# Chapter 2
# Overview of Ergativity

*Ergativity* is a term that refers to a certain pattern that some languages show in treating arguments of a verb. Generally, arguments are classified into three types: the subject of a transitive verb, the object of a transitive verb and the subject of an intransitive verb. Adopting Dixon's (1979) terminology, we will refer to them as A, O, and S, respectively. If a language treats A and S in the same way, distinguishing O, the pattern is called *accusative*. In contrast, in an ergative pattern, S and O are treated as equivalent, while A is treated differently. The notion of ergativity is often used with regard to case marking. In an ergative case system, S and O appear in the same case, *absolutive* and A appears in a special case, *ergative*. An ergative pattern of case marking is referred to as *morphological ergativity*.

Ergativity is not merely a morphological phenomenon. Some languages treat S and O as equivalents in some syntactic operations such as coordination and relativisation. An ergative pattern found at the level of syntax is referred to as *syntactic ergativity*. It should be noted that morphological ergativity does not entail syntactic ergativity. A language may have an ergative case marking without showing syntactic ergativity. However, a language that shows syntactic ergativity necessarily has an ergative case system. Syntactic ergativity is incompatible with accusative case marking. In other

words, there seems to be some correlation between morphological ergativity and syntactic ergativity. This leads to a hypothesis that ergative case marking is associated with syntactic configuration.

Another important characteristic of ergativity is its inconsistency. As Dixon (1979, 1994) points out, none of the so-called ergative languages are fully ergative. Specifically, there are always some phenomena in which S and A are grouped together as opposed to O. Such an accusative pattern found in an otherwise ergative environment is called *split*. Split exists at both morphological and syntactic levels. Such interference by accusativity to ergativity seems to demonstrate relative stability of the former.

This chapter offers an overview of ergativity. The objectives of this chapter is to illustrate the diversity of the phenomena in which ergativity is manifested and to address some questions that are relevant to the current study. §2.1 introduces some examples of morphological ergativity. Two questions will be addressed: Why does ergative case marking have to exist and how does it arise? It will be also shown why ergative case marking is problematic to the standard theory of generative grammar.[1] In §2.2, we will discuss various instances of morphological split. Morphological split is related to (one of) the following four factors: pronouns, agreement, tense/aspect, and subordinate clauses. In §2.3, we will see how ergativity is manifested at the level of syntax. Finally in §2.4, we will consider some syntactic operations that consistently

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[1] "The standard theory" here refers to the one proposed by Chomsky (1991, 1993), an earlier version of the minimalist program, with basic assumptions summarised in Chomsky and Lasnik (1993). Note that the theory of minimalist program is further developed by Chomsky (1995). However, we do not include the development proposed by Chomsky (1995) when we refer to the standard theory for various reasons to be discussed shortly (cf. Chapter 4).

show an accusative pattern cross-linguistically. These include imperatives and control

of PRO. Overall, it will be shown that there has not been a satisfactory account that

covers all of the extensive phenomena involving ergativity.

## 2.1 Morphological ergativity

A language is said to be morphologically ergative if S and O appear in the same case

while a special case is assigned to A. The marked case which A receives in such a

system is called *ergative* (ERG), while the case assigned to O and S is traditionally

called *absolutive* (ABS).[2] This type of case marking is different from the more

familiar accusative system, in which S and A both receive *nominative* case (NOM)

and O receives *accusative* (ACC). The contrast between the two systems is

schematised in (2.1) below.

(2.1)   Ergative                     Accusative
      ERG     A ⎤   NOM
      ABS  ⎡ S ⎦   NOM
      ABS  ⎣ O    ACC

In English, for example, this formal distinction is reflected in the form of pronouns.

As illustrated by (2.2), the third person singular pronoun has the same form *he* when it

occurs as S and A, while as O, it must take a distinctive form, *him*.

(2.2)   a.  He went to school.

     b. He/*him likes Mary.

     c.  Mary doesn't like him/*he.

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[2] It should be noted that some prefer to use the term nominative for absolutive, arguing that both nominative and absolutive are unmarked in a given system (cf. Bittner and Hale 1996a,b; Woolford 1996 among others).

In contrast, distribution of the case markers, *'a* and *'e* in Tongan shows an ergative pattern: *'a* occurs with S or O, while *'e* occurs exclusively with A. See (2.3) below.

(2.3)   a.  Na'e 'alu   'a/*'e     Sione ki he ako.
           Pst    go ABS/*ERG John to def school
           "John went to school."

        b. Na'e fana'i 'e   Sione 'a   Mele.
           Pst shoot ERG John ABS Mary
           "John shot Mary."

Both ergative and accusative case marking exists in the Polynesian languages; those belonging to the Tongic and Samoic-Outlier subgroups show ergative case marking. Languages that demonstrate  morphological ergativity also include Australian languages (e.g., Dyirbal, Yidin$^y$, Warlpiri, Kalkatungu), Indo-Aryan languages (e.g., Marwari, Sindhi, Hindi, Kashmiri), Mayan languages (e.g., Mam, Jacaltec), Eskimo languages (e.g., Inuit, Inuktitut),  Caucasian (e.g., Avar, Georgian),  Yagua, Basque, and Chukchee. In other words, ergative case marking spreads across a wide range of languages, and thus should be considered part of UG rather than a language-specific phenomenon. Consequently, the existence of ergative case marking raises two significant problems to the standard theory. Why does UG have two types of case marking  and how do the two differ from each other in terms of case assignment mechanism? More accurately, can the difference be reduced to a single parameter? Some attempts have been made so far in the literature (Bobaljik 1993, Murasugi 1992, Woolford 1996, Bittner and Hale 1996a, b, Mahajan 1997, to appear). However, there has not been a  consensus as to how  to incorporate ergative case  marking into the theory of UG. We will consider this problem in Chapter 4.

## 2.2 Morphological Split

Morphological ergativity is inevitably accompanied by some inconsistency, with an accusative pattern arising on one occasion or another. Generally, morphological split concerns one of the following four factors: a) pronouns, b) agreement, c) subordinate clauses, and d) aspect/tense. Anderson (1977) notes that the following generalisations hold whenever an ergative pattern and an accusative pattern co-occur within a single language: a) a language may employ an ergative pattern of case marking for full nouns and an accusative pattern for pronouns, but not vice versa; b) a language may show an ergative pattern of case marking and an accusative pattern of agreement, but not an accusative pattern of case marking and an ergative pattern of agreement; c) a language may demonstrate an ergative pattern in main clauses and an accusative pattern in subordinate clause, but not vice versa[3]; and d) a language may show an ergative pattern in the perfective and accusative in the imperfective, but not vice versa. Various analyses have been proposed in the literature, though most of them focus on a specific instance in a particular language. In this section, we will consider some examples of morphological split and introduce some of the analyses hitherto proposed in the literature.

