

## **The marked status of ergativity**

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3512 BL Utrecht  
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phone: +31 30 253 6006  
fax: +31 30 253 6406  
e-mail: [lot@let.uu.nl](mailto:lot@let.uu.nl)  
<http://www.lot.let.uu.nl/>

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# The marked status of ergativity

## De gemarkeerde status van ergativiteit

(met een samenvatting in het Nederlands)

Proefschrift

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**Mario Alexander van de Visser**

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Promotoren: Prof. dr. N.F.M. Corver  
Prof. dr. F.P. Weerman

Co-promotor: Dr. P. Ackema

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This book would have gone nowhere without the help of my informants. It

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## List of abbreviations

The following pages contain two lists of abbreviations used in this study, as well as a short list of notational conventions. The first list, in small capitals, presents the abbreviations that I use in glossing linguistic examples. Wherever possible, I follow the Leipzig glossing rules that have been developed jointly by the Max Planck Institute for Evolutionary Anthropology and by the Department of Linguistics of the University of Leipzig. At present, these rules are electronically available at:

<http://www.eva.mpg.de/lingua/files/morpheme.html>

|                 |  |
|-----------------|--|
| 1               | first person   |
| 2               | second person  |
| 3               | third person   |
| i, ii, iii, iv, | noun class markers   |
| ...             |  |
| >               | separates two arguments in a portmanteau morpheme;<br>follows the A-argument and precedes the O-argument |
| -               | separates two morphemes  |
| =               | separates a phonological clitic from preceding material  |
| A               | transitive subject (pronominal argument)   |
| ABL             | Ablative   |
| ABS             | Absolutive   |
| ACC             | Accusative   |
| AOR             | aorist tense   |
| ANTIP           | antipassive  |

|           |                                 |
|-----------|---------------------------------|
| APPL      | applicative                     |
| ASP       | aspect                          |
| CAT       | catalyst                        |
| CIS       | cislocative                     |
| COMP      | complementizer                  |
| COMP{S/A} | subject control complementizer  |
| COMP{O}   | object control complementizer   |
| COMPL     | completive                      |
| COND      | conditional                     |
| COP       | copula                          |
| DAT       | Dative                          |
| DEF       | definite                        |
| DEM       | demonstrative                   |
| DIR       | direct form                     |
| DISTR     | distributive                    |
| DR        | directional (suffix)            |
| DT        | directive                       |
| DYN       | dynamic                         |
| DU        | dual                            |
| DUP       | duplicative                     |
| EXCL      | exclusive (excluding addressee) |
| ERG       | Ergative                        |
| FAM       | familiar                        |
| F         | feminine                        |
| FACT      | factual                         |
| FIN       | finite                          |
| FUT       | future                          |
| GER       | gerund                          |
| GEN       | genitive                        |
| GNR       | generic                         |

|        |                                       |
|--------|---------------------------------------|
| HAB    | habitual                              |
| HUM    | human                                 |
| ICOMPL | incompletive                          |
| INCL   | inclusive (including addressee)       |
| INDEF  | indefinite                            |
| INF    | infinitive                            |
| INS    | Instrumental                          |
| INTS   | intensifier                           |
| INV    | inverse                               |
| IO     | indirect object (pronominal argument) |
| IPFV   | imperfective                          |
| IRR    | irrealis mood                         |
| LK     | linker                                |
| LOC    | Locative                              |
| M      | masculine gender                      |
| N      | neuter                                |
| N-     | nasal prefix                          |
| NEG    | negation, negative                    |
| NFUT   | nonfuture                             |
| NHUM   | nonhuman                              |
| NMLZ   | nominalizer                           |
| NOM    | Nominative                            |
| NPST   | nonpast tense                         |
| NSPEC  | nonspecific                           |
| O      | direct object (pronominal argument)   |
| OPT    | optative                              |
| PASS   | passive                               |
| PAUC   | paucal                                |
| PFV    | perfective                            |
| PL     | plural                                |

|       |  |
|-------|--|
| POSS  | possessor                                  |
| PREV  | preverb                                    |
| PROG  | progressive                                |
| PRF   | perfect                                    |
| PRS   | present                                    |
| PRT   | particle                                   |
| PST   | past tense                                 |
| PTCP  | participle                                 |
| PUNC  | punctual aspect                            |
| Q     | question particle / marker                 |
| R     | realis                                     |
| REFL  | reflexive                                  |
| REL   | relative                                   |
| RN    | relational noun                            |
| RPST  | recent past                                |
| S     | intransitive subject (pronominal argument) |
| SG    | singular                                   |
| SPEC  | specific                                   |
| STAT  | stative                                    |
| SUF   | suffix                                     |
| TOP   | topic                                      |
| TR    | transitive                                 |
| TS    | thematic suffix                            |
| TRLOC | translocative                              |
| UNM   | unmarked                                   |
| Z     | zoic                                       |

The next list, in full capitals, contains the abbreviations that I occasionally use in the running text and footnotes.

|      |                                |
|------|--------------------------------|
| AUX  | auxiliary                      |
| CLLD | clitic-left dislocation        |
| ECM  | exceptional case marking       |
| EPH  | Ergative as Passive Hypothesis |
| LA   | lexical argument               |
| PA   | pronominal argument            |
| SPH  | Second Pattern Hypothesis      |
| TAM  | tense, aspect, mood            |
| UG   | Universal Grammar              |

Finally, the following notational conventions are used in syntactic trees:

|                           |   |
|---------------------------|---|
| DP <sub>s</sub>           | DP associated with the sole theta role of an intransitive verb  |
| DP <sub>A</sub>           | DP associated with the external theta role of a transitive verb |
| DP <sub>O</sub>           | DP associated with the internal theta role of a transitive verb |
| [ $\phi$ ]                | phi-features (nominal features like person and number)          |
| [ACC],<br>[ERG]           | Accusative, Ergative case feature                               |
| $\Leftarrow, \Rightarrow$ | cliticization/incorporation                                     |



## The unmarked status of accusativity

### 1 Introduction

This thesis deals with the grammatical phenomenon called ‘ergativity’. This term has been used since the beginning of the 20<sup>th</sup> century in order to refer to a morphological pattern which treats both the direct object of a transitive clause and the subject of an intransitive clause in a way that differs from the way the subject of a transitive clause is treated. Often, the ergative pattern is expressed by case marking. The following sentences from Aghul, a language spoken in Daghestan (Russia) and Azerbaijan, illustrate this:

- (1) **Aghul** (North Caucasian, East Caucasian, Lezxic, Nuclear Lezxic, East Lezxic)<sup>1</sup>

- a. *ge*    *ʕ a-a*  
3SG    walk-PRS  
‘S/he is walking.’

---

<sup>1</sup> Each example introducing a new language will be provided with the complete genetic affiliation of this language. Apart from showing to which (sub)family the language at stake belongs, the affiliation is intended to function as a reading cue: examples lacking it contain data from a language that has been mentioned earlier. The genetic information has been taken from Ethnologue, and is summarized in the Language index, together with the number of members of each language family or branch.

Every linguistic example is either followed by the name of the informant who has provided the data, or, in case of citation from the literature, by a reference to the publication from which the data has been extracted. In the latter case, glosses have often been slightly modified in order to keep the presentation consistent.

- b. *gi*            *sa*    *Hač*    *ʔut'a-a*  
 3SG.ERG    one    apple    eat-PRS

'S/he is eating an apple.'

- c. *gi*            *ge*    *ʔuča-a*  
 3SG.ERG    3SG    wash-PRS

'S/he is washing him/her/it.'

(Solmaz Merdanova (via Dmitry Ganenkov))

The third person singular pronoun *ge* can either be used as an intransitive subject (cf. (1a)) or as a direct object (cf. (1c)). As the subject of a transitive clause, *gi* must be used: this is the Ergative case form.<sup>2</sup>

Patterns similar to the one found in Aghul differ crucially from the Nominative/Accusative pattern we find in most languages. According to Dixon (1994:2), ergativity plays a role in only 25 percent of the world's languages. Although being widespread geographically and genetically, the ergative pattern in a given language is often complemented by a Nominative/Accusative pattern. The fact that few languages are exclusively ergative, together with the observation that most languages can do without ergativity at all, suggests that ergativity is a marked phenomenon in natural language. This idea is the starting point of the present study, the main goal of which is to provide a theoretical explanation for the marked status of ergativity. In the chapters to follow, I will develop a generative account for various appearances of ergativity. The main hypothesis will be that every natural language is basically Nominative/Accusative, and that ergativity only occurs in languages where one or more arguments of the verb are obligatorily realized as a pronoun.

The present chapter continues with a presentation of the various faces of ergativity in section 2. As the focus of this thesis is on case and agreement morphology, I will briefly discuss the generative view on these grammatical phenomena in section 3, together with several leading

proposals with respect to ergativity. These proposals will be evaluated in the light of the supposedly marked status of ergativity. Section 4 concludes the chapter with a sketch of the proposal presented in the chapters to follow.

## **2 Ergativity in the languages of the world**

Before turning to ergativity, I will discuss the notions ‘Nominative’ and ‘Accusative’ with reference to the English language (2.1). Next, the origins and meanings of the notions ‘Absolutive’ and ‘Ergative’ are investigated (2.2), to be followed by a presentation of the various appearances ergative patterns may have in the languages of the world (2.3 and 2.4). Finally, I will summarize the facts presented in this section (2.5).

### **2.1 Nominative and Accusative**

Every natural language distinguishes between intransitive and transitive predicates: the former select only one argument, while the latter select two or more. This is illustrated in the following two English sentences:

(2) **English** (Indo-European, Germanic, West, English)

- a. *I was running* (intransitive)
- b. *I was chasing a policeman* (transitive)

Traditionally, both instances of *I* are analyzed as the subject of the sentences in (2), whereas *a policeman* is considered to be the object. In cases like (2b), the hearer/reader of the sentence immediately knows who is the chaser and who is the chased one, even when the referent of *I* is a criminal and it is not common for criminals to chase policemen. The following grammatical information ensures the only correct reading of the sentence: the pronoun ‘I’ can only refer to the chaser, which means that ‘a policeman’ must refer to

---

<sup>2</sup> It should be noted that these pronouns are actually demonstratives, since Aghul

the chased one. We know this because English possesses two different first person singular pronouns: *I* and *me*. The second one would be used if the speaker of a sentence like (2b) wanted to express the opposite meaning: *a policeman chased me*. The two forms of the pronoun can be taken to show grammatical case: *I* is used when the first person referent is the subject: it has the highest degree of control over the action denoted by the verb. The form *me* can only be used as an object: it has a lower degree of control in these cases. As it happens, the form *I* is also used as the subject of an intransitive verb (cf. (2a)). Most languages using case to distinguish between the two arguments of a transitive predicate reserve one of these cases for the argument of an intransitive predicate.<sup>3</sup> Other languages do not formally distinguish between the two arguments of a transitive predicate at all. In those cases, there are usually other means to disambiguate the sentence. Inflection of the predicate and constituent order are the main devices used by natural language. English happens to use both, in addition to the pronominal case system. It is well known that the unmarked word order requires the subject to precede the verb, whereas the object follows it: compare *I chased a policeman* with *a policeman chased me*. Furthermore, the verb in English changes (minimally) according to the person and number features of the subject. Although most pronouns have separate forms for subject and object, full DPs are never case marked in English. When both arguments of a transitive sentence are realized by full DPs, the hearer / reader is not lost: she or he can still rely on verbal agreement and/or word order.

As noted above, both the subject of an intransitive predicate and the subject of a transitive predicate share the same case form in most languages. This case is commonly referred to as the Nominative case, which

---

does not possess third person pronouns (Dmitry Ganenkov, p.c.).

<sup>3</sup> Languages using a separate form for intransitive subjects are said to employ a tripartite case system. In chapter 5, I will present evidence from Nez Perce, a language that illustrates this system perfectly. Kham, a language that I will discuss briefly later on in this section, is another case in point.



## 2.2 Ergative and Absolutive

Allegedly, the term 'ergative' shows up for the first time in Dirr (1912), in a description of Rutul (cf. Seely (1977)), like Aghul predominantly spoken in Daghestan.<sup>5</sup> Like all of the members of the North Caucasian family, Rutul has a case system which opposes S and O to A. Noun phrases in the latter function carry an overt case affix, named after the Greek word *ergon* 'work, deed': the Ergative case. Noun phrases in the former two functions always appear in their base form.

- (4) **Rutul** (North Caucasian, East Caucasian, Lezxic, Nuclear Lezxic, West Lezxic): nominal case marking

|               | Grammatical function |   |                 |
|---------------|----------------------|---|-----------------|
|               | A                    | S | O               |
| 'grandfather' | <i>babâ-r</i>        |   | <i>babâ</i>     |
| 'grandmother' | <i>babây-i</i>       |   | <i>bâbay</i>    |
| 'fish'        | <i>balğû-r</i>       |   | <i>baluğ</i>    |
| 'button'      | <i>q'°an-âr</i>      |   | <i>q'°an</i>    |
|               | Ergative             |   | unmarked (Abs.) |

(Alekseev 1994:218-222)

By comparing these forms to their equivalents in a Nominative/Accusative language like Turkish, the main difference between the two patterns immediately becomes clear:

---

<sup>5</sup> According to Butt, the origins of the label 'ergative' are not entirely clear (2006:154). Manaster Ramer (1994) claims that the term occurs in Ray & Haddon (1893), where it is applied to a Locative/Comitative case in Miriam, a Trans-New Guinea language of Australia. He assumes that Ray & Haddon based the term on the Latin preposition *ergā* ('right against, next to'). Later on, Schmidt (1902) seems to borrow the term from Ray & Haddon, wrongly applying it to the case on transitive subjects, in association with Greek *ergátēs* ('worker'). Subsequently, Trombetti (1903) applies it to Caucasian languages, a habit that is taken over by Dirr.

(5) **Turkish** (Altaic, Turkic, Southern, Turkish): pronominal case marking

|               | Grammatical function |              |                 |
|---------------|----------------------|--------------|-----------------|
|               | A                    | S            | O               |
| 'grandfather' |                      | <i>dede</i>  | <i>dede-yi</i>  |
| 'grandmother' |                      | <i>nine</i>  | <i>nine-yi</i>  |
| 'fish'        |                      | <i>balık</i> | <i>balığ-ı</i>  |
| 'button'      |                      | <i>düğme</i> | <i>düğme-yi</i> |

unmarked (Nom.)      Accusative

(Cem Keskin)

In Rutul, the separate case used for A (Ergative) is morphologically more marked than the case used for S/O. In Turkish, the separate case used for O (Accusative) is morphologically more complex than the case used for S/A.<sup>6</sup> This division of marked versus unmarked cases is exceptionally common across languages, and will therefore play an important role in the analysis. For the moment, it suffices to notice that we can contrast the two case patterns with each other by simply indicating the marked cases. Compare the representation in (3), repeated below as (6a), with the one in (6b).<sup>7</sup>

(6) Accusative versus ergative case marking:

a. English, Turkish, ...

|   |   |         |                |
|---|---|---------|----------------|
| S | V |         | (intransitive) |
| A | V | O (ACC) | (transitive)   |

b. Aghul, Rutul, ...

|         |   |   |                |
|---------|---|---|----------------|
| S       | V |   | (intransitive) |
| A (ERG) | V | O | (transitive)   |

Apart from the term 'Ergative case', people have used several other names for the case that appears exclusively on A-arguments: 'nominativus transitivus', 'subjective', 'casus activus', 'agentive', etcetera. After Dirr's

<sup>6</sup> The same is true for pronouns.

<sup>7</sup> Note that the ordering of the symbols in (6) suggests that ergative systems treat s and A as one category, just like accusative systems. Indeed, as we will see in the

(1928) survey of 35 Caucasian languages, 'ergative' has become a general term. The case used for the combination of S and O has been called: 'nominativus intransitivus', 'objective', 'casus passivus', etcetera. Often, the S/O-case is called 'Nominative', but as this term has already been reserved for the grouping of S and A in Nominative/Accusative systems, using it for S and O in an ergative system makes it a less clear notion. According to Seely (1977:192), Thalbitzer (1911) introduced the term 'absolutive' in order to refer to the combination of S and O in connection with Eskimo-Aleut. Since then, the term 'Absolutive case' has been commonly used. I will follow this custom throughout this thesis. Incidentally, I will make use of the terms 'accusative pattern' and 'ergative pattern' in order to refer to a Nominative/Accusative and an Absolutive/Ergative opposition respectively. This turns out to be useful when speaking of ergativity that is not related to case marking per se.

### 2.3 Ergative morphology

In some languages, ergativity is a morphological phenomenon, which only applies to the case system. In most ergative languages, the case system resembles the one in Rutul: the ergative case is morphologically marked with respect to the absolutive. Languages that restrict the ergative pattern to the case system are abundant in the Pama-Nyungan branch of the Australian family. The examples in (7) are from Yalarnga, an extinct language without (overt) verbal agreement.<sup>8</sup>

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next section, most syntactic phenomena that apply to subjects only appear to have the same effect in accusative and ergative languages alike.

<sup>8</sup> According to Blake (1987:179), about three quarters of the nearly 200 Australian languages that had been described at the time of writing possess the Ergative case. Approximately 40 of them apply it to nouns and pronouns alike. The remaining 135 languages typically have Accusative case on pronouns, resulting in split ergative case marking. This phenomenon will be discussed in the next subsection.

(7) **Yalarnnga** (Australian, Pama-Nyungan, Galgadungic)

- a. *ɲia waka-mu*  
1SG.ABS fall-PST  
'I fell.'
- b. *ɲa-ṭu kupi wala-mu*  
1sg-ERG fish.ABS kill-PST  
'I killed a fish.'
- c. *kupi-ɲku ɲia ṭaca-mu*  
fish-ERG 1SG.ABS bite-PST  
'A fish bit me.'

(Blake 1977:8)

In (7a/c), *ɲia* appears to be the first person singular pronoun that is used in S/O-functions. As an A, the Ergative form *ɲa-ṭu* must be used (7b). In none of these sentences is the verb inflected for person/number features of any of its arguments. The same combination of an ergative case pattern and lack of overt verbal agreement occurs sporadically outside Australia. It can be found in several Chibchan (cf. Quesada 1999) and Polynesian languages. In Polynesian, both the Absolutive and the Ergative case seem to be realized by particles that precede the noun.

(8) **Tongan** (Austronesian, Malayo-Polynesian, Central-Eastern, Eastern Malayo-Polynesian, Oceanic, Central-Eastern Oceanic, Remote Oceanic, Central Pacific, East Fijian-Polynesian, Polynesian, Tongic)

- a. *'oku lolotonga puna ('a) e vakapuna*  
PROG PROG.AUX fly ABS the<sup>9</sup> airplane  
'An airplane is flying.'
- b. *na'e taa'i 'e Mele 'a Sione*  
PST hit ERG Mary ABS John  
'Mary hit John.'

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<sup>9</sup> This gloss is not very accurate, as the article *e* appears in definite and specific indefinite DPs.

(Chung 1978:53)

In Tongan, DPs in S/O-function are commonly accompanied by 'a, which may therefore be analyzed as an Absolutive case particle. DPs in A-function are obligatorily preceded by 'e, as can be seen in (8). At first sight, the case system in Tongan differs from most ergative case systems, which usually do not have any overt Absolutive morphology. However, (Chung 1978:53) notes that the presence of 'a alternates with absence of a case particle, whereas 'e does not. For instance, the particle is optional in (8a), but not in (8b). Chung argues that 'a has descended from a Proto-Polynesian article. It obligatorily accompanies proper nouns, and it does not occur with nonspecific nouns.

(9) **Tongan**

*'oku lolotonga puna ha vakapuna*  
 PROG PROG.AUX fly a airplane

'Some airplane or other is flying.'

(Chung 1978:53)

Other types of noun phrases do allow but not require it to accompany them. Tongan's sister language Niue (Niuean) has slightly different markers for Ergative and Absolutive common nouns which strongly suggest that the former case is marked in order to distinguish it against the latter: *he* versus *e* (Seiter 1979:37). Apparently, then, these languages should not be considered to be clear counterexamples to the cross-linguistic generalization that Absolutive is morphologically less marked than Ergative.<sup>10</sup>

In the examples discussed so far, ergativity only played a role in case marking. In many other languages, however, verbal agreement participates

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<sup>10</sup> Nias, another Austronesian language spoken on Sumatra (Indonesia) is a more serious counterexample. In this language, case marking is realized by a morphophonemic process called mutation. This process affects the initial segment of nominal elements: the unmutated *iβa*, for instance, is the citation form of 'sibling' and this form is used as the Ergative case. The mutated *niβa* functions as Absolutive case (Brown 2001). I consider this to be a topic for future research.

in the ergative pattern.<sup>11</sup> In most Northeast Caucasian languages, for example, it is common for the verb to be inflected for the noun class of its Absolutive argument:

(10) **Avar** (North Caucasian, East Caucasian, Avar-Andic)

- a. *Ro-w*        *ine*        *w-ugo*  
 3SG-M.ABS    walk.INF    M-COP  
 'He is going to walk.'
- b. *Ro-j*        *ine*        *j-igo*  
 3SG-F.ABS    walk.INF    F-COP  
 'She is going to walk.'
- c. *Ro-š*        *ʔeč*        *ku-ne-b*        *b-ugo*  
 3SG-M.ERG    apple.ABS    eat-PRS.PTCP-N    N-COP  
 'He is eating an apple.'
- d. *Ro-t*        *ʔeč*        *ku-ne-b*        *b-ugo*  
 3SG-F.ERG    apple.ABS    eat-PRS.PTCP-N    N-COP  
 'She is eating an apple.'

(Naida Abdulpatakhova (via Dmitry Ganenkov))

The Avar intransitive verbs in (10a/b) agree with their s-arguments, the masculine singular pronoun *Row* and feminine singular *Roj*. The transitive verbs in (10c/d) agree with their o-argument, *ʔeč* ('apple.ABS'), which is neuter. Both types of argument are in the Absolutive case.

In several Indo-Iranian languages, too, the verb agrees with s or o.<sup>12</sup> Here, agreement shows person and number distinctions. Consider the Kurmanji sentences in (11).

<sup>11</sup> The term 'agreement' is used in a broad sense here. It refers to any type of verbal person/number inflection triggered by any verbal argument. In the chapters to follow, I will use the notion of agreement in a narrower sense, in order to distinguish between agreement markers and incorporated pronouns (pronominal arguments).

<sup>12</sup> In Iranian languages, the ergative pattern generally only occurs in past tense clauses, whereas in Indic languages it is found with perfective aspect. In all other tenses/aspects, both case and agreement pattern accusatively, as in the other Indo-

(11) **Kurmanji** (Kurdish, Northern) (Indo-European, Indo-Iranian, Iranian, Western, Northwestern, Kurdish)

- a. *ez*            *meş-îm*  
 1SG.ABS    walk-PST.1SG  
 'I walked.'
- b. *tu*            *meş-î*  
 2SG.ABS    walk-PST.2SG  
 'You walked.'
- c. *min*        *tu*            *şû-şt-î*  
 1SG.ERG    2SG.ABS    wash-PST-2SG  
 'I washed you.'
- d. *te*            *ez*            *şû-şt-im*  
 2SG.ERG    1SG.ABS    wash-PST-1SG  
 'You washed me.'

(Subhî Ahmed)

Again, in (11a/b), the s-argument triggers person/number agreement on the verb in the same way as the o-argument in (11c/d).

