

Research Master Thesis

Charlotte Lindenberg

June 2015

Deconstructing ergativity

A fine-grained analysis of ergativity phenomena

Student

C. G. Lindenberg
s1688251

Contact details

c.g.lindenberg@rug.nl

Program

Research Master Language and Cognition
University of Groningen

Supervisors

1st supervisor: prof. dr. C. J. W. Zwart
2nd supervisor: dr. M. E. Kluck

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Abstract

This thesis is a theoretical and typological investigation into the morphological and syntactic patterns that are classified in the literature as ‘ergative’. Originally, ergative is the name given to the case on the transitive subject when the object and intransitive subject are treated different. However, the term ergative is often used to classify languages as a whole, and to set these languages apart from the group of languages that pattern according to a nominative-accusative system. In this thesis, it is claimed that classifying languages using ‘ergativity’ as classifying feature has no theoretical merit, because the term ergativity has come to indicate a vast amount of quite different linguistic patterns. A number of languages are discussed that show that there is a large variety between languages that have been classified in the literature as ergative, showing the arbitrariness of using the feature ergative to typologically group these languages together. It is concluded that we cannot speak of an ‘ergative system’, only of a variety of patterns involving either morphological or syntactical ergativity. The discussion of these languages and a closer look at their case-marking and agreement patterns further shows that the current alignment typology, which distinguishes five different alignment types, is not fine-grained enough to cover the attested variation. A new fine-grained alignment typology proposed by Zwart and Lindenbergh (2015) is discussed as a good alternative to Comrie’s five-way alignment typology and a possible new definition of ergativity based on this typology is given. It is then discussed how we can use this new alignment typology to renew the investigation of universal implications about the cross-linguistic distribution of alignment patterns. A case study of the language Nez Perce shows that applying the new alignment typology can lead to a different typological classification of case-marking and agreement patterns. This case study of Nez Perce further shows how future typological research can use the new alignment typology in order to get a better and more detailed view of alignment patterns cross-linguistically.

Abbreviations

∅	Null element
1	First person
2	Second person
3	Third person
3/3	Third person subject and third person object agreement
A	Subject of transitive clause
ABS	Absolutive
ACC	accusative
AF	Agent focus
AOR	Aorist
APPL	Applicative
ASP	Aspect marker
AUX	Auxiliary
CAUS	Causative
CISLOC	Cislocative
CL	Clitic
CONJUNCT	Conjunct marker
DEM	Demonstrative
DET	Determiner
DETRANS	Detransitivizer
DISJUNCT	Disjunct marker
ERG	Ergative
EVIDENTIAL	Evidential marker
F	Feminine
FUT	Future
HAB	Habitual
HON	Honorific
IMPERF	Imperfective
IRR	Irrealis
ITV	Intransitive verb
LOC	Locative
M	Masculine
NEG	Negative
NF	Non-finite verb form
NFUT	Non-future
NOM	Nominative
NONTHEME	Nontheme marker
NPAST	Non-past
O	Direct object
OBJ	Object
PAST	Past tense
PERF	Perfective
PL	Plural number

PRES	Present tense
PRO	Zero pronominal element
PROG	Progressive
PRT	Particle
REM.PAST	Remote past tense
RP	Resumptive pronoun
S	Subject of intransitive clause
SG	Singular number
S ^I	Subject of intransitive clause
S ^T	Subject of transitive clause
SUBJ	Subject
THEME	Theme marker
TR	Transitive
TV	Transitive verb
V	Verb

1 Introduction

Natural languages have different ways of grouping the main grammatical functions, such as subject and object, of transitive and intransitive sentences. This grouping is referred to as alignment, and various alignment types have been identified in the literature. This grouping of grammatical functions pertains to how morphological and syntactic processes within a language refer to the three different elements of transitive and intransitive sentences. These elements are:

- (1) *Three elements of transitive and intransitive sentences*
 - a. The subject of transitive clauses
 - b. The subject of intransitive clauses
 - c. The direct object of transitive clauses

How these three elements are grouped together determines the alignment type of a particular process such as case marking or agreement.

This thesis investigates the ergative alignment type, which is different from the more familiar accusative alignment type, and which has received a lot of attention in both typological and theoretical linguistic literature. The difference between the ergative and accusative alignment types lies in the behavior of the intransitive subject (1b). In accusative languages the intransitive subject patterns with the transitive subject (they are treated the same), to the exclusion of the object, which is treated differently. An example of this pattern in case marking is given in the Latvian (Eastern Baltic, Indo-European) example sentences in (2) and (3).^{1,2}

- (2) Putn-s lidoja.
bird-NOM fly.PAST.3
'The bird was flying.'
- (3) Bērn-s zīmē sun-i.
child-NOM draw.PRES.3 dog-ACC
'The child was drawing a dog.'

(Comrie 2013a)

What we see in these examples is that the subjects of the intransitive and transitive sentence receive the same case marker, namely the nominative, while the object of the transitive clause receives a different case, namely the accusative.

If we group the subject of the intransitive clause not with the subject of the transitive clause, but instead with the object, we get the ergative alignment type. This is exemplified below, again with case marking, in the language Niuean (Polynesian, Austronesian).

¹ Glossing of examples is mostly in line with the Leipzig Glossing Rules. Examples taken from the literature are adapted for clarity purposes where necessary. For abbreviations used in the glosses, see the list of abbreviations.

² Information about the languages discussed in this thesis is taken from the articles cited where possible, sometimes additional information from Ethnologue (2015) is given.

- (4) Kua nofo e tua fānau i Niue.
 PERF live ABS PL children in Niue
 ‘The children lived in Niue.’
- (5) Kua fakaaoga he tau faiaoga e vagahau Niue.
 PERF speak ERG PL teacher ABS language Niue
 ‘The teachers spoke the Niuean language.’

(Polinsky 2014, 3)

In this language the subject of the transitive sentence is preceded with an ergative case marker *he*, while the other two elements—subject of the intransitive sentence and object—are preceded by the marker *e*. Absolutive is the name for the case given to the object and the subject of the intransitive sentence.

While ergative was originally the term for the case marker singling out the transitive subject, it is often used to classify languages as a whole, and subsequently to set these languages apart from languages with other alignment types. In this respect ergative languages are sometimes perceived as the mirror image of accusative languages, where both language types not only differ in their morphology but also in their syntax. In light of this view, a number of syntactic analyses explaining ergative patterns have posited a parameter either in syntax or in the morphological component that determines whether a language is ergative or accusative (Bok-Bennema 1991; Marantz 1991; Bobaljik 2008).

However, at the same time it is clear that languages with ergative patterns display a lot of variety. Alignment is not only about case marking, and ergative or accusative patterns are also found in agreement morphology (verbal alignment), but also in syntactic processes, such as control phenomena and constraints on A'-movement. Looking at all these different patterns we find that languages often display ergativity only in a subset of these phenomena, while at the same time they also have accusative alignment patterns (Anderson 1976; Comrie 1978). This so-called split ergativity is not only attested between different grammatical or morphological processes, but crucially also within the same process. On the other hand, languages that are classified as accusative often have some processes that align participating elements in an ergative way (Moravcsik 1978; Queixalós 2013).

The goal of this thesis is to examine the variation in ergative patterns to see whether it is justified to group all languages with ergative patterns somewhere in their grammar or morphology to give a unified analysis of ergativity. This follows up on some proposals in the literature that critique the above described way of looking at ergativity and hypothesize that ergative patterns display too much variation to indicate a single ergative system (DeLancey 2004; Gildea 2014). Crucially, DeLancey claims that ergativity is merely a superficial feature that we cannot use to define a theoretically interesting set of languages.

This thesis first gives a broad overview of the most prominent literature on ergativity and describes the standard view of ergativity in chapter 2. Here the ergative pattern is exemplified in more detail, and its manifestations in case marking, verbal agreement and syntactic patterns are discussed. Chapter 2 also illustrates the phenomenon of ‘split-ergativity’ and it ends with a brief overview of the typological distribution of ergativity and some universal generalizations that have been made

about this distribution. Chapter 3 then introduces the research questions of this thesis, based on the broad goal described above. The rest of the thesis answers these research questions in the below described way.

By looking more closely at various ergative patterns that are described in the literature it is shown in chapter 4 that there is indeed too much variation to give a unified analysis to ergative phenomena. This chapter furthermore shows that the current alignment theory and the standard definition of ergativity are not sufficient to describe the attested amount of variation and give a too simplistic view of alignment patterns in natural languages. Chapter 5 then introduces an alternative definition of ergative properties as proposed by Deal (2015). This definition discerns three ergative properties instead of one. It is argued that this is still not sufficient to explain the variation, but that it opens the door to an even more fine-grained conception of alignment patterns. The rest of chapter 5 introduces a new fine-grained alignment typology as proposed by Zwart and Lindenbergh (2015). This typology includes 18 alignment types instead of the five alignment types of the standard alignment typology. Based on this new typology, section 5.3 introduces a new definition of ergativity and accusativity. With this new typology and new definition it is possible to re-examine the universal constraints on ergative variation that are proposed in the literature. Chapter 6 starts with this task and sketches how this universal can be investigated anew to propose proper generalizations based on the actual amount of attested variation. Chapter 7 is a case study of Nez Perce, a language classified in the literature as tripartite ergative (Deal 2010a; 2014; Comrie 2013a). A detailed investigation of this language with the new alignment typology in mind shows how the more fine-grained alignment typology can be used and how this results in a different classification of this language. Chapter 8 then concludes this thesis.

2 Review standard analyses

This chapter discusses the standard conception of ergativity as found in influential literature from approximately the last 35 years, and gives examples from a number of different languages to illustrate the different ergative properties. The tradition when talking about ergativity is to group all languages that show ergativity in some part of their grammar together under the header of ‘ergative languages’ and treat them differently from languages that do not show any ergative patterns. This leads to a point of view where ergative languages are contrasted to languages that have nominative-accusative case-marking patterns. As mentioned in the introduction, the most prominent ergative feature is case marking. Section 2.1 discusses the ergative properties as manifested in case-marking systems, but first explains the basic notion of ergativity and gives a brief history of research on ergativity. In section 2.2 ergativity patterns outside case-marking systems, namely within the verbal agreement system and within syntactic processes, are discussed. Section 2.3 focuses on a peculiar characteristic of ergative languages, namely ‘split ergativity’ which indicates that ergativity is found in some part of the language but not in others. Section 2.4 discusses some of the most prominent syntactic analyses of ergativity that have been proposed within the minimalist program of generative linguistics. Chapter

2 is concluded by section 2.5 which gives a typological survey of the distribution of ergative patterns cross-linguistically.

2.1 Ergative case marking

The current notion of ergativity in the field of theoretical linguistics was firmly established in the 1970s by, among others, Dixon (1972; 1979), Anderson (1976), Silverstein (1976), Comrie (1978), and Plank (1979a). Languages with ergative properties had already been discovered and discussed some hundred years before that, but from the 1970s onwards, it became a prolific field of studies within generative linguistics (Plank 1979b). Before the 1970s it was common to resolve the problem that ergative languages do not mark syntactic relations in the same way as accusative languages (no clear subject and object categories) by stating that ergative languages simply do not have syntactic relations but only show semantic relations between a verb and its arguments. But, according to Anderson (1976), the most common view by far, was that the ergative construction was actually a passive construction.

However, these more traditional views changed with Anderson (1976) and Dixon (1972; 1979). Dixon discarded the view of ergative as passive and posited the idea that all languages refer to the three different arguments of transitive and intransitive sentences in either an ergative or an accusative way (Dixon 1972, 128–137). Anderson showed that the morphology of ergative languages can be misleading and that grammatical relations in a number of ergative languages are distributed as in accusative languages, introducing a new chapter in ergative research. Dixon (1979) then gave the definition of ergativity that is still widely held today, and formulated in the same way in Dixon (1994):

“The term ‘ergativity’ is, in its most generally accepted sense, used to describe a grammatical pattern in which the subject of an intransitive clause is treated in the same way as the object of a transitive clause, and differently from transitive subject.”

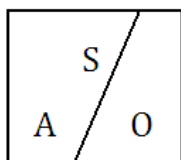
(Dixon 1994, 1)

Around the same time, Comrie (1978) wrote an influential article on ergativity where he gave more or less the same definition, establishing a clear common ground for future ergative research. As a result of this, the above definition is adopted in most of the generative literature on ergativity (e.g. Bok-Bennema 1991; Bobaljik 1993; Aldridge 2007; Assmann et al. 2012; Polinsky 2014). The grammatical pattern Dixon describes in his definition is often meant to refer to a pattern in case-marking systems, where it is used to refer to systems in which the subject of intransitive clauses and the object of transitive clauses receive absolutive case (unmarked case), whereas the subject of transitive clauses stands out and receives ergative case (marked case). According to this view of ergativity the pattern is complementary to the more familiar pattern of nominative-accusative case-marking systems, found in most Indo-European languages, where the subject of both intransitive and transitive clauses receives nominative case (unmarked case), whereas the object of transitive clauses is the one that is marked differently and receives accusative case (marked

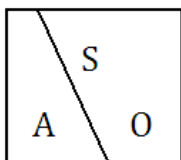
case).³ This latter pattern will be called ‘accusative’ from now on, and ‘ergative’ is used for the ergative-absolutive pattern, as is standard in most of the literature on this topic.

Before encountering ergative languages, linguists could talk about the syntactic primitives ‘subject’ and ‘object’, but taking languages with an ergative case-marking system into account, a distinction between subjects of transitive and intransitive clauses had to be made, as is clear from the given definition for ergativity. This led to a classification of case-marking systems using three syntactic-semantic primitives, namely A for subjects of transitive clauses, S for subjects of intransitive clauses, and O for objects of transitive clauses (Dixon 1972; 1979; 1994; Comrie 1978).⁴ Dixon made a major point in his (1979) paper that A, S, and O are the universal core categories to which all syntactic operations make reference, and this idea has been very fruitful. Ergativity is now nearly always described using these primitives and the difference between the accusative and ergative case-marking systems can then be schematically represented as in (6)-(7) which shows the treatment of the three primitives within the different systems.⁵

(6) Accusative pattern



(7) Ergative pattern



The accusative pattern is found, for example in the pronominal systems of Dutch and English. Examples from Dutch (Germanic, Indo-European) are given in (8)-(9), where the case-marking system is used to set aside the O, by giving it accusative marking, as opposed to the nominative marking of the S and the A.⁶

³ Markedness is here solely used to indicate structural complexity of the NP, i.e. more or less morphological material. An additional note is relevant here, since there are exceptions to the unmarked status of the nominative. Marked absolutive also exists but is even more rare. So far the only language known to have a more marked absolutive than ergative is Nias (Austronesian) (Comrie 2013a).

⁴ Dixon (1994) gives a slightly different definition for A, S, O than Dixon (1972) where these primitives were already used. In his later work, Dixon talks about arguments of clauses rather than arguments of verbs. Comrie (1978) uses P—derived from ‘patient’—instead of O. Some of the literature has adopted the O from Dixon, some the P from Comrie. I will use O to indicate the object of a transitive clause, in line with Dixon.

⁵ Schematics (6)-(7) and (12)-(14) are adapted from figure 1 from Comrie (1978, 332).

⁶ Dutch examples without further reference are my own.

- (8) Hij vertrek-t.
3SG.NOM leave-3SG
'He leaves.'
- (9) Hij kus-t hem.
3SG.NOM kiss-3SG 3SG.ACC
'He kisses him.'

The ergative case-marking pattern, while less frequent than the accusative one, is found in a great number of different language families.⁷ One example of an ergative case marking language, the only one to be found in Europe, is Basque (isolate):⁸

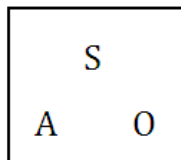
- (10) Martin ethorri da.
Martin.ABS came AUX.3SG.ABS
'Martin came.'
- (11) Martin-ek haurra igorri du.
Martin-ERG child.ABS sent AUX.3SG.ERG/3SG.ABS
'Martin sent the child.'

(Comrie 1978, 333)

In these examples we see that the S and O are the unmarked arguments, represented by the absolutive, while the A is set aside by means of the ergative marking *-ek*.

Looking at the schematic representations in (6)-(7) it is clear that the two options represented by the accusative and ergative alignment are not the only two logical options to align the three syntactic primitives S, A, and O. Comrie (1978) also notes this and discusses the other logically possible options, which are given in (12)-(14).⁹

- (12) Neutral pattern

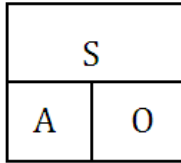


⁷ See section 2.5 for more information about the typological distribution of the discussed alignment patterns.