### 2.2.1   Accusative pattern on pronouns

Some languages show an accusative pattern of case marking with pronouns while keeping an ergative pattern with full NP's. Take Tongan for example. Despite the

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[3] As we will see shortly, however, this generalisation concerning the main-subordinate difference is untenable, as we have some counterexamples, e.g., Tsimshian (Dixon 1979).

ergative case marking on full NP's, Tongan pronouns show an accusative pattern. In

(2.4), singular personal pronouns are  contrasted with case  markers used with full

nouns. Note that in Tongan the personal pronouns are never accompanied by a case

marker. Instead, they alter their own forms.[4]

(2.4)  Tongan Case pattern

|   | 1st person pron. | 2nd person pron. | 3rd person pron. | Nouns |
|---|---|---|---|---|
| A | ou | ke | ne | 'e |
| S | ou | ke | ne | 'a |
| O | au | koe | ia | 'a |

Accusative — Ergative

Another example  is Kalkatungu, an Australian language. Kalkatungu  has a set of

bound pronouns, which operate in an accusative system. The contrast between an

ergative pattern of free pronouns and an accusative pattern of bound pronouns is

illustrated in (2.5) below. A bound pronoun may cross-reference a NP or stand in lieu of

one.

(2.5)   Kalkatungu Pronouns (Blake 1982:79)

|   | 1st person | | 2nd person | |
|---|---|---|---|---|
|   | free | bound | free | bound |
| S | ŋai | -Ø | nʸini | -n |
| A | ŋatu | -Ø | nʸinti | -n |
| O | ŋai | -ŋi | nʸini | -kin |

More complicated is the Dyirbal case. In Dyirbal, ERG assigned to A is marked by a

suffix -*ŋgu* while S and O in ABS appear with a zero morpheme. See (2.6) below.

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[4] We will discuss the accusative pattern on pronominal arguments in Tongan in Chapter 6.

(2.6) Dyirbal (Dixon 1994:160)

    a.  ŋuma-Ø    banaga-n$^y$u.
        father-ABS return-Nfut
        "Father returned."

    b. ŋuma-Ø     yabu-ŋgu    bura-n.
        father-ABS mother-ERG see-Nfut
        "Mother saw father."

Curiously, although full NP's and third person pronouns inflect on an ergative pattern, first and second person pronouns show an accusative pattern. Note that in (2.7) the pronominal arguments *ŋana* and *n$^y$ura* are marked by the suffix *-na* only when they occur as O. When they occur as A or S, they are unmarked. The inflection pattern of the Dyirbal nominals is illustrated in (2.8).

(2.7)  Dyirbal (Dixon 1979: 64)

    a. ŋana banaga-n$^y$u.
       "We returned."

    b. N$^y$ura banaga-n$^y$u.
       "You returned."

    c. N$^y$ura ŋana-na bura-n.
       "You saw us."

    d. ŋana n$^y$ura-na bura-n.
       "We saw you."

(2.8) Dyirbal Case Inflection

|   | 1st person pron. | 2nd person pron. | 3rd person pron. | Nouns |
|---|---|---|---|---|
| A | -Ø | -Ø | -ŋgu | -ŋgu |
| S | -Ø | -Ø | -Ø | -Ø |
| O | -na | -na | -Ø | -Ø |
|   | └── Accusative ──┘ | | └── Ergative ──┘ | |

Similar pattern is also found in Nez Perce, a Sahaptian language of the northwestern U.S. In Nez Perce, only the third person pronouns are marked ergatively (Rude 1988)[5].

There are two approaches to this type of split. One assumes that the split arises due to the different degree of agentivity of NP's (Dixon 1979, 1994). The other argues that topicality is the crucial factor (Blake 1982). Dixon (1979, 1994) argues that a split of this kind can be explained in terms of the animacy hierarchy proposed by Silverstein (1976). The animacy hierarchy consists of a continuum in which NP's are arranged according to their potential animacy. See (2.9) below. Silverstein (1976) claims that if a NP is located at the leftmost end of the hierarchy, it is most likely to be animate, and that the degree of animacy decreases as it gets closer to the rightmost point of the line.

(2.9) Animacy Hierarchy

| 1st person pron. | 2nd person pron. | 3rd person pron. | Proper nouns | Common nouns | | |
|---|---|---|---|---|---|---|
| | | & demonstratives | Human | Animate | Inanimate |

$\longleftarrow$ ——————————————————————— $\longrightarrow$

Most animate                                                      Least animate
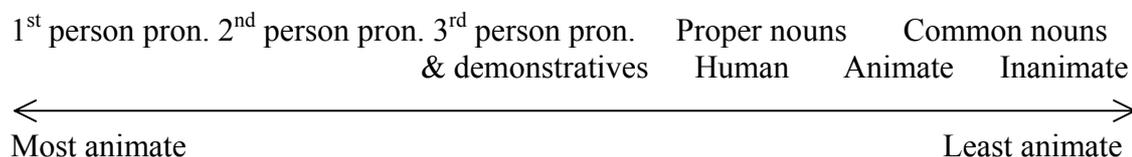
Dixon (1979) develops the idea of animacy hierarchy into that of agency hierarchy, arguing that the more animate a NP is, the more likely it is to be A than O. According to this view, the first person pronouns are most likely to be A, while inanimate common nouns tend to be O. Based on this assumption, Dixon proposes that it is most natural as well as economical to morphologically mark a constituent when it appears in an unexpected role: e.g., a first person pronoun as O or an inanimate common noun

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[5] It should be noted that strictly speaking, Nez Perce case system is not ergative. It is ergative in the sense that S and A are treated differently, with the former unmarked and the latter marked by a suffix *-nm*. However, O is marked by a distinctive suffix *-ne*, which is a deviation from ergativity (Rude 1988).

as A.  In other words, there is no need to mark a NP to indicate that it is A if the NP is located in the leftmost part of the hierarchy. Similarly, if a NP is found towards the right-hand side of the hierarchy, it is unnecessary to mark it as O.  In principle, this analysis predicts an ergative pattern of case marking from thev right-hand end up to some  point in the  middle of the hierarchy, and an accusative vpattern from that point on. However, the exact  point that marks the distinction  between the two  patterns varies from one language to another. In Dyirbal, it seems that the borderline is drawn between second  person pronouns and  third person pronouns. In the  case of Tongan, the boundary is marked at the point between third person pronouns and proper nouns.