As we have seen above, the English verb agrees with s and A. These arguments are in the (unmarked) Nominative case. It is a striking fact that in Northeast Caucasian and Indo-Iranian the verb typically agrees with Absolutive arguments, which are also in the unmarked case. Languages like Avar and Kurmanji are often considered to be canonical examples of ergative languages. Ergative case and agreement patterns as described above seem to present us with a logical complement of the familiar accusative pattern. The theoretical accounts for ergativity that I will discuss in section 3 are often based on this 'pure' variety of ergative morphology. But we have to take into account that if we investigate a broader range of ergative languages, many of them do not fit this seemingly ideal picture.

In chapter 2, I will present several examples of accusative languages that have verbal inflection triggered by both Nominative and Accusative

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European languages. This phenomenon, called split ergativity, will be the topic of the next subsection.

arguments. This means that transitive verbs seem to agree with two arguments: subject (A) and object (O). Intransitive verbs also agree with their subject (S), and the paradigm they use is the same paradigm as the one used with transitive subjects (A). Likewise, there are ergative languages where the intransitive verb uses the (transitive) object agreement paradigm. Agreement with transitive subjects is expressed by a different set of markers. Basque is a well-known example.

(12) **Basque** (Basque)

- a. *ni ibil-tzen naiz*  
1SG.ABS walk-IPFV 1SG.be.PRS  
'I am walking.'
- b. *zu ibil-tzen zara*  
2SG.ABS walk-IPFV 2SG.be.PRS  
'You are walking.'
- c. *zu-k ni garbi-tzen nau-zu*  
2SG.ERG 1SG.ABS wash-IPFV 1SG.have.PRS-2SG.A  
'You are washing me.'
- d. *ni-k zu garbi-tzen zaitu-t*  
1SG.ERG 2SG.ABS wash-IPFV 2SG.have.PRS-1SG.A  
'I am washing you.'

(Sonia Ortiz de Arri)

Most verbs in Basque are accompanied by an auxiliary, which is inflected for person and number. Intransitive sentences require a form of *izan* ('be'), which agrees with S by prefixal morphology (cf. (12a/b)).<sup>13</sup> Similar prefixal morphology is found on the transitive auxiliary \**edun* ('have'), in which case it refers to the direct object of the sentence (cf. (12c/d)). Agreement with

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<sup>13</sup> Since *izan* has an irregular conjugation, agreement is not entirely prefixal in most cases. Main verbs that occur without an auxiliary carry clearly distinguishable agreement prefixes.

transitive subjects is shown by suffixes only.<sup>14</sup> In other words, Basque seems to have prefixal agreement with Absolutive arguments, and suffixal agreement with Ergative arguments. Other languages in which this type of agreement is found, are Adyghe and Kabardian, commonly referred to as Circassian, and the extinct Ubykh (all three of them Northwest Caucasian); the Inuit language (Eskimo-Aleut); Kapampangan (Austronesian); and to a certain extent in Nez Perce (Penutian). Abkhaz and Abaza (Northwest Caucasian), Guatuso (Chibchan) and the whole Mayan family behave in exactly the same way, with the exception that they do not have an overt case system. Chapter 4 is entirely dedicated to languages with Absolutive/Ergative agreement.

#### 2.4 Not exclusively ergative

As noted in the introduction to this chapter, ergativity is estimated to play a role in approximately 25 percent of the world's languages (Dixon 1994:2). This fact might suggest that ergativity is a marked option compared to accusativity, even if we take into account that not all of the world's languages have been described yet, and the fact that accusative languages may turn into ergative languages one day, and vice versa. An overwhelming majority of the languages we know at present are exclusively Nominative/Accusative, whereas most ergative languages apply the Absolutive/Ergative pattern in only part of their grammar. As I have mentioned in footnote 8, this phenomenon is commonly referred to as 'split ergativity', because elsewhere in the grammar, an accusative pattern is often employed by these languages. Below, I will present three well-known types of split and discuss their universal properties.

The *first* type of split ergativity, then, is illustrated by the Australian language Djaru. The sentences in (13) illustrate the Absolutive/Ergative

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<sup>14</sup> In the glosses, I use A in order to signal agreement with the transitive subject. I will argue in chapter 4 that these apparent agreement suffixes *are* the actual transitive subjects.

pattern in the case system of Djaru.

(13) **Djaru** (Australian, Pama-Nyungan, South-West, Ngumbin)

- a. *mawun jan-an*  
man.ABS go-PRS  
'A man goes.'
- b. *mawun-du gɔŋar buŋ-an*  
man-ERG dog.ABS hit-PRS  
'A man hits a dog.'

(Tsunoda 1981:97)

In (13b), *mawun-du* ('man-ERG') is in the ergative case because it functions as an A-argument. In the intransitive (13a) we find *mawun*, which is the unmarked equivalent of 'man' (Absolutive). The direct object in the b-sentence, *gɔŋar* ('dog.ABS') also appears in the Absolutive, as expected. Note that the verb in these sentences is not overtly inflected for person or number of any of its arguments. However, second position person/number markers are present when the sentence contains any argument other than third person singular.

(14) **Djaru**

- a. *(ŋadʰu) ŋa=ŋa jan-an*  
1SG.ABS CAT=1SG.S go-PRS  
'I go.'
- b. *(ŋadʰu-ŋgu) ŋa=ŋa=ŋgu (ŋundu) ŋaŋ-an*  
1SG-ERG CAT-1SG.A-2SG.O 2SG.ABS see-PRS  
'I look at you.'
- c. *ŋunuŋiŋ-dʰu jambi-gu gɔŋar-u ŋa=ji bajan-i*  
2SG.ABL-ERG big-ERG dog-ERG CAT-1SG.O bite-PST  
'Your big dog bit me.'

(Tsunoda 1981:103,201)

The intransitive subject (14a) is primarily realized by  $\text{=}\eta a$  ('1SG.S'), a clitic that attaches to a 'catalyst' morpheme.<sup>15</sup> An independent pronoun ( $\eta ad^{\prime}u$  '1SG.ABS') may be added, but this is not required for grammaticality. The transitive sentence in (14b) shows that the independent pronoun receives an overt Ergative case suffix in A-function ( $\eta ad^{\prime}u\text{-}\eta gu$  '1SG.ERG'), but the clitic does not change accordingly:  $\text{-}\eta a$  is used again. The c-sentence contains a first person singular direct object (O). The independent pronoun, when present, would appear in its base form ( $\eta ad^{\prime}u$ ), corresponding to the Absolutive/Ergative case pattern. The O-clitic, however, appears in a marked form ( $\text{-}ji$  '1SG.O').<sup>16</sup> In other words: clitics in Djaru show a Nominative/Accusative pattern, which assigns the label 'split ergative' to the language: only the case system on nouns and independent pronouns is ergative. A similar distribution of accusative and ergative patterns is found in languages scattered over the world: Australia (the majority of those Pama-Nyungan languages that have pronominal clitics; Warlpiri being the most famous example); Siberia (Chukotko-Kamchatkan); in the Caucasus (several Northeast Caucasian languages that have developed person marking on the verb, like Udi and Dargi); India (for instance Assamese, Bengali and Nepali (Indo-European)) and Papua New Guinea (for instance Kewa and Tauya (Trans-New Guinea)).<sup>17,18</sup>

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<sup>15</sup> The catalyst morpheme in Djaru is an otherwise meaningless morpheme that acts as a host for clitic elements. Like the agreement suffixes in Basque (cf. (12)), I will argue in chapter 3 that the Djaru clitics *are* the actual arguments, rather than agreement suffixes. This is the reason for indicating the grammatical function of each clitic in the glosses in (14).

<sup>16</sup> Although the morphological relation between the subject and object clitics is not clear in this example, other members of these paradigms show that the latter are morphologically derived from the former, and hence the object clitics are to be considered as the marked ones (Tsunoda 1981: 69-71).

<sup>17</sup> As I have discussed above, most Northeast Caucasian languages have noun class markers on the verb, which refer to the Absolutive argument (cf. the Avar examples in (10)). Several languages have developed additional person markers referring to subject arguments (s/A). Among these languages, present-day Akusha Dargi

A very important generalization that has been made with respect to the Djaru type of split ergativity is that there are no languages with an inverse distribution of the two patterns: ergatively patterning clitics or agreement affixes are never combined with Nominative/Accusative case marking (cf. Silverstein (1976:159); Blake (1977:7); (1987:186); Dixon (1994:95)). That is, if the verb of a given language agrees with Absolutes (as in Kurmanji) or with Absolutes and Ergatives (as in Basque), there will never be a Nominative/Accusative case system. Case marking can then only be Absolutive/Ergative. This observation will play a crucial role in the analysis of ergativity to be developed and defended in this study. Chapter 3 will be dedicated to the type of ergative split found in languages like Djaru. In chapter 2, I will discuss *Tukang Besi*, an Austronesian language behaving similarly.

A *second* type of split often encountered is triggered by grammatical person features. In *Dyirbal*, for example, there is a split between the case pattern used by first and second person on the one hand, and third person on the other (cf. Dixon (1972), (1994)).

(15) **Dyirbal** (Australian, Pama-Nyungan, Dyirbalic)

- a. *ɲana banaga-nʷu*  
1PL.NOM return-NFUT  
'We returned.'
- b. *nʷurra banaga-nʷu*  
2PL.NOM return-NFUT  
'You all returned.'

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behaves differently: person marking on the verb is with Absolutes, just like the inflection for noun class (cf. Van den Berg (1999)). However, this is only the case when both arguments are first or second person. When either of them is third person, person agreement is always with the other argument, suggesting that the language makes use of a person hierarchy.

<sup>18</sup> In the case of Indo-European and Trans New Guinea, languages displaying the Djaru type of split ergativity often have clitics or agreement affixes for subjects only; objects do not trigger any overt clitic or agreement affix.

- c. *n<sup>y</sup>urra* *ɲana-na* *bura-n*  
 2PL.NOM 1PL-ACC see-NFUT  
 ‘You all saw us.’
- d. *ɲana* *n<sup>y</sup>urra-na* *bura-n*  
 1PL.NOM 2PL-ACC see-NFUT  
 ‘We saw you all.’

(Dixon 1994:14)

The pronouns in (15) have Nominative/Accusative forms and the verb is not overtly marked for person/number features of any argument. The sentences in (16) show that the Accusative case is not used for nominal arguments; they follow an Absolutive/Ergative pattern (this is also true for third person pronouns).<sup>19</sup>

(16) **Dyirbal**

- a. *ɲuma* *banaga-n<sup>y</sup>u*  
 father.ABS return-NFUT  
 ‘Father returned.’
- b. *yabu* *banaga-n<sup>y</sup>u*  
 mother.ABS return-NFUT  
 ‘Mother returned.’
- c. *ɲuma* *yabu-ɲgu* *bura-n*  
 father.ABS mother.ERG see-NFUT  
 ‘Mother saw father.’
- d. *yabu* *ɲuma-ɲgu* *bura-n*  
 mother.ABS father.ERG see-NFUT  
 ‘Father saw mother.’

(Dixon 1994:10)

Person splits like the one attested in Dyirbal play a similar role in many other

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<sup>19</sup> Word order in Dyirbal is extremely flexible, and therefore the differences in constituent order between (15) and (16) should not be related to the different case patterns.

Pama-Nyungan (Australian) languages, but they are also found in several native North American languages and in Tibeto-Burman (Sino-Tibetan) (DeLancey 1980:2). In all instances of this type of split, the arguments appear to be ranked along a person/animacy hierarchy. Silverstein (1976) presents this hierarchy as a universal feature of natural language, and he has been the first to formulate the generalization that person split ergative languages always apply the accusative pattern to the highest ranking arguments, whereas the ergative pattern is applied to the lowest ranking arguments. One variant of the hierarchy is presented below.<sup>20</sup>

## (17) Person/animacy hierarchy

|     |          |         |          |                       |
|-----|----------|---------|----------|-----------------------|
|     | Pronouns | Nouns   |          |                       |
|     | 1        | > 2 > 3 | > proper | > common              |
|     |          |         | > human  | > animate > inanimate |
| S/A | NOM →    |         |          | ← ERG A               |
| O   | ACC →    |         |          | ← ABS S/O             |

(after Dixon (1994:85))

Languages using this hierarchy differ as to where exactly they split up the arguments. In Dyirbal, the line is drawn between second and third person. Both Nominative and Accusative stop here, and Ergative and Absolutive take over from this point onwards.

<sup>20</sup> Often, nouns are also divided along a definiteness scale. We will see examples of this immediately below, in the discussion about Kham, and in the following chapter, where I discuss differential object marking. Silverstein's hierarchy also includes pronominal clitics of the type found in Djaru, which are higher on the person/animacy hierarchy than independent pronouns. This way, the Djaru type of split ergativity and the Dyirbal type are more or less conflated. However, as will become clear in chapter 3, these splits should be treated differently.

Also, Silverstein decomposes the whole hierarchy into (pro)nominal features, which is necessary in order to account for certain differences attested between languages using the hierarchy. For my own proposal, however, the exact make-up of the hierarchy is irrelevant.

(18) **Dyirbal**

|     |  | Pronouns |     | Nouns |         |        |     |  |
|-----|--|----------|-----|-------|---------|--------|-----|--|
|     |  | 1        | > 2 | > 3   | > human | > etc. |     |  |
| S/A |  | NOM      | NOM | ERG   | ERG     | ERG    | A   |  |
| O   |  | ACC      | ACC | ABS   | ABS     | ABS    | S/O |  |

(after Dixon (1994:86))

Although other languages may choose another cut-off point, there is not a single language where Nominative/Accusative is found with low ranked arguments and Absolutive/Ergative with higher ranked arguments (Silverstein 1976:159). Kham is an example of a language that draws a less neat line compared to Dyirbal: the point where Ergative takes over from Nominative is a bit further to the left than the point where Absolutive takes over from Accusative. This is illustrated in (19). Note that in this representation, animacy and humanness are not listed, since they do not play a role in this part of the grammar of Kham.

(19) **Kham** (Sino-Tibetan, Tibeto-Burman, Himalayish, Mahakiranti, Kham-Magar-Chepong-Sunwari, Kham)

|     |  | Pronouns |     | Nouns |            |              |     |  |
|-----|--|----------|-----|-------|------------|--------------|-----|--|
|     |  | 1        | > 2 | > 3   | > definite | > indefinite |     |  |
| S/A |  | NOM      | NOM | ERG   | ERG        | ERG          | A   |  |
| O   |  | ACC      | ACC | ACC   | ACC        | ABS          | S/O |  |

(Watters 2002:69)

In Kham, first and second person pronouns follow the accusative pattern. The ergative pattern only applies to indefinite nouns. Third person pronouns and definite nouns are in a transition area, where both Ergative and Accusative case are used (the shaded area in (19)). Taking into account that intransitive subjects (S) are always in the unmarked (Nominative/Absolutive) case, the transition area implies tripartite marking: Unmarked (S), Ergative

(A) and Accusative (O). This is illustrated in (20).

(20) **Kham**

- a. *calo-rə*      *ba-zya-rə*  
 girl-PL.UNM go-PRS.PROG-3PL.S  
 ‘The girls are going.’
- b. *calo-rai*      *syau*      *kəi-Ø-rə*  
 girl-PL.ERG apple.ABS eat-IPFV-3PL.A  
 ‘The girls eat apples.’
- c. *nga*              *calo-ra-lai*      *nga-ra-hur-e*  
 1SG              girl-PL-ACC      1SG.A-3PL.O-wash-IMP  
 ‘I wash the girls.’

(Bhupen Budha Kham (via David Watters))

The equivalent of the English DP ‘the girls’ is in its unmarked case in (20a) (*calo-rə* ‘girl-PL.UNM’), in the Ergative in (20b) (*calo-rai* ‘girl-PL.ERG’) and in the Accusative in (20c) (*calo-ra-lai* ‘girl-PL-ACC’). A tripartite system, if present, is normally located in between the accusative and the ergative patterns and possibly extends to either side of the hierarchy.<sup>21</sup> Including languages like Kham into the generalization of person splits, I conclude that if the person/animacy hierarchy plays a role in diverging from ‘pure’ ergativity, there is only one direction: the Nominative/Accusative (or tripartite) pattern always applies to nouns/pronouns with a higher ranking compared to ergatively patterning nouns/pronouns. A language like Dyirbal, then, where the Nominative/Accusative pattern applies exclusively to first and second person arguments, is a typical example.

A *third* type of split is determined by features like tense and aspect. Recall from the previous subsection that Kurmanji shows the (supposedly)

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<sup>21</sup> Theoretically speaking, the tripartite system could be extended to both sides of the hierarchy, yielding a language which consistently distinguishes three cases for all types of (pro)nominals. According to Blake (1987:181), Wangkumara is the only Australian example of such a language, although ± 110 out of the then 200 described Australian languages have split ergative systems of the type described here.

most 'pure' kind of ergative morphology.

(21) **Kurmanji**: past tense clauses (repeated from (11))

- a. *ez meş-îm*  
1SG.ABS walk-PST.1SG  
'I walked.'
- b. *tu meş-î*  
2SG.ABS walk-PST.2SG  
'You walked.'
- c. *min tu şû-şt-î*  
1SG.ERG 2SG.ABS wash-PST-2SG  
'I washed you.'
- d. *te ez şû-şt-im*  
2SG.ERG 1SG.ABS wash-PST-1SG  
'You washed me.'

Even Kurmanji does not apply the ergative pattern under all circumstances. If we change past tense into present tense in the sentences of (21), a Nominative/Accusative pattern appears.

(22) **Kurmanji**: present tense clauses

- a. *ez di-meş-im*  
1SG.NOM PROG-walk.PRS-1SG  
'I am walking.'
- b. *tu di-meş-î*  
2SG.NOM PROG-walk.PRS-2SG  
'You are walking.'
- c. *ez te di-şû-m*  
1SG.NOM 2SG.ACC PROG-wash.PRS-1SG  
'I am washing you.'
- d. *tu min di-şû(-yî)*  
2SG.NOM 1SG.ACC PROG-wash.PRS-2SG  
'You are washing me.'

(Subhî Ahmed)

In (22), *ez* ('1SG.NOM') and *tu* ('2SG.NOM') are used as Nominative pronouns, whereas they function as Absolutive forms in (21). Likewise, the Ergative forms *min* ('1SG.ERG') and *te* ('2SG.ERG') (cf. (21)) function as Accusative pronouns in (22). A further difference between past tense and present tense is found in verbal agreement: in the past, the verb agrees with its Absolutive argument, whereas in the present, it agrees with its Nominative argument. The Kurmanji type of split ergativity is a common one in Indo-European: it is found in many other Iranian languages as well as in Indo-Aryan languages like Hindi/Urdu. In the latter, the split is typically determined by perfective aspect, rather than past tense. A similar situation is found in Georgian (Kartvelian); Burushaski (isolate: Pakistan) and several Tibeto-Burman (Sino-Tibetan), Australian, Austronesian and Mayan languages. The cross-linguistic generalization with respect to this type of split is that whenever tense/aspect plays a role in split ergativity, the ergative pattern is only found in past tense/perfective aspect (DeLancey 1980:5, Dixon 1994:99). Apart from tense and aspect, mood or clause type are additional factors in determining whether the accusative or the ergative pattern is used. I will discuss several examples from the Mayan family in chapter 5.<sup>22</sup>

Finally, as Dixon (1994:104) notes, languages appear to be able to make all kinds of combinations of the splits described above. There seem to be no restrictions in doing so.<sup>23</sup> Georgian is a clear example: it behaves like Djaru in having Nominative/Accusative person/number marking on the verb, combined with an Absolutive/Ergative case system (case/agreement split). In addition, there is a Kurmanji type split because the ergative case pattern is

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<sup>22</sup> Another type of split mentioned by Dixon (1994) is triggered by the type of verb. I do not consider this to be an instance of split ergativity, and hence will not discuss it here. In the next section, I will touch upon the issue when discussing Basque.

<sup>23</sup> As Dixon considers four kinds of split, he claims that any combination occurs, except for a combination of all four kinds.

restricted to aorist/perfect tense.<sup>24</sup> Examples will be given in chapter 5.

## 2.5 Conclusion

A significant minority of the languages in the world have ergativity. A 'pure' instantiation of this pattern as the counterpart of an accusative system might involve Absolutive/Ergative case marking and verbal agreement with Absolutives, and this is occasionally found (Avar, Kurmanji). Often, however, the verb also agrees with the Ergative argument (Basque). Many languages displaying ergativity are inconclusive with respect to agreement, since agreement never is overt (Aghul, Yalarnga, Tongan, Dyirbal).

The use of an ergative pattern is often restricted in one way or another, giving rise to split ergativity. There are languages combining Absolutive/Ergative case marking with Nominative/Accusative verbal marking (Djaru, Kham). Other languages apply the ergative pattern only in past tense or perfective aspect (Kurmanji). Yet other languages refer to a universal person/animacy hierarchy when applying ergativity or accusativity (Dyirbal, Kham). In those cases, the ergative pattern is typically used on the lowest ranking (pro)nominals, such as third persons in general, or, more specifically, indefinite nouns. Combinations of these varieties are also attested.

Any syntactic theory about ergativity will have to allow for the different patterns described above, and preferably explain them as well. Ideally, it should also answer the question why ergativity is marked with respect to accusativity. In the next section I will discuss the main proposals with respect to the phenomenon of ergativity formulated within generative grammar. They will be evaluated from the perspective of the data presented in the present section.

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<sup>24</sup> Strictly speaking, Georgian also has a Dyirbal type person split: the Ergative/Absolutive distinction is only made with respect to third person nouns and pronouns, since first and second person pronouns do not overtly distinguish between any core cases (cf. (26) below).

### **3 Ergativity in generative grammar**

This section will start with a presentation of the standard analysis of case and agreement from government & binding theory (Chomsky 1981) via early minimalism (Chomsky 1993) and more recent versions of the minimalist program (Chomsky 1995, 2000, 2001a,b) (3.1). This subsection is followed by a brief summary of the main subject/object asymmetries that Universal Grammar (UG) appears to exhibit (3.2). Subsequently, I discuss the government & binding approach to ergativity by Marantz (1984), as well as the phenomenon of syntactic ergativity underlying Marantz's proposal (3.3). I continue with discussing Levin & Massam (1985), followed by two minimalist approaches: Murasugi (1992) and Bobaljik (1993) (3.4). Finally, I take issue with the extensive theory on case and agreement in accusative and ergative systems by Bittner & Hale (1996a,b) (3.5). The conclusion will be that no marked status whatsoever is predicted for the ergative pattern. Each of these proposals postulate some macro-parameter that allows a language to be accusative or ergative. The parameters seem to suggest that UG allows for two options, which are equally marked or unmarked with respect to one another. The prevalence of accusative languages does not support this, and the fact that most ergative languages are not entirely ergative is an even bigger problem for the parameters at stake.

#### **3.1 Case and agreement in principles & parameters theory**

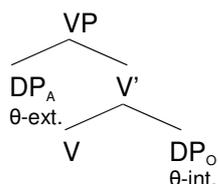
In early stages of generative linguistic theory, notably within the government & binding approach (Chomsky 1981), transitive verbs project a complement and a specifier position. The internal theta role is assigned to the argument in the complement, which is called 'direct object' (DP<sub>o</sub>) in the representations to follow).<sup>25</sup> The external theta role goes to the argument in the specifier,

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<sup>25</sup> Although the DP-hypothesis stems from a later date (cf. Brame (1981, 1982), Hellan (1985) and Abney (1987)), I am using the label DP instead of NP for ease of representation.

called 'subject' (represented by DP<sub>A</sub>).

