description of Dyirbal is not unambiguous, since Dyirbal simply lacks 3rd-person pronouns. Trivially, then, the split in object marking can be described either in terms of person features (namely, 1st/2nd-person vs. 3rd-person), or in terms of pronouns vs. non-pronouns (just like Catalan object marking). One is therefore free to assume that the Dyirbal object split is not about person features at all, but rather pronominality—and thus, completely in line with (55) and (57).

To be fair, the same could be said about subjects in Dyirbal; that is, since there are no 3rd-person subject pronouns either, one could describe the subject split in terms of pronominality as well (rather than person features, as we, as well as most every other author discussing Dyirbal, have done). Our point is not that there are Dyirbal-internal reasons to view the subject split as person-based, and the object split as pronominality-based—but simply, that if such a generalization were proposed, Dyirbal would not in fact falsify it.

We therefore assert, without loss of generality, that pronouns in Dyirbal appear with a special accusative marker, while common nouns do not. This is, in fact, not an unprecedented view of Dyirbal; in other work, Dixon (1972:43) describes the split in exactly this way: “Proper and some common nouns (usually just those referring to humans) can take the suffix *-na*, but only when they are in transitive object function”; see also Legate 2008a. Dyirbal’s binary split system can thus be seen analogously to that of Kham: subjects track local vs. non-local person, while objects participate in run-of-the-mill DOM.

As with the conative alternations discussed in section 3.2, we offer no new account of the formal or functional mechanisms underlying DOM; see Aissen 2003, Comrie 1979, Diesing 1992, Enç 1991, Torrego 1998, inter alia, for relevant proposals. We simply emphasize that (i) the differential marking of objects is independent of the ergative vs. non-ergative marking of subjects; (ii) it can be maintained that NP-based “split-ergativity” (i.e. the absence of ergative marking on certain A arguments) tracks different features from those relevant to DOM. As with complex structure in a progressive (§3.1), or demoted objects in a conative-type alternation (§3.2), the differential marking of objects is not dependent on ergativity, and not a necessary part of split-ergative systems.

It is worth pausing to compare this differential marking of objects to the oblique/non-oblique object alternations found, for example, in Georgian (§3.2, above). Recall that objects of verbs lower on Tsunoda’s ‘EF-CON’ scale appeared with oblique case-marking, thus rendering the subject intransitive. In a nominative-accusative system, this does not trigger a so-called “split”, because in a nominative-accusative system, *the case-marking on the subject does not change when the object is demoted*. Here, on the other hand, the object does not alternate between an oblique and non-oblique form, but rather between accusative and unmarked.

These two types of split patterns are summarized in (59), below. The DOM pattern discussed in this section, and illustrated in the second row of (59), does not alter the transitivity of the clause—perhaps unsurprisingly, given that we are not dealing with oblique marking—and thus can be argued to be independent of subject marking, which is the crux of the argument in this section: a separation of DOM from split ergativity.

(59)		ERGATIVE	SPLIT
	Georgian	A-ergative P-absolutive	A-absolutive P-oblique
	Kham	A-ergative P-absolutive	A-ergative P-accusative

Having separated DSM from DOM, and attributed DOM to factors independent of ergativity, we have narrowed the scope of inquiry to the behavior of subjects. We turn in the next section to a more detailed examination of the differential marking of ergative vs. non-ergative subjects and a proposal for how to account for these.

4.5. A clausal bifurcation analysis of person splits

In this section, we propose an analysis for the split between local and non-local subjects seen above, drawing on the proposal briefly presented in Coon & Preminger 2012. Crucially, with person splits—just as with the aspectual splits discussed in §3, above—*ergative* and *non-ergative* patterns are each aligned to a single side of some fixed hierarchy (i.e. of aspects, or of person features), in a cross-linguistically stable way. The proposal put forth in Coon & Preminger 2012 is that in both aspectual and person-based splits, one end of this fixed hierarchy triggers a more complex syntactic structure; and that this added structure disrupts the normal transitive case calculus, resulting in a non-ergative pattern.

The resulting picture is one in which languages consistently follow either an accusative pattern or an ergative pattern of marking core arguments (modulo factors such as DOM and verb splits, discussed above).

For example, the Basque progressive transitive in (60) (repeated from earlier) has a structure in which the bracketed clause is embedded under the aspectual auxiliary *ari*. Here, ergative marking does not appear on the subject because the subject is *not a transitive subject*, but is instead a subject of the intransitive aspectual auxiliary, *ari*.