Blake (1982) proposes that topicality is the factor that triggers the split. In   this approach, ABS is considered to represent a grammatical topic, based on the fact that absolutive arguments exhibit some characteristics generally attributed to topic: they tend to have a zero case form and often cross-referenced by bound pronouns. Blake argues that first and second person pronouns tend to operate on an accusative system because they are inherently highly  topic-worthy and therefore, they consistently appear in ABS. That is, even when they occur as A, they attract ABS rather than ERG due to their high topicality, giving rise to an accusative pattern.

The above-mentioned analyses are untenable for some obvious reasons. First, validity of the animacy hierarchy in (2.9) is questionable. Granted that personal pronouns are more likely to be animate than inanimate common nouns, it is not clear, for example, what makes the demonstratives (e.g., *it*) more animate than [+human] proper nouns. Similarly, Dixon's (1979) claim that the animacy hierarchy also represents the

potential agency cannot be justified. For example, what is the rationale behind the claim that a pronoun, *he* is more likely to be an agent than a proper noun, *John*? Another problem is the cross-linguistic inconsistency concerning where the borderline is drawn between the accusative pattern and the ergative pattern. Furthermore, it should be noted that there are some cases that cannot be sufficiently explained in terms of the hierarchy. For example, in Australian languages, personal names are often ranked higher than demonstratives (Dixon 1994).[6]

As for the second approach, an essential assumption is that ABS is related to topic in languages that have an ergative pattern of case marking. This speculation extends to a claim that in some languages topicality is so important that it prevails over the general principle of case marking, allowing A to appear in ABS rather than ERG. However, there is a crucial flaw in this logic. According to Blake (1982), first and second pronouns are highly topical and therefore, they tend to appear in ABS. If this is true, then they are expected to appear in ABS when they occur as O as well. As the Dyirbal sentences in (2.7) clearly indicate, the first and second person pronouns, despite their high topicality, appear in ACC (or at least, non-absolutive case) when they occur as O. This raises inconsistency of topicality account. Either ABS has nothing to do with topic, or first and second person pronouns are neutral in terms of topicality. Given that neither of the two approaches can provide a satisfactory account, an alternative account needs to be sought. We will consider this problem in Chapter 6.

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[6] This seems to make more sense than the way in which NP's are arranged in the proposed hierarchy. Nevertheless, Dixon (1994) treats these counterexamples as "odd exceptions," which inevitably exist with any principles.

2.2.2 Agreement

The second type of split concerns agreement. Some of those languages that have an ergative case marking show agreement on the verb which operates on an accusative basis. For example, Warlpiri, an Australian language, shows an accusative pattern of agreement despite its ergative case marking (Bittner and Hale 1996b). In Warlpiri, person and number of pronominal arguments are  reflected on the auxiliary. Specifically, the auxiliary is followed by a subject agreement morpheme and an object agreement morpheme. See (2.10) below. Note that the second person singular pronominal subjects *nyuntulu* (ERG) and *nyntu* (ABS) trigger the same  agreement form *–npa* although they bear different cases. On the other hand, the first person singular pronoun *ngaju* (ABS) triggers two different  agreement forms: *-ju* if  it is O, and *-ma* if it is S, as illustrated by (2.10a) and (2.10c), respectively.

(2.10) Warlpiri (Bittner and Hale 1996a:23)

      a. Nyuntulu-rlu ka-**npa-ju**  ngaju     nya-nyi.
         you-ERG     Prs-2.s.-1.s. me(ABS) see-NPst
         "You see me."

      b. Nyuntu     ka-**npa** parnka-mi.
         you (ABS) Prs-2.s. run-NPst
         "You are running."

      c. Ngaju       ka-**ma** parnka-mi.
         me (ABS) Prs-1.s.   run-NPst
         "I am running."

Burushaski[7] is another example. In Burushaski, all finite verbs must have a suffix that agrees with the subject. In (2.11) below, both the ergative subject (A) and the absolutive subject (S) trigger the same subject agreement, *-i*.

(2.11) Burushaski (Morin and Tiffou 1988:494)

    a. Ne      hír-e    phaló         bók    **-i**.
       the m. man-ERG seed pl. ABS   sow Pret-3.s.m.SUBJ
     "The man planted the seeds."

    b. Ne       hir       yált    **-i**.
       the m. man-ABS yawn Pret-3.s.m.SUBJ
      "The man yawned."

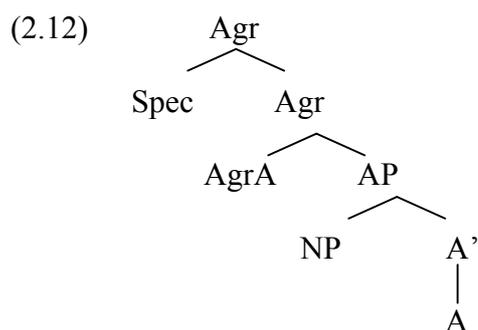This agreement pattern clearly distinguishes A and S from O.[8]

This type of split, ergative case marking on the one hand and accusative agreement on the other, prima facie poses a challenge to the standard theory, in which it is assumed that both case and agreement involve a functional category Agr (Chomsky 1991, 1993). In this view, in order for S and O to appear in a same case, they need to check their case feature in a same Agr, say Agro. This predicts that S and O also check their agreement features (i.e., phi-features) in the same Agro. On the other hand, A moves to another Agr, Agrs, where it checks its case feature as well as phi-features. Assuming that features checked in Agrs and those checked in Agro are realised as different agreement morphemes, we would expect that S and O trigger one form and A, another, thereby giving rise to an ergative pattern. Put differently, in this configuration, case and agreement are expected to show a similar pattern, whether accusative or ergative.