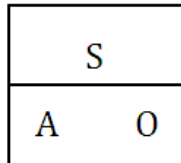
⁸ Basque is analyzed by Comrie (2013a) as belonging to the (typologically rare) active-inactive case-marking system, this variety will be further discussed in section 2.3. The examples presented here do illustrate clearly the ergative-absolutive case-marking system.

⁹ Comrie (1978; 2013a) has no name for the pattern in (14). The term 'double oblique' is taken from Payne (1980) who gives examples of the pattern in (14) within the pronoun system of the Pamir languages (Iranian, Indo-European), see examples (19)-(21) and the accompanying text for more information.

- (13) Tripartite pattern



- (14) Double oblique pattern



The neutral system is found in for example the case marking of non-pronominal noun phrases in Dutch and English. In these systems no case marking is found on any of the three arguments, examples of Dutch are given in (15)-(16). Here we see that all of A, S, and O are not case-marked.

- (15) De vrouw- \emptyset vertrek-t.
the woman-SG leave-3SG
'The woman leaves.'

- (16) De vrouw- \emptyset koop-t veel boek-en.
the woman-SG buy-3SG many book-PL
'The woman buys many books.'

Looking at the literature, the tripartite system for case marking appears to be more rare than the other systems of alignment discussed so far. Nez Perce (Sahaptian) is classified by Baker (2013) as a tripartite language. This means that all three syntactic primitives in this language behave different from each other:

- (17) Sík'em hi-wleke'yx-tee'nix háamati'c.
horse 3SUBJ-run-HAB.PL fast
'Horses run fast.'

- (18) Sik'é-m-nim kúnk'u pé-e-wewluq-se timaanii-ne.
horse-ERG always 3/3-want-IMPERF apple-OBJ
'The horse always wants an apple.'

(Deal 2010b, 74–75)

In these examples we see that the subject of the intransitive clause receives no special case marking, and could thus be called nominative or absolutive. However, this marking is distinct from both arguments in the transitive sentence, which each receive a different case marking; ergative for the subject and objective (or accusative) for the object, which gives the tree-way division as illustrated in (13).

The final logical option for case-marking systems is represented in (14). When Comrie (1978) devised these schematics, this pattern, where S is set apart while A and

O are treated the same, was not yet found in natural languages, but in his (2013a) WALS chapter on alignment he indicates that, while the system is still extremely rare, it is attested in some pronouns within a small number of Iranian languages. An example is given by Payne (1980), who does note that this pattern is very unstable, only occurring because of a diachronic change from an ergative system into an accusative one. Examples from Rošani that show the double-oblique pattern are given in (19)-(21).

- (19) Mu t̄ā (*tu) wunt.
 1SG.OBL 2SG.OBL see.PAST
 'I saw you.'
- (20) T̄ā mu (*az) wunt.
 2SG.OBL 1SG.OBL see.PAST
 'You saw me.'
- (21) Az-um tar x̄ār v̄ij.
 1SG.ABS-1SG to town be.PERF
 'I've been to town.'

(Payne 1980, 156)

What we see in the Rošani examples is that the elements in the transitive clause have the same form regardless of their argument position they take; *mu* keeps its form whether it is the external or internal argument of the transitive verb. However when it is the argument of an intransitive verb it gets additional marking and becomes *azum*.

If we look at the division of the different case-marking systems cross-linguistically, we see that languages of the world do not distribute equally across the five different systems. Section 2.5 looks at the typological distribution of the attested patterns, but first various ergative properties are discussed in more detail. In the next section ergative alignment in verbal agreement patterns and in syntactic operations is discussed.

2.2 Ergative patterns outside case marking

The ergative patterns discussed so far are found in the case-marking system of languages, but this is not the only place where ergativity occurs. Comrie (1978) notes that, in the same way case-marking systems can follow any of the five logical options given in section 2.1, agreement can too, indicating that within morphology languages can show an ergative pattern not only in case marking but also in verbal agreement. This gives us again the pattern from (7), this time indicating that instead of S and A controlling agreement on the verb, as is the case in accusative languages, S and O are grouped together in verbal alignment patterns. The ergative patterns found in case marking and agreement are referred to as morphological ergativity. Languages can also show ergativity in syntactic operations, such that certain syntactic phenomena can operate on the S and O arguments, but not on A. Below I will first give some examples of the morphological ergative properties that have not yet been discussed,

namely properties of agreement. After that the characteristics of syntactic ergativity are discussed.

For clarity, we first look at the agreement pattern from accusative languages, where agreement groups together S and A to the exclusion of O. Germanic and Romance languages all provide examples for this. Examples from Dutch are given in (22)-(24) to illustrate this pattern.

- (22) Hij loop-t.
3SG.NOM walk-3SG
'He walks.'
- (23) Hij kus-t mij.
3SG.NOM kiss-3SG 1SG.ACC
'He kisses me.'
- (24) Ik kus-∅ hem.
1SG.NOM kiss-1SG 3SG.acc
'I kiss him.'

In these examples, the nominative marked elements control agreement on the predicate. Since case marking in Dutch follows the accusative pattern, this means that the subject of the transitive clause and the subject of the intransitive clause are the ones that control agreement, while the object of the transitive clause does not.¹⁰

Dixon (1994) gives some examples of ergative agreement patterns with the following paradigm from Abaza (North Caucasian):

- (25) d-θád
3SG-go.AOR
'He/she's gone.'
- (26) h-θád
1PL-go.AOR
'We've gone.'
- (27) h-l-bád
1PL-3SG-see.AOR
'She saw us.'

(Dixon 1994, 43)¹¹

With these examples we can see how the agreement on the predicate is marked in this language and how it follows an ergative pattern. Example (25) shows that *d-* is the third person singular agreement morpheme for the S argument. Example (26) shows that for the first person plural S argument, the agreement morpheme is *h-*. If we then look at (27), an example of a transitive predicate, we see that the agreement with the

¹⁰ Note that agreement is also marked with non-pronominal NPs which in Dutch do not receive any case marking, see examples (15)-(16).

¹¹ Dixon does not provide glosses for these patterns. The glosses used here are based on O'Herin's (2002) monograph on case and agreement in Abaza.

first person plural O is *h-*, the same marker as the agreement for the first person plural S (26), while the agreement with the third person singular A argument is *l-*, which differs from the third person singular S in (25).¹² Agreement in Abaza thus has the same morphological markers for the S and O arguments, and different markers for the A arguments.

This concludes the discussion of morphological ergativity, more characteristics and examples will be discussed in section 2.3 on split ergativity. The rest of this section explains and discusses the notion of syntactic ergativity. Above, a broad definition of syntactic ergativity was given; syntactic phenomena that treat S and O different from A constitute syntactic ergativity. Comrie (1978) noted that there is no a priori reason why the different alignments of A, S, and O should be confined to only the morphology of languages. Focusing on the accusative and ergative alignment, he shows that English has both these alignment patterns in syntax. While English is overwhelmingly an accusative language, it has an ergative pattern when forming compound nouns.¹³ This is shown in the following examples:

- (28) The birds chirp → bird-chirping
 S V S-V
- (29) Someone hunts foxes → fox-hunting
 A V O O-V
- (30) Someone hunts foxes → *someone-hunting
 A V O A-V

(Comrie 1978, 337)

What we see here is that some arguments of the verb can be incorporated into it. Looking at these examples with the A, S, and O primitives in mind, it becomes clear that S and O can form a compound with the verb, while A cannot. This is thus an ergative alignment pattern outside of morphology.

The above examples show an ergative pattern in a morphologically accusative language, but most discussions of syntactic ergativity look at other structures and focus on determining if, and in what ways, morphologically ergative languages are also syntactically ergative. Comrie (1978) and Dixon (1994) try to do this and discuss a number of syntactic ergative patterns, using the broad definition of syntactic ergativity as given above. They look at how different syntactic phenomena such as control, coordination reduction, and binding operate in morphologically ergative languages. Based on their findings that most morphologically ergative languages syntactically operate on a nominative-accusative pattern, they conclude that syntactic ergativity is quite rare, with Dyirbal (Australian) as an often cited exception to this claim, because it shows syntactic ergativity in quite a number of syntactic processes. An example of syntactic ergativity in a coordinated structure in Dyirbal is given in

¹² That (27) does not translate as ‘we saw her’ is due to the strict order of verbal suffixes in Abaza (S-V / O-S-V), where the absolutive always precedes the ergative element (Dixon 1994).

¹³ It appears that most languages where nouns can be incorporated into verbs work according to the same pattern, where O and S can be (more easily) incorporated in to the verb, while A cannot (Alexiadou 2001).

(31), which is contrasted with the same structure in English (32) to indicate the difference.

(31) [N_{uma}_o yabu-ŋgu_A buran] [∅_S banagan^yu].
 father.ABS mother-ERG saw returned
 ‘Mother saw father and he returned.’

(32) [Mother_A saw father_o] and [∅_S returned].
 ‘Mother saw father and she returned.’

(Dixon 1994, 155)

What we see is that in English the empty element in the second conjunct of the sentence, the S, can only refer to the A argument in the first conjunct. However, this works differently in Dyirbal as can be seen in the translations of (31) and (32). In Dyirbal the S argument can only refer to the O argument, showing that conjunction reduction groups S and O the same way as in the ergative case-marking system of the language.

However, in more recent literature dealing with ergativity outside of the morphological domain (e.g. Aldridge 2007; Assmann et al. 2012; Coon et al. 2014; Polinsky 2014; Deal 2015), the focus lies solely on ergative patterns in A'-movement phenomena and no attention is given anymore to the other phenomena discussed by e.g. Comrie (1978) and Dixon (1994). Polinsky (2014) gives a number of arguments for why we should only look at A'-movement phenomena when determining if a language is syntactically ergative. Her most important argument for looking only at A'-movement is that we can be more certain that these processes actually take place in narrow syntax, as opposed to for example binding or coreference across clauses. By looking at A'-movement to determine whether or not a language has syntactic ergativity, there is a higher degree of certainty that we have actually looked at the syntactic component of the grammar and not at other parts. Polinsky restricts her definition even further by only looking at relativization as a valid diagnostic for syntactic ergativity. She shows that focus structures and wh-questions in a number of languages can be formed with alternative strategies, without making use of A'-movement, thus not actually diagnosing syntactic ergativity.

The notion of syntactic ergativity is now thus severely restricted to include only ergative patterns in A'-movement. Syntactic ergativity in this sense indicates that absolutive elements can be A'-moved, while ergative elements cannot. This means that in syntactically ergative languages the A argument cannot undergo wh-movement, focus movement or relativization. With this definition, syntactic ergativity becomes part of the broader notion of extraction asymmetries where some elements can be the subject of movement while others cannot. Examples of this type of syntactic ergativity are found in a number of distinct languages such as Jakaltek and Q'anjob'al (Mayan), Kanamarí (Katukinan), Dyirbal (Pama-Nyungan), and Tongan (Polynesian) (Assmann et al. 2012; Coon et al. 2014; Polinsky 2014). Coon et al. (2014) give some examples from Q'anjob'al that show that it is not possible to wh-move the ergative element in a transitive sentence, while wh-movement of both absolutive elements (S and O) is possible. This can be seen in (33)-(35):

- (33) Maktxel_i max-∅ way-i ____i?
 who ASP-ABS.3 sleep-ITV
 ‘Who slept?’
- (34) Maktxel_i max-∅ y-il-a’ naq winaq ____i?
 who ASP-ABS.3 ERG.3-see-TV CL man
 ‘Who did the man see?’
- (35) *Maktxel_i max-∅ y-il-a’ ____i ix ix?
 who ASP-ABS.3 ERG.3-see-TV CL woman
 intended: ‘Who saw the woman?’

(Coon et al. 2014, 18–19)

In the first example we see that the S argument can be extracted and questioned with a fronted *wh*-phrase. The second example shows that the other absolutive marked argument, the O, can undergo the same operation.¹⁴ However, (35) shows that the ergative element, the A, cannot undergo this operation in the same way.

This restriction holds for quite a number of morphologically ergative languages, but note that at the same time all these languages have one or several strategies making the A'-movement of the ergative possible in a slightly different way. These ‘rescue’ strategies usually involve a change in transitivity so that the ergative element becomes absolutive, such as antipassivization and agent focus, but resumptive pronouns in relative clauses, anti-agreement, and nominalization of *vP* are also used (Polinsky 2014). Syntactic ergativity thus indicates that the ergative element cannot be A'-moved just as easily as the absolutive. Example (36) shows the rescue strategy used in a number of Mayan languages to A'-move the agent.

- (36) Maktxel max-ach il-on-i?
 who ASP-ABS.2 see-AF-ITV
 ‘Who saw you?’

(Coon et al. 2014, 19)

In (36) the *wh*-movement of the agent argument is possible, counter to what we see in (35). This is because of the agent focus (AF) suffix *on*. Importantly, this *on* addition changes the morphology of the verb by adding an intransitive marker (glossed as *ITV*) making the verb lose its ergative agreement marking. Even though this language thus has a way of A'-moving the agent of a clause, it can never A'-move the ergative element. This is typical for syntactic ergativity in other languages, but as mentioned above, the specific strategy used to extract the A argument differs from language (group) to language (group).

This concludes the description of syntactic ergativity. The next section discusses the phenomenon of split ergativity, reflecting the fact that languages can have both ergative and other alignment patterns at the same time.

¹⁴ Note that in Q'anjobal (as in most other Mayan languages) absolutive and ergative show up as agreement markers on the predicate, while there is no case marking on NPs.

2.3 Split ergativity

Above the definitions of both morphological and syntactic ergativity were discussed and examples were given to show how languages display these patterns. In the paragraphs on syntactic ergativity it was pointed out that languages are almost never completely ergative in their syntax (with Dyrbal as a possible exception). An important finding within research on ergativity has been that most ergative languages are also not completely ergative in their morphology. Most languages are what is called ‘split ergative’, indicating that they have both accusative (or neutral) and ergative alignment patterns in case marking and/or agreement. Quite a number of different splits have been attested in different languages and they have been quite extensively discussed in previous literature (e.g. Comrie 1978; Dixon 1994; Coon and Preminger 2012; Coon 2013a). Below the different splits are discussed and exemplified.

First, it must be clear what is indicated by the split we are talking about when discussing split ergativity. The term is not generally used to indicate that a language is ergative in its morphology but accusative in its syntax. I will refer to this as a between-domains ergative split. Split ergativity usually indicates a split of a more fine-grained nature, where “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). A number of different conditions can be the cause of a split, and languages differ as to which splits they exhibit. Looking at the literature, roughly three groups of different types of split ergativity can be distinguished, namely splits based on the properties of the NPs (the arguments of the verb), on the properties of the verb, or on the tense/aspect/mood the verb phrase occurs in (also called TAM-splits). Two other slightly different types of split (the between-domain splits) are when case marking of a language follows an ergative pattern, but agreement follows an accusative pattern, and when a language is morphologically but not syntactically ergative. The following section discusses the basic properties of all of these splits.

The last two splits mentioned above are thus usually not considered to be a form of split ergativity, but I will nevertheless discuss them here, because they are an important characteristic of probably all ergative languages. It was already noticed quite early in the history of ergative research that most languages that display ergative patterns do so only in part of their system, while displaying accusative or neutral patterns in the rest of the language (Anderson 1976; Comrie 1978). Warlpiri (Australian) and Nez Perce (Sahaptin) are examples of languages that have an ergative case-marking pattern, but an accusative pattern in verbal agreement, which is a pattern found quite often cross-linguistically. Examples (37)-(39) show the ergative alignment pattern in the case-marking system of Warlpiri:

(37) Ngajulu-rlu-rna-ngku nyuntu nya-ngu.
1-ERG-1SG.SUBJ-2SG.OBJ 2.ABS see-NPAST
‘I saw you.’

(38) Nyuntu-rlu-npa-ju ngaju nya-ngu.
2-ERG-1SG.SUBJ-2SG.OBJ 1.ABS see-NPAST
‘You saw me.’

- (39) Ngaju-rna parnka-ja.
 1.ABS-1SG.SUBJ run-PAST
 'I ran.'

(Legate 2002, 119)

In the next examples we see that the verbal agreement pattern does not follow the ergative case marking, but is instead aligned on an accusative pattern:

- (40) Nya-ngu-rna-ngku.
 see-PAST-1SG.SUBJ-2SG.OBJ
 'I saw you.'

- (41) Nya-ngu-mpa-ju.
 see-PAST-2SG.SUBJ-1SG.OBJ
 'You saw me.'

- (42) Parnka-ja-rna.
 run-PAST-1SG.SUBJ
 'I am running.'