- (60) emakume-a [ogi-a ja-te-n] ari da.
 woman-ART.ABS bread-ART.ABS eat-NML-LOC PROG AUX(be)
 ‘The woman is eating the bread.’ [=(17a)]

As discussed in section 3.1, this bifurcation analysis predicts the lack of ergative marking on the subject in an example like (60) whether one adopts a theory of ergative as *dependent case* (as in Marantz 1991), or as case assigned by functional heads that select only transitive verbs (Aldridge 2004, Legate 2008b).

4.5.1. ParticipantP

If this type of clausal bifurcation is to also account for the lack of ergative morphology on first and second person A arguments, the question we must then ask is: What is it about 1st/2nd-person (i.e., local) arguments, that would entail additional structure? Here we draw on converging work

from several domains arguing that the appearance of a 1st/2nd-person DP must be licensed by an appropriate functional projection in the clause.

Consider, for example, the *Person Case Constraint* (PCC). As a first approximation, the PCC is a prohibition against a 1st/2nd-person direct object in the presence of an indirect object—i.e., “direct objects of ditransitives must be 3rd person”. But if one looks at accounts of the PCC, one finds that what they actually rule out is not 1st/2nd-person arguments per se, but rather 1st/2nd-person *object agreement*, or 1st/2nd-person *object clitics*. Left as it is, this would (falsely) predict that a 1st/2nd-person strong pronoun in direct object position of a ditransitive would be fine, provided that the finite verbal element carried agreement morphology corresponding to the direct object that expressed 3rd-person features.

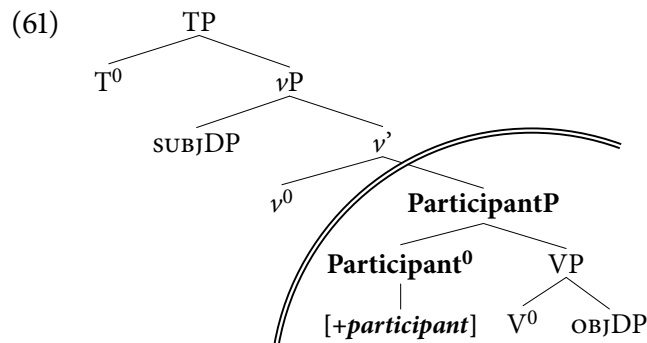
These proposals are then commonly supplemented with a stipulation requiring local pronouns to be *licensed*; for example:

“The system as it stands will automatically derive PCC effects with the addition of the following *Person Licensing Condition* (PLC) axiom: An interpretable 1st/2nd person feature must be licensed by entering into an Agree relation with a functional category”

[Béjar & Rizac 2003:53]

A similar conclusion is reached by Sigurðsson & Holmberg (2008); see also Nichols 2001, for the argument that person/animacy hierarchy effects arise as the result of interactions among functional projections that license the various arguments, as opposed to direct comparison among the arguments themselves.

The presence of a 1st/2nd-person pronoun in the clause thus necessitates the presence of a corresponding functional projection on the clausal spine. Suppose this functional projection—call it *ParticipantP*—were to disrupt the case calculus, in a manner similar to the additional structure involved in the Basque progressive, above. The result would be that in a language whose core alignment is ergative, the presence of a 1st/2nd-person pronoun would result in a ‘shift’ out of the normal ergative pattern in exactly the same way outlined for aspectual splits, in §3.1:



Again, such clausal bifurcation would result in the absence of ergative marking regardless of the theory of case-assignment adopted.

Some discussion is in order regarding the structure in (61). As it stands, ParticipantP is located below the [Spec,νP] position of the subject DP. This raises the question of how exactly this DP could enter into the requisite licensing relation with the Participant⁰ head. There are several options here, which we will not conclusively adjudicate among, and which are not even mutually exclusive. First, it might be the case that the subject is actually base-generated even lower than [Spec,νP] (or more

to the point, lower than the position in which ergative case is assigned); see Preminger 2012, Rezac, Albizu & Etxepare 2011, Roberts 2010, for arguments to that effect. Second, it might be the case that Participant⁰ can license a 1st/2nd-person subject that is not in its direct c-command domain, for instance via Béjar & Rezac’s (2009) *Cyclic Expansion* mechanism (in which case, it might make sense to collapse what we annotate as ν^0 and Participant⁰ into a single syntactic head).