(23) Assignment of theta roles in transitive clauses (government & binding)<sup>26</sup>



Grammatical case, like theta roles, is assigned under government. The transitive verb, however, is able to assign only one case, which in languages like English goes to the direct object: the Accusative case. The subject does not receive its case from the verb. Instead, a functional category called INFL (I) is required to be present for that purpose. This category is also responsible for the finiteness or nonfiniteness of the verb. Since only finite verbs allow for their subject to be overt, it was suggested that finite I assigns Nominative case, unlike nonfinite I.<sup>27</sup> In order to be governed by I, the subject needs to move to the specifier of this head (cf. (24)).

The fact that the verb agrees with the Nominative argument is formalized by means of the presence of the functional category: the morphology of the verb expresses nominal features like grammatical person and number of the external argument and a category like I is the host of

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<sup>26</sup> Note that I am assuming the VP-internal subject hypothesis (cf. Kuroda (1988); Koopman & Sportiche (1991)), which, of course, is not yet included in the theory of Chomsky (1981). According to the latter, subjects are base-generated in the specifier of I.

<sup>27</sup> In ECM-constructions, the nonfinite verb seems to allow for an overt subject:

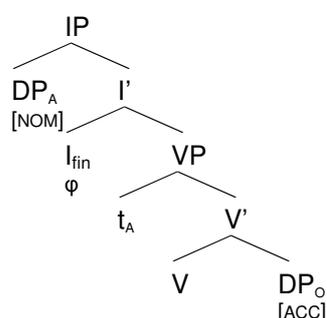
- (i) *John believed me to chase a policeman*

The nonfinite verb *chase* has an overt first person singular subject (*me*). However, this is realized by a pronoun in accusative case, which is commonly explained by assuming that the matrix verb (*believed*) exceptionally marks this embedded subject with Accusative case.

Languages like Portuguese (cf. Raposo (1987)) and Hungarian (Tóth (2000)) seem to allow nonfinite verbs to cooccur with an overt Nominative subject, and even to display subject agreement.

these features, provided that it is finite (represented by  $\phi$ ). Given the fact that tense and agreement morphology are often included in the same phonological word as the verb, it is assumed that the verb moves as well in order to adjoin to I (not represented in (24)).

(24) Case assignment in finite transitive clauses (government & binding)



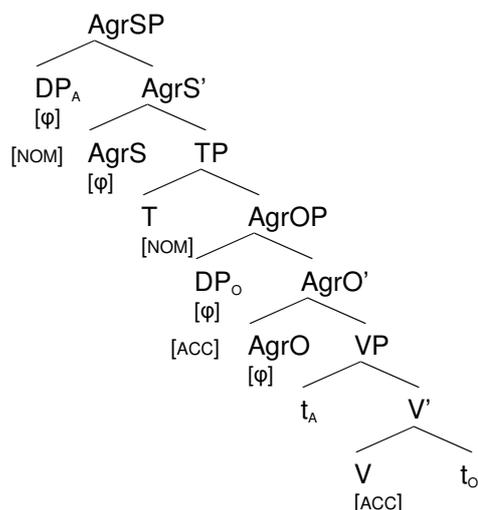
The theta criterion requires that every theta role of a verb is assigned to exactly one element in an argument position. Conversely, every argument (position) present in a sentence must receive a theta role. A finite transitive verb thus always projects a complement and a specifier that need to be filled. On the other hand, the case filter requires overt DPs to bear case. The fact that a nonfinite verb cannot have an overt subject is explained by the assumption that nonfinite I is unable to assign Nominative case.

Recall from section 2 that the only reason for calling a case (and agreement) system Nominative/Accusative is the fact that in a given language the sole argument of an intransitive verb, *s*, is treated in the same way as *A*, the external argument of a transitive predicate. The English sentences in (2) showed that *s* indeed appears in the case we have called Nominative and that the verb agrees with it. This means that intransitive subjects move to Spec,IP, just like *A*. In general, two classes of intransitive verbs are distinguished: unergatives and unaccusatives. The unergative class assigns an external theta role to the *s*-argument, which hence is base-generated in the same position as *A* and licensed by Nominative case (and

agreement). Unaccusative verbs, however, assign an internal theta role to the s-argument, which is base-generated in the same position as o. Unlike the o-argument, however, s does not bear Accusative case. Rather, it appears in the Nominative and triggers agreement. The idea that intransitive verbs differ with respect to the position in which their sole argument is base-generated was first put forward as the unaccusativity hypothesis (cf. Perlmutter (1978); Perlmutter & Postal (1984); Burzio (1986)). On the assumption that an unaccusative verb is unable to assign Accusative case, the sole argument of such a verb will always be licensed by Nominative case and agreement, just like the external argument of an unergative or transitive verb.

In an early version of the minimalist program (Chomsky (1993), reprinted as chapter 3 of Chomsky (1995)), case is checked, rather than assigned. The idea is that features of syntactic elements are either interpretable or uninterpretable. Examples of the former are  $\phi$ -features on DPs: person and number are inherent to the semantics of DPs. A functional category in the verbal projection may also contain  $\phi$ -features, but these are not semantically inherent and hence they are uninterpretable. Case features are always uninterpretable, since they do not have any semantic content. Uninterpretable features must be deleted, which can be done by checking them off against an interpretable or uninterpretable feature of the same type and value in a spec-head relationship. This means that the  $\phi$ -features of a functional category are deleted by the  $\phi$ -features of a DP in its specifier. Similarly, the case feature of both the functional category (or V) and the DP are also deleted, provided that the features match. Checking theory allows DPs to be base-generated in the case *form* that is required by their syntactic function. They carry a formal case *feature*, which needs to be checked in a spec-head configuration. One important implication of this is that objects need to move, overtly or covertly, just like subjects. The following structure has been designed in order to make this checking procedure possible:

(25) Case and  $\phi$ -feature checking in finite transitive clauses (Chomsky 1995:chapter 3)



A new functional head, called AgrO, is introduced in order to have the object check its case feature. The case feature of V is only able to check Accusative case, whereas T's case feature checks Nominative case.<sup>28</sup> The  $\phi$ -features of the Nominative argument are checked by the topmost functional head, AgrS. The advantage of this approach is that it accounts for languages where the transitive verb seems to agree with more than one argument. The AgrO-head represents the agreement morpheme that expresses the  $\phi$ -features of the direct object. Consider the Georgian sentences in (26):

(26) **Georgian** (Kartvelian, Georgian)

- a. *is seirn-ob-s*  
 3SG.NOM walk.PRS-TS-3SG  
 '(S)he is walking.'

<sup>28</sup> Because of the fact that there is head-movement, the case features of V and T are checked in the Agr-projections.

- b. *is*            *m-ban-s*            *me*  
 3SG.NOM    1SG-wash.PRS-3SG    1SG(.ACC)<sup>29</sup>  
 '(S)he is washing me.'

(Kakhi Sakhltkhusishvili)

According to the minimalist program, the agreement suffix *-s* ('-3SG') is a morphological realization of AgrS, since it agrees in  $\phi$ -features with the subject. The prefix *m-* ('1SG-') would be an overt representation of AgrO.

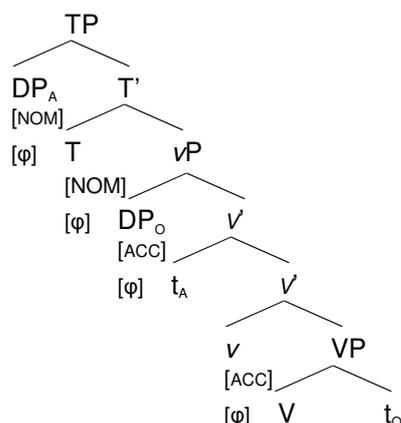
In intransitive sentences, AgrO is not projected (or stays inactive), yielding the familiar asymmetry between subjects and objects: intransitive subjects behave like transitive subjects, since they are in the Nominative case and they trigger the same agreement forms on the verb. They move to the specifier of AgrS.

A later version of the minimalist program employs a similar checking principle, albeit in a more restrictive tree (cf. Chomsky (1995:chapter 4)). In this version, there are no AGR-projections any more. A light verb *v* is responsible for assigning the external theta role to the transitive subject, which is base-generated in its specifier. In addition, *v* contains a case feature (and  $\phi$ -features), which is checked by the direct object. In order to allow this argument to check the features of *v*, a second specifier is projected as a landing site. Similarly, the higher T-head also contains a case feature and  $\phi$ -features. The tree in (27) is a typical representation of this later version of minimalism:

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<sup>29</sup> As I have mentioned above, first and second person pronouns do not overtly distinguish between core cases in Georgian (cf. footnote 24). Therefore, Accusative is put in brackets here. Note, by the way, that the Accusative form of third person nouns/pronouns is similar to the Dative.

(27) Case and  $\varphi$ -feature checking in finite transitive clauses (Chomsky 1995:chapter 4)



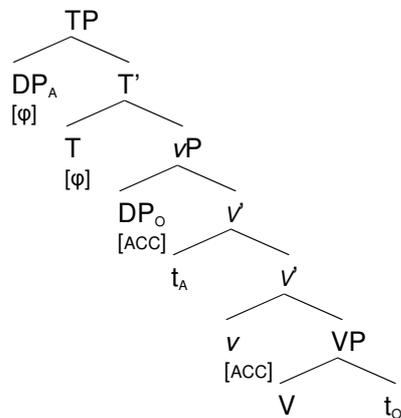
Intransitive clauses either lack a  $vP$  (when  $V$  is unergative) or their  $v$  is inactive (when  $V$  is unaccusative). This way, the theory ensures that the single argument of an intransitive verb is always base-generated with Nominative case, which is checked in Spec,TP, along with its  $\varphi$ -features (cf. Chomsky 1995:55,232).

The fact that in Nominative/Accusative languages, the verb typically agrees with the Nominative, has led to the idea that agreement might be the only reason why external arguments move.<sup>30</sup> Therefore, several people have proposed to abandon the notion of Nominative case, that is, to consider 'nominatives' to be caseless (cf. Jakobson (1936); Andrews (1982)). This evokes a view in which case and agreement are in complementary distribution: only one of them is needed in order to license an argument. An

<sup>30</sup> As we have seen above, languages like Georgian do not only display agreement with subjects, but also with objects. Cross-linguistically, object agreement in Nominative/Accusative languages only occurs when there is agreement with subjects as well (originally noted by Moravcsik (1974, 1978). For ergative languages, the generalization seems to be that there can only be agreement with A if there is also agreement with s and o (cf. Croft (1990:105-107); Bittner (1994:9)). These generalizations may of course vary when certain instances of agreement are analyzed as incorporated pronouns (recall the Djaru style ergative split). This will be the keystone of my analysis of ergativity. For the time being, I will ignore agreement with multiple arguments, but return to the issue in the following chapters.

internal argument (o) is licensed by case morphology, which is assigned by the verb or checked by a functional category like AgrO or *v*. The transitive external argument (A) and the intransitive argument (s), on the other hand, are licensed by agreement morphology on the verb. In other words, an argument may be licensed either by morphological marking on the argument proper (case) or by marking on the predicate (agreement).

(28) Case and  $\varphi$ -feature checking in finite transitive clauses (dependent marking/head marking)

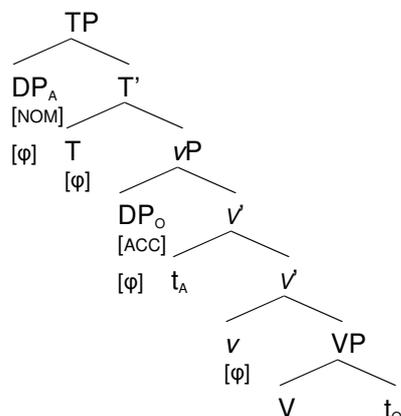


This opposition is traditionally referred to as dependent marking versus head marking (cf. Nichols (1986), Neeleman & Weerman (1999)). Intransitive clauses only have a caseless argument, which is licensed by agreement. This approach accounts nicely for the fact that ‘nominatives’ systematically occur without any overt case morpheme.<sup>31</sup> My own proposal for ergativity assumes a similar complementary distribution of case and agreement. A variant of the tree in (28) will be argued to be universal. Every language that uses both case and agreement in order to license verbal arguments, employs this tree as the backbone of its syntactic derivations.

<sup>31</sup> Latin and Japanese are well-known exceptions to this generalization: subjects in Latin seem to carry a Nominative case suffix, whereas in Japanese they may be accompanied by a Nominative case particle. I will discuss this in slightly more detail in chapter 2.

Finally, Chomsky (2000, 2001a,b) proposes a different treatment of case and agreement, based on the structure in (27). Again, both  $v$  and T have uninterpretable  $\phi$ -features. Uninterpretable in this version of the minimalist program technically means that the value of a particular feature is unspecified when it enters the derivation. At Spell Out, the point in the derivation where the sentence is sent to the interface with the articulatory system ('phonetic form' (PF)), unvalued features must be erased. The fact that  $v$  and T have uninterpretable features makes them active: they are *probes* seeking a matching *goal*. Matching means that probe and goal contain features of the same sort, and the goal values the features of the probe. In order to be able to enter into an Agree relationship with an active probe ( $v$ /T), a goal (DP) must be active as well. This means that it must possess an(other) uninterpretable feature. Naturally, case features are supposed to make DP-goals active. The probes  $v$  and T do not possess a case feature themselves, differing in this respect from earlier versions of the minimalist program, but they are somehow able to assign a value to the uninterpretable case feature of the DP with which they agree. Instead of *checking*, *valuation* is the key to converging derivations in this approach. A probe T or  $v$  enters into an Agree relationship with a DP-goal, causing the probe's  $\phi$ -features and the goal's case feature to be valued and erased before Spell Out.

(29) Agree relationships (Chomsky 2000, 2001a,b)



It should be noted that movement is not strictly necessary in (29), as valuation of formal features may take place with the DP in situ, i.e. a probe is able to look downward. A relevant change seems to be that Agree is predominantly motivated by  $\phi$ -features on functional heads. Case is only a by-product that turns DP-arguments into active goals.

Again, the fact that intransitive subjects behave like transitive subjects is captured by assuming that  $v$  is either absent or inactive in intransitive clauses.

### 3.2 The asymmetry between subject (s/A) and object (o)

The accounts of case and agreement discussed so far all have in common that the external argument of an active transitive verb is base-generated in a higher position with respect to the internal argument. If there is movement for reasons of case or agreement, this does not change the hierarchy between the two arguments of a transitive clause. The syntax of many (if not all) languages shows asymmetries in the behaviour of arguments that follow from this hierarchy. Below, I will briefly discuss subject/object asymmetries attested in reflexivization, control, raising and coreferential deletion.

For instance, *reflexive* pronouns in simplex clauses can only be internal arguments, as they require an antecedent in a c-commanding position

(Principle A of the binding theory):<sup>32</sup>

(30) Reflexivization

- a. *John<sub>i</sub> washed himself<sub>i</sub>*
- b. \* *John<sub>i</sub>'s mother washed himself<sub>i</sub>*
- c. \* *himself<sub>i</sub> washed John<sub>i</sub>*

The problem with the b-sentence is that *John* does not c-command the reflexive pronoun. The c-sentence is out because the reflexive pronoun is not c-commanded by *John*. Moreover, the latter is c-commanded by the former and this is ruled out by Principle C of the binding theory.<sup>33</sup> Nominative reflexives simply do not exist in English: a form like \**heself* or \**sheself* is not to be found in the lexicon. As we will see in the next subsection, languages without reflexive pronouns typically use intransitive constructions in order to convey reflexive meanings. It appears that only subjects (S/A) may function as the antecedent in a reflexive construction, not objects (O).

*Control* and *raising* constructions display a similar subject/object asymmetry. Nonfinite verbs require their subject to be phonologically empty, whereas direct objects are always overtly present. The following constructions exemplify the phenomenon of control:<sup>34</sup>

(31) Control

- a. *John<sub>i</sub> wanted [PRO<sub>i</sub> to walk / fall]*
- b. *John<sub>i</sub> wanted [PRO<sub>i</sub> to wash her]*
- c. \* *John<sub>i</sub> wanted [her to wash PRO<sub>i</sub>]*

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<sup>32</sup> Principle A of the binding theory states that an anaphor (reflexive pronoun) must be bound in its governing category (Chomsky 1981:188; 1995:186).

<sup>33</sup> Principle C of the binding theory states that an R-expression (fully referential expression (nonpronominal DP)) must be free (Chomsky 1981:188; 1995:186).

<sup>34</sup> As explained in footnote 27, ECM-verbs like *believe* do allow the embedded infinitive to have a subject, but this argument seems to be licensed by the ECM-verb as it carries Accusative case.

Control verbs take an infinitival clause as their internal argument. The subject of such an infinitive must be realized by an empty element, called PRO, whereas the object cannot be realized in this way (cf. (31a,b)). The original explanation for this phenomenon is based on the assumption that nonfinite inflection is unable to assign or check Nominative case, which means that an overt DP cannot be licensed in subject position (Chomsky 1981). From Chomsky & Lasnik (1993) onwards, people have assumed that the case checked by finite I differs from the one checked by nonfinite I. Whereas the former checks Nominative, the latter checks a Null case, which is found on PRO only. The sentence in (31c) proves that the explanation must lie in the properties of I, because it appears to be impossible to have an overt Nominative subject and PRO as an object.

The following constructions exemplify the phenomenon of raising:

(32) Raising

- a. *John<sub>i</sub> seemed [t<sub>i</sub> to walk / fall]*
- b. *John<sub>i</sub> seemed [t<sub>i</sub> to wash her]*
- c. \* *her<sub>i</sub> seemed [John to wash t<sub>i</sub>]*

Unlike control verbs, which assign two theta roles, raising verbs do not assign an external theta role. A verb like *seem* assigns an internal theta role to a clausal complement. When headed by an infinitive, the subject of this clause is raised to the subject position of the raising verb, where it is licensed by Nominative case and agreement (32a,b). It is impossible to raise the object instead, as shown in (32c). Besides the fact that it would end up with two cases (Accusative and Nominative), the embedded subject would stay unlicensed, as nonfinite I is unable to license an overt DP. Furthermore, a sentence like (32c) would violate the so-called minimal link condition (cf. Chomsky (1995:311)).<sup>35</sup> Just like control constructions, raising proves that

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<sup>35</sup> This condition is formulated as follows: "K attracts  $\alpha$  only if there is no  $\beta$ ,  $\beta$  closer to K than  $\alpha$ , such that K attracts  $\beta$ ." The subject of the infinitival clause is closer to the

there is a structural asymmetry between subjects and objects: the former can be controlled and raised; the latter cannot. The various analyses of case and agreement described above have been designed in order to account for these facts.

Coordinated sentences provide equal evidence for the asymmetry between subjects and objects.

(33) Coordination: conjunction reduction

- |    |   |             |
|----|---|-------------|
| a. | <i>John<sub>i</sub> turned around and <del>John<sub>i</sub> / he<sub>i</sub></del> walked away</i>  | intr.+intr. |
| b. | <i>John<sub>i</sub> turned around and <del>John<sub>i</sub> / he<sub>i</sub></del> hit the ball</i> | intr.+tr.   |
| c. | <i>John<sub>i</sub> hit the ball and <del>John<sub>i</sub> / he<sub>i</sub></del> turned around</i> | tr.+intr.   |
| d. | <i>John<sub>i</sub> hit the ball and <del>John<sub>i</sub> / he<sub>i</sub></del> kissed Mary</i>   | tr.+tr.     |

When two finite sentences are coordinated, the subject of the second conjunct is commonly pronominalized or even omitted when referring to the same entity as the subject of the first conjunct, irrespective of the (in)transitivity of either of the conjuncts (33a-d). That is, the S- or A-argument of the second conjunct can be empty whenever it is coreferent with the S or A of the first conjunct. This phenomenon exemplifies what is commonly referred to as 'conjunction reduction'. Now consider the following sentences, in which omission of the constituent in brackets causes ungrammaticality:

(34) Coordination: \* conjunction reduction

- |    |   |           |
|----|---|-----------|
| a. | * <i>John hit the ball and <del>the ball<sub>i</sub> / it<sub>i</sub></del> rolled away</i>                                     | tr.+intr. |
| b. | * <i>the ball<sub>i</sub> rolled away and John hit <del>the ball<sub>i</sub> / it<sub>i</sub></del></i>                         | intr.+tr. |
| c. | * <i>John<sub>i</sub> hit the ball and Mary kissed <del>John<sub>i</sub> / him<sub>i</sub></del></i>                            | tr.+tr.   |
| d. | * <i>John hit the ball and Mary caught <del>the ball<sub>i</sub> / it<sub>i</sub></del></i>                                     | tr.+tr.   |
| e. | * <i>John hit the ball<sub>i</sub> and <del>the ball<sub>i</sub> / it<sub>i</sub></del> hit the car</i>                         | tr.+tr.   |
| f. | * <i>John<sub>i</sub> washed himself<sub>i</sub> and <del>John<sub>i</sub> / he<sub>i</sub></del> dried himself<sub>i</sub></i> | tr.+tr.   |

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subject position of the raising verb than the embedded object, because the subject is base-generated in a position that is structurally higher than the position in which the object is base-generated. Hence, the subject will be attracted, rather than the object.

The above sentences show that a second conjunct *s* cannot be omitted when it is coreferent with a first conjunct *o* (34a), neither is it possible to omit *o* when it is coreferent with *s* (34b). Omission of an *o* that is dependent on *A* (34c) or *o* (34d) is also bad, and so is omission of *A* when depending on *o* (34e). The *f*-sentence shows that omission of the *o*-argument is even not allowed when it is bound by an (omitted) antecedent-*A*, which in turn is coreferent with both *A* and *o* in the first conjunct. So again, *s* and *A* team up and form a category (subject) to the exclusion of *o* (object). Note, by the way, that omission of objects is not totally excluded, but it is restricted to coreference with another object:

(35) Coordination: conjunction reduction?

- a. *John hit ~~the ball~~; and Mary caught the ball;*
- b. *what; did John hit and ~~what; did~~ Mary catch?*

**Dutch** (Germanic, West, Low Saxon-Low Franconian, Low Franconian)

- c. *deze vis; zal Jan met olie inwrijven en*  
     this fish will.PRS.SG John with oil rub and  
     *deze vis; zal Marie bakken*  
     this fish will.PRS.SG Mary fry

'John will rub this fish with oil and Mary will fry it.'

Sentence (35a) is an example of backward reduction, since the gap is in the first conjunct. These constructions have an omitted constituent in the initial conjunct, and differ in this respect from forward reduction, which is exemplified in (33) and (34). It has already been noted by Ross (1968) that the conditions that play a role in backward reduction differ from the ones that apply to forward reduction, so I will restrict myself to the latter construction.<sup>36</sup> In (35b), for instance, we see that one interrogative pronoun may be used in order to question the object of two conjuncts, provided that the answer is the

same in both cases. Similarly, topicalization of a joint object is quite natural in languages like Dutch (cf. (35c)). Again since Ross (1967), these constructions have been derived by movement of the same constituent out of the two conjuncts ('across the board-movement').<sup>37</sup> I will assume throughout this study that these cases differ from conjunction reduction as exemplified in (33) and (34), and therefore ignore them. In chapter 4, I will return to the issue of conjunction reduction, analyzing the phenomenon as a process of deletion.