(Legate 2002, 119–120)

Example (37) shows that the subject of a transitive clause receives an ergative case marker, namely *-rlu*. Example (39) shows that the subject of an intransitive clause is treated differently; the *-rlu* marker is absent on the pronominal subject. If we compare (39) to (38) we see that the pronominal subject of intransitive clauses has the same form as the pronominal object of a transitive clause, namely *ngaju*. S and O thus pattern together to the exclusion of the A in the case-marking system of this language, but the verbal agreements shows a different pattern, as can be seen in (40)–(42). The agreement marking follows an accusative pattern because it groups together the A and S to the exclusion of the O. Agreement with the first person singular A (40) is the same as with the first person singular S (42), namely *-rna*, while the object is marked differently with *-ju*.

The other between-domains split pattern often attested is when a language shows ergativity in its morphology, but not in its syntax. As was also discussed in section 2.2, according to older literature (e.g. Comrie 1978) this occurs very frequent, with syntactically ergative languages as Dyirbal as exception to the rule that most morphological ergative languages have accusative syntax. However, more recently, syntactic ergativity has been described as a ban on ergative extraction in A'-movement and quite a number of languages show this syntactic ergative pattern (Polinsky 2014). We can of course still call a language that only has syntactic ergativity in A'-movement processes of the split type, because it has accusative patterning in other parts of its syntax. In this regard most, if not all, ergative languages are considered to be only partially ergative.

As mentioned above, most discussion on split ergativity has focused on the within-system split, which is found in different forms already briefly mentioned above. There are a number of splits determined by properties of the predicate, and these type of splits usually indicate that the S argument is not always marked absolutive, but also

sometimes ergative, based on various factors. A well-known split system here is the active-stative system (also called active-inactive) where the S argument of an active predicate patterns with the A argument and is thus marked ergative, while the S argument of a stative predicate patterns with the O argument and receives absolutive case. A similar split is based on the semantic properties of the S argument selected by the verb where a more agent-like S argument patterns with the A argument and a more patient-like S patterns with the O argument (Comrie 2013a; Gildea 2014). These split-S patterns are also referred to as ‘split intransitivity’ (Coon and Preminger 2012). An example of this type of split in Basque is given below.

(43) Ekaitz-a-k txalupa hondora-tu du.
 storm-DET-ERG boat.DET.ABS sink-PERF has
 ‘The storm sank the boat.’

(44) Txalupa hondora-tu da.
 boat.DET.ABS sink-PERF is
 ‘The boat sank.’

(45) Gizon-a-k aharrausi egi-n du.
 man-DET-ERG yawn do-PERF has
 ‘The man yawned.’

(Laka 2006, 376–377)

What we see in these examples is that the ergative marker does not only appear with the A argument, but also with some of the S arguments. The subjects of unergative intransitive verbs (45) are marked ergative, while the subjects of the unaccusative intransitive verbs (44) are not.

Another group of ergative splits consists of splits based on the tense, aspect or mood the predicate is in, the so-called TAM-splits. What this means is that a language has ergative case or agreement morphology in for example the past tense, but accusative marking in non-past tenses. Importantly, these splits are always in the same direction, so if such a split exists it is always the past that has the ergative marking and the non-past the accusative, never the other way around. This also holds for the aspect and mood based splits, a clear overview is given by Gildea (2014):

(46) <i>TAM-splits</i>	
Ergative	Non-ergative
past tense	non-past tense
perfective aspects	imperfective aspects
non-agent oriented modalities	agent-oriented modalities
affirmative polarity	negative polarity

(Gildea 2014, 1)

However, of these various splits the aspect-based split appears to be far more common than the others (Coon and Preminger 2012), and it is even argued that tense and mood splits can always be reduced to other types of split, either based on aspect or on clause-type (Salanova 2007; Coon 2013b). An example from the aspect split is

found in Hindi (Indo-Aryan, Indo-European) where the ergative marker is lost in non-perfective contexts.

- (47) Laata-ji-ne kai gaane gaa-ye.
 Latta.F-HON-ERG many song.M sing-PERF.M.PL
 ‘Latta sang several songs.’

- (48) Laata-ji gaane gaa-tii he / thī.
 Latta.F-HON song.M sing-HAB.F be.PRES.PL be.PAST.F.PL
 ‘Latta sings/used to sing songs.’

(Coon 2013b, 178)

In (47), the verb is in the perfective aspect, resulting in ergative marking on the A argument, while this ergative marker is no longer present in (48) when the predicate is in a non-perfective aspect.

The final type of within system splits discussed here is based on person features of the verbal arguments, therefore this split is often referred to as ‘person split’ ergativity. Silverstein (1976) showed that this split is also not random, but that the same person and number features are always associated with the ergative pattern or the accusative pattern. Based on his findings, Silverstein proposed a universal hierarchy along which this type of split ergativity is governed. This hierarchy is given below, based on Dixon’s (1994, 85) representation of it.

- (49) *Prominence hierarchy*
- a. 1st person pronouns
 - b. 2nd person pronouns
 - c. 3rd person pronouns and demonstratives
 - d. Proper nouns
 - e. Common nouns
 - i. Human
 - ii. Animate
 - iii. inanimate

Elements higher on this hierarchy are universally more likely to be agents and elements lower on the hierarchy are more likely to be patients. If a language has an ergativity split based on person features it will mark A arguments lower on the hierarchy as ergative and O arguments higher on the hierarchy as accusative, while A arguments lower on the hierarchy will be unmarked or marked nominative/absolute, just as O arguments higher on the hierarchy. This hierarchy is an implicational one, which means that if a language marks 3rd person pronoun A arguments with ergative, it will also do so for everything lower on the hierarchy. This NP-split ergativity results in somewhat more complex systems than the other split ergativity types, since in some languages it takes into consideration person and number features of both the A and the O argument, while the TAM or predicate based splits only have one feature to consider (Coon and Preminger 2012). To illustrate this split, examples are given from Dyirbal, where features of both A and O arguments are considered in determining case marking.

(50) Numa yabu-ŋgu bura-n.
father.ABS mother-ERG see-NFUT
'Mother saw father.'

(51) Yabu banaga-n^yu.
mother.ABS return-NFUT
'Mother returned.'

(52) Nana n^yurra-na bura-n.
we.NOM you.PL-ACC see-NFUT
'We saw you(pl).'

(53) Nana banaga-n^yu.
we.NOM return-NFUT
'We returned.'

(Dixon 1994, 161; via Coon and Preminger 2012, 20–21)

When we look at the first two examples, (50)-(51), we see Dyirbal as an ergative language. The A argument receives ergative marking, while both the O and S are unmarked. Crucially, all arguments are 3rd person and human common nouns, thus low on the Silverstein hierarchy. If we now look at examples (52) and (53), where only 1st and 2nd person pronouns are used, an accusative system emerges, where only the O argument is marked and the A and S are unmarked.

The discussion of all these different types of split shows that a number of aspects need to be taken into consideration before it can be determined whether a language shows ergative patterns or not. Crucially, ergative research over the past years has shown that all languages with ergative patterns have some type of split ergativity, making this a very important property of ergativity.

This section concludes the introduction of the various ergative patterns found in natural languages. The next section discusses some syntactic analyses of ergativity that have been proposed in the literature.

2.4 Analyses of ergativity

The previous sections of this chapter described the different properties of ergativity as found cross-linguistically in various language systems, but how these patterns are explained within linguistic theory has not been discussed yet. The older, more typologically oriented literature discussed above presents some analyses of how to account for ergative properties synchronically and diachronically.

A popular typological explanation of ergativity is that an ergative construction is derived from a passive construction. According to Plank (1979b) and Anderson (1976) this is actually the most traditional approach to ergativity, already put forward in the mid-1800s (e.g. Gabelentz 1860).¹⁵ Comrie (1978) also discusses the relation between ergatives and passives. He states that the ergative pattern indeed closely resembles the passive construction in accusative languages. The resemblance is that in passive constructions in accusative languages and in transitive constructions in ergative

¹⁵ C.f. endnote 9 from Plank (1979b, 30) for more information about the history of this analysis.

languages, the A argument is the most marked element (oblique or ergative), whereas the O is the unmarked element (nominative or absolutive). The ergative construction can then be seen as an ‘obligatory passive’ construction, and diachronically this could account for ergativity in a number of languages, supported amongst others by the history of Indo-Iranian languages. However, Comrie claims that synchronically this analysis is only plausible for languages that consistently show syntactic ergativity besides being morphologically ergative.¹⁶

Another important contribution from Comrie (1978) is that he examines the often made claim that the ergative marks agentivity. By showing that the identification of ergative arguments with agentive arguments is far from perfect for multiple reasons—there are ergative elements that are not agentive and vice versa—he is able to reject this often assumed link.

One of Dixon’s most influential theoretical proposals has probably been the definition of the universal syntactic-semantic primitives A, S, and O (Dixon 1979 et seq.), and his idea that the languages of the world can be divided into two basic syntactic types, namely languages that group S with O and languages that group S with A (Dixon 1972, 128). This definition is still widely used and influential in current generative analyses (e.g. Bobaljik 2008; Assmann et al. 2012; Coon et al. 2014).

The rest of this section will extend the above by discussing more recent analyses of ergativity, proposed within the framework of generative linguistics (Chomsky 1981; 1995). While most theoretical analyses of ergativity have focused on explaining ergative case and agreement marking, recently a number of analyses have been proposed dealing specifically with syntactic ergativity in A’-movement (e.g. Assmann et al. 2012; Coon et al. 2014; Polinsky 2014). This section focuses on accounts of morphological ergativity. Important questions dividing the analyses are whether ergative case is seen as structural (on a par with nominative and accusative) or inherent/lexical (on a par with e.g. dative) case, and which arguments—those marked ergative or those marked absolutive—align with the grammatical functions of subject and object. Since most analyses of ergativity focus on explaining the ergative properties in case marking, the analyses are determined greatly by the particular form of case theory that is adopted. An important question in this respect is whether case assignment is a property of narrow syntax or of the morphological component.

One of the early proposals that has been quite influential is the morphological case theory from Marantz (1991). As the name already predicts, this proposal falls in the category of theories that posit case in a post-syntactic morphological component, which indicates that while case assignment is based on syntactic rules, syntactic rules are never influenced by case morphology. Marantz’s proposal also belongs to the group of analyses that analyze ergative as a structural case, on a par with accusative. Both these cases are classified by Marantz as ‘dependent’ case, whereas absolutive and nominative fall in the category ‘unmarked’ case. The different case categories are placed on a disjunctive hierarchy, see (54).

¹⁶ For Comrie’s full treatment of these ideas see Comrie 1978, paragraph 7.3.1 ‘Passive and Ergative’.

- (54) *Case realization disjunctive hierarchy*
- Lexically governed case
 - Dependent case (accusative and ergative)
 - Unmarked case (environment-sensitive)
 - Default case

(Marantz 1991, 24)

Case assignment takes place in the morphological component after the grammatical relations are determined in syntax. According to Marantz the case assigning algorithm does not only look to the NP in need of case but also to the other NPs in the clause. It first determines if it can assign lexical case, such as dative case. If there is no lexical case required by the predicate, the algorithm checks if the requirements for the assignment of dependent case are met. When there is an NP that is governed by an NP that does not have lexical case, dependent case will be assigned, and this is where ergative and accusative languages differ in Marantz's system. Dependent case can be assigned in two directions, either upwards, assigning ergative case to the subject, or downwards, assigning accusative case to the object. After this, nominative or absolutive will be assigned to the remaining NP, resulting in either a nominative-accusative or an ergative-absolutive system.

In this proposal, there are thus no syntactic differences between accusative and ergative languages, the only difference is a parametrical difference in the morphological component, determining the direction of dependent case. Marantz's model is adapted by, among others, Bobaljik (2008). Deal (2015) notes that this system can explain related phenomena in a large number of languages, but it makes a specific prediction about the co-occurrence of lexically governed case and ergative case in the same clause. While this is not often attested, Deal gives some examples of Warlpiri where dative and ergative appear as two arguments of one verb. It is not quite clear how Marantz's analysis can deal with this. Another problem for theories that analyze ergative patterns as part of the morphological component is that they cannot deal with syntactic ergativity. As Deal notes, syntactic and morphological ergativity could in principle be explained by separate principles, but this seems odd given the fact that syntactic ergativity only seems to occur in languages that also display morphological ergativity.¹⁷

In a recent handbook chapter on ergativity Deal (2015) gives a very helpful summary of the different proposals that analyze ergativity as a property of narrow syntax. She notes that a number of different approaches can be distinguished that differ as to which functional head assigns which case and whether this is done in or ex situ. The underlying case theory behind all these proposals is that functional heads have uninterpretable abstract case features that have to be checked by the arguments of the predicate, which in turn need a case feature in order to survive (this represents the standard case theory in minimalist proposals, c.f. Chomsky 1999). Three different positions are discerned by Deal and discussed below:

¹⁷ See section 2.5 for a discussion of this and other generalizations about the distribution of ergative properties.

- (55) *Syntactic analyses of ergativity*
- a) Subjects and objects receive case ex situ from T
 - b) Subjects and objects receive case in situ from v
 - c) Subjects receive case in situ from v, objects receive case ex situ from T
- (Deal 2015, 677)

An example of the option in (55a), given by Deal (2015), is the approach from Bok-Bennema (1991). In her system, developed while analyzing ergativity in Inuit (Eskimo-Aleut), absolutive is equaled to nominative and ergative is equaled to genitive case. The difference between accusative languages and ergative languages is which case transitive T can assign. In accusative languages transitive T (just as intransitive T in both accusative and ergative languages) assigns only nominative case, in Inuit transitive T also assigns genitive. Genitive case is always assigned by spec-head agreement, the subject thus moves to the specifier of T to receive case. The other crucial assumption is that accusative case is not available in ergative languages. Because of this, direct objects are forced to move to a position where they can receive case, which will be nominative, assigned also by T, either by spec-head or by adjunct-head agreement.

Other approaches take the locus of ergative case assignment to be v instead of T (55b). According to Deal (2015), Woolford (1997; 2006a) initiated these approaches by her proposal that ergative case should be seen as an inherent case, linked to θ -role assignment of the verb, which puts ergative on a par with e.g. dative case. An example of an analysis that adopts this view of ergativity is proposed by Aldridge (2004; 2007). Ergative case on the subject is assigned by v (in situ), and v can then also assign absolutive case to the object. However, in most intransitive clauses v is not present and T assigns absolutive to the S. Absolutive case is thus assigned by different elements and according to Aldridge this adequately covers her claim that absolutive marked elements cannot always be identified with the category of subjects. Deal (2015) points out that this analysis makes specific predictions, namely that in non-finite environments absolutive on O should be possible because it is assigned by v, but absolutive on S should not, because it is assigned by T. Legate (2008) shows that this prediction holds in Warlpiri, but not in Dyirbal, leading both Aldridge and Legate to propose a different analysis for languages like Dyirbal.

The analysis of Dyirbal proposed by Aldridge (2004) and Legate (2008) falls within Deal's third category of ergative analyses where v assigns ergative case in situ and T assigns absolutive case to the object and intransitive subject, which have to move close to T to receive the absolutive case. This analysis applied to Dyirbal correctly predicts that absolutive case does not appear in non-finite environments. Both Aldridge and Legate then propose that this derivation holds for languages like Dyirbal, while languages like Warlpiri are derived in the way described above, falling in Deal's second category of ergative analyses. This analysis with in situ ergative case-assignment by v and ex-situ absolutive case-assignment by T is also proposed by Ura (2001) as a general case-assignment mechanism, but this thus makes the wrong predictions in languages like Warlpiri.

Many more analyses to account for ergative case-assignment have been proposed, and there are also a number of analyses that account for syntactic ergative patterns which I did not discuss. However, the above discussion suffices for the purposes of

this thesis. For more detailed surveys the reader is referred to the recent survey articles from Deal (2015) and Polinsky (2014). The next section discusses how ergative patterns are distributed cross-linguistically and introduces a number of generalizations that have been made about this distribution.

2.5 Cross-linguistic distribution and universal generalizations

To close this chapter, the cross-linguistic distribution of different ergative patterns is discussed to give an idea of where these patterns occur and how frequently they are attested. After this, some universals that have been proposed in the literature about the distribution of ergative patterns are discussed.

It is quite clear that accusative patterns are cross-linguistically more frequent than ergative patterns and that they are also globally more wide-spread. Ergative patterns, as opposed to accusative patterns, are for example rarely found in Europe and Africa (Comrie 2013a). The WALS-chapters on alignment of pronouns and full NPs (chapters 98 and 99 by Comrie 2013a; 2013b) extensively discusses the cross-linguistic distribution of alignment patterns in case-marking processes. Comrie discusses a total number of 190 languages in the chapter on alignment of full noun phrases and a number of 172 languages in the chapter on alignment of pronouns. The different alignment types Comrie uses to divide these languages are given in (56).