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[7] Burushaski is said to be a language isolate spoken in the Karakoram Range on the border between Kashmir and Tibet (Dixon 1979:95). The data provided in this specific research by Morin and Tiffou (1988) are collected in Yasin, Pakistan.
[8] As far as the object agreement is concerned, some verbs agree with the affected participant (in the case of affective verbs) or with the highest complement NP in the following hierarchy: a) dative complement, b) object, c) subject (Morin and Tiffou 1988: 495). It is not clear if this can be considered object agreement. However, what is crucial here is that the language shows the subject agreement, which is an obvious deviation from ergativity.

However, it has been also shown that case and agreement do not entail each other. For example, Chomsky (1993) notes that  agreement can appear without case and vice versa. The former is exemplified by NP-AP agreement in configuration (2.12) below. The latter is demonstrated by the transitive expletive construction in Icelandic (Bobaljik and Jonas 1993).

(2.12)

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                    Agr
                   /   \
               Spec     Agr
                       /   \
                   AgrA     AP
                           /   \
                         NP     A'
                          |     |
                                A
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These examples show that agreement does not necessarily reflect case. Thus, in principle, the standard theory does not exclude the combination of ergative case marking and accusative agreement.

Bittner and Hale (1996b) also  assume that agreement and case are different phenomena, and give the following account of the split concerning agreement. They compare two morphologically ergative languages, Inuit and Warlpiri to illustrate how the two  agreement patterns arise. Inuit shows an ergative pattern, while  Warlpiri shows an accusative pattern. It is argued that agreement is a relation between an argument (chain) and a local functional head, which  "canonically  antecedent-governs a designated  position in that chain"  (Bittner and Hale 1996b: 542).[9] Also crucial to their argument is an assumption that so-called ergative languages are divided into two subclasses: raising ergative and transparent ergative. In a raising ergative language, an

absolutive NP moves to [Spec, IP], yielding the structure (2.13a). [10] While in a transparent ergative language, it remains in the VP internal object position, where it is base-generated, as illustrated by (2.13b). Consequently, the absolutive NP is located in a higher position than the ergative NP in the raising ergative language. In contrast, the ergative NP appears in the higher position in the transparent ergative variation.

(2.13)          Raising                    Transparent



Inuit is a raising ergative language, while Warlpiri is a transparent ergative language. As illustrated by (2.13a), in Inuit the ABS-argument moves to [Spec, IP] to be licensed, while the ERG-argument is licensed in situ. As a result, the former is canonically antecedent-governed by C. Consequently, C agrees with the ABS-argument, whether S or O. On the other hand, the ERG-argument is canonically antecedent-governed by I, which agrees with it. In contrast, in Warlpiri, both ABS- and ERG-arguments are licensed in situ. Thus, I consistently canonically antecedent-governs the VP-adjoined subject. Consequently, I agrees with the subject, whether S

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[9] $\alpha$ canonically antecedent-governs $\beta$, iff $\alpha$ governs and binds $\beta$ (Chomsky 1981).

or A. In short, Bittner and Hale argue that whether a language shows ergative agreement or accusative agreement is determined by the position in which the ABS-argument appears in S-structure. The account proposed by Bittner and Hale (1996b), theory-internally consistent as it is, requires a number of prerequisites idiosyncratic to this particular theory. In this respect, it cannot be easily incorporated into the standard theory. The question is whether it is possible to account for this type of split without introducing such prerequisites. We will attempt to propose an alternative account in Chapter 6.

2.2.3 Perfective vs. imperfective

The type of split conditioned by tense/aspect is particularly characteristic of Indic and Iranian languages, e.g., Hindi (Anderson 1977) and Kashmiri (Wali and Koul 1994). In these languages, the use of ergative case marking is restricted to perfective (or past-based) tenses and accusative marking is used for imperfective (or non-past) tenses. For example, in Hindi, A is marked by *-ne* in the perfective, while in the imperfective *-ne* never accompanies A. See (2.14) below.

(2.14) Hindi (Anderson 1977: 330, 331)

    a. larka kutte-ko dekhta hai.
       boy  dog-ACC sees   aux
       "The boy sees the dog."

    b. larke-ne  kutte-ko dekha hai.
       boy-ERG dog-ACC has-seen aux
       "The boy has seen the dog."

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[10] This movement is enforced by the K Filter, which requires absolutive NP's to be governed by C. In a transparent ergative language, VP is rendered transparent to government from C (due to the I-to-C or V-to-I-to-C movement) and therefore the absolutive NP can be governed by C in situ.

Kashmiri sentences in (2.15) shows a similar pattern: the ERG-marker *-an* appears on A only in the perfective. In the imperfective, A is accompanied by the ABS-marker *I*.[11]

(2.15) Kashmiri (Wali and Koul 1994: 970)

      a. mohn-an     por akhba:r
        Mohan-ERG read nespaper
      “Mohan read the newspaper.”

      b. mohnI      chu čaay čavaan.
        Mohan-ABS be   tea   drinking
      “Mohan is drinking tea.”

Note, however, that in the Hindi examples, a particle *-ko*, glossed as ACC-marker, appears not only in the imperfective but also in the perfective. Furthermore, *-ko* may be absent in the perfective, as illustrated by (2.16b) below.

(2.16)  Hindi (Anderson 1977: 330, 331)

      a. larka kutta dekhta hai.
        boy   dog    sees aux
      “The boy sees a dog”

      b. larke-ne kutta dekha     hai.
        boy-ERG dog  has-seen aux
      “The boy has seen a dog”

Traditionally, *-ko* is taken to be an accusative marker. (2.14a) of the structure [A O-*ko* V] is at a first glance an accusative construction because O is morphologically marked with A unmarked. However, as illustrated by (2.16a), *-ko* is not always present in the imperfective. More accurately, *-ko* accompanies O only if it is animate and definite. This generalisation also holds of the occurrence of *-ko* in the perfective. In other words, the function of *-ko* is to mark O for the features [+animate, +definite], and not

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[11] Thus, *-I* appears on O in a perfect transitive construction (Wali and Koul 1994).

to mark O for ACC case.[12] Marwari, a dialect of west Rajasthani, provides additional evidence against this dubious status of ACC-marker in these languages. Marwari is also said to have an ACC-marker *-ne* that appears on O. Usage of *-ne* is also conditioned by the semantic features of O. Namely, it can occur only when O is [+animate or +definite]. Hence, all personal pronouns and human proper nouns get this object-marking. In contrast, common noun direct objects take *-ne* only if they are [+definite] and [+animate]. See (2.17) below.