The conclusion of this brief survey is obvious: subjects behave differently from objects with respect to reflexivization, control, raising and conjunction reduction. The same conclusion has been reached by scholars investigating other syntactic phenomena, such as the ban on extraction from subject islands (cf. Huang (1982)) or the scarcity of subject idioms (cf. Marantz (1984)). As these phenomena have not been studied very broadly for the ergative languages dealt with in this study, they will be left out of the discussion. For an overview of subject-object asymmetries the reader is referred to the literature (see for example Keenan (1976); Ordoñez (1998)). The general belief is that these asymmetries are to be explained by a structural difference: subjects occupy a higher position than objects.

In most approaches to the phenomenon of ergativity, the subject/object asymmetry is retained. The reason for this is that the bulk of ergative languages do not differ from English with respect to syntactic phenomena such as reflexivization, control and conjunction reduction. Nevertheless, several important approaches differ from that. They try to account for languages with 'syntactic ergativity', a much debated phenomenon since the discovery of Dyirbal syntax (Dixon 1972). This language, as well as a handful of other languages, does not behave like English. It is suggested

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<sup>36</sup> See Wilder (1997) for a recent discussion of the various types of reduction in coordinated structures.

<sup>37</sup> The sentence in (35a) has also been accounted for by movement ('right node raising', a term introduced by Postal (1974)).

that in these languages, the category of subject consists of S and O, rather than S and A. For scholars studying ergativity it has therefore always been tempting to consider Absolutive DPs as Nominatives: both categories are apparently associated with subject properties, and both of them are morphologically unmarked cross-linguistically. Also, in languages with overt verbal marking, the verb often agrees with the argument in Absolutive case. For this reason, several scholars prefer to talk about Nominative/Ergative marking, instead of Absolutive/Ergative.

We have seen that generative grammar treats the nominative relation as a structural notion, tied to a functional projection (IP/AgrSP/TP) high up the (extended) verbal projection. In this projection, arguments with morphologically unmarked case are licensed. If the same happens in ergative languages, this means that in transitive clauses the internal argument is moved to this projection instead of the external argument. The idea is attractive, since the latter argument is typically licensed by a marked case (Ergative). In the following two subsections, I will describe various instantiations of this idea, and discuss what they tell us about subject/object asymmetries, syntactic ergativity and the presumed marked status of ergativity in general. At this point, I would like to stress that full understanding of the details of these proposals is not necessary in order to be able to follow the development of my own proposal in the chapters 2 to 5.

### **3.3 Syntactic ergativity and the reversal of theta roles**

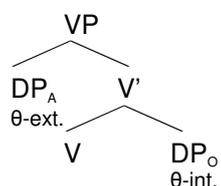
Within government & binding, Marantz (1981, 1984) provides an analysis in the spirit of a pre-government & binding analysis of Basque by De Rijk (1966). The central claim of these analyses is that there are languages in which the transitive verb assigns its external theta role to the complement position, whereas the internal theta role is assigned to the specifier position. This means that the logical subject (A) is in the complement, whereas the logical object (cf. O) is in the specifier of the verb. Compare the representation in (36b) with the tree in (36a), which shows theta role

assignment under standard government & binding assumptions as discussed in (23). Case assignment is shown in (37b), which is to be compared to standard case assignment (cf. (24)).

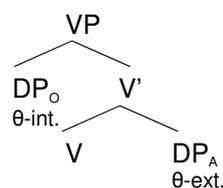
(36) Assignment of theta roles in transitive clauses (De Rijk (1966); Marantz (1981), (1984))

a. accusative

(repeated from (23))



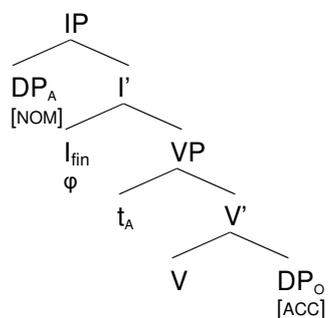
b. ergative



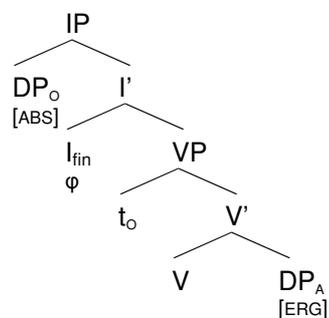
(37) Assignment of case in ergative transitive clauses (on the basis of Marantz (1981), (1984))

a. Nominative/Accusative

(repeated from (24))



b. Absolutive/Ergative



Like in English, the verb in (36b) assigns a marked structural case to the internal argument position, which is filled by the argument receiving the external theta role: the Ergative case. Likewise, the argument in the external argument position receives the internal theta-role and needs to move upwards in order to become licensed. I assigns an unmarked structural case which is morphologically unmarked: Absolutive. The structure in (37) suggests that Absolutive DPs behave exactly like Nominative DPs, and that Ergatives behave like Accusatives syntactically. Therefore, we expect that

languages applying the reversal of theta roles suggested in (36b) have entirely different argument asymmetries than the ones discussed in (30) through (34). That is, we expect there to be languages where the direct object (O) may function as an antecedent for a transitive subject (A) reflexive pronoun. Also, it is predicted that only Absolutives may be realized by PRO in control environments, and that they may be raised in raising constructions and omitted in the second conjunct of a coordinated structure.

Marantz argues that Dyirbal is such a language. His claim is based on Dixon (1972), who argues that Dyirbal displays a unique type of ergativity, which he calls 'syntactic'. Not only is Dyirbal morphologically ergative, as has been illustrated in (16), but several syntactic operations seem to function on an equally ergative basis. The following sentences illustrate conjunction reduction in Dyirbal:

(38) **Dyirbal: syntactic ergativity**

- a. *ŋuma banaga-n<sup>y</sup>u*  
 father.ABS return-NFUT  
 'Father returned.'
- b. *ŋuma yabu-ŋgu bura-n*  
 father.ABS mother.ERG see-NFUT  
 'Mother saw father.'
- c. [*ŋuma<sub>i</sub> banaga-n<sup>y</sup>u*] [*∅<sub>i</sub> yabu-ŋgu bura-n* ]  
 father.ABS return-NFUT mother.ERG see-NFUT  
 'Father<sub>i</sub> returned and mother saw (him)<sub>i</sub>.'  
 NOT: 'Father<sub>i</sub> returned and (he)<sub>i</sub> saw mother.'
- d. [*ŋuma<sub>i</sub> yabu-ŋgu bura-n*] [*∅<sub>i</sub> banaga-n<sup>y</sup>u*]  
 father.ABS mother.ERG see-NFUT return-NFUT  
 'Mother saw father<sub>i</sub> and (he)<sub>i</sub> returned.'  
 NOT: 'Mother<sub>i</sub> saw father and (she)<sub>i</sub> returned.'

(Dixon 1994:10,12)

The sentences in (38a/b) show that case marking on Dyirbal nouns is Absolutive/Ergative and that the verb is not overtly marked for any of its

arguments. These sentences, one intransitive and the other transitive, are coordinated in (38c/d). If the transitive sentence is the second conjunct, as is the case in the c-sentence, the object of that sentence can be omitted under coreference with the s of the first conjunct. The d-sentence shows that the s-argument of an intransitive second conjunct can be omitted if it is coreferent with a first conjunct o. On the basis of these data, people tend to conclude that Dyirbal treats s and o as one syntactic class, which behaves like the English subject, and that A forms a category comparable to the English object. This seems to be primary evidence for Marantz's approach to ergativity.

Many western Austronesian languages display similar behaviour.<sup>38</sup> This can be illustrated by conjunction reduction in Balinese (cf. (39a)). The literature also provides evidence from control and raising constructions (cf. (39b/c)).

(39) **Balinese** (Austronesian, Malayo-Polynesian, Bali-Sasak): syntactic ergativity

a. [*ia*<sub>i</sub> opak *tiang*] *lantas* [*∅*<sub>i</sub> *ng-eling*]  
 3SG.O scold 1SG.A then N-cry

'I scolded her/him<sub>i</sub>, then s/he<sub>i</sub> cried.'

NOT: 'I<sub>i</sub> scolded her/him, then (I)<sub>i</sub> cried.'

b. *tiang edot* [*∅*<sub>i</sub> *periksa dokter*]  
 1SG.A want examine doctor.A

'I want to be examined by a doctor.'

NOT: 'I want to examine a doctor.'

c. *kapelihan<sub>i</sub>-ne ngenah sajan* [*∅*<sub>i</sub> *engkebang ci*]  
 mistake.O-3POSS seem much hide 2SG.A

'It is very apparent that you are hiding his/her wrongdoing.'

(Artawa & Blake 1997:495, Wechsler & Arka 1998:7,17)

<sup>38</sup> The term 'western Austronesian' does not refer to a particular branch within the Austronesian family. In Wouk and Ross (2002), the term is strictly geographical, roughly referring to those Austronesian languages spoken to the west of 130° east longitude (Himmelman 2002:7).

Since Balinese does not display overt case marking or agreement, I simply use the labels S, A and O in order to indicate the grammatical functions of the arguments. The sentence in (39a) is comparable to the one in (38d): the omitted S of the second conjunct can only be coreferent with the O-argument of the first conjunct, not with A. In the b-sentence, the O-argument (rather than the A) of *periksa* ('examine') is controlled by *tiang* ('1SG.S'), and in (39c) it is the O-argument of *engkebang* ('hide') that is raised to the matrix clause, not the A-argument. This is the opposite of the English patterns found in (31) (control) and (32) (raising), and therefore Balinese has been argued to be a perfect example of a syntactically ergative language (cf. Artawa (1998); Artawa & Blake (1997); Wechsler & Arka (1998)).

However, conjunction reduction, control and raising do not *always* operate on an ergative basis: syntactic accusativity is also attested in Balinese. Whether a construction is syntactically ergative or accusative, is determined by the morphological shape of the verb. Every transitive verb has two morphological realizations in Balinese: a bare form and a form with a nasal prefix. Constituent order is highly dependent on the presence or absence of this nasal prefix.

(40) **Balinese:** constituent order in transitive sentences

- |    |                 |                  |               |         |
|----|-----------------|------------------|---------------|---------|
| a. | <i>Nyoman</i>   | <i>lempag</i>    | <i>tiang</i>  | O V A   |
|    | Nyoman.O        | hit              | 1SG.A         |         |
|    | 'I hit Nyoman.' |                  |               |         |
|    |                 |                  |               |         |
| b. | <i>tiang</i>    | <i>ng-lempag</i> | <i>Nyoman</i> | A N-V O |
|    | 1SG.A           | N-hit            | Nyoman.O      |         |
|    | 'I hit Nyoman.' |                  |               |         |

(Artawa & Blake 1997:484,485)

The sentences in (40) show that the preverbal constituent is interpreted as the O-argument when the nasal prefix is absent. When this prefix is present,

the preverbal constituent must be interpreted as the A-argument.<sup>39</sup> The transitive verb *opak* ('scold') in (39a) and the embedded transitive verbs *periksa* ('examine') and *engkebang* ('hide') in (39b/c) lack the nasal prefix. The unexpressed argument in each of the sentences in (39) normally precedes these verbs, which means that it is the O-argument that is omitted, controlled or raised. This constituent is viewed as *syntactic pivot* of the clause, and the cited authors even claim that it is actually the *subject* of the clause. However, adding nasal prefixes to the verbs at stake changes the underlying order of constituents, requiring the A-argument to precede the verb. This renders syntactically accusative constructions, with the A-argument functioning as pivot.

(41) **Balinese:** syntactic accusativity

- a. [tiang<sub>i</sub> ng-opak ia ] lantas [∅<sub>i</sub> ng-eling]  
 1SG.A N-scold 3SG.O then N-cry

'I<sub>i</sub> scolded her/him, then (I)<sub>i</sub> cried.'

- b. tiang<sub>i</sub> edot [∅<sub>i</sub> meriksa dokter ]  
 1SG.A want N\examine<sup>40</sup> doctor.O

'I want to examine a doctor.'

- c. ci<sub>i</sub> ngenah sajan [∅<sub>i</sub> ng-engkebang kapelihan-ne ]  
 2SG.A seem much N-hide mistake.O-3POSS

'It is very apparent that you are hiding his/her wrongdoing.'

(Artawa & Blake 1997:495, Wechsler & Arka 1998:8,17)

In (41), the omitted/controlled/raised argument is S or A, as is the case in the English translations.<sup>41</sup> This alternation is often called 'voice system' or 'focus system', and is typical of Western Austronesian languages (cf. Wouk & Ross

<sup>39</sup> The constituent in preverbal position may also appear in sentence final position.

<sup>40</sup> In accordance with the Leipzig glossing rules (see List of abbreviations), affixes that replace other phonological material are separated from the root by a back slash, instead of a hyphen.

<sup>41</sup> The English translations of the c-sentences of (39) and (41) do not show raising, but they do if we paraphrase them as 'You clearly seem to hide his/her wrongdoing'.

(2002) for discussion and further exemplification). In Philippine-type languages like Tagalog there are more than two voices, allowing even more peripheral constituents like locations and instruments to function as syntactic pivot. The main reason for calling such languages 'syntactically ergative' is that the construction is unmarked in several respects when another constituent than A functions as the pivot. When A is the pivot, the construction is more marked (Ross 2002:22). In Balinese, for instance, the verb is morphologically unmarked in the former case, whereas it carries a nasal prefix in the latter. Nevertheless, as Ross notes, there is much controversy with respect to this issue, and I will simply assume for the moment that the syntax of languages like Balinese is hybrid: it is split syntactically ergative.

Dixon has claimed that "no language is known that is ergative at the syntactic but not at the morphological level" (1994:172). Since there are no overt signs of case and agreement in Balinese, this would mean that we have to assume that there is a covert Ergative case/agreement pattern. This pattern at least applies in syntactically ergative constructions, but it may apply in syntactically accusative constructions as well, considering the fact that most morphologically ergative languages are syntactically accusative (Anderson 1976). Alternatively, we may assume split morphological ergativity for Balinese. This split would then be determined by the shape of the verb, in the same way as tense or aspect regulates split ergativity in Indo-Iranian languages. However, there are indications that syntactic ergativity in Austronesian does not depend on ergative morphology as such. As Ross (2002:22,23) notes, non-A syntactic pivots are often only possible when they have specific reference. Cooreman, Fox & Givón (1984), for instance, show that the higher the topicality of a non-A constituent is, the greater the probability is that it will be realized as the syntactic pivot in this type of language.<sup>42</sup>

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<sup>42</sup> Topicality is here defined as 'discourse continuity'. Cooreman et al. do not imply that o-arguments are always more topical in Austronesian languages: cross-linguistically, A-arguments tend to be more topical in discourse than o-arguments.

In Van de Visser (2003) I have proposed to explain the Austronesian variant of ‘syntactic ergativity’ by some kind of topicalization of the object. Assuming that the preverbal constituent in Balinese is clitic-left dislocated, the facts shown in (39) and (41) follow without having to evoke the concept of morphological ergativity. If the verb carries a nasal prefix, this prefix is analyzed as a cliticized argument (with A-function). It is assigned the external theta role, and this role carries over to the preverbal constituent, which forms a chain with the prefix. Likewise, a bare verb is assumed to carry an empty prefix, which is a cliticized O-argument. The preverbal constituent doubles the prefix, and hence carries the internal theta role:

(42) Austronesian hybrid syntax (according to Van de Visser (2003))

- a. [ DP<sub>A</sub> [ N<sub>A</sub>-V DP<sub>O</sub> ] ]
- b. [ DP<sub>O</sub> [ Ø<sub>O</sub>-V DP<sub>A</sub> ] ]

On this view, the preverbal DP is merely an adjunct to the clause, which can be omitted when the pragmatic context allows the hearer to identify its reference. Since every verb carries an argumental prefix, the sentences above are not what they seem to be: there is no omitted argument in conjunction reductions, no raised argument in raising constructions, and nor is there an empty PRO in control constructions. All that is left out is the adjunct, because the reference of the verbal prefix is clear from the first conjunct / matrix clause. According to this proposal, the sentences in (41) will be glossed as follows:

(43) **Balinese:** syntactic accusativity (cf. (41))

- a. [ *tiang<sub>i</sub>*    *ng<sub>i</sub>-opak*    *ia*    ]    *lantas*    [ *ng<sub>i</sub>-eling* ]  
       1SG        A-scold    3SG.O    then        A-cry  
       ‘I<sub>i</sub> scolded her/him, then (I)<sub>i</sub> cried.’
- b. *tiang<sub>i</sub>*    *edot*        [ *m<sub>i</sub>eriksa*        *dokter* ]  
       1SG.A    want        A\examine        doctor.O  
       ‘I want to examine a doctor.’

- c. *ci<sub>i</sub> ngenah sajan [ng<sub>i</sub>-engkebang kapelihan-ne ]*  
 2SG seem much A-hide mistake.O-3POSS

'It is very apparent that you are hiding his/her wrongdoing.'

The subject of the second conjunct in (43a) is *ng-*, which is coreferent with the same prefix in the first conjunct, the reference of which is made explicit by the clitic-left dislocated *tiang* ('1SG'). Similarly, the nasal prefix of *meriksa* ('\examine') in (43b) is the A-argument, which is coreferent with *tiang* in the matrix clause.<sup>43</sup> In (43c), finally, *ng-* is the A-argument of *engkebang* ('hide'), and the adjunct *ci* ('2SG'), which normally precedes *ng-engekebang*, has been raised to the subject-position of *ngengah* ('seem'). Replacing the nasal prefixes by empty ones yields constructions that remind us of syntactic ergativity, as we have seen in (39). The crucial point is that the Balinese constructions at stake are not really syntactically ergative.

It is imaginable that 'real' syntactic ergativity in a language like Dyirbal is also the result of topicalizing the O-argument. The alternative construction, in which the A-argument is topicalized, simply does not exist (anymore), explaining the lack of 'syntactically accusative' constructions in Dyirbal.<sup>44</sup> The proposal described here allows us to account for 'syntactic ergativity' without having to assume a reversal of theta roles, as in Marantz's approach. In chapter 4, I will return to the phenomenon of syntactic ergativity, providing a different analysis for Dyirbal. This analysis, which compares transitive clauses to passive constructions, will differ from Marantz's proposal in the same respects. Nevertheless, we should bear in mind that most morphologically ergative languages are *not* syntactically ergative at all, as

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<sup>43</sup> Note that it is not clear whether *edot* ('want') carries an argumental prefix as well. When it does, it is clearly empty, and the preverbal constituent is supposed to be O. However, this does not seem to be the case, since we would expect that the internal theta role is assigned to the sentential complement of *edot*. Therefore, I will simply assume that verbs like *edot* may occur without a cliticized argument. The same applies to the raising verb *ngengah* ('seem') in (43c).

<sup>44</sup> For Dyirbal, my (2003) analysis assumed that both A and O are topicalized and clitic-doubled.

has been pointed out frequently by authors like Anderson (1976), Comrie (1979) and Dixon (1994). Even in Balinese and Dyirbal, accusativity does not seem to be far away. Reflexivization, for instance, universally employs an accusative pattern (cf. Dixon 1994:138-139). In Dyirbal, the verb carries a reflexive marker, which intransitivizes the predicate:

(44) **Dyirbal**: reflexivization

- a. *bala yugu bangul yara-ngu buyba-n*  
 IV.ABS stick(IV) I.ERG man(I)-ERG hide-NFUT  
 'The man hides the stick.'
- b. *bayi yara buyba-yiri-nu*  
 I.ABS man(I).ABS hide-REFL-NFUT  
 'The man hides himself.'

(Dixon 1972:90)

Marantz's proposal predicts that there are languages with Ergative reflexive pronouns that are syntactically bound by Absolutive antecedents, since Ergatives are c-commanded by Absolutes in (36b) and (37b). In Dyirbal, we cannot test this, since the language does not possess independent reflexive pronouns. Balinese, on the other hand, seems to employ such pronouns:

(45) **Balinese**: reflexivization (nasalized V)

- a. *cai<sub>i</sub> n<sub>i</sub>-ebek awak<sub>i</sub>*  
 2SG A-stab self.O  
 'You stabbed yourself.'
- b. *ia<sub>i</sub> ng<sub>i</sub>antung awak<sub>i</sub>*  
 3SG A\hang self.O  
 'S/he hanged herself/himself.'
- c. *tiang<sub>i</sub> m<sub>i</sub>elihang [awak tiang<sub>i</sub>-e ]*  
 1SG A\blame self.O 1SG-GEN  
 'I blamed myself.'

(Artawa 1998:17)

The Balinese reflexive pronoun *awak* ‘self’ can be used for different persons. With nasalized verbs, it follows the verb, just like the o-argument in a canonical transitive construction (cf. 40b). Under the proposed analysis, the A-argument, which is realized as a nasal prefix on the verb, binds the reflexive pronoun. The A-argument, in turn, is coreferent with the preverbal DP. This constituent is in an adjunct position, forming a chain with the argumental prefix. As is demonstrated by (46b), *awak* may be accompanied by a Genitive pronoun, but this is optional.<sup>45</sup> In constructions with bare verbs, the Genitive pronoun is obligatorily present, making the reflexive specific. This confirms my analysis, which is based on topicalization of the preverbal constituent.

(46) **Balinese:** reflexivization (bare V)

- a. \* *awak<sub>i</sub> Ø<sub>r</sub>-pelihang cai<sub>i</sub>*  
       self   O-blame   2SG.A  
       ‘You blamed yourself.’
- b. [*awak cai<sub>i</sub>-ne*] *Ø<sub>r</sub>-pelihang cai<sub>i</sub>*  
       self   2SG-GEN O-blame   2SG.A  
       ‘You blamed yourself.’

(Artawa 1998:17)

When functioning as an argument of a bare verb, the reflexive pronoun doubles the o-argument, which is expressed by an empty prefix on the verb.<sup>46</sup> Apparently, then, even Balinese does not use reflexive pronouns in A-function. Ignoring the exact details of the binding relation in these constructions, it will be clear that Balinese does not confirm Marantz’s hypothesis with respect to the assignment of theta roles in ergative

<sup>45</sup> Artawa (1988) uses the term ‘possessive marker’ instead of ‘Genitive’..

<sup>46</sup> Note that, although the clitic-left dislocated reflexive pronoun is maximally specific, it is not bound according to Principle A of the binding theory. This probably means that it is not a real anaphor under these circumstances. I take it that *awak* in this case is a noun with third person singular reference, suggesting that the o-prefix on the verb must be third person singular too.

languages. The Balinese reflexive pronoun *awak*, with or without the Genitive pronoun, exclusively functions as an O-argument (or its double) (cf. Artawa & Blake (1997:502)). According to Dixon, reflexivization universally patterns accusatively, even in syntactically ergative languages (1994:138-139). Neither Dyirbal, nor Balinese are exceptions to this generalization.

Although Marantz discusses coreferential deletion in Dyirbal and Eskimo-Aleut, nothing is said with respect to control or raising. Levin (1983), assuming Marantz (1981), tries to show that control constructions in Dyirbal are also syntactically ergative, but it is not clear that the examples she uses are real cases of control. Moreover, Bittner and Hale (1996b:532,533) argue that control in Dyirbal is syntactically accusative. Under reference to Chomsky (1981), they claim that this is due to universal constraints. Dixon reaches the same conclusion on the basis of empirical evidence (1994:134-137). This has the consequence that any proposal that is supposed to account for syntactic ergativity can only be based on a limited number of constructions. Furthermore, morphologically ergative languages that are said to be syntactically ergative as well, are fairly exotic and often highly endangered. Apart from Dyirbal, there is Warrgamay, one of its sister languages, and Yidin<sup>y</sup>, another Pama-Nyungan (Australian) language (cf. Dixon (1981), (1977)). Dixon (1994:175-180) adds Kalkatungu and Bandjalang (both Pama-Nyungan), Alutor (Chukotko-Kamchatkan), several Mayan languages, Nadëb (Maku, spoken in Brazil) and Tongan (Austronesian). It should be noted that in some of these cases, the claim for syntactic ergativity is exclusively based on relative clause and *wh*-question formation. In chapter 4, I will show examples from Mayan where only Absolutive arguments can be questioned or relativized. In my analysis, however, this is the result of ergative morphology, and does not necessarily imply that there is syntactic ergativity as well. The overall conclusion with respect to syntactic ergativity, then, must be that it is a highly marked phenomenon that is not to be derived in the way Marantz (1981) suggests.