- (56) *Alignment types*
- a. Neutral
 - b. Nominative-accusative (standard)
 - c. Nominative-accusative (marked nominative)
 - d. Ergative-absolutive
 - e. Tripartite
 - f. Active-inactive
 - g. None (*only used for alignment of pronouns*)

(Comrie 2013a; 2013b)

Comrie indicates that with the often attested ergative splits not all languages can be easily classified into these types—see sections 2 and 3 of WALS chapter 98 for an extensive discussion of the problems and solutions used by Comrie. In table 1 below, the data from chapters 98 and 99 are combined to give an idea of the cross-linguistic distribution of these alignment patterns.

What we see in table 1 is that neutral alignment is the most commonly attested alignment type for both the alignment of full NPs and pronouns, but that ergative case marking compared to accusative case marking is far less attested in alignment of pronouns than in alignment of full NPs. The tripartite and active-inactive patterns both occur very infrequent. Note that in most literature on ergativity, the active-inactive system is considered to be a form of split ergativity (see the discussion in section 2.3), not as an alignment type on its own.

Alignment type	Alignment of full NPs	Alignment of pronouns
Neutral	98 (52%)	79 (46%)
Nominative-accusative (standard)	46 (24%)	61 (35%)
Nominative-accusative (marked nominative)	6 (3%)	3 (2%)
Ergative-absolutive	32 (17%)	20 (11%)
Tripartite	4 (2%)	3 (2%)
Active-inactive	4 (2%)	3 (2%)
none	-	3 (2%)

Table 1: Wals data on alignment of full NPs and pronouns. Indicated are the number of languages per alignment type. Based on Comrie (2013a; 2013b).

Looking at the other manifestations of morphological ergativity, namely agreement, we see an even more skewed division of ergative patterns versus accusative patterns. WALS chapter 100 discusses the cross-linguistic distribution of agreement—or verbal alignment—with a sample of 380 languages (Siewierska 2013). A summary of the data is represented in table 2:

Alignment type	Number of languages
Neutral	84 (22%)
Accusative	212 (56%)
Ergative	19 (5%)
Active	26 (7%)
Hierarchical	11 (3%)
Split agreement	28 (7%)

Table 2: WALS data on alignment on verbal person marking, indicated are the number of languages per alignment type. Based on Siewierska (2013).

We see that in the domain of verbal agreement accusative is by far the most frequently attested pattern, with the neutral pattern in second place. Only 5% of the languages in this sample have ergative agreement patterns, though again, the active system is often argued to be a subset of ergative agreement indicative of a split system. The split agreement category also contains languages that are all at least partially ergative, active or tripartite. Combining these categories we can then say that 15% of the languages displays some ergative patterns in verbal agreement, which is still a small amount in comparison to the neutral and the accusative patterns.

We saw in table 1 and 2 how often the various alignment patterns occur in relation to other alignment patterns, but we can also ask how these patterns are distributed

geographically. It was already mentioned that ergative patterns are almost completely absent from Europe and Africa, and it is well-known that most Indo-European languages display accusative alignment patterns (Sheehan 2014). Looking at the world maps in the three relevant WALS chapters (Comrie 2013a; 2013b; Siewierska 2013) we see indeed that ergative alignment is absent from Europe and Africa, with the exception of Basque (which is not an Indo-European language). We also see that the three different maps show almost the same geographical distribution of ergative patterns. Most ergative languages are found in Australia and the Caucasus, and they are also attested regularly in South America and Asia, within the Austronesian language family. Looking at the numbers and the geographical distribution it is clear that the accusative and neutral patterns are more frequently attested and more equally distributed across all areas of the world.

Another interesting part of research on the distribution of ergative patterns is represented by a group of universal generalizations about ergativity, that seem to restrict the attested variation within ergative patterns (Deal 2015). Sheehan (2014) described most of these universals from the literature as implications about the occurrence of alignment patterns, see (57).

(57) *Universal implications*

- a. Ergative with unergatives > ergative with transitives (no split-S accusative languages)
- b. Syntactically ergative > morphologically ergative (Dixon 1994, 172)
- c. Ergativity in control > ergativity in A'-movement > ergativity in case/agreement (Deal 2015, 667)
- d. Split-S alignment > not syntactically ergative (Deal 2015, 667)
- e. Tripartite case system > not syntactically ergative (Deal 2015, 667)
- f. Ergative agreement > ergative case or no case (Anderson 1977; Moravcsik 1978; Corbett 2006; Woolford 2006b)
- g. Ergative case > overtly marked ergative case (Deal 2015, 668)
- h. Ergative > not SVO (Trask 1979; Mahajan 1994)

(Sheehan 2014, 401)

In the section on split ergativity we already saw some implications about the distributions of the TAM-split and NP-split, which provide additional universal implications on a language internal level. Deal (2015) also discusses most of these generalizations and she also gives known counterexamples. There are, for example, some well-known counterexamples to the universal about word order, also often stated as claiming that all ergative languages are verb-peripheral or have free word order. Mahajan (1997) found that the language Kashmiri (Indo-Aryan, Indo-European) has ergative patterns in case marking even though it has V2 in SVO clauses. Another counterexample is given by the ergative language Shilluk (Nilo-Saharan), which has OVS and SV word order patterns. Nevertheless, a clear statistical trend is found confirming the idea that ergative languages are always verb final (Deal 2015).

Another strong correlation is found between the occurrence of syntactic ergativity and morphological ergativity (57b), as a number of authors claim that there are no languages with syntactic ergativity without ergative patterns in their morphology

(Dixon 1994; Polinsky 2014). Of course, important here is which definition of syntactic ergativity is used. Deal claims that this universal holds for ergative patterns in control and A'-movement, as she shows that the one known counterexample in fact has an ergative pronoun system. However, we did see an example of how noun incorporation in English follows an ergative pattern, see examples (28)-(30). In footnote 13 it was furthermore noted that this process of noun incorporation in fact follows an ergative pattern in most languages. If we accept the process of noun incorporation to be a syntactic process, it provides a strong counterexample to this particular universal. There are some more of these so-called 'ubiquitous ergative' processes (c.f. Moravcsik 1978; Queixalós 2013) that could prove that the generalization that syntactic ergativity only occurs in languages that also have morphological ergativity is too broad. Nevertheless, that syntactic ergativity in A'-movement is restricted to morphologically ergative languages is something that theories of ergativity should take into account.

Another important generalization is the implication given in (57f). Above, while discussing the WALS data on verbal agreement and case marking, we saw that ergative verbal agreement is relatively less frequently attested than ergative case marking, and the universal about the co-occurrence of ergative case and agreement appears to be connected to these frequency effects. While there are numerous examples of ergative case marking languages that have accusative or neutral agreement patterns, languages with ergative agreement patterns always have ergative case marking according to the universal in (57f). Deal does give some counterexamples, which will be further discussed in chapter 6 of this thesis, where the universal generalizations are discussed in light of Zwart and Lindenbergh's (2015) new fine-grained alignment typology.

These universals about the distribution of ergative patterns provided the base of numerous theoretical investigations, which makes the proper statement of these generalizations and implications very important for syntactic theories of ergativity.

This section concludes chapter 2 which introduced the most important literature on ergativity and discussed the main ergative properties in morphology and syntax. The next chapter introduces the research questions of this thesis.

3 Research questions

The previous chapter discussed the concept of ergativity as it is described in influential literature over the past 45 years. Examples from a number of ergative systems were given to illustrate the manifestation of ergativity in case marking, agreement and syntactic processes. A number of influential generative analyses of ergativity have been discussed, as well as some well-known universal tendencies governing the distribution of ergativity.

Although most literature on ergativity agrees and acknowledges that a lot of variety exists within languages that display ergative properties, the majority takes morphological ergative patterns to be an indication of an underlying ergative system, and subsequently tries to give a unified analysis for ergativity. The term 'ergativity' is then used not to classify the specific morphological or syntactic pattern in one domain, but languages as a whole. Ergativity is often seen as a mirror image of

accusativity and Dixon's traditional definition of ergativity using the syntactic-semantic primitives A, S, and O is used as a blueprint to divide languages into either ergative or accusative languages. As mentioned in the introduction, the goal of this thesis is to examine the variety within and between ergative languages more closely and subsequently to examine the current alignment theory that lies at the base of ergativity research. This way it can be determined if we can speak of 'ergative languages' for which a unified analysis (e.g. in the form of an ergative parameter) can be given. The remaining part of this chapter introduces the three research questions that form the basis of the theoretical explorations of this thesis.

The first question this thesis poses is thus whether it is justified to look at ergativity in the way described above. Looking closely at languages that have been termed ergative in the literature, it is clear that ergativity manifests itself different in each language and always to a limited degree—every ergative language is actually split ergative and has other alignment patterns as well—but a lot of this variation is ignored in order to fit the described languages into the predefined groups of ergative or accusative languages. DeLancey (2004) also noted this and the question he raises is whether a set of languages defined by the feature ergativity can give any insight into the nature of these languages. He claims that it cannot and compares the ergative property of languages to the property 'being blue' of birds: a superficial feature that does not give any insight into the deeper properties of either languages or birds. Grouping all these diverse languages under the header of 'ergativity' obscures what is actually going on in these languages. If DeLancey is right, it means that a number of languages are consistently being misdiagnosed as ergative languages. This is a problem, because it means that what is actually going on in these languages is ignored. In this way interesting linguistic patterns remain undiscovered and syntactic analyses of ergativity try to provide theories based on a very diverse set of data. The first goal of this thesis is therefore to further explore DeLancey's claim by looking closely at variation in languages with ergative properties. This exploration forms the content of chapter 4, where DeLancey's hypothesis that ergativity is a too heterogeneous notion to be used as a set-defining feature is confirmed in sections 4.1-4.3. In section 4.4 the consequences of this variation for the current definition of ergativity and current alignment typology are examined.

The answer to the first research question brings forth questions about the validity of the standard alignment typology and the definition of ergativity as introduced in chapter 2. The exploration of the first research question in chapter 4 indicates that the current alignment typology cannot capture the attested amount of variation. It also shows that Dixon's definition ($A \neq S = O$) does not capture all the attested ergative patterns in an interesting way. This leads to the second research question: What would be a better way to look at alignment patterns and how can we better classify languages in alignment types, while not ignoring the attested variation? Chapter 5 first describes a new ergative definition proposed by Deal (2015) in section 5.1 and introduces a more fine-grained alignment typology proposed by Zwart and Lindenbergh (2015) in section 5.2. Based on this new alignment typology, a new definition for ergativity is proposed in section 5.3.

This new alignment typology opens the door to a new investigation of the generalizations and universals about the distribution of ergative patterns (described in section 2.5). The final research question of this thesis is then: What remains of

these universal constraints in light of the attested variation and the newly proposed alignment typology? If the main claim of this thesis, that there is too much variation to talk about ergative systems and analyze ergativity by positing an ergative parameter in syntax, is correct, it becomes difficult to explain why this variation does seem to be restricted by robust universals. Chapter 6 explores this question by focusing on the case-agreement universal that states that ergative agreement patterns do not co-occur with accusative case-marking patterns, while the opposite combination is attested. It is shown that the case-agreement universal cannot be maintained as a strong linguistic universal, confirming the idea that there is no deeper underlying ergative system.

Chapter 7 uses the fine-grained typology from Zwart and Lindenbergh (2015) to take a close look at the language Nez Perce. The case study of this language shows that applying the new typology can lead to a different typological classification of languages that are currently classified as ergative.

The research questions of this thesis are repeated below in (58).

- (58) Research questions
- a) Is it useful to talk about ergative languages, or is there so much variation that we cannot use the feature ‘ergative’ as a way to define an interesting set of languages?
 - b) What is a better way of looking at alignment typology in light of the attested amount of variation in alignment patterns?
 - c) What remains of the generalizations constraining the distribution of ergative patterns in light of the attested variation and the new alignment typology?

4 Variation in ergativity and its consequences

This chapter explores the attested amount of variation within and between ergative patterns described in the literature. By looking closely at the variation in languages that are classified as ergative, an answer to the first research question of this thesis is given. The hypothesis under investigation in this chapter is the claim made by DeLancey (2004) that the variety in ergative patterns is so high that the feature ‘ergativity’ by itself does not define a linguistically interesting set.¹⁸ Sections 4.1-4.3 show that there is indeed a lot of variation, resulting in quite different ergative patterns, and, as DeLancey claims, there seems to be no merit in grouping these together under the header ‘ergative’. These sections look at a number of languages that have been classified in the literature as ergative languages, but show different patterns when they are closely examined. These languages either show too much variation to be grouped together in a set defined by the feature ergative, or they have in fact been misdiagnosed as ergative due to other morphological properties of the

¹⁸ Gildea (2014) comes to the same conclusion from a functionalist perspective when looking at Cariban languages. He also claims that ergativity can be described as a pattern governing a specific construction in a language, but not as something that defines a language, and argues furthermore that we need a more fine-grained typology than is currently used, in line with the conclusion of this thesis and Zwart and Lindenbergh (2015), see sections 5.2-5.3.

language. The consequences of this for current alignment typology and the problems with the way ergativity is currently defined are discussed in section 4.4.

4.1 Different functions of ergative marking in Mizo and Lhasa Tibetan

DeLancey (2004) discusses two languages of the Tibeto-Burman branch that are known as ergative languages in the literature, namely Mizo and Lhasa Tibetan (Chhangte 1989; DeLancey 1990a). The discussion of these languages shows that the term ‘ergative’ is used to refer to quite different linguistic patterns, highlighting the heterogeneity of the set of languages indicated by the feature ergativity, and posing the question what the term ‘ergativity’ means.

In Mizo (of the Kuki-Chin branch of Tibeto-Burman, also known as Lushei) the A argument is consistently marked with the postposition *in*, regardless of NP type or TAM variation. The S and O are usually unmarked, indicative of an ergative language as defined by Dixon’s definition. However, agreement in this language follows a nominative-accusative pattern where the subjects of both transitive and intransitive clauses control agreement. The following examples illustrate these patterns: the S and O are unmarked, the A is marked with *in*, but the agreement clitics *a* and *an* are controlled by both S and A.

- (59) Nauseen a trap.
 infant 3.NOM cry
 ‘A baby is crying.’

- (60) Naupang le? ui in aar a-n uum.
 child and dog ERG chicken 3.NOM-PL chase
 ‘A child and a dog are chasing a chicken.’

(Chhangte 1989, 121,123)

There is, however, an exception to the subject agreement pattern. If there is a first or second person object, it gets preference for agreement marking over a third person subject. This is shown in (61), where there is no longer agreement with the subject, because of the interference of a first person object. In (62) it is shown that with second person objects there can be both subject and object agreement.

- (61) Ui in mi=se?
 dog ERG 1.OBJ=bite
 ‘A dog bit me.’

(DeLancey 2004, 7)

- (62) Lal in a haau ce.
 chief ERG 3.NOM scold 2.OBJ
 ‘The chief scolded you.’

(Chhangte 1989, 124)

According to DeLancey (2004) the Mizo system is a good illustration of ergativity as a functional system to distinguish between transitive and intransitive clauses, existing purely to mark grammatical relations, where the ergative marker *in* marks the

category of A arguments. Note, however, that we cannot call this entire language ergative, since verbal agreement aligns the transitive with the intransitive subject, to the exclusion of the object, see (59)-(60), with the exception of first and second person objects, see (61)-(62).

When we then look at Lhasa Tibetan (a dialect of Central Tibetan belonging to the Bodic-branch), another pattern emerges. Lhasa Tibetan is labeled ergative, because it has a postposition that co-occurs with A arguments. However, DeLancey (2004) shows that the distribution of this ergative marker is more complex than that of the ergative marker in Mizo and also has a different function. The full description of the use of the ergative marker in Lhasa Tibetan is as follows: the ergative marker is obligatory on A arguments of perfective clauses, see (63), optional on A arguments of non-perfective clauses, see (64), and also optional on S arguments of active perfective clauses, see (65), but it can never occur on S arguments of non-perfective clauses, see (66).¹⁹

- (63) Kho-s deb de bglogs-song.
 he-ERG book that read-PERF/EVIDENTIAL
 'He read the book.'
- (64) Kho(-s) deb de klog=gis.
 he(-ERG) book that read=IMPERFF/DISJUNCT
 'He is reading the book.'
- (65) Nga(-s) bod-la phyin-ba yin.
 I(-ERG) Tibet-LOC went-PERF/ CONJUNCT
 'I went to Tibet.'
- (66) Nga(*-s) bod-la 'gro=gi yod.
 I(-ERG) Tibet-LOC go=IMPERF/ CONJUNCT
 'I am going to Tibet.'