As we do not, at this time, have any data that bear directly on this particular detail of the implementation, we leave it open for future research.

Crucially, as was the case with aspectual splits (§3.1), this analysis is able to account for the universal *directionality* of person-based split ergativity. As observed earlier, if in a given ergative language, any type of NP triggers a “split” out of the ergative alignment, it will be 1st/2nd-person pronouns. The current proposal rests on the observation, exemplified by Béjar & Rezac’s (2003) *PLC*, that it is 1st/2nd-person pronouns—and not the complement set, of 3rd-person nominals—that must stand in a particular licensing relation with an appropriate functional category. This observation is again not related to ergative languages in particular, and in fact comes primarily from an examination of Person Case Constraint effects in languages most of which are nominative-accusative. But given that it is 1st/2nd-person pronouns that require this licensing, it is those arguments whose appearance will coincide with additional structure (labeled *ParticipantP*, here); and it is therefore these configurations that will, in the event that *ParticipantP* is syntactically opaque, result in bifurcation of the clause, and in what looks like a “split” out of ergative alignment.

Finally, as with the aspectual splits explored in section 3, there is no necessity that 1st/2nd-person *ParticipantP* be syntactically opaque in *every* language; and an ergative language in which *ParticipantP* is not opaque will simply exhibit no NP-type/prominence-based split ergativity.

4.5.2. Auxiliary selection

As with the added structure associated with certain non-perfective aspects (§3.1), here too the presence of *ParticipantP* is not limited to ergative systems. Coon & Preminger (2012) propose that this system can be used to account for the auxiliary selection splits found in certain Romance dialects, in which auxiliary alternations are constrained by person features of the subject (D’Alessandro & Roberts 2010). In the relevant auxiliary split cases, *have* is used with 3rd-person subjects, while *be* is used with 1st/2nd-person subjects, as shown for Abruzzese in (62):

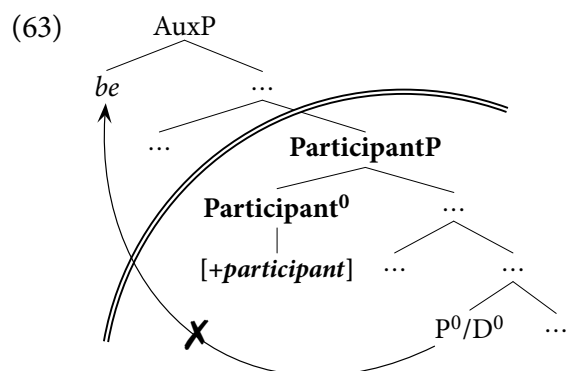
(62) ABRUZZESE

- a. Ji **so**’ magnate.
I am eaten.SG
‘I have eaten.’
- b. Esse **a** magnate.
she has eaten
‘She has eaten.’

[D’Alessandro & Roberts 2010:54–55]

Perhaps the most well-known approach to the *have/be* alternation is that *have* comes about as the result of ‘synthesis’ or ‘incorporation’ of another particle in the clause into *be* (Benveniste 1966, 1971, Freeze 1992, Kayne 1993). It is well-established that processes such as incorporation are disrupted by the presence of a functional projection in between the source and target positions. For example: N^0 can incorporate into V^0 in a $[V [_{NP} N]]$ configuration; but not in a $[V [_{DP} D [_{NP} N]]]$ configuration

(see, e.g., Baker 1988). We propose that the presence of a boundary-inducing ParticipantP projection in the clause will—at least given certain assumptions regarding the relevant clause structure, as shown below—disrupt incorporation of the relevant element into *be*:



On this view, person-conditioned auxiliary selection is a matter of **disruption**, of an otherwise attested process of synthesis/incorporation (as shown in (63)). Further support for this view comes from several Central/Southern-Italian dialects, where unlike in Abruzzese, 3rd-person subjects trigger the familiar transitivity-based *have/be* alternation, while 1st/2nd-person subjects still give rise to invariant *be*: Colledimacine, Torricella Peligna, Borgorose-Spedigno, Amandola, Ortezzano, and Tufillo (see D’Alessandro & Roberts 2010, and references therein).