As has been noted above, various authors have pointed out that most

morphologically ergative languages are *not* syntactically ergative (Anderson (1976); Comrie (1979); Dixon (1994)). Marantz acknowledges this fact by assuming that morphologically ergative languages apply ergative case marking to verbs that assign theta roles as depicted in (36a), instead of following the pattern in (36b) and (37b). It remains unclear how case assignment takes place in these languages.<sup>47</sup> This is an unfortunate result, as morphological ergativity (combined with syntactic accusativity) appears to be so common. Marantz also admitted that any account of ergativity must face the fact that the majority of the languages in the world are not ergative at all (1984:220-221). His own theory clearly does not predict this fact, since neither of the two alternatives in (36) is inherently more or less marked with respect to the other. I conclude from all this that we should reject the hypothesis that theta roles can be assigned in a reversed way.

Finally, Manning (1996) provides an analysis similar to the one put forward by Marantz, working within a lexical-functional framework (cf. Bresnan (1982)). However, most of the accounts that have been developed after Marantz (1981) assume that theta role assignment in ergative languages does not differ from the way this is done in non-ergative languages.

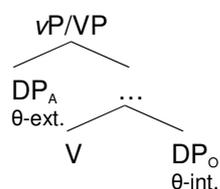
### 3.4 Different ways of case marking

The approaches to ergativity discussed in this subsection have in common that they assume that the universal assignment of theta roles is as follows:

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<sup>47</sup> Marantz (1991) proposes a complete break between abstract case and morphological case, which overcomes this shortcoming. Levin & Massam (1985) provide a different solution, as we will see in the next subsection.

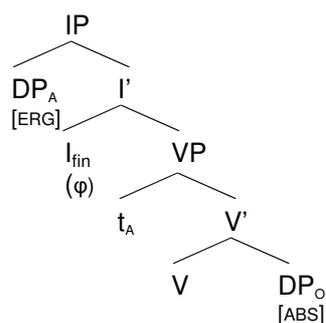
(47) Universal assignment of theta roles (repeated from (23) and (36a))



In a transitive clause, the O-function is invariably associated with the verbal complement, whereas the A-function is associated with the specifier of V or *v*. The approaches at stake differ with respect to the way case is realized.

Levin & Massam (1985), working within the government & binding-approach, propose the following analysis of ‘surface’ ergativity.<sup>48</sup> For Nominative/Accusative languages, they assume the standard view on case assignment represented in (24): the verb assigns Accusative case to the internal argument, which stays in situ, and the external argument has to move to Spec,IP where it is assigned Nominative case by I. In ergative languages, however, the verb assigns Absolutive case and (finite) I assigns Ergative case.

(48) Absolutive/Ergative case assignment in finite transitive clauses (Levin & Massam 1985)



Since Levin & Massam only discuss Niuean (Austronesian), a language

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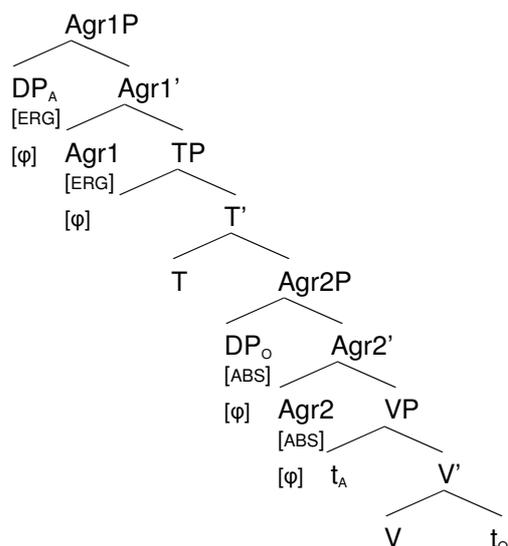
<sup>48</sup> The term ‘surface’ ergativity refers to morphological ergativity. Syntactic ergativity is also known as ‘deep ergativity’.

without overt agreement, it is not clear how their analysis accounts for agreement in ergative languages. In order to account for case marking in intransitive clauses, they assume that natural languages have one obligatory case, which has priority above the other case. In accusative languages, this is of course the Nominative. In Ergative languages, Absolutive is the obligatory case. This means that in intransitive clauses, this case percolates from V to I, preventing the assignment of Ergative case. Again, this approach seems to postulate a parameter that simply states whether a language is accusative or ergative. As with Marantz's proposal, there is no suggestion that the latter pattern should be marked.

Bobaljik (1993) formulates a similar proposal within an early version of the minimalist program. Remember from the representation in (25) that arguments are base-generated as fully inflected for case. Two functional heads, AgrO and AgrS, contain a case feature that must be checked by moving a DP with the right case to the specifier of either head. In Nominative/Accusative languages, AgrO is equipped with an Accusative feature, to be checked by the internal argument ( $DP_o$ ); AgrS carries a Nominative case feature, which is checked by the external argument ( $DP_A$ ). Bobaljik uses the labels Agr2 and Agr1 instead of AgrO and AgrS, respectively. In ergative languages, the arguments move to the same projections as the arguments in a Nominative/Accusative language. The difference is that the case checked by AGR2 is Absolutive, rather than Accusative, and the case checked by AGR1 is Ergative, rather than Nominative. Compare the representation in (49) with the familiar one in (25).<sup>49</sup>

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<sup>49</sup> As was the case in (27), I am ignoring the role of TP for the moment.

(49) Absolutive/Ergative case and agreement in finite transitive clauses  
(Bobaljik 1993)

Inspired by Levin & Massam's approach, Bobaljik assumes an 'obligatory case parameter', which accounts for the fact that in ergative languages, the s-argument of an intransitive clause checks Absolutive case (instead of Ergative). Bobaljik's parameter states that intransitive clauses have an 'inactive' Agr1 in ergative languages, ensuring that the sole argument of the intransitive verb moves to Spec,Agr2P, where Absolutive case is checked. In accusative languages, the intransitive verb has an 'inactive' AGR2P, as I have already discussed in relation to (25).

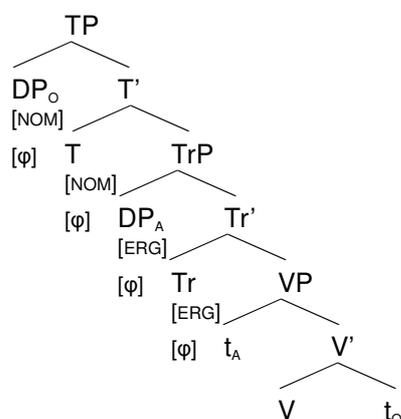
The obligatory case parameter has different implications for nonfinite clauses, depending on the language type. Bobaljik argues that a nonfinite T makes Agr1 defective. If a language belongs to the accusative type, the defective Agr1 is unable to check Nominative case. In this language type, the Nominative argument is therefore obligatorily realized by PRO, and the verb does not agree with it either, as we know from familiar languages like English. If, on the other hand, a language belongs to the ergative type, only the Ergative DP is realized as PRO, and any agreement with Ergative arguments should be suppressed. Nonfinite T does not affect Agr2, so an

*intransitive* nonfinite clause should still allow for an overt Absolutive argument and verbal agreement. The Inuit (Eskimo-Aleut) examples Bobaljik cites, do indeed show the structural absence of an Ergative DP in transitive nonfinite clauses, as well as absence of agreement morphology with that same argument (1993:64-65). According to Johns (2000:54), however, the structural absence of Ergative DPs from such sentences and the relevance of these examples is a matter of dispute (cf. Murasugi 1992:188-189, fn. 5). If such DPs turn out not to be necessarily absent, it might be the case that this language has inflected infinitives or lacks nonfinite constructions. Since infinitives do not play an important role in my own proposal, and considering the fact that control has been argued to follow a universally accusative pattern, I will leave this issue open. My conclusion is that however promising Bobaljik's proposal might be, it does not pay attention to the fact that ergative languages are marked compared to non-ergative languages. A further drawback is perhaps the fact that Agr1 checks the unmarked case (Nominative) in accusative patterns, whereas it checks the marked case (Ergative) in ergative patterns. With Agr2, the reverse holds. Note also that the idea that Nominatives and Absolutives might be caseless arguments is not really compatible with Bobaljik's view. It would imply that in accusative systems, Agr1 is the caseless head, whereas in ergative systems, Agr2 would be without a case feature.

Such analyses *are* compatible with Murasugi (1992), who provides a different analysis of ergativity in minimalist terms. In her approach, the lower functional head responsible for checking case is called Transitivity (instead of AgrO), and the higher head is T (instead of AgrS). The main difference with the previous approaches is that the *unmarked* cases are checked by T, whereas the *marked* cases are checked by Tr. For Nominative/Accusative languages, the derivation is comparable to the one in (25): the features of the internal argument are checked in the lower functional projection (Spec,TrP), and the features of the external argument are checked in the higher projection (Spec,TP). This yields so-called 'crossing paths', which are

also predicted by Bobaljik's approach to Nominative/Accusative patterns. Absolutive/Ergative patterns, on the other hand, are different: the internal argument is in the Absolutive, and since this is the unmarked case, it is checked in Spec,TP. Murasugi equates this case with Nominative. Ergative case is morphologically marked, and like Accusative case it is checked in Spec,TrP:

(50) Nominative/Ergative case and agreement in finite transitive clauses (Murasugi 1992)



The paths of movement followed by the two arguments in (50) do not cross each other, and hence Murasugi refers to this structure as displaying 'nested paths'.

In order to ensure that intransitive clauses have a Nominative DP<sub>S</sub>, Murasugi assumes that the Tr-head lacks a case feature when it has the value [-trans]. This predicts that intransitive subjects always move to Spec,TP in both accusative and ergative languages. As with Bobaljik's proposal, this means that nonfinite constructions affect different arguments, depending on the language type. For Nominative/Accusative languages, Murasugi's predictions are the same as Bobaljik's: nonfinite T requires the Nominative argument to be realized by PRO, and agreement to be absent, as is well-known. For Nominative(=Absolutive)/Ergative languages, however,

Murasugi's structure makes a prediction which is the opposite of Bobaljik's: Ergative DPs are not supposed to be affected by nonfiniteness, whereas Nominatives (Absolutives) pattern like Nominatives in English. Languages where Nominatives (=Absolutives) trigger agreement on the nonfinite verb are explained by assuming that C is responsible for this. In these constructions, C is supposed to possess a [+finite] feature and a Nominative case feature. Murasugi compares these constructions to inflected infinitives in Portuguese and Italian. Johns (2000:58-59) notes that Murasugi's analysis has been disputed, just like Bobaljik's (cf. Bobaljik (1993:63, fn.13)). For reasons mentioned above, I will not dwell on the analysis of infinitives here.

At first sight, then, the movements shown in (50) result in a structure where the internal argument in Spec,TP c-commands the external argument in Spec,TrP. Although this analysis differs crucially from Marantz's proposal for 'deep ergative' languages like Dyirbal, Murasugi considers syntactic ergativity to be common in morphologically ergative languages, unlike the empirical findings discussed in the previous subsection.<sup>50</sup> Although Murasugi does not deny the fact that there are ergative languages with syntactically accusative behaviour, she clearly considers the class of syntactically ergative languages to be larger than commonly assumed. Following Marantz (1991), Murasugi assumes that there are two levels of case marking: an abstract and a morphological level. Syntactically accusative languages have syntactic derivations as in (25), not as in (50). This means that the abstract case pattern is accusative, because the external argument moves to Spec,TP and the internal argument to Spec,TrP. The morphological realization of the abstract cases, however, follows an ergative pattern (1992:199-206). Exactly how this proposal is to be implemented, remains

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<sup>50</sup> Note that Murasugi does not expect reflexivization to be different in accusative and ergative languages. Movement of the internal argument to Spec,TP in ergative languages only takes place after Spell Out, assuming that the case feature of T is weak in ergative languages. Under the additional assumption that binding takes place at surface structure, no peculiar binding facts that are the result of ergativity are expected. A similar explanation is given for the fact that control and raising have a universal orientation towards Nominatives (instead of Absolutives) (1992:163-173).

unclear. Again, nothing is said with respect to the attested marked status of ergativity. Murasugi's proposal seems to be primarily designed for the random generation of syntactically accusative and syntactically ergative patterns; languages with morphological ergativity only require adaptation of the theory. Although syntactic ergativity in Murasugi's proposal does not anymore allow for unattested reflexive constructions of the kind predicted by Marantz (1984), the fact remains that syntactic ergativity is completely absent from most morphologically ergative languages.<sup>51</sup>

### **3.5 Allowing for both types of ergativity: Bittner & Hale (1996a,b)**

A more recent proposal by Bittner and Hale (1996a, 1996b) accounts for both morphological and syntactic ergativity by using independently motivated constraints on syntactic structures. I have chosen to dedicate a separate subsection to this proposal because it is quite elaborate and influential. At the same time, it is a serious attempt to account for an impressive range of data. One caveat should be made, though: Bittner & Hale rely on several technical notions that have not been discussed before. It goes without saying that full understanding of these notions is irrelevant with respect to the following chapters.

First of all, Bittner & Hale argue for a functional category K(ase), which is the nominal counterpart of C. DP (or NP) extends to KP in the same way as IP extends to CP (cf. (51)). Nominative arguments are caseless, and

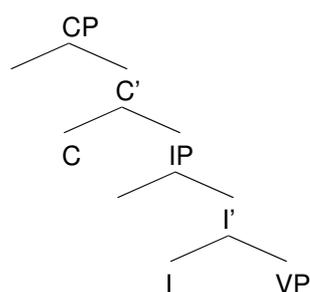
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<sup>51</sup> Most evidence for syntactic ergativity comes from agreement, the realization of nonfinite and relative clauses (Murasugi 1992:96-155). I will return to her proposal with respect to agreement and relativization in chapter 4. There I will argue that syntactic ergativity may only arise when passive constructions take over the function of the active construction. Universal pragmatic tendencies, according to which A-arguments of active constructions are more topical than O-arguments, predict that the phenomenon will only occur in the transition stage. Once the system has stabilized, syntactic ergativity has become impossible. This accounts for the scarcity of syntactically ergative languages.

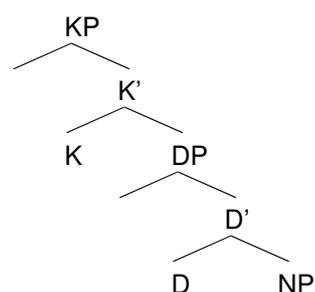
hence they lack a KP-projection.<sup>52</sup> At D-structure, K may be empty or filled. A filled K corresponds to inherent cases like Dative and Instrumental. The distribution of these phrases, which I will not discuss here, is regulated by the projection principle (cf. Chomsky (1981:29,38)). An empty K corresponds to marked structural case: Accusative or Ergative.<sup>53</sup> Because K is empty, Accusative and Ergative KPs are subject to the empty category principle (cf. Chomsky (1981:274-275)). If an empty K is governed by V, KP will be Accusative. Alternatively, if I is the governor, the empty-headed KP will be Ergative.

(51) Parallels between nominal and sentential domains

a. sentential



b. nominal



(after Bittner & Hale 1996a:4)<sup>54</sup>

<sup>52</sup> Absolute arguments are also considered to be Nominatives, since they equally lack a KP projection. Henceforth, nominative and absolute will be written without capitals, in order to indicate that they refer to *categories* (S/A or S/O) instead of *cases*.

<sup>53</sup> This might imply that there are also unmarked structural cases. However, since the 'unmarked' cases correspond to absence of the K-projection, using the term 'marked structural case' is somewhat awkward.

<sup>54</sup> The original structures are head-final, instead of head-initial.

## (52) Case theory

|                        | Unmarked<br>Case | Marked structural<br>Case   | Inherent<br>Case        |
|------------------------|------------------|-----------------------------|-------------------------|
| K present?             | no               | yes                         | yes                     |
| K at D-structure       | --               | empty                       | filled                  |
| Licensing<br>condition | K-filter         | empty category<br>principle | projection<br>principle |

(Bittner &amp; Hale 1996a:6)

In principle, every nominal expression is subject to a constraint called the K-filter. This filter requires DPs (or NPs) to be c-commanded and governed by K or its verbal counterpart C. The former applies to marked structural cases and inherent cases, because these represent presence of K. Unmarked cases (nominatives), however, lack K, and hence they must be governed by C. The K-filter is stated in (53):

## (53) K-filter

Let  $\alpha$  be a K-less nominal (DP or NP) with a nonempty  $X^0$  head, and let  $\alpha$  head an argument chain  $\beta$ . Then

- a.  $\alpha$  is c-commanded and governed by K or C, and
- b.  $\beta$  does not contain any Case-bound position.

(Bittner &amp; Hale 1996b:542)

Central to the theory is the notion of *case binding*: any head assigns structural case to any argument that it case-binds. If the case binder is V, the empty-headed KP it case-binds is realized as Accusative. If the case binder is I, the argument is realized as Ergative. Nominatives must not be case-bound. Below, I will explain how this theory applies in nominative/Accusative and nominative(=absolute)/Ergative languages.

First of all, the definition of case binding predicts that intransitive verbs always have a Nominative argument:

## (54) Case binding

Let  $\alpha$  be a head that delimits a small clause, and let  $\beta$  be an argument. Then  $\alpha$  Case-binds  $\beta$ , and  $\beta$ 's head, iff

- a.  $\alpha$  locally c-commands  $\beta$ ;
- b.  $\alpha$  governs a Case competitor for  $\beta$ .

(Bittner & Hale 1996a:12)

Only if there is a case competitor will case binding apply. A case competitor is a K-less coargument, which only occurs in transitive clauses. As intransitive clauses only have one argument, case binding does not apply since the b-requirement in (54) is not met. The sole argument (s), therefore, is itself realized as a K-less DP/NP, and must therefore be licensed under c-command and government by C. This can be accomplished by moving the argument to Spec,IP or by head movement of I to C, accounting for the generalization that the case found in intransitive clauses is always nominative/absolutive.

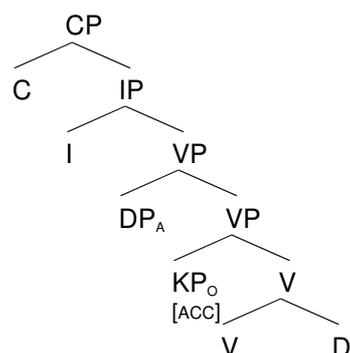
Transitive clauses come in two types, corresponding to the difference between ergative and accusative patterns. Remarkably, the ergative structure is less complex than the accusative one. Consider the trees in (55).<sup>55</sup>

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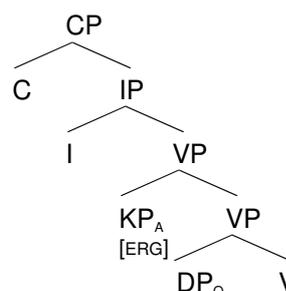
<sup>55</sup> These trees summarize the basics of case licensing in Bittner & Hale's theory, and therefore they have been reduced for presentational reasons. For instance, agreement is not represented in (55). On Bittner & Hale's account, agreement can be expressed by C or I, and it does not require a specifier-head configuration (1996a:17). Since my own proposal considers agreement to be able to license an argument (just like structural case), and, moreover, since it does not analyze every kind of person/number marking as agreement proper, discussing Bittner & Hale's approach to agreement is irrelevant at this point.

(55) Nominative/Accusative and nominative/Ergative case in finite transitive clauses (Bittner & Hale 1996a/b)

a. nominative/Accusative



b. nominative/Ergative



In both constructions, the subject is adjoined to VP, which – under Bittner & Hale’s analysis - means that it is not governed by V. Thus, in (55b), the direct object is the sole argument that is governed by the verb, so it must be K-less. Just like the intransitive subject, the direct object is licensed under c-command and government by C. The transitive subject is governed by I, which also governs the direct object. The latter is K-less and hence counts as a case competitor to the former, so the subject must be realized as a KP. K is spelled out as Ergative, because the case binder is I. The result is a nominative/Ergative case pattern.

As we can see in (55a), Accusative case is only found in clauses where V governs a case competitor for the direct object. This situation arises when an element of category D incorporates into the verb. This is supposed to be the case when an antipassive morpheme is reanalyzed as a functional head or when pronominal object incorporation is reanalyzed as agreement (Bittner & Hale 1996a:40-41). D counts as a case competitor, and therefore the direct object is necessarily realized by a KP. K spells out as Accusative because it is c-commanded and governed by V. The transitive subject is K-less, since it is the only nominal phrase governed by I. Consequently, the subject is licensed by being c-commanded and governed by C. Both trees in (55) show that the A-argument is always structurally higher than the O-

argument, like in Bobaljik's analysis (cf. (49)). However, as with the intransitive subject (s), there are two ways of having a K-less O-argument satisfy the K-filter: either by moving to Spec,IP or by head movement of I to C. The former alternative yields a structure in which the O-argument c-commands A, accounting for syntactically ergative languages like Dyirbal and Inuit. The latter leaves the O-argument in situ, which is what is supposed to happen in syntactically accusative languages with morphological ergativity. Although this analysis accounts for a lot of data, which I will leave undiscussed, there is again total freedom for languages to choose between both alternatives, and hence there is no explanation for the fact that syntactic ergativity is so marginally present in the languages of the world.

Structurally, the ergative construction in (55) seems to be the most basic one since the verb does not have an incorporated D. In accusative patterns, the incorporated D is obligatorily present in order to be able to have Accusative objects (cf. (7a)). As has been said above, this D is either an old antipassive affix, or an incorporated object pronoun, which has been reanalyzed. Antipassives are only found in languages that have morphological ergativity. Although there are diachronic data showing that ergative languages may develop into accusative languages and vice versa, (cf. Dixon, 1994:187-203), it is not very likely that every accusative language has gone through a stage of ergativity. Within most familiar accusative Indo-European languages, there does not seem to be explicit evidence in the morphology of the verb for the D-status of any functional head. And, moreover, object agreement is hardly found. By the way, this type of agreement is most often formally different from subject agreement, as the object agreement markers usually morphologically resemble independent pronouns with Accusative case. It is counterintuitive to consider the agreement marker a K-less D. I take this as a serious drawback of Bittner & Hale's theory. Although it should be noted that the structural markedness of accusative constructions with respect to ergative constructions does not *have* to be a counterargument, it is at least a very unfortunate result of this

analysis. In the remainder of this study, I will argue for an analysis that is able to explain the marked status of ergativity.

It should be clear that I have only discussed a selection of proposals with respect to ergativity. For more references to other proposals, the reader is referred to Johns (2000). In the following chapters, I will briefly discuss two further analyses: Neeleman & Weerman (1999) and Ura (2000).