(2.17)  Marwari (Magier 1983: 246)

    a. mhai uthe  dhobi       dekhiyo.
      I-DIR there washerman saw-m.s.
      "I saw a washerman"

    b. mhai uthe  i    dhobi-ne      dekhiyo.
       I-DIR there  this washerman-ACC saw-m.s.
      "I saw this washerman"

These data strongly suggest that the elements that have been called ACC-markers actually have nothing to do with case. Consequently, we may assume that O is in the same case (whatever case it may be) in both tenses.[13] Considering the sentences in (2.14) and (2.16), O is unmarked for case regardless of tenses.

Thus, case marking in Hindi shows a pattern depicted in (2.18). The contrast is between ergative and neutral (no marking) rather than between ergative and accusative.

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[12] It should be noted, however, as Gillian Ramchand (p.c.) points out, *-ko* cannot be seen simply as a definiteness marker because it only has consequences for definiteness when it appears on direct object arguments. It could be that there is a language-specific constraint that requires the direct objects to be marked for definiteness in these languages.

[13] Alternatively, one may assume that although O appears in one case in the perfective and another in the imperfective, morphology does not reflect the difference.

(2.18)  Hindi case marking

|            | S   | A   | O   |
|------------|-----|-----|-----|
| Perfective | -Ø  | -ne | -Ø  |
| Imperfective | -Ø | -Ø | -Ø |

As for  Kashmiri, the  ABS-marker *-I*  appears on S and O in the perfective, and on S

and A in the imperfective. O in the imperfective is unmarked if A is in a higher person

than O or marked as OBL otherwise. Thus, we find an  ergative  pattern  in  the

perfective and an accusative pattern in the imperfective, as illustrated below.

(2.19) Kashmiri case marking

|            | S   | A   | O   |
|------------|-----|-----|-----|
| Perfective | -I  | -an | -I  |
| Imperfective | -I | -I | -Ø/OBL |

A commonly accepted account of this type of split is that it is due to the  reanalysis of

the past  participles as active verbs. For example,  Anderson (1977) gives a  sketch of

the evolution of Hindi as follows. It is known that Sanskrit had an extensive series of

inflected verb forms with inherited Indo-European ending. These inflected forms fell

out of use in Middle-Indic, in which a variety of periphrastic constructions  took over

the function of the original inflected verbal forms. It is said that for the perfective, the

periphrastic form based on the verbal adjective or participle *-ta* was used.  *-ta* form of

an intransitive verb has simply the perfective sense. In contrast, *-ta* form of a transitive

verb has a passive interpretation and could be accompanied by a complement in the

instrumental case  representing the agent. At this stage, S and O  appear in the same

case, which at a later stage is recognised as direct (DIR) or subject case. A appears in the

Instrumental  case (i.e., as an  agent in the *-ta*  construction, as  mentioned above),

which subsequently merges with other uses of a general oblique case. In Hindi, this

derived passive has been reanalysed as an active, i.e., ergative. Consequently, an ergative pattern of case marking is found only in the  perfective in  languages  like Hindi, because it is inherently related to the perfective.[14]

Mahajan (1997) proposes an alternative account, which drastically diverges from the traditional view. Mahajan regards *ko* as definite marker and *ne* as adposition for an ergative argument. Noting that ergative case marking and the *have*-auxiliary (e.g., English *have* in the past perfect) are in complementary distribution, Mahajan argues that the *have*-auxiliary is derived by incorporation of the ERG-adposition into the *be*-auxiliary.[15] In Hindi, this incorporation fails to take place and therefore, it has the ERG-adposition *ne* and the *be*-auxiliary. In this approach, the perfective is universally ergative in an underlying structure. The surface accusative pattern arises due to the incorporation of an ERG-adposition into the *be*-auxiliary.

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[14] However, Magier (1983) points out that Marwari is a counterexample for this passive-to-ergative reanalysis. In Marwari, all subjects are unmarked (i.e., assigned directional case) regardless of transitivity of the verb or tense of the clause. The only exception is third person pronominal subjects, which are marked in OBL in the perfective transitive. Moreover, the use of OBL with third person pronominal subjects is a free variation when it is allowed to occur. Compare (i) and (ii) below. Magier (1983) suggests that this is actually evidence for a change toward (or back to) accusativity which is currently taking place in Marwari.
(i) a. mhai  kale      athe  puggo.
      I(DIR) yesterday here reached-m.s.Pst
      "I arrived here yesterday."
    b. mhai  kam      kariyo.
      I (DIR) work-Ø did-m.s.Pst
      "I did work."
(ii) a. vo/*un      kale      athe  puggo.
      he(DIR)/he(OBL) yesterday here reached-m.s.Pst
      "He arrived here yesterday."
    b. vo/un        kam    kariyo.
      he(DIR)/he (OBL) work did-m.s.Pst
      "He did work."
[15] This hypothesis is based on Kayne (1993)'s proposal that *have* is underlyingly *be* + an empty preposition.

2.2.4 Subordinate vs. main clauses

The fourth type of split concerns the clause types in terms of main vs. subordinate. According to Anderson (1977), a language may have an ergative pattern in main clauses and an accusative pattern in subordinate clauses. Mam, an Eastern Mayan language, seems to conform to this generalisation. Mam has two sets of agreement affixes that specify number and person of the arguments. In principle, these agreement affixes operate on an ergative basis: one set is used for A, and the other for S/O. Pronominal arguments in first and second person (except for the first person inclusive plural pronoun) are also cross-referenced by an enclitic *-(y)a*.

(2.20) Mam agreement affixes (England 1988: 526)

|          | ERG Prefix | ABS Prefix        | Enclitic |
|----------|-----------|-------------------|----------|
| 1s       | n-/w-     | chin-             | -(y)a    |
| 2s       | t-        | Ø-/tz-/tz'-/k-    | -(y)a    |
| 3s       | t-        | Ø-/tz-/tz'-/k-    |          |
| 1pl.excl.| q-        | qo-               | -(y)a    |
| 1pl.incl.| q-        | qo-               |          |
| 2pl      | ky-       | chi-              | -(y)a    |
| 3pl      | ky-       | chi-              |          |

Intriguingly, this ergative pattern is violated in some exceptional clause types, including a) *when-* clauses, b) purpose and result clauses, c) clauses introduced by focused adverbials, specific adverbs or focused generic quantifiers, and d) relative clauses with stative verbs. In such clauses, A, O and S are all cross-referenced on the verb by an ergative affix. See (2.21) below. In (2.21a), the verb *poon* ("arrive") agrees in person and number with S *ky-txuu7* ("their mother"), but crucially what appears on the verb is an ergative affix instead of an absolutive one. Similarly, in (2.21b), both of the two agreement affixes (one for A and the other for O) on the verb belong to the ergative set.