(DeLancey 1990b, 306)

The ergative marker in this language is thus not used to single out one of Dixon's categories—it appears on both A and S—but it appears to mark a distinction between active and inactive subjects. However its use is also aspectually restricted, giving us quite a complicated ergative pattern. DeLancey claims this pattern can be better described if we use the notion of transitivity as given by Hopper and Thompson (1980). They claim that the notions active and perfective are both part of the prototypical transitive clause, which indicates that the ergative postposition in Lhasa Tibetan might in fact be marking transitivity. However, this does still not explain the optionality of the ergative maker in some cases. A closer look at this optional use of ergativity in this language led Tournadre (1991) to claim that the marker has the rhetorical function of indicating focus. According to DeLancey, the best way of describing Lhasa Tibetan is then to say that the distribution of the 'ergative'

¹⁹ Tibetan languages display an evidential pattern making use of the categories 'conjunct' and 'disjunct' (terms originally from Hale 1980), see DeLancey (1990a; 1990b) for more information on this language and its evidential pattern.

postposition is sensitive to the global notion of transitivity, but its primary function is distinguishing a discourse-pragmatic category.

The two Tibeto-Burman languages Mizo and Lhasa Tibetan were discussed in this section. At first sight both these languages are classified as ergative because A arguments appear with a distinctive marker. However, a closer look at these languages shows that they have very different types of ‘ergativity’, and that the ergative markers have a different distribution and different functions; in Mizo the marker indicates grammatical relations, in Lhasa Tibetan it marks discourse-pragmatic properties. Holding on to the idea that all languages that display some notion of ergativity belong to one group seems to be unjustified in light of these examples. Furthermore, the question arises how many more types of ergativity exist if we take a closer look.

4.2 Ergativity—or deixis?—in Sahaptin

The above discussion of Mizo and Lhasa Tibetan showed that not all ergative marking elements have the same function. According to DeLancey (2004), this is even more clear in the language Sahaptin (Sahaptian). In Sahaptin the suffix *-in* marks third person A arguments, which leads to the classification of Sahaptin as an NP-type split ergative system, governed by the animacy hierarchy of Silverstein (1976) (see the discussion in section 2.3). However, DeLancey claims this is a false classification, and that what we actually see in Sahaptin is that special attention is given to the deictic center. This is evidenced by the fact that there are two separate ergative markers, depending on the number feature of the O argument:

- (67) Pá-q’ínu-sha iwíns-in tílaaki-n.
 3/3-see-PROG man-ERG.1 woman-ACC
 ‘The man sees the woman.’
- (68) Iwínsh-nim=nash i-q’ínu-sha (ín-áy).
 man-ERG.2=1SG 3SUBJ-see-PROG (I-OBJ)
 ‘The man sees me.’
- (69) Iwínsh-nim=nam i-q’ínu-sha (íma-náy).
 man-ERG.2=2SG 3SUBJ-see-PROG (you-OBJ)
 ‘The man sees you.’

(DeLancey 2004, 10–11)

We see in (67) that the ergative marker *-in* appears if both A and O are third person. However, when the O is first or second person, as in (68)-(69), the ergative marker changes to *-nim*.

That the language has two separate ergative markers is already different from most other languages that are classified as ergative, and the fact that it is sensitive to the number of the object suggests that the ergative marker is not just used to single out the category of A arguments. DeLancey’s claim, that the system in Sahaptin is about giving attention to the deictic center, is furthermore confirmed by Rude’s (1991) arguments for the idea that the origin of the Sahaptin ergative morpheme is an old cislocative form, as well as by the distribution of its pronominal clitics. These

pronominal clitics obligatorily appear when reference is made to a first or second person, even when an independent first or second person pronoun is present. Sahaptin thus has morphological markers solely with the purpose of indicating the deictic center, showing that deictic marking is an important part of the grammar of this language. This gives some additional weight to the claim that the ‘ergative’ marker also has this function.

The question that arises here is: why would we want to classify this entire language as ergative? The marker appearing on the A argument clearly has a completely different function from the ergative markers in other languages that we discussed so far. In fact, the distribution of it is parallel to the distribution of the preverbal clitic *hong* in Sizang and Tiddim (two languages of the Kuki-Chin branch of Tibeto-Burman) which is also used to indicate first or second person objects in transitive clauses. It is because the marker in Sahaptin is attached to the A argument that we see Sahaptin as ergative. However, if we classify Sahaptin as ergative, the deictic function of the ergative marker is overlooked. The question arises how many more interesting facts are ignored because a language has been classified as ergative, before taking a closer look as to what the function and actual distribution of the ‘ergative marker’ really is.

4.3 Pseudo-ergativity in Paumari

Another example where the label ‘ergative language’ seems to be a case of misdiagnosis is given by Zwart and Lindenbergh’s (2015) discussion of Paumari (an Arauan language spoken in Western Central Brazil, described by Chapman and Derbyshire 1991). Zwart and Lindenbergh show that the system used for describing ergativity by only looking at how the categories A, S, and O are marked is too simplistic and gives us the wrong results in this language. Paumari is classified as an ergative language based on the case marker *-a* that only appears with A arguments (Chapman and Derbyshire 1991). This can be seen in the following examples:

(70) *Dono-a bi-ko’diraha-‘a-ha ada isai hoariha.*
 dono-ERG 3SG.TR-pinch-ASP-THEME.M DEM.M child other
 ‘Dono pinched the other boy.’

(71) *Soko-a-ki hida mamai.*
 wash-DETRANS-NONTHEME DEM.F mother
 ‘Mother is washing.’

(Chapman and Derbyshire 1991, 163–164)

But, as with the discussion of Sahaptin in the above section, a closer look at case marking in Paumari reveals that the ergative classification for this language is too simplistic. As Chapman and Derbyshire showed, the case system of Paumari is restricted to mark only the immediate preverbal noun phrase. This, in combination with the unmarked word order being SVO for transitive clauses and VS for intransitive clauses gives rise to what seems to be an ergative pattern. However, if we look at transitive clauses with a marked word order, a different pattern arises:

(72) Bano pa'isi o-sa'a-ra anani-hi.
 piranha small 1SG-finger-OBJ bite-THEME
 'A small piranha bit my finger.'

(73) Morosi va-a-kaira-ha-'a-ha.
 Morosi 3PL-V-guava-PRT-ASP-THEME
 'Morosi c.s. went to get guava.'

(Chapman and Derbyshire 1991, 197)

We see in (72) that there is no ergative marker on the subject, but that instead the object, which is now in a preverbal position, is marked with objective case. In (73) the subject of the intransitive clause is unmarked, just like the subject of the transitive clause. If we only take examples (72)-(73) in consideration, we would conclude that the language is accusative rather than ergative. Taking all the attested variation into account then leads us to conclude that this language is not ergative in the sense of Dixon's definition, but instead has a tripartite system of case marking, where case marking is sensitive to word order (Zwart and Lindenbergh 2015). Thus by only looking at the sets of A, S, and O without taking into account the fact that word order is of influence on the case-marking pattern in this language, we would wrongly diagnose this language as ergative.

4.4 Problems with defining ergativity in current alignment typology

This chapter explores the consequences for the standard alignment typology of the conclusion that can be drawn based on the previous sections, namely that there is too much variation in ergative patterns to speak of 'ergative languages' in a meaningful way. A number of quite different 'ergative' patterns were discussed that do not neatly fit into one of the systems defined by the standard alignment typology that makes use of A, S, and O (see the figures in (6)-(7) and (12)-(14)) to classify languages into different typological groups. Furthermore, the fact that languages show split ergativity should be taken as an indication of the fact that classifying languages as a whole by means of their alignment typology has no syntactic merit.

Originally the term 'ergative' was the name for the special case of the A argument, but the term 'ergative' (or 'ergative-absolutive') is now mostly used to classify systems or languages as a whole. This second use of the term is problematic in light of all the attested variation. Furthermore the original definition of ergativity, based on the syntactic-semantic primitives A, S and O, stating that S and O behave the same, to the exclusion of A, appears not to cover the languages that are described as being ergative in the literature. If we look at how languages are actually defined as ergative, it is usually because of the fact that A has a special marking, regardless of whether or not S and O behave the same. DeLancey (2004) also discusses this and shows that Dixon's definition is flawed in this respect. DeLancey gives the following examples from Tibetan to indicate that we do not actually think of ergative systems as strictly defined by $S=O \neq A$.

(74) Kho-s blobzang-la gzhus-song.
 he-ERG Lobsang-LOC hit-PERF
 'He hit Lobsang.'

- (75) Kho-s blobzang bsad-song.
 he-ERG Lobsang killed-PERF
 'He killed Lobsang.'

(DeLancey 2004, 2–3)

What we see in Tibetan is that not all O arguments are marked in the same way. The S argument is always unmarked (DeLancey 2004), but (74)-(75) show that only some of the O arguments, namely the one in (75), behave like the unmarked S argument. However, some verbs assign a specific case to their objects (the locative in (74)), giving the category O a heterogeneous character, so that Dixon's definition does not hold for this language, unless we include in the definition that differential object (or subject) marking should be ignored in defining languages as ergative or accusative. The definition should then at least be that A is marked different while the unmarked S and O behave the same. However, this definition should still not be used to define languages as a whole, because it is clear that languages always have multiple alignment patterns.

Verbeke and Willems (2012) also show that the attribution of the term 'ergative language' is made on quite arbitrary grounds, since the existence of ubiquitous ergative processes should lead us to include all languages into the set of ergative languages, or at least into the set of 'split ergative' languages, but this definition is even more arbitrarily assigned. Verbeke and Willems then claim that if we want to continue talking about ergative languages, we at least should keep a rigid definition to define this set of languages, instead of arbitrarily assigning some, but not all languages with ergative features to it. They set out to do this and take Dixon's definition of ergativity, with the addition that the ergative pattern that is attested in some part of the grammar should at least occur on a regular basis.

With this definition they take a look at Hindi, a language often cited as a typically ergative language, with a TAM-based split, resulting in ergative marking in perfective clauses. However, Verbeke and Willems show that there are perfective clauses where the O is marked with accusative, not in line with the S=O definition. For Dixon then, this language should not be classified as ergative, which is not in line with the tradition of describing Hindi. However if we follow the same logic, languages such as Dutch and English, where nominalizations (see examples 28-30) are rigidly based on an ergative pattern should be qualified as ergative languages. This is clearly not how we would want our alignment typology to work, since it provides no insight in what is actually happening in these languages. More interesting patterns will be found if we look instead at to what extent languages display ergative features and what governs the occurrence of these features.

Another issue with current alignment typology is the focus on the categories A, S, and O. An important claim from DeLancey (2004) is that A, S, and O are actually not the syntactic-semantic primitives Dixon (1972; 1979; 1994) claims them to be. That A, S, and O are semantic primitives is very difficult to show, as it is not clear which semantic properties can define any of the three sets. DeLancey (2004) shows that we can try to define A by claiming that it defines a set of agentive arguments, but this was already thoroughly rejected by Comrie (1978). So while the semantic categories such as Agent and Patient are shown to have a real content, just as pragmatic categories such as topic and focus, they do not correspond to the sets defined by A, S,

and O. Defining A, S, and O as syntactic primitives is also problematic, specifically in light of the various types of split ergativity where the S is aligned differently depending on whatever governs the ergativity split. Especially in split-S systems it is not clear that S represents a unified syntactic category. I thus agree here with DeLancey that the categories A, S, and O should only be used in a purely descriptive way to talk about the different arguments in transitive and intransitive sentences, and that no particular syntactic or semantic value should be assigned to them.²⁰

The current definition of ergativity is thus not sufficient to describe the attested variation in patterns with ergative case marking or agreement. What we need in order to adequately describe and analyze ergativity is then a new alignment typology altogether, because the 5-way typology as introduced in chapter 2 cannot cut it. In the next section we first look at a slightly different ergative definition as proposed by Deal (2015), which opens the way to an even more fine-grained alignment typology. Based on this typology a different ‘definition’ of ergativity arises. With this new typology we can re-examine languages that are defined as ergative in the literature to see which specific patterns they exhibit.

5 How should we look at alignment typology?

In order to deal with the attested variation in alignment patterns and to overcome the problems sketched in chapter 4, we need a new way of looking at alignment typology. What we need from a new alignment typology is a more fine-grained system that can accompany all the various alignment patterns we encountered. This new typology, as proposed by Zwart and Lindenbergh (2015), is discussed in section 5.2, after which a new definition of ergativity and accusativity can be given (section 5.3). Section 5.1 first discusses a new definition of ergative properties from Deal (2015), which differs from Dixon’s definition in that it includes two different ergative properties.

5.1 Deal’s (2015) ergative properties

Deal (2015) acknowledges that Dixon’s definitions in fact has two ergative properties that do not have to appear together. These are either grouping S and O together, or marking A differently, and she proposes a different set of definitions of ergativity (called properties) to incorporate this idea. Deal’s ergative properties are given in (76), note that she does not use A, S, and O. Another important point is that she acknowledges that these properties can hold “for some grammatical generalizations”, letting go of the wish to use ergative properties to define entire languages.

²⁰ In order to avoid confusion with the view of A, S, and O as syntactic-semantic primitives, Zwart and Lindenbergh’s (2015) new alignment typology uses a different way of identifying the three arguments of transitive and intransitive clauses, namely S^I, S^T, O, see section 5.2.

- (76) Ergative properties
- I. *The ergative property*
Subjects of transitive clauses behave differently from subjects of intransitive clauses for some grammatical generalization(s)
 - II. *The absolutive property*
Objects of transitive clauses and subjects of intransitive clauses behave identically for some grammatical generalization(s)
 - III. *The argument-structural property*
Subjects of unaccusative verbs behave differently from subjects of unergative and transitive verbs for some generalization(s)
- (Deal 2015, 654)

Property (I) defines a set of patterns we can call ergative, property (II) a set of patterns we can call absolutive, and often, but crucially not always, these sets will overlap. Notice that Deal's third property actually defines a split ergative pattern of the split-S type. In this respect it has a slightly different value from the first two ergative properties, since it can only occur when these first two properties do not strictly hold. In light of all the various split ergative patterns, it is interesting that Deal includes one of these splits into the definition of ergativity. This puts the split-S patterns on a different level from the other ergative splits, such as the TAM splits or N-type splits (see section 2.3 for a discussion of these splits).

With the first two ergative properties given in (76) the languages discussed by DeLancey (2004, 3) that have ergative marking, but do not always mark the object and subject of intransitive clauses identical, e.g. Tibetan, the Tibeto-Burman languages Gurung and Kham, and Indic languages with ergative case marking, are included in set (I), but not in set (II). Deal shows that the (I) and (II) properties are independent of each other in the way they occur in natural languages, which gives us 4 different systems, represented in (77).²¹

- (77) *Interactions between ergative properties (76I) and (76II):*
- a) + ergative property + absolutive property: e.g. Warlpiri
 - b) + ergative property – absolutive property: e.g. Nez Perce
 - c) – ergative property + absolutive property: e.g. Chinese
 - d) – ergative property – absolutive property: e.g. Latin
- (Deal 2015, 656)

These 4 systems are all represented by Comrie's (1978) patterns introduced in chapter 2. The major difference with the systems defined by Comrie, based on A, S and O is that the tripartite system is now included in the set of languages that display ergative properties (just no absolutive properties). So far, this does not really give us a way to include more variation than is done with the patterns based on A, S, and O, but the fact that these patterns are not taken to be properties of an entire language but of a specific grammatical generalization is important. Furthermore, indicating three different ergative properties opens the door to further explorations of which

²¹ Note that Deal's classification of Chinese as a language with the absolutive, but without the ergative property is a bit strange, since this is an elaborate way of stating that Chinese has no case marking at all.

patterns are attested in natural languages and which properties are ergative. The next section discusses a more fine-grained alignment typology which takes into account not only the fact that certain properties hold only for certain grammatical processes, but also the fact that not all elements in a clause participate in all grammatical processes in the same way, which influences how we look at their alignment typology (as in Paumari described in section 4.3).

5.2 A new alignment typology

In the previous sections it was argued that the standard alignment typology used in most literature on case and agreement systems is not representative of the variation that is actually attested in alignment patterns. The standard alignment typology was illustrated in chapter 2 and it contains the five logically possible combinations of the categories A, S, and O, see figure 1 for a reminder.