#### **4 Sketch of the proposal**

The proposal to be presented in the chapters to follow assumes that every language is basically nominative/Accusative. That is, the subject of a transitive clause (A) will always be base-generated in a position c-commanding the direct object (O). The only structural case available is Accusative, and it can only be used in order to license O. Both A and s are commonly licensed by agreement in Spec, IP. This is the *main hypothesis*, to be presented in chapter 2.

Starting from the idea that ergative languages have a nominative/Accusative basis, I propose that ergativity is derived in two different ways. Firstly, there are nonconfigurational languages with pronominal arguments. In these languages, arguments may be realized twice in the same sentence: as a clitic (obligatory) and as an independent noun or pronoun (optional). The clitics are base-generated in argument positions, and hence pattern nominative/Accusatively. Independent nouns and pronouns adjoin to IP, and may remain caseless. Alternatively, an oblique (semantic) case is used in order to distinguish grammatical roles among these adjuncts. This may yield an accusative or ergative pattern, depending on the type of case that is available. Instrumental, Locative or Genitive are typically associated with A-function, and therefore they are often the source of the Ergative case. I call this the *Second Pattern Hypothesis* (SPH), Djaru being a representative example of this type of language (cf.

(13) and (14)). The SPH is the central topic of chapter 3.

Secondly, ergativity may appear in a passive-like construction. In chapter 4, I present an analysis of the passive that assumes incorporation of the transitive subject (A). An incorporated argument does not have to be licensed by case or agreement. This is the reason why the direct object (O) in a passive clause is commonly licensed by agreement instead of Accusative case. In intransitive clauses, incorporation does not take place, and this explains why agreement in a language like Kurmanji patterns ergatively (cf. (11) and (21)). The *Ergative as Passive Hypothesis* (EPH) assumes that the incorporated A-argument is either an empty nominal (PRO/*pro*) or a definite pronoun. The incorporated A-argument in Kurmanji is empty, which is why the ergative construction in this language resembles the English passive in such a great detail. Incorporated definite pronouns are found in languages like Basque (cf. (12)). In both varieties, the A-argument is a clitic that may be doubled by a full noun or pronoun in adjunct position. In some languages, this constituent carries an oblique case, which will be interpreted as Ergative case.

The SPH predicts that languages with nominative/Accusative clitics may have any pattern of case marking on full nouns and pronouns. If the pattern is ergative in a given language, this language has split ergativity of the type found in Djaru. According to the EPH, languages can be entirely morphologically ergative, but syntactic ergativity is extremely rare. Chapter 5 discusses various types of split ergativity. Tense/aspect splits, as illustrated by Kurmanji above, find a ready explanation if we assume that either the SPH or the EPH applies restrictively: in past tense or perfective aspect only. More challenging are splits determined by grammatical person, as illustrated by Dyirbal (cf. (18)) and Kham (cf. (19)). In these languages, the accusative and the ergative pattern may co-occur in one and the same clause. Presenting data from Nez Perce, I will show that this type of split is typically found in SPH-languages: more specifically, in the case marking of independent nouns and pronouns of SPH-languages. The SPH appears to

allow for these cases as well.

In the chapters 2 to 5, I will limit the discussion to languages that have some degree of verbal inflection. The reason for this is that my proposal depends heavily on the analysis of person/number markers as incorporated pronouns. Most of the data that were gathered for this study come from languages with rich inflection. In chapter 6, I present an overview of the patterns predicted by my proposal, demonstrating that each one of them is empirically motivated. Those languages without any verbal inflection fit in with my proposal. The main conclusion will be that there is no need for an independent macro-parameter accounting for ergativity. Ergative patterns may only follow from the positive setting of a parameter allowing languages to realize one or more verbal arguments by an incorporated pronoun.



## Accusative case and ‘nominative’ agreement

### 1 Introduction

In this chapter, I will investigate the morphological realization of subjects and direct objects in nominative/Accusative systems. That is, I will primarily focus on non-ergative languages and discuss how case and agreement distinguish between subjects and objects. The main claim will be that if both mechanisms are available in a particular language, they are complementarily distributed over subject and object. In fact, case marking is only available for the licensing of the O-argument. Subjects are licensed by agreement, never by case. Following Bittner & Hale (1996a,b) and Neeleman & Weerman (1999), among others, I assume that case and agreement are complementary devices. Nominatives are considered to be caseless, and verbs agree with a caseless argument only. This pattern is universal and hence is found in ergative languages as well. The complementary distribution of case and agreement is shown in (1).

|               |   |                  |                       |
|---------------|---|------------------|-----------------------|
| (1)           | Main hypothesis: universal licensing of arguments (preliminary version) |                  |                       |
| Intransitive: | [ <sub>IP</sub> DP <sub>S,φ</sub>                                       | V+I <sub>φ</sub> | ]                     |
| Transitive:   | [ <sub>IP</sub> DP <sub>A,φ</sub>                                       | V+I <sub>φ</sub> | DP <sub>O,Acc</sub> ] |

As can be seen in (1), arguments in s-function are universally licensed by agreement ( $\phi$ ). In transitive clauses, A-arguments are also licensed by agreement ( $\phi$ ), whereas O-arguments are licensed by structural Accusative case (Acc). I take this difference between subjects (S/A) and objects (O) to be responsible for the universal subject/object asymmetries discussed in the previous chapter. Hence, (1) applies to non-ergative and ergative languages alike.<sup>1</sup>

In section 2, I will argue that structural Accusative case is always present, even if it is not visible. Languages with so-called differential object marking (cf. Aissen (2003)) seem to reserve the overt Accusative marker for a particular type of objects, for instance definite objects. Objects that are outside this class appear without overt Accusative morphology, and often have a more restricted distribution in the sentence. Cross-linguistic data suggest that in these languages, the apparently caseless object does bear an (empty) Accusative morpheme, which contrasts with the overt one marking the direct object for nominal features like specificity or definiteness. I propose that the checking of the Accusative case feature takes place in situ, and does not involve agreement. Subjects, on the other hand, do not carry a case feature, but these move to Spec,IP in order to check their  $\phi$ -features. In my proposal, licensing by case marking compares to Agree in the latest version of the minimalist program (Chomsky 2000, 2001a,b), whereas licensing by agreement compares to spec-head agreement in the minimalist program (Chomsky 1995).

In section 3, we will see that evidence from languages like Amharic (Afro-Asiatic), as well as many Bantu (Niger-Congo) and various Austronesian languages suggests that a verb may agree with both the subject and the object, which at first sight contradicts my proposal. Data from

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<sup>1</sup> In chapter 4, I will show that incorporation may function as an alternative to syntactic licensing, giving rise to ergative patterns that include verbal marking. This is still compatible with those subject/object asymmetries that are considered to be universal.

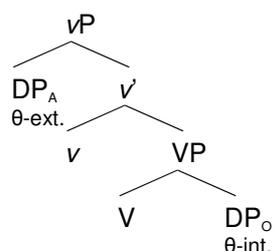
Amharic, however, shows that whenever the direct object DP is indefinite, object agreement is dropped. In those cases, the position of the direct object is more fixed. Although there are obvious similarities with differential object marking, I will argue that the agreement morphemes are actually pronouns that are base-generated in argument position and subsequently cliticize. What seems to be the direct object is actually an adjoined DP doubling the clitic. The adjunct status of such DPs explains their relatively free distribution. A similar claim has been made with respect to 'object agreement' in Bantu languages, although these languages are different. Not only do they obligatorily realize the object as a clitic pronoun, but the same happens with the subject. In section 4, I will argue that this process optionally takes place in *Tukang Besi* (Austronesian). When it does, case marking in this language patterns ergatively. I will claim that this can only be explained by the fact that independent subject nouns and pronouns are adjunct-doubles of clitic pronouns. This will prepare us for chapter 3, where I deal with ergativity in nonconfigurational languages.

Section 5, finally, sums up the main findings of this chapter.

## **2 Grammatical licensing of core arguments**

In this section, I will first focus on the licensing of direct objects by Accusative case (2.1). The phenomenon of differential object marking will predominantly be illustrated with data from *Sakha*, an Altaic language from Siberia. Next, I will briefly discuss agreement as a licensing mechanism for subjects (2.2). The following structure shows how theta role assignment takes place in transitive sentences. I take this structure to be universal.

- (2) Universal assignment of theta roles in transitive clauses (cf. Chomsky (1995, 2000, 2001a,b))



As I have discussed in section 3.1 (chapter 1), V assigns a theme role to its complement, DP<sub>O</sub>. The functional head *v* assigns the agent role to its specifier, DP<sub>A</sub>.<sup>2</sup>

### 2.1 Direct objects (o) and case

An overwhelming majority of Nominative/Accusative case patterns show that the Accusative is morphologically more marked than the Nominative. Accusative is commonly realized by the presence of an overt affix or particle which is absent from the Nominative (cf. Dixon (1994:62-63)). Consider the following examples from Sakha (cf. Vinokurova (2005)):

- (3) **Sakha** (Altaic, Turkic, Northern)

- a. *bihigi khaam-a-byt*  
1PL.NOM walk-PRS-1PL  
'We are walking.'
- b. *ehigi khaam-a-qyt*  
2PL.NOM walk-PRS-2PL  
'You (pl) are walking.'
- c. *bihigi ehigi-ni suuj-a-byt*  
1PL.NOM 2PL-ACC wash-PRS-1PL

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<sup>2</sup> By assuming *v* I am merely following the most recent analysis of verbal projections. It is not crucial for my analysis of ergativity.

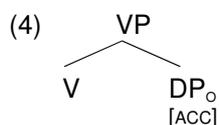
'We are washing you (pl).'

- d. *ehigi*            *bihigi-ni*    *suuj-a-qyt*  
 2PL.NOM        1PL-ACC    wash-PRS-2PL

'You (pl) are washing us.'

(Nadya Vinokurova)

In (3), Nominative *bihigi* ('1PL') contrasts with Accusative *bihigini*, and in the same vein, *ehigi* ('1SG') contrasts with *ehigini*. In Sakha, then, direct object pronouns bear an overt case suffix.<sup>3</sup> This suffix is absent from subjects, which is the reason why we analyze *-ni* as a marker of Accusative case. In accordance with standard practice in minimalism, I assume that the direct object is base-generated together with its Accusative marker, as originally proposed by Chomsky (1993). The case marker is an overt reflection of the fact that the DP carries a formal case feature with the value [ACC].



The functional head *v* that takes VP as its complement is responsible for assigning the external theta role to the subject DP. In addition to that, Chomsky's (1995) version of minimalism assumes that *v* carries a case feature, which has the same value as the case feature of the object (Accusative), implying that only the object can check it.<sup>4</sup> Recall from section 3.1 (chapter 1) that formal features need to be checked in a spec-head configuration. In order to establish such a configuration, the direct object moves to Spec,*v*P. This movement is similar to the one made by the subject

<sup>3</sup> Accusative marking of first and second person singular apparently involves a stem change as well: *miiginn* ('1SG.ACC') derives from Nominative *min*, the Nominative form of *ejigini* ('2SG.ACC') is *en*.

<sup>4</sup> Modulo exceptional case marking constructions.

in order to check its  $\phi$ -features and Nominative case. Subjects move to Spec,IP. The idea behind all this is that the  $\phi$ -features of the object are checked as well, which in languages like Georgian spells out as object agreement on the verb, as I have illustrated in the previous chapter (subsection 2.4). In the most recent version of minimalism, the relation Agree does not require the probe and the goal to be brought into a spec-head configuration. The functional categories  $v$  and I only need to *c-command* an argument in order to establish feature valuation.<sup>5</sup> From this, it becomes clear that both versions of Chomsky's theory assume that every verbal argument is essentially licensed by the same mechanism. In section 3.3 of chapter 1, I have presented two analyses of ergativity that implement such a (minimalist) view on case and agreement, Murasugi (1992) and Bobaljik (1993).

My own proposal abandons this view, because I believe that it suffers from unnecessary overgeneration. As I have already stated in the previous section, I will claim that apparent object agreement is best analyzed as involving clitic-doubling.<sup>6</sup> The analysis to be presented in the following chapters assumes that subject/object asymmetries are reflected in the way subjects and objects are commonly licensed. Licensing by case takes place in situ. The functional head  $v$  carries an Accusative case feature, and so does the direct object. Thus far, I follow Chomsky (1995). However, I believe that movement of the object is not required in order to check Accusative case. Although Chomsky (2000, 2001a,b) assumes that  $v$  does *not* have a case feature, my view on the relation between  $v$  and the direct object is more or less similar to Agree. I differ from both versions of minimalism in assuming that  $\phi$ -features do *not* play a role in the licensing of the direct object. Hence, an additional assumption is that  $v$  does not contain any  $\phi$ -features. This way of checking Accusative case may resemble case *assignment* in the

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<sup>5</sup> Usually, the label T is used for the probe that is present in every verbal clause. As I have noted in chapter 1, I will use the more neutral term I.

<sup>6</sup> Although I will not discuss data from Georgian in this chapter, I will show in chapter 5 that the clitic-doubling analysis carries over to this language.

government & binding approach, but there is a crucial difference. According to the proposed analysis, case is not assigned, because the case feature is already present on the noun when it enters the syntactic derivation. In situ licensing is also proposed by Ura (2000), but he parameterizes it in order to account for the difference between accusative and ergative patterns.<sup>7</sup>

The idea that a direct object needs Accusative case in order to be licensed leads to the prediction that this holds true across languages. There are, however, languages where direct objects never show overt Accusative case morphology. Balinese, as discussed in 3.2 (chapter 1), is a case in point. Indonesian is another example of a language without a morphological distinction between subjects and objects.

(5) **Indonesian** (Austronesian, Malayo-Polynesian, Malayic, Malayan, Local Malay)

- a. *saya*            *berjalan*  
1SG(.NOM) walk  
'I am walking.'
- b. [*pria*    *itu* ]            *berjalan*  
man    the (NOM) walk  
'The man is walking.'
- c. *saya*<sub>i</sub>            *me*<sub>i</sub>-*mandi*-*kan*    [*pria*    *itu* ]  
1SG(.NOM) A-wash-APPL    man    the (.ACC)  
'I am washing the man'
- d. [*pria*    *itu* ]<sub>i</sub>            *me*<sub>i</sub>-*mandi*-*kan*            *saya*  
man    the (NOM) A-wash-APPL            1SG(.ACC)  
'The man is washing me.'

(Zahroh Nuria)

Like Balinese, Indonesian does not distinguish between S, A and O in terms of case marking. The form *saya* ('1SG') is used as S in (5a), A in (5c) and O in

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<sup>7</sup> I will touch upon the main idea of Ura's proposal in chapter 4.

(5d).<sup>8</sup> Similarly, noun phrases like *pria itu* (the man) may also fulfill every grammatical function without any morphological changes. In the absence of overt case (and agreement) morphology, constituent order in Indonesian is as strict as it is in Balinese. The O-argument is invariably postverbal in sentences like (5c/d), whereas the A-argument usually appears before (and marginally after) the verb (cf. Verhaar (1988:349)). I assume that the direct object in these sentences carries a formal case feature with Accusative value, which happens to lack any overt realization. Whereas Indonesian and Balinese never have overt Accusative morphology, languages like German always do, as we will see below.

The present proposal states that every direct object with Accusative case will be licensed in situ, irrespective of the question whether a language is ergative or not. This does not mean, of course, that a direct object never moves. It may scramble or leave its base position in *wh*-questions, relativization or topicalization constructions. The latter type of movement has A'-status, and is by definition not related to licensing by case. The former type, scrambling, is often considered to be the result of the need to check Accusative case. In the remainder of this subsection, I will argue that scrambling does not have anything to do with case licensing of the object, although it is true that direct objects with overt Accusative case often scramble, whereas seemingly caseless objects have a more restricted distribution.

In languages such as Sakha, for instance, overt Accusative morphology is not always present.

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<sup>8</sup> Again, like Balinese, Indonesian uses a nasal prefix in sentences where A is the syntactic pivot. Recall from the discussion of 'syntactic ergativity' in Balinese that I propose to analyze the nasal prefix as the actual A-argument, which can be doubled by an adjunct DP in preverbal position.

(6) **Sakha**

- a. *beqehee, bihigi xahyat-y aax-ty-byt*  
 yesterday 1PL.NOM newspaper-ACC read-PST-1PL

'Yesterday, we read the newspaper.' / 'Yesterday, we read a (specific) newspaper.'

- b. *kūn aajy , bihigi xahyat aaq-a-byt*  
 day DISTR.PRT 1PL.NOM newspaper read-PRS-1PL

'Every day, we read a (nonspecific) newspaper.'

(Nadya Vinokurova)

The examples in (6) show that direct objects only seem to carry Accusative case when they are specific.<sup>9</sup> In (6a), *xahyat-y* ('newspaper-ACC') is interpreted either as a definite or as a specific indefinite DP ('the newspaper', 'a (specific) newspaper'). When the Accusative case marker *- (n)l* is lacking, the direct object receives a nonspecific interpretation: *xahyat* is interpreted as 'one newspaper or other' (cf. Vinokurova 2005:195).<sup>10</sup> The same condition is also found in other languages. Turkish, genetically related to Sakha (cf. Enç (1991)), and Persian, an Indo-Aryan (Indo-European) language (cf. Lazard (1982)) are two well-known examples.

Cross-linguistically, it is quite common to divide direct object DPs into two classes with respect to (overt) case marking.<sup>11</sup> This phenomenon has been termed 'differential object marking' by Bossong (1985). Aissen

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<sup>9</sup> Sentential complements are also marked with Accusative case:

(i) **Sakha**

*Masha [Ujbaan utuj-ar-∅ ]-yn bil-er-∅*  
 Mary John sleep-PRS-3SG -ACC know-PRS-3SG

'Mary knows that John is sleeping.'

(Nadya Vinokurova)

Accusative case marking of sentential complements is always overt.

<sup>10</sup> Note that *-nl* subsumes several allomorphs.

<sup>11</sup> Recall the examples from Tongan in chapter 1 (subsection 2.3).

describes the picture that emerges from the functional/typological literature as follows: “the higher in prominence a direct object, the more likely it is to be overtly case-marked” (2003:436). Prominence is assessed along two scales, an animacy scale and a definiteness scale.

(7) Differential object marking: prominence scales

animacy scale: human > animate > inanimate

definiteness scale: personal pronoun > proper name > definite NP >  
indefinite specific NP > non-specific NP

(Aissen 2003:437)

The scales given in (7) are clearly related to Silverstein’s (1976) person/animacy hierarchy, presented in subsection 2.4 of the previous chapter. Differential object marking in Sakha, Turkish and Persian is determined by the definiteness scale. Nonspecific direct objects do not carry an overt Accusative marker, but more prominent ones do.

In Sakha, as in many other languages, the lack of an overt case marker on the direct object restricts its distribution in the sentence. For instance, when Accusative case is overtly present, the following orders are allowed:

(8) **Sakha**

a. *kini jabloko-nu sii-r-∅*  
3SG.NOM apple-ACC eat-PRS-3SG

‘S/he is eating the/a (particular) apple.’

b. *jabloko-nu kini sii-r-∅*

c. *kini sii-r-∅ jabloko-nu*

d. *kini jabloko-nu bŭgŭn sii-r-∅*  
3SG.NOM apple-ACC today eat-PRS-3SG

‘S/he is eating the/a (particular) apple today.’

(Nadya Vinokurova)

The sentence in (8a) is comparable to the one in (6a), since it contains a direct object that is interpreted as either definite or specific indefinite. The b-

sentence shows that this constituent can be topicalized, and according to the c-sentence it may also follow the verb. Furthermore, an adverb can intervene between direct object and verb in the canonical AOV order. Now compare these sentences with the ones in (9).

(9) **Sakha**

- a. *kini jabloko sii-r-∅*  
3sg.nom apple eat-prs-3sg  
'S/he is eating some apple or other.'
- b. \* *jabloko kini sii-r-∅*
- c. \* *kini sii-r-∅ jabloko*
- d. ?\* *kini jabloko bŭgŭn sii-r-∅*  
3SG.NOM apple today eat-PRS-3SG  
'S/he is eating some apple or other today.'

(Nadya Vinokurova)

When the direct object is nonspecific, as is the case in (9), it obligatorily precedes the verb directly, and any alternative ordering is out.<sup>12</sup> If we were to assume that Accusative case is checked by moving the direct object to Spec, vP, these different types of behaviour with respect to scrambling could be explained by the absence or presence of Accusative case. The different constituent orders shown by the sentences in (8) could then be argued to be the result of movement of the direct object to Spec, vP. The fact that there are

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<sup>12</sup> Note that it is not very likely that the direct object is incorporated in the verb in sentences like (9a), assuming that incorporation is an instance of head movement (cf. Baker (1988)). For instance, it is perfectly possible to have a nonspecific direct object consisting of a coordinate structure, which is a phrasal constituent:

(i) **Sakha**

*min kuruusa uonna jabloko sii-∅-bin*  
1SG.NOM pear and apple eat-PRS-1SG

'I am eating pears and apples.'

(Nadya Vinokurova)

different orders might point to the fact that this movement may take place before or after Spell Out. The order of (9a) is more fixed, which would be explained by the fact that the nonspecific direct object does not have a case feature at all. This is rather unlikely, since the same scrambling restrictions appear to be present in languages like German, in which Accusative case is always overt on arguments with masculine gender.

(10) **German** (Indo-European, Germanic, West, High German, German, Middle German, East Middle German)<sup>13</sup>

- a. ... *dass der Mann sein-em Sohn den Apfel*  
 that the.M.NOM man his-M.DAT son the.M.ACC apple

*gib-t*  
 give-3SG

‘... that the man gives the apple to his son.’

- b. ... *dass der Mann den Apfel seinem Sohn gibt*

- c. ... *dass der Mann jed-en Tag sein-em*  
 that the.M.NOM man every-M.ACC day his-DAT

*Sohn ein-en Apfel gib-t*  
 son a-M.ACC apple give-3SG

‘... that the man gives his son an apple every day.’

- d. \* ... *dass der Mann jeden Tag einen Apfel*  
*seinem Sohn gibt*

(Jenny Audring)

The sentences in (10) show that scrambling of the definite direct object *den Apfel* (‘the.M.ACC apple’) over *sein-em Sohn* (‘his-M.DAT son’) is allowed, but a nonspecific indefinite direct object may not scramble (cf. *ein-en Apfel* ‘a-M.ACC apple’) over that same indirect object (cf. Lenerz (1977)). Nevertheless, both types of direct object are overtly marked for Accusative case. Hence, assuming that nonspecific indefinite direct objects lack a case

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<sup>13</sup> The labels ‘High German’ and ‘Middle German’ represent sub-branches of Germanic, and should not be confused with the same labels representing dialects in stages preceding present-day Standard German.

feature is not a viable way to go. There is a vast literature on scrambling, starting with Ross (1967), ranging from proposals assuming that scrambled word orders are derived by movement to proposals assuming that every scrambled order is base-generated (see Corver & Van Riemsdijk (1994) or Van Gelderen (2003) for an overview). Movement proposals, in turn, differ with respect to the type of movement that is involved: A-movement or A'-movement. Even within a single language like German, scrambling may feature both A-properties and A'-properties. Since scrambling in non-ergative languages will not play any role of importance in this thesis, I will take no particular stand in this debate. Whatever causes scrambled word orders, I take it that the data presented above indicate that it does not have anything to do with the checking of Accusative case by the direct object. That way, I will be able to maintain my hypothesis that Accusative case is checked in situ, as explained above.