(2.21)  Mam (England 1988: 527)

    a.  N  - chi        ooq'  **t**    -poon  ky-txuu7.
       Prog-3.pl.ABS cry [3.s.ERG -arrive  3.pl.-mother]
       "They were crying when their mother arrived."

    b. Ok     qo     tzaalaj-al    [ok     **t**      **-q**   -il  u7j    t -e
      Fut 1.pl.ABS be-happy-Pot when 3.s.ERG-1.pl.ERG-see book 3.s.-RN/poss.
      yool  t- e  I7tzal].
      word 3.s.-RN/poss. Ixtahuacan
     "We'll be happy when we see the Ixtahuacan dictionary."

It should be noted that the  pattern the Mam  subordinate clauses show is not accusative; subordinate clauses show neither an ergative nor an accusative pattern. Arguments are all cross-referenced by ergative agreement affixes: in effect they are unmarked. However, what matters here is that the ergative pattern cannot be found in subordinate clauses.

On  the other hand,  Dixon (1979) cites a counterexample for Anderson's generalisation. Tsimshian (due to Boas 1911) consistently shows an ergative pattern of cross-referencing in subjunctive clauses while showing a neutral pattern in main clauses unless A is third person and O is first or second person.[16] Thus, we have evidence for split based on the main-subordinate difference. Nevertheless, we do not know whether a certain pattern is characteristic of either subordinate or main clauses.

Dixon (1979) proposes that the key factor that gives rise to this type of split is also agency. In his approach, the split conditioned by tense/aspect arises when a language

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[16] Dixon (1979) refers to two other examples: Australian Ngarluma (due to Hale 1967) and Lardil (due to McConvell 1977 following Klokeid 1976).

marks S for agency in the imperfective.[17] Dixon argues that subordinate clauses such as purposive clauses are semantically similar to the imperfective, and therefore the same principle applies. Hence, S is marked in the same way as A, giving rise to an accusative pattern. In contrast, subordinate clauses such as relative clauses are similar to the perfective, and thus are expected to show an ergative pattern. Dixon argues that Tsimshian subjunctive clauses show the pattern predicted by this hypothesis. However, the same argument is disproved by the Mam data cited above. In Mam not only purposive clauses but also relative clauses show an accusative pattern.

An alternative approach would be to assume that main clauses and subordinate clauses have different structures in these languages, just like English *to*-infinitives lack tense and agreement.[18] Another point to note is that the non-ergative pattern is not accusative but neutral (either all marked as ERG or all marked as ABS). This raises a problem to this alternative account because in a transitive construction both A and O must check its features in the single Agr. We will leave this problem open to future research.

## 2.3    Syntactic ergativity

As mentioned above, a language can either be ergative or accusative at the level of syntax as well as morphology.[19] Syntactic ergativity of a language is typically

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[17] Dixon argues that it is because an event described by the imperfective is likely to be thought of in terms of the potential agent rather than the potential patient. We do not discuss the validity of this hypothesis here. For details see Dixon (1979).

[18] More accurately, Agro is present as ACC can be assigned within *to*-infinitives. See Chapters 4 and 10 for more discussion.

[19] However, it should be mentioned that no language that is morphologically accusative has been reported to demonstrate syntactic ergativity. (Dixon 1979, 1994; Comrie 1989).

demonstrated by coordination and relativisation. To illustrate the contrast, let us first consider a syntactically accusative language, English. In an English coordinate construction involving the conjunction *and*, the coreferential argument may be (and usually is) omitted in the second clause. For example, consider (2.22) below. The second occurrence of *John* is considered redundant and usually dispensed with.

(2.22) John came in and (John) saw Mary.

The coreferential argument can be dropped in the second clause only if it is either S or A, but crucially not if it is O. Consider the sentences in (2.23) below. (2.23a) is ungrammatical because the coreferential argument *John* is O in the second clause. Similarly, (2.23b) can be interpreted only as "John saw Mary and John left the room", and not "John saw Mary and Mary left the room". Put differently, coreference is possible between S and A, but not between S and O. (2.23c) illustrates that coreference between O and A is also prohibited.

(2.23)  a. *John came and Mary saw (John).

b.  John saw Mary and (John/*Mary) left the room.

c.  John saw Bill and (John/*Bill) raised his eyebrow.

(2.24) below shows all the possible combinations. * indicates that coreference is impossible. Note that coreference is strictly prohibited in any combination involving O.[20]

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[20] Note that the combination O-O is also forbidden. As far as syntactic accusativity is concerned, a generalisation is that the gap (the omitted argument of the second verb) must be S or A. O can never be omitted, as illustrated in (i) below.
(i)*John saw Bill and Mary kissed (Bill).

(2.24)  Syntactically accusative language

| Second \ First | S | A | O |
|---|---|---|---|
| S | √ | √ | * |
| A | √ | √ | * |
| O | * | * | * |

In contrast, syntactically ergative languages treat S and O as equivalent in such operations. Specifically, A cannot participate in a coordinate construction either as a gap or an antecedent. A well-known example is Dyirbal. Consider (2.25) below. In (2.25a), the omitted argument, S of the second verb "return," can be coreferential with O of the first verb, but not with A. Similarly, in (2.25b), coreference between O of the second verb and A of the first verb is impossible.

(2.25)  Dyirbal (Dixon 1994: 162)

a. ŋuma-Ø     yabu-ŋgu  bura-n    banaga-nyu.
   father-ABS mother-ERG see-Nfut returen-Nfut
   "Mother saw father and (*mother/father) returned."

b. ŋuma-Ø     yabu-ŋgu   bura-n    jaja-ŋgu   ŋamba-n.
   father-ABS  mother-ERG see-Nfut child-ERG hear-Nfut
   "Mother saw father and the child heard (father/*mother)."