Given our proposal, it is possible that when ParticipantP is absent or projects no locality boundary (i.e., in the absence of an 1st/2nd-person subject), incorporation into *be* will still be subject to other conditions—such as the transitivity-based conditions familiar from Standard Italian. Crucially, however, the presence of a boundary-inducing ParticipantP will **disrupt** any such alternation, resulting in a non-alternating auxiliary form in the presence of a 1st/2nd-person subject, exactly as attested.

4.5.3. Is DSM always about person?

The above account offers an analysis of subject splits which divide 1st/2nd-person subjects from all other subjects. This is true not only in canonical instances of *split ergativity*, but also in Romance auxiliary splits, which we have argued result from the same underlying clausal bifurcation. We must now ask: does the split between ergative and non-ergative marking of subjects always follow the local (1st/2nd-person) vs. non-local (3rd-person) distinction? The examples above—from Mocho’, Halkomelem, Balochi, Dyirbal, Kham, and Cashinawa would lead us to believe so. The only counter-examples we have been able to locate come from the Pama-Nyungan group (the same family as, e.g., Dyirbal), and both involve a split between pronouns and all other nouns. Aissen (2003:473) notes, for example, that in Guugu Yimidhirr (Pama-Nyungan) “all transitive subjects are overtly marked except personal pronouns (Haviland 1979)”. Similarly, in Aranda (Pama-Nyungan), Blake (1977) (discussed in Aissen 1999a) describes a split which divides second person pronouns, on the one hand, from first and third person pronouns and common nouns, on the other.

Interestingly, Goddard (1982), citing Dixon 1980, presents a historical and phonological motivation for the absence of ergative marking on some pronouns in Australian languages. Dixon (1980) reconstructs the contemporary “nominative” pronoun forms as having originally been the ergative forms. A phonological constraint requiring all words to be at least bisyllabic led to the loss

of the original nominative forms (which had been monosyllabic), leading to the nominative/ergative syncretism in pronouns. As [Goddard \(1982\)](#) notes, “on this historical interpretation, the homonymy of ergative and nominative 1sg and 2sg in many Pama-Nyungan languages is explained without taking recourse to any universal property of 1st and 2nd person pronouns.” Given the Aranda pattern, this may indeed be desirable. A similar approach to Pama-Nyungan split ergativity is formalized by [Legate \(2008b\)](#), who argues that subjects receive the same abstract case regardless of whether they are local or non-local, and behave in a syntactically uniform way; the apparent split lies simply in the fact that there is no distinct realization for ergative in certain pronouns (though on this view, it is an accident that this split shares the same *directionality* as the syntactically-driven ones; see the discussion of (33), above).

5. Summary and conclusions

This article has aimed to accomplish two main goals. **First**, by bringing together a wide range of empirical work on split ergativity, we hope to have shed light on the diversity of these systems. In [section 3](#) we argued, following [Coon 2012](#), that aspectual splits are triggered by at least two distinct factors: added structure in non-perfective aspects, and demotion of the object, resulting in detransitivization. For person splits, in [section 4](#), we showed that a general “prominence scale” over-generates in terms of the attested range of splits: while subjects split along the lines of local vs. non-local persons, objects are sensitive to typical *Differential Object Marking* categories of definiteness/specificity and animacy.

Previous surveys group together languages which in fact show rather different patterns when examined more carefully. The problem is compounded by the fact that many—if not most—languages which exhibit split ergativity are under-documented and in many cases endangered. However, the increased interest in ergativity has resulted in a number of rich descriptive and empirical accounts. Cavineña (Tacanan, spoken in Bolivia) was described in [Camp 1985](#) as having an extremely complex split system, conditioned by four distinct factors; more recently, [Guillaume \(2006\)](#) has shown that this in fact boils down to a distinction between bound and free pronominal forms. Work of this sort has made the present study possible.

It may well turn out to be the case that more detailed investigations reveal that there are other languages which do not cleanly fit with the proposal outlined above;¹¹ but we leave as a working hypothesis the idea that the splits we have seen up to this point *do not involve mechanisms or featural specifications different from those found in nominative-accusative languages*.