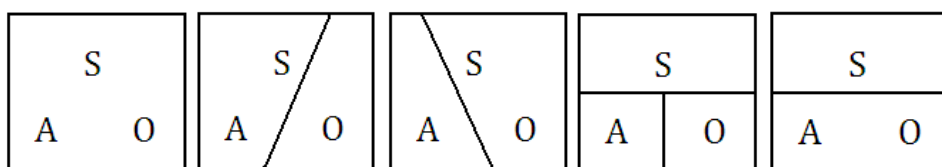


Figure 1: Five alignment types based on the different possible combinations of A, S, and O, with from left to right: neutral, accusative, ergative, tripartite, double-oblique (Comrie 1978).

However, this system does not distinguish between grammatical relations and the morphological realization of these relations. The section on Paumari showed that we do need to take this distinction into account, because the participation in a grammatical process of only certain elements (preverbal arguments in the case of Paumari) influences how alignment patterns are morphologically realized. The important new question posed by Zwart and Lindenbergh (2015) that gives rise to a more fine grained alignment typology is then whether or not a particular grammatical phenomenon applies to all arguments of the verb or to only a subset (as the agreement in Paumari).

I will here discuss this new typology as proposed by Zwart and Lindenbergh (2015). This system describes the alignment of the grammatical functions object (O), transitive subject (S^T), and intransitive subject (S^I) for a specific grammatical of morphological process (such as case marking or agreement).²² If all the three elements {S^T, S^I, O} participate in the process, we say that the alignment is *complete* for this process. This gives us the following complete alignment types, where ‘=’ indicates that the arguments are realized in the same way and ‘≠’ represents a different realization:

²² Zwart and Lindenbergh (2015) deliberately refrain from using the more standard categories A, S, and O to indicate that these categories are purely descriptive and not syntactic-semantic categories as is often assumed in the literature. See also footnote 1 of Zwart and Lindenbergh (2015).

- (78) *Complete types*
- | | |
|--------------------------|---------------------|
| a) $S^T = S^I = O$ | identical |
| b) $S^T = S^I \neq O$ | accusative |
| c) $S^T \neq S^I = O$ | ergative |
| d) $S^T = O \neq S^I$ | intransitive |
| e) $S^T \neq S^I \neq O$ | tripartite |

The identical type should not be confused with the neutral alignment type. In the neutral alignment type none of the grammatical functions participate in the process, while in the identical alignment type all the grammatical functions do participate, but all in the same way. Including the neutral type there are now six complete alignment types. Next the alignment types for which not all grammatical functions participate can be illustrated. This results in twelve logically possible combinations, where the types that involve two out of three categories (79a-79c) all represent three possibilities (the '>' indicates which of the elements is more marked).

- (79) *Incomplete types*
- | | |
|-------------------|--------------------------------|
| a) only S^T/S^I | |
| i. $S^T = S^I$ | subjective |
| ii. $S^T > S^I$ | transitive subjective |
| iii. $S^I > S^T$ | intransitive subjective |
| b) only S^I/O | |
| i. $S^I = O$ | absolutive |
| ii. $S^I > O$ | intransitive absolutive |
| iii. $O > S^I$ | transitive absolutive |
| c) only S^T/O | |
| i. $S^T = O$ | transitive |
| ii. $S^T > O$ | subjective transitive |
| iii. $O > S^T$ | objective transitive |
| d) only O | objective |
| e) only S^T | narrow ergative |
| f) only S^I | narrow intransitive |

We now have a total of 18 different alignment types, which we can use to determine how the grammatical functions are aligned for each grammatical or morphological process. It is important to note that, while some of the alignment types have names that are already frequently used in the literature, they do have a different, often more specific meaning in this system. The name *accusative* now only refers to the system where all the three elements participate in, for example, agreement. The consequence is that Dutch agreement can no longer be described as *accusative*, but should instead be referred to as *subjective*, because only S^T and S^I control agreement morphology on the verb. Furthermore the name *neutral* is now only used when none of the elements participate, not when they all participate in the same way, which is called *identical*. Notice also that *ergative* is no longer a convenient shorter name for the ergative-absolutive system, because *ergative* refers to a complete alignment pattern while *absolutive* indicates an incomplete alignment type.

Looking at languages and trying to determine their alignment patterns, we now first have to analyze which arguments participate in the process under investigation

and this is not always an easy task. Zwart and Lindenbergh (2015) acknowledge this, and show that in order for this system to work, we need to make a distinction between zero marking and the absence of marking. This difference is not always clear, but it is assumed that it can be made when looking closely at the morphological and/or phonological properties, see section 4 of Zwart and Lindenbergh (2015).

The system is briefly illustrated below by looking at some of the languages that were discussed above and that were previously classified in the standard five-way alignment typology.

Dutch, see examples (8)-(9), (15)-(16). We already saw that Dutch agreement is of an incomplete type where only subjects control agreement and S^T and S^I both behave the same, resulting in a subjective alignment type. Dutch case marking is a bit more complex since pronouns and full noun phrases behave differently. Pronouns all participate in case marking with S^T and S^I realized identical and O differently, which indicates an accusative system. Full noun phrases do not participate in case marking at all and are thus of the neutral alignment type.

Lhasa Tibetan, see examples (63)-(66). Lhasa Tibetan has previously been classified as ergative language, because it has a postposition *-s* that occurs with S^T. DeLancey (2004) already showed that this view is too simplistic because this postposition can also optionally mark S^I, and its distribution is sensitive to tense. Looking again at the Lhasa examples, we see that the object does not participate in the case-marking process and that S^T and S^I morphologically have the same marker. It thus appears that Lhasa Tibetan is subjective for case marking.²³

Hindi, see the discussion in section 4.4. Hindi is classified in the literature as being a TAM-split ergative language, because its ergative patterns only occur when the verb is in the perfective. What we see, however, is more complicated. In the perfective, only the S^T argument is marked with a postposition, while O and S^I remain unmarked, but they control agreement, making the perfective agreement system in fact absolutive, and the case-marking system narrow ergative. With non-perfective verbs case marking is neutral and agreement subjective. As Verbeke and Willems (2012) show, this is furthermore complicated by what seems to be differential object marking determined by animacy and definiteness.

It seems that a lot of agreement patterns classified in the literature as ergative are in fact absolutive, but we have also seen the agreement pattern of **Abaza** in examples (25)-(27) where all the elements do participate in the agreement process resulting in a complete ergative agreement pattern.

The language **Halkomelem** (Salish) presents yet another pattern. In this language, only the ergative marked element S^T controls agreement, which means agreement in this language is narrow ergative. The pattern has the additional restriction that only third person arguments control agreement. So it seems that agreement in Halkomelem is sensitive to transitivity with the additional restriction of only occurring in combination with 3rd person subjects.

²³ If DeLancey (2004) is right in claiming that the *-s* marker in Lhasa in fact has the function of indicating focus, this might be a case of differential subject marking on top of an actually neutral case-marking system (see Zwart and Lindenbergh 2015, sec. 5 for a brief discussion on differential subject and object marking).

The above section briefly illustrated how this system developed by Zwart and Lindenbergh (2015) can apply to morphological processes. We can also use it to look at syntactic processes to determine how they reflect alignment patterns. Syntactic ergativity as defined by a ban on A'-extraction of the ergative element might be either **ergative** or **absolutive** depending on the rescue strategy used to, for example, relativize the ergative element. Syntactic ergativity in A'-movement follows an ergative pattern if the ergative element can be moved, but in a different manner from the absolutive elements. This seems to be the case for most languages discussed in the literature, for example in Tongan (Polynesian) the transitive subject can only be relativized when there is a resumptive pronoun in the relative clause:

- (80) 'Oku 'ene 'e he tamasi'i 'a e ta'ahine.
 PRES tickle ERG DET boy ABS DET girl
 'The boy is tickling the girl.'
- (81) *'A e tamasi'i ['oku 'ene 'a e ta'ahine].
 ABS DET boy PRES tickle ABS DET girl
 'The boy who is tickling the girl.'
- (82) 'A e tamasi'i ['oku **ne** 'ene 'a e ta'ahine].
 ABS DET boy PRES RP tickle ABS DET girl
 'The boy who is tickling the girl.'

(Polinsky 2014, 6)

We see in (80) the regular transitive sentence followed by two options for relativization of this sentence in (81) and (82). In the sentence in (81) the S^T is relativized while leaving a gap in the relative clause and this results in an unacceptable sentence, even though the S^I and O can be relativized with a gap in this language (c.f. Polinsky 2014, 5). In (82) the resumptive pronoun *ne* fills the gap left by relativization of the transitive subject, making it an acceptable sentence in Tongan. This indicates that in this language all categories, S^T, S^I, and O participate in the process of relativization, but that S^T participates in a different way, indicating an ergative alignment system.

If it were the case that the S^T could not be A'-moved at all, while the S^I and O can, then we would have an absolutive alignment pattern for A'-movement. However, Deal (2015, 665) claims that syntactic ergative patterns are always ergative/absolutive (in terms of her ergative properties, see (76)), thus ergative in terms of the alignment typology of Zwart and Lindenbergh (2015), but it would be interesting to investigate syntactic ergative patterns anew with the 18 different alignment patterns in mind, to see if we can maintain Deal's claim about this or not.²⁴

²⁴ At first sight Zwart and Lindenbergh (2015) expect all the 18 types to be not only logically possible options, but actually attested patterns. While this seems indeed to be true for morphological processes—although some patterns are presumably quite rare—the question arises if all the patterns are also attested in syntactic processes. This is an interesting question for future research.

5.3 A new definition of ergativity

Zwart and Lindenbergh (2015) present a new alignment typology with no less than 18 different alignment types. In the section above it was illustrated how this typology works and how we can classify syntactic and morphological processes with it. The question arises if we can make an additional classification of groups of these alignment types, and if we link this new typology to research on ergativity, the question becomes which patterns constitute ‘ergativity’. Zwart and Lindenbergh made the classification into four groups of alignment types as presented in table 3. Important to note here is that the cells with the ‘subjective’, ‘absolute’, and ‘transitive’ types all contain three different alignment patterns. This means that the groups of patterns we can call accusative and ergative both consist of five alignment types. This reflects the idea brought forward in chapter 4 and in DeLancey (2004) that ‘ergativity’ does not represent one alignment type for which a unified analysis can be given. Note furthermore that the tripartite system is not included in the group of ergative patterns which, as we saw in section 5.1, is the case for Deal (2015).

Accusative	Ergative	Neutral	Weird
Accusative $S^T=S^I \neq O$	Ergative $S^T \neq S^I=O$	Neutral	Intransitive $S^T=O \neq S^I$
Subjective $S^T=S^I$ or $S^T \neq S^I$	Absolute $S^I=O$ or $S^I \neq O$	Identical $S^T=S^I=O$	Transitive $S^T=O$ or $S^T \neq O$
Objective O	Narrow ergative S^T	Tripartite $S^T \neq S^I \neq O$	Narrow intransitive S^I

Table 3: Alignment type groups (Zwart and Lindenbergh 2015, 5).

Looking at how the alignment types are classified in table 3, we see that the subjective alignment types are all classified as belonging to the group of accusative patterns, because both subjects participate in a process while the object does not. However, patterns where both S^T and S^I participate, but S^T is more marked than S^I —the narrow subjective type—closely resembles narrow ergative patterns, and can easily be confused to portray ergativity.

A new definition of ‘ergativity’ is now not so simple to give, because it is not only about the behavior of the transitive subject or about the identical behavior of the object and the intransitive subject. Because the transitive subjective type is not a pattern signifying ergativity—all subjects participate while the object does not—we need to make sure this pattern is not included in a new definition for ergativity. A possible new way to define ergativity that refers to the whole paradigm of S^T , S^I , O is given in (83).

(83) *New definition of ergativity*

Ergativity is the phenomenon where for morphological or syntactic processes:

- a) S^T participates in the process while S^I and O do not participate, or
- b) S^T participates in the process differently from both S^I and O which behave the same, or
- c) S^T does not participate in the process while S^I and O do.

A new definition of accusativity can be given in the same way as the one for ergativity, since this term now also represents a family of five different alignment types.

However, while new definitions of ergativity and accusativity can be proposed, it is important to note that the main idea of this new fine-grained alignment typology is to go beyond general remarks about ergative systems versus accusative systems. New typological research where morphological and syntactic processes are classified in one of these 18 types should give insight into whether the above classification in alignment type groups from Zwart and Lindenbergh (2015) is in fact a valid one. The question that needs to be answered in this respect is, can we make unified statements about these groups of patterns or can we just as well classify them into other groups? Typological research on this subject might prove the above classification to be a useless one. Therefore, the focus should remain on finding out which of the 18 alignment types are manifested in a language. Only when this is done with a large enough sample of languages can we proceed to make valid claims about groups of alignment types.

6 Universal constraints and generalizations

In light of all this attested variation and the new alignment typology with its 18 alignment types, the question arises if this variation is completely random or if we can make generalizations about their (cross-)linguistic distribution. An important part of the research on ergativity focuses on finding these constraints or generalizations that delimit this variation. A number of these generalizations have indeed been identified (e.g. Sheehan 2014; Deal 2015, see also section 2.5). However, these generalizations found in the literature are based on the alignment system that uses the categories A, S, O to define only 5 possible alignment types (Comrie 1978, 332, see also figure 1). It is thus important to re-examine these generalizations and typological correlations. An important reason to do this is that grammatical theories of ergativity often take these generalizations as a starting point for their analyses. Another important reason to look at these universals once more is that these general restrictions on variation are not expected if ergative alignment patterns do not represent a deeper underlying ergative system, and the distribution of these patterns appears to be chaotic.

Section 6.1 further investigates one of these universals, namely the case-agreement universal. This universal pertains to the relation between case marking and verbal agreement, and states that ergative agreement implies ergative case marking, whereas ergative case marking can co-occur with either neutral or accusative agreement (Moravcsik 1978; Dixon 1994; Deal 2015, 668–670). Section 6.2 briefly discusses some of the other universal correlations that have been put

forward in the literature, that should receive renewed attention in light of the new alignment typology.

6.1 Case-agreement universal

The case-agreement universal discussed in this section is about the co-occurrence of ergative and accusative alignment types in the domains of morphological case and agreement morphology.²⁵ It states that not all logically possible combinations in these domains are actually possible. Table 4 represents the predictions made by this universal.

Case marking	Agreement	Possible?
Ergative	Ergative	Yes
Ergative	Accusative	Yes
Ergative	Absent	Yes
Accusative	Ergative	No
Accusative	Accusative	Yes
Accusative	Absent	Yes
Absent	Ergative	Yes
Absent	Accusative	Yes
Absent	Absent	yes

Table 4: Co-occurrence of case marking and verbal agreement patterns according to the case-agreement universal.

As mentioned above, if morphological manifestations of alignment patterns do not signify a deeper underlying alignment system, we would not in principle expect that ergative agreement cannot co-occur with accusative case marking. Furthermore, this possible correlation needs to be investigated anew in light of the 18 alignment types defined by Zwart and Lindenbergh (2015), because with the new alignment typology this universal does not refer to two single alignment patterns anymore, but instead to the groups of patterns as represented in table 3.

The next section will first give two arguments claiming this universal as stated in the literature does in fact not hold. Section 6.1.2 then briefly sketches how we should investigate possible correlations between case marking and agreement patterns with Zwart and Lindenbergh's (2015) new typology.

6.1.1 Counterexamples and small numbers

First, an important argument against the existence of this universal comes from counterexamples reported in the literature. There are at least two languages that

²⁵ The terms 'ergative' and 'accusative' are used here as they are used in the literature, not corresponding with the newly proposed alignment theory, this is discussed later.

serve as counterexamples to the case-agreement universal, which are Kutchi Gujarati (Indo-Aryan, Indo-European) and Canela (Jê languages) (Deal 2015, 669).

Kutchi (Patel 2006; Grosz and Patel-Grosz 2014) has a split agreement pattern where agreement is subjective in the imperfective, but absolutive in the perfective. However, pronoun alignment is always accusative, and case marking on NPs is objective.²⁶ The following examples illustrate the relevant patterns from the perfective tense:

- (84) John aav-yo.
 John come-M.SG.SUBJ
 'John came'
- (85) John Mary ne dhudr-av-i.
 John Mary ACC shake-CAUS-F.SG.OBJ
 'John shook Mary.'