It will be clear that a key assumption in my proposal is that in languages with differential object marking, every direct object bears Accusative case. This case may be realized by overt or covert morphology. Objects lacking overt case morphology are accompanied by a covert case marker, which is an allomorph of the overt one(s). Specifically, I argue that the Sakha examples in (9a) and (6b) are best glossed as follows:

(11) **Sakha**

- a. *kini jabloko-∅ sii-r-∅*  
 3SG.NOM apple-NSPEC.ACC eat-PRS-3SG

'S/he is eating some apple or other.'

- b. *kūn aajy, bihigi xahyat-∅*  
 day DISTR.PRT 1PL.NOM newspaper-NSPEC.ACC  
*aaq-a-byt*  
 read-PRS-1PL

'Every day, we read a (nonspecific) newspaper.'

(Nadya Vinokurova)

The main function of differential object marking in languages like Sakha, then, seems to be to morphologically distinguish specific and nonspecific direct objects. As Sakha does not have articles encoding definiteness or specificity, we could analyze the Accusative case allomorphs as a combination of case and specificity features. Overt allomorphs correspond to specific direct objects (either definite or indefinite, glossed as 'SPEC.ACC'), whereas zero allomorphs correspond to nonspecific direct objects (glossed as 'NSPEC.ACC') (cf. (11)). Under such an analysis, it would be reasonable to assume that features related to specificity are the sole driving force behind scrambling (as proposed by Delfitto & Corver (1998), Diesing (1992), De Hoop (1992) and others). Alternatively, in a theory like Bittner & Hale's, which assumes that case-marked DPs project to KP ((1996a,b), cf. subsection 3.4 (chapter 1)), an overt Accusative marker corresponds to a filled K-head, whereas the covert marker corresponds to an empty K. Such an approach predicts that the distribution of empty-headed KPs is limited by a condition like the empty category principle (cf. Chomsky (1981:250)). Neeleman & Weerman (1999) have developed an elaborate analysis of scrambling that follows this line of reasoning. Their main idea is that the empty category principle puts restrictions on the distribution of the empty case marker. In order to account for the German facts presented in (10), Neeleman & Weerman rely on the concept of specificity as well (as most other theoretical approaches to scrambling). A minor question is why differential object marking always seems to apply to Accusative case only, and not to Dative or other cases.<sup>14</sup> Obviously, this is a problem for any kind of analysis discussed here, and it is beyond the scope of this study to solve it.

Assuming that direct objects are universally licensed by in situ checking of an abstract Accusative case feature, we can conclude that differential

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<sup>14</sup> In chapter 4, we will see that Kabardian and Adyghe (North Caucasian) seem to apply differential case marking to Ergative subjects.

object marking links the two extreme situations described at the beginning of this subsection.

(12) Continuum of Accusative case marking

| always overt        | partly overt/partly covert (differential object marking) |                  |        |                               | always covert          |
|---------------------|--|------------------|--------|-------------------------------|------------------------|
| German<br>Icelandic | Sakha<br>Turkish<br>Persian                              | Spanish<br>Hindi | Hebrew | Norwegian<br>English<br>Dutch | Balinese<br>Indonesian |

If we conflate the two scales in (7) for the moment into one (inverse) Silverstein-like hierarchy, we end up with a continuum of Accusative case marking as shown in (12). Between languages like German and Icelandic, where every direct object bears overt Accusative case, and languages like Balinese and Indonesian where Accusative case is never overt, we find various degrees of differential object marking. Languages more to the left extreme have overt Accusative case marking on most types of DP, whereas languages more to the right end have empty Accusative on most DP types.

As I have argued above, Sakha, as well as Turkish and Persian, only have an empty Accusative case morpheme on *nonspecific indefinite* direct objects. Spanish is famous for overt marking of *animate* direct objects only, having an empty Accusative marker on non-animates (Torrego 1998:16).

(13) **Spanish** (Indo-European, Italic, Romance, Italo-Western, Western, Gallo-Iberian, Ibero-Romance, West Iberian, Castilian)

- a. *nosotros esta-mos andando*  
1PL.NOM be.PRS-1PL walk.GER

'We are walking.'

- b. *el niño / el perro está-∅ andando*  
the child the dog be.PRS-3SG walk.GER

'The child/dog is walking.'

- c. *el tomate está-∅ creciendo*  
 the tomato be.PRS-3SG grow.GER  
 'The tomato is growing.'
- d. *nosotros esta-mos lavando al niño /*  
 1PL.NOM be.PRS-1PL wash.GER the.ACC child  
*al perro / el tomate*  
 the.ACC dog the.ACC tomato  
 'We are washing the child/dog/tomato.'
- e. *nosotros esta-mos lavando a un niño /*  
 1PL.NOM be-1PL wash.GER ACC a child  
*a un perro / ∅ un tomate*  
 ACC a dog ACC a tomato  
 'We are washing a ((non)specific) child/dog/tomato.'
- f. *el niño nos está-∅ lavando*  
 the child 1PL.ACC be.PRS-3SG wash.GER  
 'The child is washing us.'

(Luis Vicente)

Direct object DPs in Spanish cooccur with the directional preposition *a* ('to'), which I analyze as the Accusative case. This marker never appears with subjects (cf. (13a-c)). Its presence on direct objects does not depend on definiteness or specificity. Every nominal direct object co-occurs with *a*, as long as it is animate (cf. (13d,e)). Inanimate direct objects, like *un/el tomate* ('a/the tomato') never co-occur with overt Accusative case, no matter how specific they are. Hence I assume that they carry an empty Accusative case marker (cf. Torrego (1998) for a minimalist implementation of this idea).<sup>15</sup> Pronominal direct objects are realized by clitics, which I take to be

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<sup>15</sup> According to my informant, there are speakers who restrict the use of *a* to human direct objects. This means that in their speech, *un/el perro* ('a/the dog') would also appear without *a*. For some people this is optional, for others it is obligatory. As Torrego (1998) points out, there is a lot more to say about the exact factors causing differential object marking in Spanish, but this is irrelevant for my purposes here.

Accusative forms of the full pronouns (cf. (13f)).<sup>16</sup>

The animacy feature also appears to play a role in differential object marking in Sakha. Recall that direct objects in Sakha carry covert Accusative case when they are nonspecific. This restriction, however, only applies to inanimate direct objects. Animate direct objects are always marked by overt Accusative case.<sup>17</sup>

(14) **Sakha**

- a. *beqehee, medsestra yaryhaq-y suuj-d-a*  
 yesterday nurse.NOM patient-ACC wash-PST-3SG  
 'Yesterday, the nurse washed a/the patient.'
- b. *kün aajy medsestra yaryhaq\*(-y) suuj-d-a*  
 every day nurse.NOM patient-ACC wash-PST-3SG  
 'Every day, the nurse washed a (nonspecific) patient.'

(Nadya Vinokurova)

These sentences show that a human direct object with overt Accusative case (*yaryhaq-y* 'patient-ACC') can be interpreted as either specific (definite or indefinite) or nonspecific. As indicated in (14b), the sentence becomes ungrammatical when the Accusative morpheme is empty. Aissen (2003:468), citing Lazard (1984), notes that this humanness effect is also found in Persian and Hindi (both Indo-Aryan, and hence Indo-European), but not in Turkish. Persian differs from Sakha in that the Accusative marker on human, nonspecific direct objects is not obligatorily present (Aissen 2003:468-469).

Differential object marking in Hebrew appears to impose empty Accusative case on both nonspecific and specific indefinite direct objects (cf.

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<sup>16</sup> Clitics may be doubled by a full noun or pronoun that is marked by *a* when animate. In those cases, the double either follows the verb or it occurs sentence initially. I will argue in the following sections that in such cases, only the clitic is licensed by structural Accusative case.

<sup>17</sup> Vinokurova points out that there are verbs where nonhuman animate direct objects may appear without the overt Accusative case (when nonspecific) (pc.).

Givón (1978)).

(15) **Hebrew** (Afro-Asiatic, Semitic, Central, South, Canaanite)

- a. *anaxnu halax-nu*  
1PL.NOM go.PST-1PL  
'We went.'
- b. *ha-qelev halax-∅*  
DEF-dog.NOM go.PST-3SG.M  
'The dog went.'
- c. *anaxnu raxac-nu et ha-qelev*  
1PL.NOM wash.PST-1PL ACC DEF-dog  
'We washed the dog.'
- d. *ha-qelev raxac-∅ otanu*  
DEF-dog.NOM wash.PST-3SG.M 1PL.ACC  
'The dog washed us.'
- e. *anaxnu raxac-nu ∅ qelev*  
1PL.NOM wash.PST-1PL ACC dog  
'We washed a nonspecific/specific dog.'

(Oren Sadeh-Leicht, Yoad Winter)

The sentences in (15a-d) show that subjects can be considered to bear no special case marker, whereas objects surface in a distinct Accusative case. Pronouns come in suppletive forms (*anaxnu* '1PL' versus *otanu* '1PL.ACC') and full DPs are preceded by *et* (cf. 15c), which I assume marks Accusative case. The sentence in (15e) shows that ((non)specific) indefinite direct objects do not cooccur with *et*. Hence I assume an empty Accusative marker. Definite and indefinite DPs are further distinguished by presence or absence of the nominal determiner prefix *ha-*.

Germanic languages like English and Dutch, as well as most of the Romance languages, have covert Accusative morphology on every nominal direct object, irrespective of specificity, animacy or definiteness. Only pronouns have overt Accusative morphology. Consider the following Norwegian examples:

(16) **Norwegian** (Indo-European, Germanic, North, West Scandinavian)

- a. *vi*            *går*  
 1PL.NOM walk.PRS  
 'We are walking.'
- b. *hund-en*            *går*  
 dog-SG.M.DEF.NOM walk.PRS  
 'The dog is walking.'
- c. *vi*            *vasker*    *hund-en*  
 1PL.NOM wash.PRS dog-SG.M.DEF.ACC  
 'We are washing the dog.'
- d. *hund-en*            *vasker*    *oss*  
 dog-SG.M.DEF.NOM wash.PRS 1PL.ACC  
 'The dog is washing us.'

(Mai Tungseth)

In Norwegian, Nominative pronouns like *vi* ('1PL') alternate with Accusative pronouns like *oss* ('1PL.ACC') as can be seen in (16a,c-d), but a full nominal direct object does not distinguish overtly between these cases. This system of differential object marking comes closest to total absence of overt Accusative morphology, as is found in Balinese and Indonesian.

According to the analysis proposed above, Accusative markers in Sakha contain a specificity feature. If this turns out to be correct, we have to make the additional assumption that they contain an animacy feature as well (cf. (14)). The Spanish Accusative markers also contain this animacy feature, but they lack the specificity feature. Accusative marking in Hebrew encodes definiteness, in addition to the language's determiner system. Overt Accusative morphology in Norwegian probably means that pronominal objects spell out a higher projection than its unmarked form.<sup>18</sup>

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<sup>18</sup> Weerman & Evers-Vermeul (2002), implementing Neeleman & Weerman's (1999) theory of argument licensing, argue that Accusative pronouns in languages like English spell out KP, whereas Nominative forms spell out DP. Although they argue

As I have mentioned before, Accusative case will be the only structural case available in my proposal. Accusative case can be checked because of the presence of *v*. It is an abstract feature, which is sometimes morphologically visible. Other cases, such as Dative and Ergative, are semantic cases tied to particular thematic roles, like recipient/benefactive or agentive. Nominative and Absolutive, I will argue in the following subsection and in the chapters to follow, represent total absence of case.

## 2.2 Subjects (S/A) and agreement

In Nominative/Accusative languages, subjects are typically in the unmarked case, called Nominative. Following authors like Jakobson (1936), Andrews (1982), Bittner & Hale (1996) and Neeleman & Weerman (1999), I treat subjects as caseless DPs. Therefore, this case will not be represented in the glosses of the linguistic examples to follow. As I have already mentioned in chapter 1 (subsection 3.4), I will use the term ‘nominative’, without capital, for the combination of the syntactic functions S and A, as in ‘a nominative/Accusative pattern’.<sup>19</sup> It should be noted, however, that although treating the nominative as a caseless category is straightforward in many languages, some problematic cases remain. Languages like Latin and Icelandic, for example, seem to possess nominative case suffixes. Neeleman & Weerman (1999:64-67) argue convincingly that the ‘nominative’ suffixes in these languages encode other features (like gender and number), without bringing in an additional nominative case feature. This analysis is based on the fact that Latin and Icelandic morphology is quite fusional. For

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that this is different from Nominative/Accusative case marking in languages with morphological case, they assume that full nominal direct objects have an empty case shell. This corresponds to my assumption that there is an empty Accusative case marker in these cases.

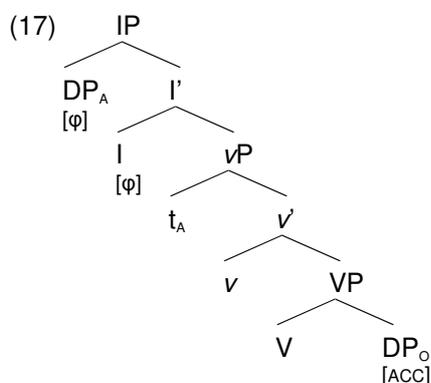
<sup>19</sup> I will incidentally refer to the combination of S and A as ‘the nominative relation’. Likewise, the combination of S and O will be called ‘the absolutive relation’. Both terms refer to a particular grouping of syntactic functions that are not licensed by case.

languages with more agglutinative morphology, such as Japanese and Arabic, Neeleman & Weeman (1999:201-208) argue that 'nominative' markers are genuine and hence should be explained by the theory of argument licensing. This explanation is incompatible with my analysis. Since I have no alternative solution at present, Japanese and Arabic are problematic for my proposal. I consider the overt nominative in these languages to be a topic for future research.

Arguments lacking a case feature must be licensed in an alternative way. I assume that agreement is one such alternative, in view of the fact that the verb at least agrees with the argument in the unmarked case in languages with overt verbal agreement (cf. Moravcsik (1974), (1978), Nichols (1986), Croft (1990:105-107), Bittner (1994:9), Bittner & Hale (1996), Neeleman & Weerman (1999:192)). Put differently, if a language has overt agreement, then the minimum is agreement with the caseless argument of a clause. The standard assumption within generative grammar has always been that subjects are moved to the specifier of a functional projection where agreement morphology is realized. According to Chomsky (1995), the functional head I carries  $\phi$ -features matching those of the subject. In order to check these features, the subject moves to Spec,IP, leaving a trace in its base position.<sup>20</sup> The tree given in (2) is thus extended to the one in (17).

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<sup>20</sup> Under the copy theory of movement, reintroduced by Chomsky (1993), two copies of the subject DP are inserted into the derivation, and only one of them is pronounced.



According to my proposal, I is unable to check case since it does not contain a case feature. Inserting a DP with an Accusative case feature in Spec,vP would cause the derivation to crash since the DP's case feature cannot be checked.<sup>21</sup> This is in accordance with Chomsky (1993, 1995), but different from Chomsky (2000, 2001a,b). The most recent version of the minimalist program assumes that both I and v lack a case feature, although valuation of the arguments' case features is somehow possible under Agree. Also, this operation always requires the argument to have an uninterpretable case feature in order to turn it into an active goal. An inactive goal is not able to enter into an agreement relation in this approach. As this is incompatible with the view that nominatives are caseless, I choose to assume Chomsky (1995) throughout this study, when it comes to agreement. As I have indicated in the previous subsection, Accusatively marked direct objects are not licensed in a spec-head configuration. This yields a fundamental asymmetry between subjects and objects. The former are licensed by head marking (agreement), whereas the latter are licensed by dependent marking (case). This was schematized in (1) as the main hypothesis of this study.

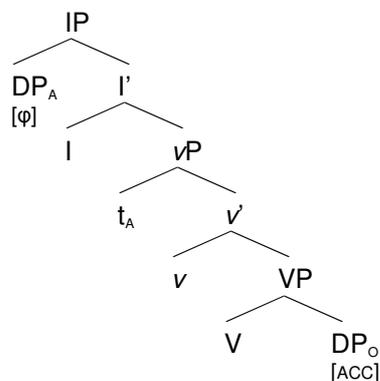
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<sup>21</sup> This does not mean that a DP with an inherent case like Dative may not be inserted in Spec,vP. This happens in constructions with quirky case marking, found in Icelandic and older stages of other Germanic languages. Under those circumstances, agreement is neutralized, suggesting that agreement is not used in order to license the quirky subject.

|               |  |  |  |
|---------------|--|--|--|
| (18)          | Main hypothesis: universal licensing of arguments (preliminary version)  |  |  |
| Intransitive: | [ <sub>IP</sub> DP <sub>S,φ</sub> V+I <sub>φ</sub> ]                     |  |  |
| Transitive:   | [ <sub>IP</sub> DP <sub>A,φ</sub> V+I <sub>φ</sub> DP <sub>O,Acc</sub> ] |  |  |

In this scheme, I use the more general functional head I instead of T, because languages may code aspect or mood instead of tense. The scheme allows for two licensing mechanisms, case marking and agreement. In the chapters to follow, incorporation will be added as a morphological alternative to syntactic licensing. Together, these three mechanisms will be able to account for the patterns of case and verbal marking that were discussed in chapter 1. At the same time, they will be insightful with respect to the marked status of ergativity. Throughout this study, I will assume the following tree structure.<sup>22</sup>

(19) Universal projection of a transitive verb



In this tree, I have omitted the φ-features of I and DP<sub>O</sub>. The notational

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<sup>22</sup> I will leave open the possibility that DP<sub>O</sub> is base-generated to the left of the verb, in order to account for languages like Sakha, in which AO<sub>V</sub> seems to be the basic word order.

convention underlying this is that overtly represented features show how a DP is licensed. The symbol  $\phi$  indicates that a DP is licensed through agreement, and implies that I has matching  $\phi$ -features. It also implies that the DP is caseless. The symbol ACC indicates that a DP is licensed through Accusative case marking, and that the case feature is checked by *v*. The  $\phi$ -features of that DP are irrelevant with respect to its licensing.

Agreement, I propose, is possible with only one argument per clause. This means that, since subjects are not licensed by case, the (active) verb may never agree with  $DP_o$ .<sup>23</sup> However, there are lots of languages where the verb seems to agree with both subjects and objects. In the next two sections, I will explain how data from these languages can be explained.

### 3 Object agreement: clitic-doubling

Recall from chapter 1 that my analysis of (seemingly) syntactically ergative constructions in Balinese makes use of clitic-doubling. This is a well-known phenomenon that has been studied for a range of languages, notably Romance, Slavic and Greek. Compare the following examples from Spanish with the ones in (13):

(20) **Spanish:** clitic-doubling

- a. *a nosotros el niño nos está-∅ lavando*  
 ACC 1PL the child 1PL.ACC be.PRS-3SG wash.GER  
 'Us, the child is washing us.'
- b. *al niño nosotros lo esta-mos lavando*  
 the.ACC child 1PL 3SG.M.ACC be.PRS-1PL wash.GER  
 'The child, we are washing it.'

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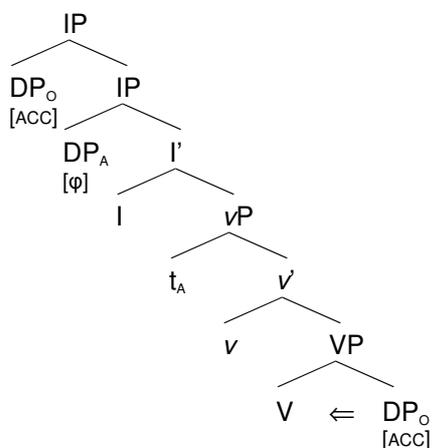
<sup>23</sup> A passive verb, on the other hand, does agree with  $DP_o$ . Passivization will not be discussed until chapter 4.

- c. *a un niño nosotros lo esta-mos lavando*  
 ACC a child 1PL 3SG.M.ACC be.PRS-1PL wash.GER  
 'A child, we are washing it.'

(Luis Vicente)

These sentences differ from the ones in (13) in that they seem to have the direct object in sentence-initial position, instead of postverbal. In addition, the sentence contains a clitic pronoun referring to the direct object, *nos* ('1PL.ACC') in (20a), *lo* ('3SG.M.ACC') in (20b,c).<sup>24</sup> Following Rizzi (1986a, 1997), Cinque (1990) and many others, I assume that the sentence-initial DP is adjoined to the clause, doubling the clitic, which is the real direct object argument. I will assume the following structure for these cases of clitic-doubling:

(21) Clitic-doubling the direct object



Compare this tree with the one in (19). Both trees have in common that the direct object is base-generated as the complement of V, and both of them are licensed in situ by Accusative case, which is checked by *v*. The direct

<sup>24</sup> Instead of appearing after the subject, these pronouns may also follow the main verb (Luis Vicente (p.c.), see also Torrego (1998)).

object in (21), however, is realized by a pronoun that cliticizes to the predicate, represented by the symbol ‘←’.<sup>25</sup> The subject is base-generated in Spec,vP, and subsequently raised to Spec,IP in order to be licensed by agreement. An additional DP is added to IP, which is interpreted as being coreferent with the clitic. This DP-double is analyzed as an adjunct, since it is not obligatorily present and it orders freely with respect to the rest of the sentence.

(22) **Spanish**

- a. *nosotros lo esta-mos lavando*  
 1PL 3SG.M.ACC be.PRS-1PL wash.GER  
 ‘We are washing it.’
- b. *nosotros lo esta-mos lavando al niño*  
 1PL 3SG.M.ACC be.PRS-1PL wash.GER the.ACC child  
 ‘We are washing it, the child.’

(Luis Vicente)

The adjunct *al niño* (‘the.ACC child’) that appears sentence-initial in (20b), is absent in (22a), and sentence-final in (22b). In order to account for the latter, I will assume that adjuncts may be attached to the right hand side of the clause.

In order to maintain my analysis of case and agreement, it is important that agreement is only available for one (caseless) argument per clause. If a language has additional agreement with Accusative direct objects, I need to assume that the object agreement morpheme is a cliticized (or incorporated) direct object pronoun. In other words, the analysis of clitic-doubling (or clitic-left dislocation (CLLD)) in Spanish is supposed to account for all cases of so-called ‘object agreement’. Support for my analysis comes from an interesting observation on the grammaticalization of agreement markers. Whereas

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<sup>25</sup> As we will see in the next chapter, cliticization is often an instance of incorporation, which means that head movement is involved. See also footnote 12.

these markers often fully grammaticalize when they are associated with subjects, this is never so in the case of objects (Siewierska 1999). This can be understood by looking at the development of agreement markers. Siewierska, basing her arguments on Givón (1976) and Bresnan & Mchombo (1986, 1987), describes how agreement may develop out of anaphoric pronouns diachronically (see also Ariel (2000)).

The first stage of such a development, called *anaphoric* agreement (cf. Siewierska (1999:226), arises when apparent agreement markers are in complementary distribution with pronouns or full DPs. The following sentences from Indonesian exemplify this stage:

(23) **Indonesian**

- a. *kamu<sub>i</sub> me<sub>i</sub>-mandi-kan Mary*  
 2SG A-wash-APPL Mary  
 'You are washing Mary.'
- b. *kamu<sub>i</sub> me<sub>i</sub>-mandi-kan dia*  
 2SG A-wash-APPL 3SG  
 'You are washing her.'
- c. *kamu<sub>i</sub> me<sub>i</sub>-mandi-kan-nya*  
 2SG A-wash-APPL-3SG  
 'You are washing her.'
- d. \* *kamu<sub>i</sub> me<sub>i</sub>-mandi-kan-nya Mary / dia*

(Zahroh Nuria)

What is of interest here is the realization of the direct object. As was pointed out with respect to Balinese in the previous section, the direct object always follows the verb in constructions with a nasal prefix-verb, whether it is a full DP (*Mary* in (23a)) or a pronoun (*dia* ('3SG') in (23b)). Alternatively, a verbal enclitic may represent the direct object (*-nya* ('-3SG') in (23c)), like in Spanish, but this suffix may not be doubled by an independent noun or pronoun (cf. (23d)).