The **second** goal of this paper has been to argue that split ergativity—of both the aspectual sort and the NP-type/prominence-based sort—is epiphenomenal, and reduces to independently

¹¹One such problematic case, brought to our attention late in the course of writing this paper, involves patterns of apparent DOM that are sensitive to person features per se, rather than the canonical DOM features discussed in §4.4. Roberta D’Alessandro (p.c.) points out that in the Italian dialect Ariellese, an *a* marker is added to 1st/2nd-person object pronouns, but not to the ‘unmarked’ 3rd-person pronoun *esse* (Ariellese also has a system of proximate/medial/distal 3rd-person demonstratives, all of which apparently marginally tolerate the *a* marker). A similar though non-identical system, involving optionality of *a* with 3rd-person pronouns (but obligatoriness of it with 1st/2nd-person ones) is reported by [Manzini & Savoia \(2005\)](#) for the Canosa Sannita dialect.

While nothing in our account specifically rules out person-sensitive DOM, the overwhelming tendency of DOM to be based on other features (in contrast to DSM, which is frequently—perhaps always—based on person distinctions) was important in arguing that DOM should be factored out of the discussion of NP-type/prominence-based split ergativity.

observable structural differences; and that these structural differences are not limited to ergative systems, in the first place. The absence of ergative marking on (what appears) to be a transitive subject is in all cases connected to a *bifurcation* in the clause: the subject is separated from the object, rendering it effectively an intransitive subject. Three factors accounted for this bifurcation:

- (64) I. non-perfective aspects are frequently built on complex constructions involving an aspectual auxiliary; the object is in an embedded clause (§3.1)—*Basque, Tsez, Gujarati*
- II. imperfectivity is associated with reduced transitivity, along the lines of *Tsunoda 1981*, resulting in a demoted or oblique object (§3.2)—*Georgian, Tongan, Warrungu*
- III. first and second person subjects must be licensed by a phrase, *ParticipantP*, which serves as a boundary for case assignment (§4.5)—*Dyirbal, Kham, Cashinawa*

As noted, none of these factors is limited to ergative languages, in the first place. Rather, the issue boils down to the defining characteristic used by linguists to distinguish ‘ergative systems’ and ‘accusative systems’ from one another. The simple fact that both transitive and intransitive subjects receive the same marking (nominative) in an accusative system obscures the fact that some subjects may be in a sense *intransitive* (e.g. in the presence of a complex progressive aspectual construction, a demoted object, or phasal *ParticipantP*).

A switch from a transitive to an intransitive subject (as in English *John shot the bear* vs. *John shot at the bear*, for example) does not catch our attention as readily in an accusative system as it does in an ergative one. As noted above, this analysis gives us a handle on the seeming paucity of consistently ergative languages, compared to consistently accusative languages—an asymmetry which on the current view is rather superficial, and has more to do with terminology than any significant grammatical difference.

Furthermore, the proposed analyses of both aspect-based and NP-type/prominence-based split ergativity are able to account for the universal *directionality* of these splits—namely, the fact that ergative-absolutive alignment and nominative-accusative alignment each remain anchored, cross-linguistically, to fixed ends of the relevant scale (be it an aspectual scale or an NP “prominence” scale). That is because in both domains (aspect and NP-type), there is independent evidence that the values on one end of the relevant ‘scale’, but not the other, are cross-linguistically associated with additional syntactic structure (in ergative languages and accusative ones alike). It is this additional structure, on the current account, that is responsible for the relevant bifurcation of the clause, in those languages where the added structure happens to be syntactically opaque; and it is this bifurcation that results, in a language that is ergative to begin with, in the appearance of a split.

While we make no new proposals about why some languages display an ergative pattern, while others display a nominative one, the resulting picture is one in which a given language consistently exhibits one or the other pattern, at least as far as the core principles of case assignment. There is no “split” in the set of case-assignment rules or principles operative in the language as a whole. Different constructions may result in detransitivization, as discussed above, this is not specific to ergative systems. This demystification of split ergativity contributes to a growing body of work suggesting that there is no ergative “macro-parameter”, which would group together ergative and split-ergative languages under a single setting, which would stand in opposition to fully accusative languages; rather, ergativity may be tied to a single functional head (e.g. inherent case from v^0), with room for variation in other domains: e.g. *Aldridge 2004, Legate 2008b* on case assignment to absolutive DPs;

Coon, Mateo Pedro & Preminger 2011 on syntactic ergativity. Furthermore, this casts doubt on the proposal that there is anything especially “marked” about ergativity (cf. van de Visser 2006).

Finally, the analysis of split ergativity proposed here does not rely on any specific theory of case-assignment or agreement. Whatever mechanism derives the difference between ergative marking on A arguments and absolutive on S arguments will suffice to account for the splits discussed here.

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