Dyirbal demonstrates an ergative pattern with regard to relativisation as well: only S and O may be relativised. Relativisation of A yields an ungrammatical sequence. See (2.26) below. (2.26c) shows that if the gap happens to be A, the verb must be antipassivised so that the argument appears as a surface S instead of A.[21]

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[21] Antipassive converts a transitive construction into an intransitive construction by putting the subject in ABS and assigning an oblique case to the object. In other words, it is a convention to put the underlying A argument in a surface S. It contrasts with passive in accusative languages, which changes the underlying O argument into a surface S.

(2.26) Dyirbal (Dixon 1979: 127-8)

      a. ŋuma+ŋgu  yabu+Ø    [duŋgara+ŋu+Ø ] bura-n.
         father-ERG mother-ABS   cry-Rel+ABS  see-Pst
         "Father$_i$ saw mother$_j$, who$_{*i/j}$ was crying."

      b. ŋuma+ŋgu [duŋgara+ŋu+ru] yabu+Ø      bura-n.[22]
         father-ERG [cry-REL-ERG]  mother-ABS  see-Pst
         "Father$_i$, who$_i$ was crying, saw mother."

      c. ŋuma+Ø [bural+ŋa+ŋu+Ø yabu+gu] duŋgara+n$^y$u.
         father-ABS [see-APASS-Rel mother-DAT cry-Pst
         "Father, who saw mother, was crying."

Tongan also shows syntactic ergativity as illustrated by (2.27) below. A coordinate construction involving *pea* ("and") does not allow A to occur either as a gap or as an antecedent.[23]

(2.27) a. Na'e taa'i 'e Mele$_i$ 'a Hina$_j$ pea tangi $e_{i*/j}$.
         Pst cry ABS Hina and hit ERG Mele
         "Hina cried and Mele hit (her)."

      b. *Na'e tangi 'a Hina$_i$ pea taa'i $e_i$ 'a Mele.
         Pst cry ABS Hina and hit ABS Mele
         "Hina cried and (she) hit Mele."

It is natural to wonder why an ergative pattern arises at the level of syntax in these languages. In many languages, syntactic rules refer to grammatical relations (e.g., subject and direct object) rather than case. Nevertheless, in languages like Dyirbal and Tongan, such rules refer to case, distinguishing A from S and O. Dixon (1979, 1994) attempts to explain syntactic ergativity in terms of syntactic "pivot". Pivot is a pair of argument types that are considered syntactically equivalent. A language

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[22] Note that although the gap in the relative clause is S, the verb is marked by an ergative marker. According to Dixon (1979), the verb in a relative clause bears a suffix *−ŋu* and agrees in case with the antecedent.
[23] We will discuss syntactic ergativity in Tongan in Chapter 5.

chooses either the S/A or S/O pivot. If the former is selected, the language is syntactically accusative. If the latter is selected, the language exhibits syntactic ergativity. In this view, syntactic ergativity derives from a more primitive concept of pivot and it is not related in any way with the morphological ergativity. Hence, a language with an ergative case system may choose the S/A pivot at the syntactic level. However, this analysis is ad-hoc in two respects. First, it only describes what happens but not why it happens. Second, it is not entirely true that there is no connection between syntactic ergativity and morphological ergativity. For example, a language that is morphologically accusative always selects the S/A pivot. If it is a random choice, then, the combination of accusative case marking and the syntactic S/O pivot should be allowed. The restriction on the combination seems to indicate that syntactic ergativity is not a phenomenon independent of morphological ergativity. A language that is morphologically ergative can be either accusative or ergative in terms of syntax, while a language with an accusative case system can only be accusative at the syntactic level. Thus, case definitely plays a significant role in determining whether a language regards S as equivalent to O or A in terms of syntactic operations. This in turn suggests that it has to do with the positions in which these arguments occur, assuming that syntactic rules are sensitive to structural positions.

Bittner and Hale (1996a,b) propose that difference between syntactically ergative languages and those that are not is that the former is raising ergative. Bittner and Hale argue that it is the hierarchical relations of NPs at SS that determines which pivot is used for certain types of syntactic operations. If A is located higher than O, A will be considered more prominent than O. On the other hand, if O is in a higher position than

A by virtue of raising, O will override A, whereby an ergative pattern arises. Note, however, that although this approach accounts for syntactic ergativity in terms of structural  position, it  requires a number of assumptions unique to this  particular theory. Our question is whether is it possible to account for the same phenomenon using the framework of the standard theory.

## 2.4     Syntactic split

There are also some instances in which a language shows a split at the level of syntax. For example, in Yidin$^y$, there  are two types of  coordination: a) joining  two clauses that share a pronominal argument and b) linking clauses that share a non-pronominal NP. The former shows an accusative pattern while the latter shows an ergative pattern (Dixon 1994). Dixon argues  that  this  syntactic split reflects  the  split at  the morphological level. Yidin$^y$ has an accusative case marking for pronouns and an ergative case marking for full NP's (Dixon 1994).

This hypothesis that a   morphological split is reflected  at the   syntactic level is infeasible with regard to other languages. For example, Dyirbal also shows a similar kind of morphological split, but does not show a split at the syntactic level. Moreover, Dixon's account cannot explain some other instances of syntactic split. Take, for example, a type of syntactic split found in Chukchee. In Chukchee, an ergative pattern is found only with a specific instance of relativisation, specifically, relativisation using a negative participle. With regard to other syntactic processes, Chukchee consistently

shows an accusative pattern (Comrie 1979). Tongan shows yet another type of syntactic split: coordination involving *pea* shows an ergative pattern, whereas coordination involving *mo* shows an accusative pattern (see Chapter 5). It appears that each instance of syntactic split requires a case-by-case explanation. We will consider the Tongan case in Chapter 5. However, we have to leave other cases open to future research.

**2.5 Subject-oriented syntactic rules**

Finally, it should be noted that some syntactic rules are universally subject-oriented. These include imperatives and control of PRO. An accusative pattern found with such syntactic rules should not be regarded as an instance of split. For example, imperatives have a second person pronoun as S or A, but never as O, as illustrated by (2.28). We cannot have (2.28c) with the intended meaning "put yourself in a situation such that John hits you" not only in syntactically accusative languages but also in syntactically ergative languages.