(Patel 2006, 5,11)

The examples show that both S^T and S^I do not receive any case marking, while the O argument *Mary* in (85) does. However, agreement is controlled by S^I in (84) and by O in (85). Crucially Patel (2006) shows that case marking is always aligned according to accusative patterns (accusative and objective). Agreement morphology thus has alignment patterns that fall in the group of ergative patterns, while all case-marking patterns align in accusative ways.²⁷

Canela also has a counter-universal alignment pattern: pronominal case marking has a subjective pattern and verbal agreement follows an absolutive pattern (Gildea and Castro Alves 2010). The following examples illustrate that agreement morphology on the verb indicates either S^I or O, and not S^T. However, in (86)-(87) the pronouns for S^T and S^I are identical, indicative of a pattern belonging to the accusative family type.²⁸

- (86) Wa ha i-wrik nare.
 1SG IRR 1SG-descend.NF NEG
 'I will not descend.'

²⁶ Alignment patterns are here described with the new alignment typology as presented in (78)-(79), but note that both these languages are also considered counterexamples when the standard alignment typology would have been used.

²⁷ There is one additional fact about agreement in Kutchi noted by Grosz and Patel-Grosz (2014). When there is a structure including a perfective participle or an aspectual participle and a tense auxiliary, the object controls agreement on the participle, as in (84)-(85), but the subject controls agreement on the auxiliary. However this auxiliary agreement does not seem to interfere with the split-ergative agreement pattern, leading Grosz and Patel-Grosz to propose that in Kutchi there are two ϕ -agreement probes.

²⁸ Deal (2015) notes that Salanova (2007) identified a similar pattern in the related language Mëbengokre (Northern Jê languages) as weak pronominals instead of agreement morphemes. If this analysis transfers to Canela the language would not be relevant here as counter example to the case-agreement universal.

(87) Wa ha iʔ-pir na.
 1SG IRR 3SG-grab.NF NEG
 'I will not grab it.'

(Gildea and Castro Alves 2010, 177–178)

That these counterexamples are significant to the generalization is illustrated here with some numbers about the occurrence of the case marking and agreement patterns relevant for the generalization, and this is the second argument against the existence of this universal. The universal is namely based on a small amount of languages. Looking at the relevant WALS chapter (Siewierska 2013), we see that only 19 languages are listed as having ergative agreement, while 296 languages are listed as accusative (212) or neutral (from a total of 380 languages).²⁹ From these 19 languages 4 also occur in the WALS chapters on case marking (Comrie 2013a; 2013b) and they are listed as ergative-absolutive. If we now add Kutchi and Canela to this picture we have 21 languages with ergative agreement of which 9,5% of the languages has accusative case marking and 19% has ergative case marking. These percentages do not seem to justify the claim that ergative agreement implies ergative case marking.

The conclusion from this section is then that with a closer look at the relevant languages, this proposed universal about ergative agreement implying ergative case marking does not hold, giving more weight to the idea that ergative alignment patterns do not signify an underlying ergative system. The question now is if we do find other correlations or generalizations when we start using the more fine-grained alignment typology.

6.1.2 New ways to look at case and agreement correlations

What we should look at is how all the 18 alignment patterns correlate with each other and if there are new generalizations to be found. If we want to compare how ergative and accusative case marking and verbal alignment co-occur we first have to determine for each language which of the 18 different patterns they have and what governs the realization of these patterns.

If we look again at the languages Kutchi and Canela, and some of the languages of which we classified the alignment patterns with the new typology in section 5.2, we can start determining which case marking and agreement patterns occur together. Adding some of the languages discussed in Zwart and Lindenbergh (2015) we can plot the relations between the occurrence of case marking and agreement patterns as follows:

Language	Verbal agreement		Case marking	
	Kutchi	Imperfective	<i>Subjective</i>	Full NPs
Perfective		<i>Absolutive</i>	Pronouns	<i>Accusative</i>

²⁹ The pattern 'neutral' indicates here both the neutral and the identical pattern from Zwart and Lindenbergh's (2015) typology, and the terms 'ergative' and 'accusative' are used as in the literature.

Canela	<i>Absolutive</i>		Full NPs	<i>Neutral</i>
			Pronouns	<i>Subjective</i>
Dutch	<i>Subjective</i>		Full NPs	<i>Neutral</i>
			Pronouns	<i>Accusative</i>
Halkomelem	3rd persons	<i>Narrow ergative</i>	<i>Neutral</i>	
	Other persons	<i>Neutral</i>		
Hindi ³⁰	Perfective	<i>Absolutive</i>	Perfective	<i>Narrow ergative</i>
	Non-perfective	<i>Subjective</i>	Non-perfective	<i>Neutral</i>
High German	<i>Subjective</i>		Pronouns	<i>Accusative</i>
			Full NP	<i>Neutral</i>
Shipibo	Emphatic pronouns	<i>Accusative</i>	Emphatic pronouns	<i>Intransitive</i>
	Other domains	<i>Neutral</i>	Other domains	<i>Ergative</i>
Wambaya	3rd person singular	<i>Transitive subjective</i>	Full NPs	<i>Ergative</i>
	3rd person plural	<i>Subjective</i>	Singular pronouns	<i>Identical</i>
	Other persons	<i>accusative</i>	Other pronouns	<i>Accusative</i>
Coast Tsimshian	<i>Neutral</i>		Past tense predicate connectives	<i>Identical</i>
			Other predicate connective	<i>Ergative</i>
			Imperfective full NPs	<i>Tripartite</i>
			Other full NPs	<i>Accusative</i>
			Clitics	<i>Ergative Tripartite Intransitive</i>

Table 5: Case marking and agreement patterns in various languages, determined with the new alignment typology.

³⁰ It seem to be the case that in Hindi there is only agreement with elements that are not case-marked, making it difficult to conclusively classify the agreement pattern. For example, when there is differential object marking, there is no agreement possible with the object (Grosz and Patel-Grosz 2014).

Looking at table 5 it is clear that it is more complicated to quickly make generalizations about the co-occurrence of alignment patterns, because there are many more patterns that we can now identify. Before we can make claims about restrictions on the distribution of certain patterns in relations to others, our language sample of course needs to be much bigger than the one presented in table 5. It is important to not only determine which patterns occur in a language, but also the factors that govern the occurrence of these patterns, such as TAM variation or NP type, as is also indicated in table 5. Only if we determine all these factors can analyses be developed that explain how these patterns arise.

Analyses currently presented in the literature dealing with the case-agreement universal, such as Bobaljik (2008) and Klockmann (2015) should be examined anew when a large enough language sample has been studied with the new alignment typology. Crucially, syntactic theory should proceed with caution proposing analyses for ergative languages or ergative systems as a whole before the full variation is determined at the level of the syntactic and morphological processes themselves (Zwart and Lindenbergh 2015).

The next section further discusses possible universal generalizations and gives a restatement of Sheehan's (2014) universal implications (discussed in section 2.5) in the new alignment typology.

6.2 Other universals and generalizations

All the universals and correlations about 'ergative languages' should be investigated once again in light of the new alignment typology, respecting the actual variation in alignment patterns, without making broad statements about 'ergative languages' versus 'accusative languages'.

It would also be interesting to look again at the fairly old notion that accusativity appears to be more robust than ergativity, and to the fact that it is cross-linguistically more frequent. The numbers in section 6.1.1 about the occurrence of ergative versus accusative case marking and agreement show that the group of ergative alignment patterns, in both case marking and agreement, is cross-linguistically far less attested than the group of accusative patterns (Comrie 2013a; 2013b; Siewierska 2013). The question then arises whether this indicates a different status of the group of accusative patterns with respect to the group of ergative patterns. The next question is then whether this claim still stands if we compare all 18 alignment types with each other, but at first glance it seems to be the case that there are significant differences in frequency. The fact that accusative languages seem to be more robustly accusative (less split-accusative) than ergative languages robustly ergative is also of importance here. Critical here is literature identifying so-called 'ubiquitous ergativity' such as Moravcsik (1978) and Queixalós (2013). They claim that there are numerous syntactic and morphological processes based on ergative patterns in languages that can be classified as accusative. The patterns they identify should all be classified in terms of the new alignment typology, just as the other processes in the same language to see what is happening precisely. Space limitations do not permit us to examine this further, but now that the actual amount of variation can be identified with our more fine-grained alignment system, this presents an interesting topic for future research, as do the other potential generalizations and correlations about ergative variation.

Another universal that can be investigated in the same way as was indicated for the case-agreement universal is the universal about the occurrence of syntactic ergativity. This is claimed to only occur when a language also has morphological ergativity. Taking the above-mentioned literature on ubiquitous ergativity into account we might be able to find a number of counter-examples, as with the case-agreement universal. However, crucial here is what definition of syntactic ergativity is used. We saw in chapter 2 that some of the literature claims that only ergative patterns in A'-movement are seen as syntactic ergativity (Polinsky 2014).

This is also important when looking at another universal that can be particularly well investigated with the new alignment typology (Zwart and Lindenbergh 2015). This is the universal indicated by Deal (2015) which states that syntactic ergative patterns are always ergative-absolutive, not just ergative and not argument-structural (terms from Deal's ergative properties, see (76)).³¹ Restating this universal in terms of the new typology, syntactic ergativity is always complete, namely ergative, and not narrow ergative or absolutive. If we determine precisely which of the 18 alignment patterns occur in the syntactic and morphological processes of a large enough language sample, we can determine if Deal's generalization is indeed a universal restriction on the occurrence of ergative patterns.

Section 2.5 discussed several more universal generalization about the distribution of alignment patterns involving ergative properties. These universals were represented by Sheehan (2014) as universal implications, repeated below in (88).

(88) *Universal implications*

- a. Ergative with unergatives > ergative with transitives (no split-S accusative languages)
- b. Syntactically ergative > morphologically ergative (Dixon 1994, 172)
- c. Ergativity in control > ergativity in A'-movement > ergativity in case/agreement (Deal 2015, 667)
- d. Split-S alignment > not syntactically ergative (Deal 2015, 667)
- e. Tripartite case system > not syntactically ergative (Deal 2015, 667)
- f. Ergative agreement > ergative case or no case (Anderson 1977; Moravcsik 1978; Corbett 2006; Woolford 2006b)
- g. Ergative case > overtly marked ergative case (Deal 2015, 668)
- h. Ergative > not SVO (Trask 1979; Mahajan 1994)

(Sheehan 2014, 401)

As we saw above when discussing some generalizations with the new alignment typology of Zwart and Lindenbergh (2015), to properly investigate these implications we need to restate them in terms of the 18 new alignment types. Sheehan's implications as presented in (88) are too broad, and it is not clear which patterns exactly imply which other patterns. To restate these implications we can make use of the classification of the 18 alignment types in table 3, but it is important to note that the division in this table is a theoretical one, and future research has to indicate whether this classification is empirically sound, so typological research should focus

³¹ See also the brief discussion of alignment patterns in syntactic ergativity at the end of section 5.2.

on the individual alignment patterns, after which we can determine if the classification in table 3 is valid.

In (89) Sheehan's (2014) implications are restated with the new typology of Zwart and Lindenbergh (2015) in mind (see table 3 and (78)-(79)):

- (89) *Implications in terms of the new typology*
- a. Ergative case marker with unergatives > ergative case marker with transitives
 - b. Syntactically ergative, absolutive, intransitive or transitive absolutive, or narrow ergative > morphologically ergative, absolutive, intransitive or transitive absolutive, or narrow ergative
 - c. Ergative, absolutive, intransitive or transitive absolutive, or narrow ergative patterns in control > ergative, absolutive, intransitive or transitive absolutive, or narrow ergative patterns in A'-movement > ergative, absolutive, intransitive or transitive absolutive, or narrow ergative patterns in case/agreement
 - d. Split-S alignment (Sⁱ is sometimes unmarked or marked with nominative/absolutive, and sometimes with ergative) > not syntactically ergative, absolutive, intransitive or transitive absolutive, or narrow ergative
 - e. Tripartite case system > not syntactically ergative, absolutive, intransitive or transitive absolutive, or narrow ergative
 - f. Ergative, absolutive, intransitive or transitive absolutive, or narrow ergative patterns in agreement > Ergative, absolutive, intransitive or transitive absolutive, or narrow ergative patterns in case marking, or no case marking
 - g. Ergative case marker > overtly marked ergative case marker
 - h. Ergative, absolutive, intransitive or transitive absolutive, or narrow ergative patterns > not SVO

What we see is that most implications now involve a lot more patterns than in Sheehan's original wording. For all these patterns it needs to be investigated if these implications hold and if we might find new classifications or universals about the distribution of these alignment patterns. While these implications can be used as guidance in future research it should be kept in mind that they originated based on typological research using the old alignment typology, and it could turn out to be the case that the new alignment patterns result in quite different universals or implications.

Space limitations do not permit a full investigations of these implications, but chapter 7 gives a case study of one language, Nez Perce, to exemplify how the new alignment typology can be used to classify case and agreement patterns in more detail than the old alignment pattern. Based on investigations like this, implications and generalizations can be studied in future research.

7 Case study of Nez Perce

Nez Perce was already briefly discussed in chapter 2.1, as illustration of the tripartite alignment type in the standard alignment theory of Comrie (1978). The goal of this

chapter is to classify this language using the new alignment typology, to see what we gain from this more fine-grained typology and how this affects previously drawn conclusions about this language, and about the nature of the relation between case and agreement more in general.

Nez Perce is a Sahaptian language, spoken in Idaho, Washington, and Oregon, and classified with the standard alignment typology in the literature as an ergative or tripartite ergative language, with an ergative-accusative split in its pronoun paradigm and a nominative-accusative system of agreement (Rude 1986; 1991; Deal 2010b; 2014; Comrie 2013a; 2013b; Siewierska 2013). In this section I go through data on the case and agreement systems of this language, provided by a number of recent papers by Amy-Rose Deal. She extensively studied this language over the last ten years and I use her dissertation (Deal 2010b), and two recent papers (viz. Deal 2010b; 2014). Based on this data, I will analyze the case and agreement patterns of this language with Zwart and Lindenbergh's (2015) new alignment typology.

7.1 Alignment of full NPs

This section first discusses the alignment of full NPs. In the next sections the pronoun system and verbal alignment patterns are classified. The basic tripartite case system for full noun phrases of Nez Perce is exemplified below:

- (90) Sík'em hi-wleke'yx-tee'nix háamati'c.
 horse 3SUBJ-run-HAB.PL fast
 'Horses run fast.'
- (91) Hi-pa-k'oomay-na mamáy'ac.
 3SUBJ-SUBJ.PL-be.sick-PERF children
 'The children were sick.'
- (92) Sik'é-m-nim kúnk'u pée-wewluq-se timaaní-ne.
 horse-ERG always 3/3-want-IMPERF apple-OBJ
 'The horse always wants an apple.'
- (93) Pit'íin-im páa-'yax-na picpíc-ne.
 girl-ERG 3/3-find-PERF cat-OBJ
 'The girl found the cat.'

(Deal 2010b, 74–75)

What we see is that S^I's, (90)-(91), have no morphological marker, and that S^T's, (92)-(93), are marked with an ergative suffix *-nim/-im*, while the O is marked with an accusative or objective marker *-ne*.³² The ergative case marker appears on all transitive subjects regardless of their theta-role and it is not affected by the tense or

³² The subject of intransitive verbs is not glossed for case by Deal (2010b), but glossed as nominative by Deal (2014). The case on the object is glossed as objective by Deal (2010b), but as accusative by Deal (2014), I adopt here the glossing convention of Deal (2010b).

aspect of the verb.³³ However, the object does not behave identical to the intransitive subject; in Deal's (2015) words, this case-marking system has the ergative property, but not the absolutive one (see 76).

To be able to classify this case-marking system for full noun phrases with the new typology of Zwart and Lindenbergh (2015), we need to establish whether all the three grammatical functions participate in the case-marking process. Put differently, we need to determine whether we are dealing with zero-marking or with an absence of case marking on the intransitive subject. This determines whether the system is indeed complete and tripartite (78e) or rather incomplete and transitive (79c).

As indicated by Zwart and Lindenbergh (2015, sec. 4), the tools with which we can determine between these two options differ for each language, but should be based on an analysis of paradigmatic morphology. If we approach this tripartite division trying to identify a paradigmatic opposition between the marked and unmarked element it seems that the absence of case on the intransitive subject is meaningful in that it sets this category apart from the other two categories participating in the case-marking process. Looking at the distribution of the case marking suffixes we can then say that Nez Perce is indeed a language of the complete, tripartite alignment type, with an ergative marker for the transitive subject, zero-marking for the intransitive subject, and an objective marker for the object in a transitive clause.

However, as Deal (2010b) quite convincingly argues, the distribution of the ergative and objective marker is not only determined by the transitivity of the clause, but also by the presence of object agreement. To get the complete picture of case assignment in Nez Perce, we also need to look at a set of transitive clauses where no case marking is present at all:

- (94) Pit'íin hi- 'yáax-na pícpic.
 girl 3SUBJ-find-PERF cat
 'The girl found her cat.'
- (95) Ke 'itúu hi-wéwluq-se kúnk'u 'iceyéeye.
 something 3SUBJ-want-IMPERF always coyote
 'Coyote is always wanting something.'