(2.28)   a. (You = S) go to school now!
          b. (You = A) do your work!
          c. John hit *(you = O)!

An accusative pattern displayed by the imperative can be accounted for in terms of semantics. Dixon (1994) argues that in an imperative  construction, the covert argument refers to the  addressee  (hence the second person pronoun). At the  same time, the addressee must be the performer/actor of the instruction. This condition necessarily  implies that the covert  second person argument has an agent theta-role or

at least that it is volitional. O is never volitional and therefore cannot have the addressee as its referent. To support this hypothesis, S of a non-volitional verb is disallowed in an imperative construction. See (2.29) below.

(2.29) a. *Want to go to school!
       b. *Hear the music!

In short, an accusative pattern found with the imperative is conditioned by semantics. Consequently, it does not affect the syntactic ergativity of a given language.


Also, consider control of PRO. Control verbs generally take a subordinate clause that contains an empty argument, which is coreferential with a matrix argument. In addition, control verbs universally require this empty argument to be S or A, but never O. See (2.30) below.

(2.30) a. John wants [ PRO (S) to win].
       b. John wants [ PRO (A) to persuade Mary].
       c. *Mary wants [John to persuade PRO (O)].

Even if a language is syntactically ergative otherwise, the empty element in the control constructions can only be S or A. Consider the Dyirbal examples in (3.31) below. PRO is allowed to appear as A. *Nuyma-l* ("do properly") is a control verb that takes an ERG-subject.

(2.31) Dyirbal (Dixon 1994: 134)

    a. yara-ngu     mija         wamba-n.
       man (A) -ERG house (O) ABS build NFut
       "The man built a house."

    b. yara-ngu [ PRO   mija       wamba-n] nuyma-n.
       man -ERG        house-ABS  build-NFut do properly-Nfut
       "The man built the house properly."

A similar restriction exists in Tongan as well. Consider (2.32) below. *Loto* ("want") is a control verb that takes an ABS-subject.

(2.32)  Tongan

    a. Na'e loto 'a Sione [ke PRO ha'u].
      Pst  want ABS Sione ke     come
      "Sione wanted to come."

    b. Na'e loto 'a Sione [ke PRO 'ave 'a Mele].
      Pst want ABS Sione ke    take ABS Mele
      "Sione wanted to take Mele."

    c.*Na'e loto 'a Sione [ke 'ave 'e Mele PRO].
       Pst want ABS Sione ke take ERG Mele
      "Sione wants Mele to take (Sione)."

An accusative pattern found in control constructions, unlike the imperative, cannot be explained in terms of semantics: [± volitional] or [± agent] is not a  determinant  factor in this case. Dixon (1994) thus attempts to account for an accusative pattern found in the control constructions in terms of the notion "subject", which he defines as a universal category that consists of S and A.  He argues that the   notion   subject overrides ergativity in control constructions. However, this is merely another way of describing the single fact. It does not explain why the notion of subject prevails over ergativity in control constructions and not in any others.

On the other hand, Bittner and Hale (1996a,b) propose an account that is based on the syntactic configuration. As mentioned above, Bittner and Hale postulate that O raises to [Spec, IP] in a syntactically ergative language. Note that the  landing site for O, [Spec, IP] is crucially an A-bar position. Bittner and Hale argue that those syntactic operations which  universally shows an accusative pattern are  A-bar  dependent. That

is, they involve A-bar movement. In contrast, in control constructions, what is relevant is the highest A-position. Sitting in an A-bar position, O is invisible in this case and therefore, A in the VP-adjoined position (i.e., A-position) prevails over O. Granted that this account is consistent with their theory of ergativity, one drawback of their approach is that it requires many preliminary conditions.

Another alternative is to assume that this accusative pattern arises due to a case reason. However, in this case, the case in question is Null, which is assumed to be assigned exclusively to PRO (Chomsky and Lasnik 1993). If we are able to show Null is assigned to a particular position in a phrase structure, which is accessible for both A and S, this exceptional accusative pattern would be reducible to a condition on the structural case assignment. We will pursue this possibility in Chapter 10.

## 2.6    Summary

In summary, we made the following three observations regarding ergativity. First, ergative case marking is found across a wide range of languages. This leads us to conclude that ergativity, as least morphological ergativity, is part of UG rather than a language-specific phenomenon. Hence, two questions arise. Namely, why does UG (have to) have two types of case marking? And, how does morphological ergativity arise? Second, there is correlation between morphological ergativity and syntactic ergativity. A language does not show syntactic ergativity unless it has an ergative case

marking. This unilateral relation between morphological ergativity and syntactic ergativity suggests that an ergative pattern found at the level of syntax is induced by the ergative case marking. Or at least, they are both caused by the same factor, which probably is associated with some structural position. Thirdly, between these two systems in UG, the accusative system exhibits relative stability compared with the ergative system. Specifically, whenever an ergative pattern exists, morphologically or syntactically, an accusative pattern also appears.

Given these facts, we considered various phenomena in which ergativity is manifested. With regard to morphology, we observed that the following four factors may give rise to an accusative pattern in a language that otherwise consistently sticks to an ergative pattern. These factors are a) pronouns, b) agreement, c) imperfective tense/aspect, and d) main-subordinate difference. On the other hand, it was also shown that there is not a single account that successfully explains in accordance with the standard theory why a morphological split arises. However, we proposed that it is possible to relate a mophological split caused by the above-mentioned factors to a phrase-structural reason. In other words, there is a possibility that phenomena of morphological split can be incorporated into the standard theory.

As for syntactic ergativity, we suggested that syntactic splits found across languages are caused for a language-specific reason. More significant to our study is the fact that some syntactic operations, control of PRO in particular, universally show an accusative pattern, grouping S with A rather than with O. This accusative pattern could also be due to a phrase structural reason. Specifically, the standard theory

assumes that PRO is associated with Null case. If, for example, Null case can be assigned in the position in which only S and A can appear but O cannot, it explains why the distribution of PRO shows an accusative pattern.

To conclude, we argue that morphological ergativity, morphological split, and syntactic ergativity may all be explained in terms of phrase structure. That is, the standard theory should be able to provide a satisfactory account of ergativity. In the following two chapters, we will study in more detail how ergativity is manifested in Tongan (Chapter 3) and set forth a hypothesis regarding how ergative case marking could be accounted for in the standard theory (Chapter 4).