(Deal 2010b, 75)

As Deal shows, these caseless clauses differ not only in their case morphology from the transitive clauses above, but also in the type of agreement on the verb. In the transitive clauses with case marking, the agreement marker indicates both subject and object agreement (glossed 3/3), while it only marks subject agreement (glossed 3SUBJ) in the sentences without case marking. Deal discusses other differences between the case-marked and caseless clauses and she shows that the only commonality between the two different types of sentences that are caseless is that they lack object agreement (Deal 2010b, sec. 3.1). She thus concludes that object agreement and the presence of ergative and objective case marking are linked; object agreement is a prerequisite for case marking.

³³ Cf. section 4.1 of Deal (2014). A number of examples convincingly show that ergative is not linked to the theta-role of the subject, since, for example, the subjects of psych-verbs and non-agentive causer subjects also receive the ergative marker.

Now that we have all the facts of the distribution of the ergative and objective marker we can determine how to interpret the absence of a morphological case marker on the intransitive subject. Since the morphological marking of case in Nez Perce appears to be dependent on the presence of object agreement, the case-marking process does not seem to take the intransitive subject into account. It is strange to say that the intransitive subject participates in the case-marking process, since it never occurs together with an object agreement marker. The dependency of case on object agreement indicates that case marking is not governed by the division between transitive and intransitive only, but instead indicates a special behavior of the subset of transitive clauses that have object agreement. The absence of case on the intransitive subject is therefore no longer a meaningful opposition to the presence of case on the subject or object of the transitive clause. The alignment of full noun phrases in Nez Perce then falls into the category of incomplete alignment types and is classified as transitive (type 79c), where the object and transitive subject are both marked differently. The pattern has the additional restriction that it thus only occurs in combination with object agreement.

7.2 Alignment of pronouns

If we look at the alignment of personal pronouns in Nez Perce, we see a pattern that is very similar to the alignment of full NPs, with the addition of an alignment split based on person features of the transitive subject. According to Deal, pronoun alignment is nominative-accusative when subjects are first or second person, and tripartite ergative when they are third person (patterning with full NPs). The following examples show how pronouns in subject position are marked:^{34,35}

- (96) 'Iin kúu-se-∅.
1SG go-IMPERF-PRES
'I am going.'
- (97) 'Iim 'ee kúu-se-∅.
2SG 2SG.CL go-IMPERF-PRES
'You are going.'
- (98) 'Ipí hi-kúu-se-∅.
3SG 3SUBJ-go-IMPERF-PRES
'She is going.'
- (99) 'Iin 'ipéwi-se-∅ Méli-ne.
1SG look.for-IMPERF-PRES Mary-ACC
'I am looking for Mary.'

³⁴ Examples (99) and (100) are not predicted by the claim that object agreement is a prerequisite for case marking. Looking at Deal's (2010a) summary of agreement prefixes (table 2 on page 80), we see that there is a prefix in the combined paradigm for third person singular object and first or second person singular subject, but it is unclear why they are not used in these examples.

³⁵ Example (100) includes a pronominal clitic. Clitics in Nez Perce are not affected by case marking, they can double personal pronouns, and are generally optional (Deal 2014, n. 2).

(100) 'Iim 'ee 'ipéwie-se-∅ Méli-ne.
 2SG 2SG.CL look.for-IMPERF-PRES Mary-ACC
 'You are looking for Mary.'

(101) 'Ip-ním pée-'pewi-se-∅ Méli-ne.
 3SG-ERG 3/3-look.for-IMPERF-PRES Mary-ACC
 'She is looking for Mary.'

(Deal 2014, 1–2)

We see in the above examples that there is no case marking in the intransitive sentences (96)–(98), similar to the intransitive sentences with full NPs. In the transitive sentences the split becomes evident: only third person subjects receives the ergative marker *-nim*, while first and second person subjects stay unmarked.

Object pronouns pattern with object full NPs for the whole paradigm, there is no sensitivity to person or number marking as is the case for the ergative marker. The examples below show that the objective marker also appears on first and second person pronouns in object position.^{36,37}

(102) Ciq'áamqal-m hi-ke'níp-∅-e 'iin-e.
 dog-ERG 3SUBJ-bite-PERF-REM.PAST 1SG-ACC
 'The dog bit me.'

(103) *pro* 'ime-né 'ee 'iyóo xoo-sa-∅.
 PRO.1SG 2SG-ACC 2SG.CL wait.for-IMPER-PRES
 'I'm waiting for you (sg).'

(104) *pro* 'imuu-né 'eetx tiwíx-nu.
 PRO.1SG 2PL-ACC 2PL.CL follow-FUT
 'I will follow you (pl).'

(Deal 2014, 4,7)

It thus seems that only the ergative case marker is sensitive to person features, while the objective marker robustly appears on all objects.

We do find the same distinction between cased and caseless clauses with third person pronouns as with full NPs:

(105) 'Ip-ním pée-qn'i-se qeqíi-ne.
 3SG-ERG 3/3-dig-IMPERF edible.root-OBJ
 'He digs qeqít roots.'

³⁶ In Deal (2010a; 2010b; 2014) no example of a third person pronoun in object position is given, but according to her overview of the pronominal system the forms are *'ipné* (SG) and *imuuné* (PL), patterning with the other objective pronouns and full NPs in that it is the form of the intransitive subject with the objective marker *-ne* added.

³⁷ Examples (103) and (104) include *pro* arguments, as Deal notes, all pronouns can be dropped in Nez Perce, the glosses indicate the intended meaning of the speaker and are taken from Deal (2014).

- (106) 'Ipí hi-qn'i-se qeqíit.
 3SG 3SUBJ-dig-IMPERF edible.root
 'He digs qeqít roots.'

(Deal 2010b, 74–75)

The example sentences with third person pronouns in (105)-(106) show the same pattern of case versus caselessness as the sentences with full NPs; no case marking on the S^T and O argument when there is no object agreement.

Another similarity between the case marking of pronouns and full NPs, is that the case markers for both classes of nouns are identical. There is no separate set of pronouns, but the ergative and objective markers *-nim* and *-ne* (and their allomorphs) are added to the pronoun stem (SG: 'iin, 'iim, 'ipí, PL: nuun, 'imé, 'imé), just as the markers are added to full NPs. I take this as support for the claim made above about the absence of case marking on the intransitive subject. In the whole paradigm, we find no indication that the intransitive subject pronoun is participating in the case-marking process, and the requirement of object agreement is present also in the pronominal case-marking paradigm.

For the pronominal alignment in Nez Perce we can then give two classifications; one for third person pronouns, and one for first and second person pronouns. For third person pronouns we have an incomplete alignment system where only S^T and O participate, resulting in the transitive alignment pattern, identical to the alignment pattern of full NPs. For first and second person pronouns only the O participates in the case-marking process, making it objective (79d), rather than nominative-accusative as it had been previously identified.

7.3 Verbal alignment

As we have already seen, agreement in Nez Perce is controlled by both subjects and objects, with the presence of object agreement being a prerequisite for objective and ergative case marking. Deal (2010b) shows that object agreement always goes hand in hand with object case marking, but that there is no link between the ergative marker and subject agreement. In all the different clause types, transitive clauses with and without case and intransitive clauses, subject agreement is always present. However, verbal agreement seems to be subject to a person and number-based split, in that it distinguishes third person from non-third person and plural from non-plural number in its paradigm:

- (107) *Agreement prefixes*
- | | |
|-------|--|
| hi- | 3 rd person subject |
| 'e- | 3 rd person object |
| pee- | 3 rd person subject and 3 rd person object |
| pe- | plural subject |
| nees- | plural object |

(Deal 2014, 4)

What we see is that both subjects and objects in first and second person singular are not overtly marked for agreement, and that there is only a distinction between

singular/plural and subject/object. The agreement prefixes can be combined if necessary; *hipenees-*, for example, indicates third person plural subject and first or second person plural object. Some additional example sentences are given below, see also the previous examples of this chapter.

(108) 'Imé 'eetx pe-cewcew-núu-m-∅-e pro.
 2PL 2PL.CL SUBJ.PL-call-APPL-CISLOC-PERF-REM.PAST PRO.1SG
 'You (pl) called me.'

(109) Ángel-nim hi-nees-cewcew-téetu-∅ núun-e.
 Angel-ERG 3SUBJ-OBJ.PL-call-HAB-PRES 1PL-ACC
 'Angel usually calls us.'

(Deal 2014, 6,8)

We already saw that all the three grammatical functions participate in the verbal agreement process. The question we now have to answer is whether first and second person singular objects and subjects participate in the verbal agreement process, to determine if we indeed have a person and number split in the agreement paradigm. The question then again is: are first and second person singular arguments zero-marked or is there an absence of agreement marking on the verb for these person and number features? Importantly, Deal showed that case marking is dependent on object agreement. Crucial examples in this case are (99)-(100) above and (110):³⁸

(110) Ciq'áamqal-m hi-ke'níp-e 'iin-e.
 dog-ERG 3SUBJ-bite-PERF 1SG-OBJ
 'The dog bit me.'

(Deal 2014, 4)

We see here ergative and/or objective case marking, but no overt object agreement on the verb. If we maintain Deal's idea that case marking is dependent on object agreement, we are forced to claim that there is object agreement in these examples. This then has the form of a zero-marker for first and second person singular objects. This means that there is in fact no person or number split in the verbal alignment paradigm, and that we can give a single classification for the verbal alignment system in Nez Perce.

We have seen that in Nez Perce all of S^T, S^I, and O participate in the verbal alignment paradigm, and we can thus classify the verbal alignment as one of the complete alignment types. We have also seen that S^T and S^I are treated the same, while the object is treated differently, indicative of the accusative alignment type (78b).

7.4 Conclusions about Nez Perce

In the previous sections the verbal alignment and case-marking patterns of Nez Perce were classified using Zwart & Lindenbergh's (2015) new alignment typology. Three

³⁸ Example (104) might be problematic in the same way as (99) and (100) (see footnote 34). There exists a plural object agreement marker, the question is why it can be left out in this case.

patterns were identified, namely transitive for the case marking of all third person NPs, objective for first and second person pronouns and accusative for verbal alignment.

Looking closely at whether or not all elements participate in the process we try to classify has led to a different classification of the case-marking patterns in this language: I claim Nez Perce is in fact not a tripartite language with a split between tripartite and nominative-accusative in its pronoun paradigm, but a language in which only the arguments in a transitive clause participate in the case-marking process (either both S^T and O, or only O).

Interesting about this language is that case marking appears to be dependent on the presence of object agreement, while case marking and agreement do have different alignment types. Another interesting point is that the relation between case marking and agreement could be used to establish if all grammatical categories participate in case and agreement processes or not. This is a direct result of the division between complete and incomplete systems made by the new typology. This division forces us to look at case-marking and agreement paradigms in relation to each other and other domains of the language, which might lead to different results, as in the case of Nez Perce.

The relation between case and agreement in this language is strong, even though the alignment patterns differ. Nez Perce was classified as having nominative-accusative agreement in combination with tripartite ergative case marking. With the new typology, we still have an agreement pattern that falls in the accusative group, but the two case-marking patterns, transitive and objective, belong to different groups if we look at the broader classification in table 3. Crucially, they both fall outside of the ergative group of patterns. The objective pattern groups together with the accusative pattern, while the transitive pattern is in fact part of a whole new group of ‘weird’ alignment patterns. We know now from Nez Perce that these case-marking patterns can co-occur with accusative agreement.

If we look at the universal correlations between case marking and verbal alignment patterns as discussed in chapter 6, we now have a novel classification of alignment patterns in Nez Perce. Nez Perce thus indicates the need to re-examine the alignment patterns of languages that are claimed to be of an ergative type, before we can say anything about typological gaps in the combination of case marking and agreement patterns. The question still remains whether all combinations of agreement and case-marking patterns are possible and whether we can find correlations or directions within the possible combinations. More languages need to be examined in the way Nez Perce was examined in this chapter in order to make valid claims about the co-occurrence of certain case marking and agreement patterns.

8 Conclusion

This thesis focused on alignment patterns that have been identified as ergative in previous literature. Chapter 2 introduced the basic notion of ergativity and discussed how ergative patterns have been described since influential work on ergativity and alignment patterns by amongst others Comrie and Dixon in the 1970s (Comrie 1978; Dixon 1979). It has been standard to classify alignment patterns into one of the five

types from Comrie (1978) (see figure 1). Based on his typology and based on Dixon's (Dixon 1972; Dixon 1979) introduction of the categories A, S, and O as syntactic-semantic primitives, languages with ergative-absolutive patterns have often been viewed as the mirror image of languages with nominative-accusative patterns. In this respect, ergative morphology has been taken to identify a deeper underlying ergative system. As a consequence, a number of syntactic analyses have posited an ergative parameter in either the syntactic or the morphological component, that determines whether a language is ergative or accusative (e.g. Bok-Bennema 1991; Marantz 1991; Bobaljik 2008). Even though most literature on ergativity acknowledges that there is a lot of variation between languages that display ergative patterns, this variation is often ignored in order to give a unified analysis of ergative patterns.

In chapter 4 a number of languages with ergative patterns were discussed and it was shown that the ergative markers in these languages all have different functions and distributions. This was taken to confirm DeLancey's (2004) hypothesis that ergativity is a too heterogeneous notion to be used as a feature defining a theoretically interesting set of languages. I furthermore argued that the amount of variation between these different patterns that are all classified as ergative, questioned the validity of the currently used alignment typology based on the five basic alignment types and the current definition of ergativity. In agreement with DeLancey, I claimed in chapter 4 that the categories A, S, and O should not be seen as syntactic-semantic primitives and that they should only be used in a purely descriptive way.

In chapter 5, a new, fine-grained alignment typology as proposed by Zwart and Lindenbergh (2015) was introduced and I claim that this typology with eighteen different alignment types is better suited to explain the attested amount of variation in ergative patterns than the traditional five-way typology. Based on this new typology, a new definition of ergativity was given in section 5.3. Crucially, ergativity now indicates not just one alignment pattern, but represents a group of five different alignment types (table 3). This is in line with the main claim of this thesis that we cannot speak of one ergative system or of ergative languages. For every morphological and syntactic domain it should instead be determined which of the eighteen alignment types apply, so that important variation will not be ignored. It is important to note that the newly proposed definition of ergativity is a tentative one, based on the new alignment typology, but not yet based on substantial typological research. Only when a large amount of languages have been examined in more detail can we say whether this definition is a useful one or not.

What we gain from this new alignment typology is that variation in ergative patterns can be investigated properly and an important consequence of adopting this new typology is that universal generalizations and implications about the distribution of ergative patterns have to be investigated anew. Chapter 6 discusses this and restates a number of implications in terms of the new typology. It is indicated how future research can use the new alignment typology and a discussion of the case-agreement universal shows how a detailed investigation of these universals can result in invalidation of the universal in case. A full investigation of the universals found in the literature is not permitted by time and space limitations of this thesis, but this is precisely where future research can take up. With the new typology every language can be classified anew and only this way can existing generalizations be investigated properly.

In chapter 7 a case study of Nez Perce, a language classified in previous literature as tripartite ergative, shows how the new alignment typology can be applied and how it can result in a different typological classification. I claim that case marking and agreement in Nez Perce cannot be classified as belonging to the ergative alignment patterns, but instead that case marking is either transitive (with third person NPs) or objective (with first and second person pronouns) and that verbal alignment is accusative. If we take this result and apply it to the universal about the distribution of ergative case and agreement, it is clear that more typological research is needed to be able to determine what precisely is the relation between alignment patterns in case marking and verbal alignment.

Overall, the main conclusion of this thesis is that there is no merit in speaking of an ‘ergative system’ or of ‘ergative languages’ as compared to languages with other alignment patterns. The amount of variation should not be ignored by grouping languages with various ergative patterns together. The new alignment typology of Zwart and Lindenbergh (2015) is a useful tool in determining the actual amount of variation and should be used in future research to determine for each language which of the eighteen alignment types are found in various morphological and syntactic domains.

The consequences of adopting a new alignment typology and of the claim that ergative patterns are not indicative of an underlying ergative system is that syntactic analyses of ergativity should not use a single parameter to distinguish languages with ergative patterns from languages with accusative patterns. The goal of syntactic analyses should also not be to give one unified account of all ergative patterns. New typological research should bring to light if some alignment types pattern together in a specific way. Only then can unified analyses for groups of alignment patterns be given.

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