The next developmental stage is called *ambiguous* agreement. This stage is attested when agreement markers are obligatorily present, even

when a pronoun or a full DP is present as well. Sakha is a case in point.

(24) **Sakha**

- a. *kyrgyt-tar xaam-al-lar*  
 girl-PL walk-PRS-3PL  
 'The girls are walking.'
- b. *kini-ler xaam-al-lar*  
 3-PL walk-PRS-3PL  
 'They are walking.'
- c. *xaam-al-lar*  
 walk-PRS-3PL  
 'They are walking.'

(Nadya Vinokurova)

The agreement suffix *-lar* ('-3PL') is obligatorily present in the context of a third person plural subject, whether there is an additional pronoun (*kini-ler* ('3-PL') in (24b)) or full DP (*kyrgyt-tar* ('girl-PL') in (24b)). This additional noun or pronoun is not required for the sentence to be grammatical, as is shown by (24c). Ambiguous agreement is basically the type of agreement found in what have been termed 'null subject languages' (cf. Jaeggli & Safir (1989)). In these languages, subjects are often omitted when they can be deduced from the context in which a sentence is uttered. For the time being, I will follow the generative tradition and assume that overt subjects alternate with an empty pronominal category, called *pro* (cf. Chomsky (1981)).

Finally, anaphoric pronouns may develop into *grammatical* agreement. This is the familiar type of agreement encountered in present-day stages of languages like English, Dutch, German and French, where agreement markers are always obligatorily present and subjects are not commonly omitted. In sum, Siewierska suggests the following tripartite typology of agreement markers, which is inspired by the typology elaborated in Bresnan & Mchombo (1986, 1987):

(25) Grammaticalization cline of person markers<sup>26</sup>

anaphoric > ambiguous > grammatical

(Siewierska 1999:227)

What generative grammarians have been calling 'canonical subject agreement' appears to reflect the final stage of a development from anaphoric pronoun to grammatical agreement marker. In Siewierska's sample of 272 languages, 230 display agreement to a certain extent. Only two of these languages exhibit grammatical agreement, which is somewhat unexpected. According to Siewierska, this might be explained by the idea that "languages tend to evolve new agreement markers once the old ones lose or start losing their referential potential due to, for instance, syncretism of some of the forms (...)." (1999:239). This means that null subject languages are much more common than languages like English which require an overt subject in almost every finite clause.

Regarding so-called 'object agreement', Siewierska (1999) makes the following important observation: whereas subject agreement markers may eventually reach the status of grammatical agreement, object agreement markers never do. That is, whereas in a language like English every clause is required to have an overt subject, this will never apply to objects in languages where there is agreement with objects. Unlike subject agreement, object agreement markers are always anaphoric or ambiguous. As explained above, ambiguous object markers allow for empty objects, just like subject agreement markers in null subject languages. Anaphoric object markers only occur when an object pronoun or full DP is lacking. I propose to link this asymmetry between subject and object markers to the tree in (21). Subject markers can be real agreement markers, whereas object markers can only be pronouns that are cliticized from the complement position. Hence, full

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<sup>26</sup> Although the examples I have presented cover person and number marking, Siewierska's paper focuses primarily on person markers.

(pro)nominal direct object DPs in languages with ‘object agreement’ are necessarily adjuncts that are attached to IP. By analyzing ‘object agreement’ as clitic-doubling, we will be able to maintain the main hypothesis of this thesis, as presented in (18).

Clitic-doubling in languages like Spanish is an optional construction, alternating with constructions that lack a cliticized direct object (compare the sentences in (20) to those in (13d-f)). The main discourse function of clitic-doubling involves topicalization, which can be deduced from the fact that certain quantified direct objects cannot be clitic-left dislocated. The theoretical motivation for this will be discussed in section 3 of chapter 3. For the moment, it suffices to observe that indefinite direct objects in Spanish may only be clitic-left dislocated when they are specific.

(26) **Spanish**

*a un niño nosotros lo esta-mos lavando*  
 ACC a child 1PL 3SG.M.ACC be.PRS-1PL wash.GER  
 ‘A (specific) child, we are washing it.’  
 \* ‘One child or other, we are washing it.’

(Luis Vicente)

The sentence in (20c), repeated here as (26), can only be interpreted as having a specific direct object. Similar restrictions are found in languages which are thought to display object agreement, such as the Bantu branch of Niger-Congo and various Austronesian languages. The examples in (27) are from Amharic, an Afro-Asiatic language from Ethiopia.

(27) **Amharic** (Afro-Asiatic, Semitic, South, Ethiopian, South, Transversal, Amharic-Argobba)

- a. *Ləmma hed-ə*  
 Lemma go.PF-3SG.M  
 ‘Lemma came.’
- b. *Ləmma t’ərmus-u-n səbbər-ə*  
 Lemma bottle-DEF-ACC break.PF-3SG.M

'Lemma broke the bottle.'

- c. *Lemma and t'ərmus-∅ səbbər-ə*  
 Lemma one bottle-ACC break.PF-3SG.M  
 'Lemma broke one bottle.'

(Amberber (2005:298-299), p.c.)

First of all, the sentences in (27a-c) show that Amharic is an accusative language. The verb carries an agreement suffix showing person, number and gender of the subject (cf. *-ə* ('-3SG.M') in (27)). Subjects are caseless, and direct objects are marked by Accusative case (cf. *-n/-∅* ('-ACC') in (27b,c)). Like in Hebrew (cf. (15)), the overt Accusative marker *-n* co-occurs with a definiteness marker (cf. *-u* ('-DEF') in the b-sentence), whereas the empty Accusative morpheme applies to indefinite direct objects, as shown in the c-sentence. Unlike Sakha, Amharic does not allow direct objects with overt case to order more freely with respect to the rest of the clause, in comparison to direct objects with the empty Accusative marker. 'Object agreement' is optional with definite direct objects, and impossible with indefinite direct objects.

(28) **Amharic:** 'object agreement'

- a. *Lemma t'ərmus-u-n səbbər-ə-w*  
 Lemma bottle-DEF-ACC break.PF-3SG.M-3SG.M.O  
 'Lemma broke the bottle.'
- b. *Lemma and t'ərmus səbbər-ə(\*-w)*  
 Lemma one bottle break.PF-3SG.M-3SG.M.O  
 'Lemma broke one bottle.'
- c. *t'ərmus-u-n Lemma səbbər-ə-w*  
 bottle-DEF-ACC Lemma break.PF-3SG.M-3SG.M.O  
 'Lemma broke the bottle.'

(Amberber (2005:299), (p.c.))

The verbal affix *-w* ('-3SG.M.O') is allowed with *t'ərmus-u-n* ('bottle-DEF-ACC'),

but not with *and t'ərmus* ('one bottle'). Notice that I analyze this affix as the O-argument. According to the clitic-doubling approach, this suffix is an object pronoun that is licensed by Accusative case and subsequently cliticizes to the verb (cf. Mullen (1986)). The direct object-double may appear either between the subject and the verb, as in (28b), or sentence-initially, as in (28c) (cf. Givón (1976), Leslau (2000)). Assuming that this DP adjoins to IP, we can account for the latter option. The former option is unexpected, but might be explained by assuming that the subject is raised to Spec,CP or, if we assume that adjunction to I' is also possible, to Spec,IP, in which case the object-double 'tucks in' between DP<sub>A</sub> in Spec,IP and I. At present, sufficient data are lacking in order to test either of these hypotheses in Amharic.

There is, however, a third alternative that should be considered. The subject is itself left dislocated, doubling the actual subject argument in Spec,IP. This argument could be a pronoun that has been cliticized to the predicate.<sup>27</sup> Exactly this analysis has been given for Chicheŵa (Niger-Congo, Bantu sub-branch). This language is like Amharic in having strict AVO constituent order. When there is 'object agreement', all six permutations of A, V and O are possible. Bresnan & Mchombo (1987) explain this by assigning a hybrid status to subject agreement markers. These markers function as grammatical agreement in the absence of object 'agreement' markers, but they function as cliticized pronouns when object 'agreement' is present (see also Mchombo (2002); Mchombo & Morimoto (2004)). Baker (in preparation) applies a similar analysis to Kinande, another Bantu language. This is an interesting proposal, and I will return to it in section 4. Moreover, most of chapter 3 is devoted to languages that apply CLLD to every verbal argument.

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<sup>27</sup> Alternatively, in the case of a null subject language, we could assume that the subject-double is associated with an empty *pro* in Spec,IP. Ordoñez & Treviño (1999) contains a proposal based on this idea for Spanish (cf. Rigau (1988) for Catalan, Cardinaletti (1996) for Italian, Barbosa (1996) for Portuguese; Alexiadou & Anagnostopoulou (1998) for Greek and other languages).

Apart from Chicheŵa and Kinande, the type of object 'agreement' discussed here is present in other Bantu languages like Swahili and Zulu (Givón 1976).<sup>28</sup> Within the Malayo-Polynesian branch of Austronesian, the following languages have been reported to show object agreement: Muna (Van den Berg 1989) and Selayarese (Finer 1994, 1997), both belonging to the Sulawesi sub-branch; Kambera (Klamer 1994, 1998, p.c.), a member of the Central-Eastern sub-branch, and Palauan (Georgopoulos 1991, 1992, 1998), from the Palauan sub-branch. In each of these languages, indefiniteness of the direct object blocks object 'agreement', which would be expected under a clitic-doubling approach.<sup>29</sup> Within Europe, Hungarian (Uralic) has marginal object 'agreement' morphology. In this language, subject agreement has a separate paradigm for certain combinations of a subject and a *definite* direct object (cf. Kiss (2002:49-55)).

Morphologically speaking, a clitic-doubling analysis seems to be inappropriate in the case of Hungarian, since the object marker is an affix, rather than a clitic. However, as Siewierska (1999:231) points out, there is no absolute one-to-one correspondence between stages in the grammaticalization cline of person markers and their morphological form. Nevertheless, there is a parallel between (25) and the so-called 'grammatical bondedness cline' presented in (29).

(29) Grammatical bondedness cline

independent pronoun > unstressed pronoun > clitic > affix

(Siewierska 1999:231)

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<sup>28</sup> Givón actually claims that every Bantu language he knows displays this behaviour (1976:157).

<sup>29</sup> More specifically, one would expect that nonspecificity would be the determining factor, since indefinites can still be specific, and hence clitic-left dislocated, as we saw in the Spanish example in (26). However, 'indefiniteness' in these languages is not used in the canonical sense, as the cited authors observe. For instance, human direct objects tend to belong to the class of definite direct objects, and hence always trigger 'agreement'. I admit that this might be a problem for my theory and consider a precise analysis along the lines of my proposal a topic for further research.

Naturally, anaphoric agreement markers are likely to be realized by independent pronouns, rather than affixes, whereas grammatical agreement markers will be represented by an affix rather than an independent pronoun. Ambiguous markers reflect an intermediate stage between anaphoric and grammatical agreement, but we know from many null subject languages that this type of agreement is often realized by an affix, as far as subject agreement is concerned.<sup>30</sup> If Siewierska is correct in her observation that object ‘agreement’ markers never become fully grammaticalized, then the fact that they are realized by affixes in Hungarian does not come as a surprise anymore.

Notice that I am connecting Siewierska’s conclusion to a CLLD-analysis, arguing that real object agreement does not exist (in languages that already have subject agreement). If subject agreement markers are ambiguous (or anaphoric), they are not commonly argued to show CLLD (but see footnote 27). However, as I have pointed out above, they *are* associated with clitic-doubling in several Bantu languages, so the option should not be ruled out in principle. Null subject languages are not the real topic of this dissertation, so I will leave this issue for future research. In the next section, I will discuss data from *Tukang Besi*, showing that in certain constructions, a clitic-doubling analysis is suitable for every verbal argument. In the next chapter I will argue that this option may give rise to ergative case marking.

#### **4 Ergative case marking: *Tukang Besi***

In anticipation of the following chapter, I will now discuss an example of how ergative case marking may arise in my proposal. The analysis presented here will be elaborated in chapter 3, where I will present my Second Pattern

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<sup>30</sup> Romance, Slavic and Greek languages illustrate this abundantly.

Hypothesis (SPH).

Tukang Besi, an Austronesian language spoken in the archipelago that bears the same name (Indonesia, Sulawesi province), has constructions that can be analyzed along the lines of (19). Subjects are licensed by agreement, and objects bear Accusative case.

(30) **Tukang Besi** (Austronesian, Malayo-Polynesian, Sulawesi, Muna-Buton, Tukangbesi-Bonerate)

- a. *no-tinti na ana*  
3S.R-run ART child  
'The child is running.'
- b. *ku-ita te ana (na iaku)*  
1SG.A-see ACC child ART 1SG  
'I saw a child.'
- c. \* *ku'ita na iaku te ana*

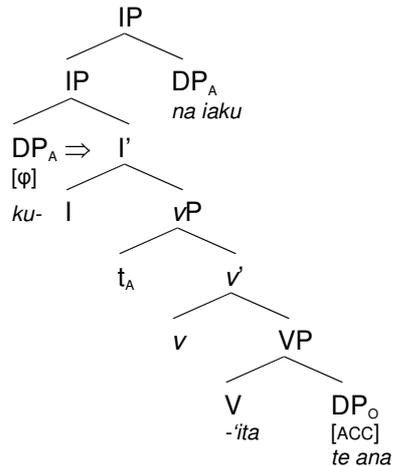
(Donohue 1999:51; 2002:83; 2004:74)

As is shown in (30b), *Tukang Besi* appears to display typical characteristics of a null subject language: overt subjects can be dropped. Subject agreement is prefixal, *no-* ('3S.R-') licenses an S-argument in the a-sentence *ku-* ('1SG-') an A-argument in the b-sentence. If we assume that the agreement marker licenses *pro* in Spec,IP, we would expect that an overt subject would appear in preverbal position. This is not the case, as is shown in (30b/c). The phrase *na iaku* ('ART 1SG') may only follow the direct object, *te ana* ('ACC child').<sup>31</sup> I take this as evidence that the overt subject is adjoined to the right of IP, where it clitic-doubles the actual subject in Spec,IP. Theoretically speaking, the subject could be either *pro* or the verbal prefix itself. Although nothing hinges on it, I will henceforth assume the latter, and analyze a transitive sentence like (30b) as follows:

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<sup>31</sup> It should be noted that Donohue does not actually use the term Accusative in his glosses. He distinguishes a nominative marker (*na*) and a non-nominative marker (*te*) (2002:81). The reason for this is that *te* is not always used for internal arguments, as we will see shortly.

(31) *Tukang Besi*: canonical tree (cf. (30b))



The direct object, *te ana*, is base-generated in the complement of V and licensed by Accusative case. The subject is base-generated as a pronoun in Spec,vP, and raises to Spec,IP where it is licensed by agreement. Afterwards, it cliticizes to the predicate, shown by '⇒' in order to indicate that this is proclisis, rather than enclisis. The cliticized subject is doubled by *na iaku*, a DP that right-attaches to IP. Apparently, left-adjunction is not possible in *Tukang Besi*, since the order found in (30b) is the only one possible.<sup>32</sup> Although subjects are assumed to be caseless, the subject double does contain an element which Donohue (1999:63) analyzes as 'nominative article'. I will assume here that *na* only licenses adjunct nouns, like *by* in English passive *by*-phrases. As we will see below, bare nouns are simply not allowed in *Tukang Besi* adjuncts. Importantly, *na* never accompanies a subject clitic, suggesting that it is not a case marker that licenses the subject argument, which would run counter to my theory, but an oblique case marker licensing the subject-double. The clitic-doubling analysis is supported by the

<sup>32</sup> In intransitive clauses, the independent subject noun or pronoun equally follows the verb, always accompanied by *na*. Hence, A and s behave similarly.

fact that these subjects are clearly interpreted as topics. In Donohue's words: "Givenness, definiteness and referentiality are all pragmatic notions that are bound up in the specification that is part of a nominative argument's pragmatic representation" (1999:63). Conversely, a direct object like *te ana* ('ART.ACC child') is typically interpreted as indefinite (cf. (30b)). Definite direct objects typically occur in constructions with object 'agreement'.

(32) **Tukang Besi**

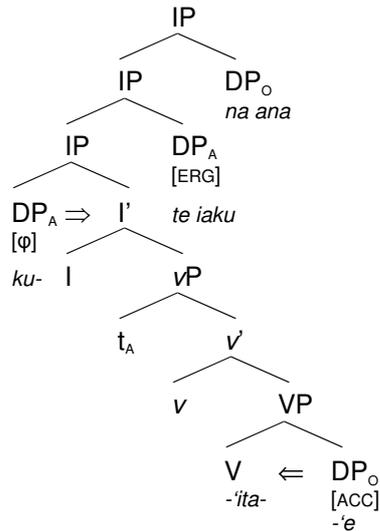
- a. *ku-ita-ʼe na ana (te iaku)*  
 1SG.A-see-3.O ART child ART.ERG 1SG  
 'I saw the child.'
- b. *ku'ita'e (te iaku) na ana*

(Donohue 2004:74)

Again, as I have done with respect to object 'agreement' in the languages cited in the previous section, I analyze the verbal suffix *-e* (3.O) as a cliticized object pronoun. This means that the phrase *na ana* ('ART child') is an adjunct doubling this clitic. Evidence for this comes from the fact that in the object 'agreement' construction, the order of the postverbal phrases is flexible (cf. (32)). Moreover, there is a further difference: *te*, which functions as an Accusative marker in the canonical construction (cf. (30b)), appears on the transitive subject double *te iaku* ('ART.ERG 1SG') when the object is clitic-doubled (cf. (32)). As intransitive subject-doubles are always marked by *na* (cf. (30a)), we observe that constructions with clitic-doubled objects display an *ergative* case pattern: Ergative *te* versus unmarked *na*.<sup>33</sup> This pattern is only found on the adjuncts doubling the cliticized arguments. The clitics still pattern accusatively, since subjects are consistently realized by a prefix, and objects by a suffix. The tree in (33) shows the syntactic structure of what I will term the ergative construction.

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<sup>33</sup> In this construction, *na* is what most people would call an absolutive marker.

(33) *Tukang Besi*: ergative construction

In this tree, the subject double is adjoined first, and finally the (object) double is right-attached to IP. This ordering is not strict, as is shown in (32), and the explanation for that comes from the fact that both verbal arguments are actually clitic-doubled.<sup>34</sup>

Under the analysis given in (31) and (33), the apparently exotic syntax of *Tukang Besi* is compared to the more familiar syntax of a null subject language which also has clitic-doubling. By assuming that 'null subjects' in this language actually mean that the subjects are realized by cliticizing pronouns, which may be doubled by an adjunct, we can account for the

<sup>34</sup> Donohue's remark with respect to the givenness, definiteness and referentiality of *na*-marked phrases carries over to clitic-doubled direct objects. With respect to *te*-marked phrases, Donohue remarks that *te* has a wider range of functions than *na*, which is plausible under my analysis for Accusative *te*, but not for Ergative *te*. The former applies to an argument, but the latter applies to an adjunct doubling the transitive subject clitic. However, Donohue includes other uses of *te*, notably as a pragmatic marker on constituents that appear in preverbal position, so it is not clear at all whether Ergative *te* really behaves similarly to Accusative *te*. In the next chapter, I will discuss the pragmatic use of *te*.

syntactic behaviour of postverbal DPs. When the internal argument is indefinite, it is licensed by Accusative case in the complement of V. Hence, it must follow the verb immediately. Transitive constructions with a definite internal argument apply object clitic-doubling, in which case both postverbal DPs are adjuncts. In order to associate these adjuncts with the correct clitic, an ergative case pattern is used.

## 5 Universal argument licensing in syntax: the main hypothesis

In this chapter I have defended the main hypothesis of this study, repeated below.

|               |   |                  |                       |
|---------------|---|------------------|-----------------------|
| (34)          | Main hypothesis: universal licensing of arguments (preliminary version, repeated from (18)) |                  |                       |
| Intransitive: | [ <sub>IP</sub> DP <sub>S,φ</sub>   | V+I <sub>φ</sub> | ]                     |
| Transitive:   | [ <sub>IP</sub> DP <sub>A,φ</sub>   | V+I <sub>φ</sub> | DP <sub>O,Acc</sub> ] |

According to this hypothesis, UG provides two syntactic mechanisms that can be used for the licensing of verbal arguments: Accusative case marking and agreement. Accusative case is checked in situ by  $v$ , and therefore it can only be used for the licensing of an O-argument in a transitive clause. The case feature is abstract: languages without overt case marking are supposed to use it as well. Differential object marking is encountered when the morphological realization of Accusative case is restricted to a subclass of O-arguments, determined by the person/animacy hierarchy. Subjects (S/A) are caseless arguments, which means that they cannot be licensed by structural case. Instead, they move to Spec,IP in order to check the  $\phi$ -features of I.

Although it is common to believe that objects are able to trigger agreement, I reject this possibility on the basis of the observation that 'object

agreement' markers never become fully grammaticalized (cf. Siewierska 1999). If a language seems to display verbal agreement with objects, the agreement markers can be analyzed as clitics that are optionally doubled by nominal adjuncts, at least in the languages that I have been able to look at so far. Well-known clitic-doubling languages such as Spanish, as well as languages like Amharic and *Tukang Besi*, where 'object agreement' is optional, confirm this analysis.

The structures in (34) are pervasive, and hence supposed to be present in every natural language, even the ergative ones. The examples from *Tukang Besi*, cited in the previous subsection, suggest that it is possible for ergative patterns to occur in a language that behaves as predicted by the main hypothesis. True as this may be, (34) does not yet answer the question why ergativity should appear at all in a language like *Tukang Besi*, and why it is dependent on object clitic-doubling. These questions will be answered in the next chapter, where I will discuss examples from *Warlpiri*, a language in which direct objects are always clitic-doubled. This results in a situation where independent nouns and pronouns are always adjuncts, for which it may be desirable to distinguish consistently between the two arguments of a transitive clause by the means of morphological case. Some languages may use an ergative pattern there, but an accusative pattern is also possible.

## Ergativity in nonconfigurational languages

### 1 Introduction

As I have argued in chapter 2, the main assumption underlying this thesis is that the syntax of every natural language has an accusative orientation, dictated by Universal Grammar. The projection of verbal argument structure shows a structural asymmetry between subjects (S/A) and objects (O). Reflexivization, control and raising therefore distinguish between subjects and objects. Morphologically, the syntactic asymmetry between subjects and objects is reflected in case marking and agreement, if a language has overt reflections of either of these two mechanisms for argument licensing. The object is licensed by structural case (Accusative), whereas the (caseless) subject is licensed by agreement. The hypothesis that Accusative is the only structural case cross-linguistically, and that there can only be agreement with one argument provides an explanatory basis for the fact that ergative patterns are marked, both with respect to their occurrence and their application. As we have seen in the last section of the previous chapter, there is evidence of an ergative case pattern on DP-doubles of cliticized arguments in a certain class of languages. In a language like *Tukang Besi*, the cliticized arguments pattern nominative/Accusatively, as expected. Considering the fact that the clitics are always present in a sentence, the accusative pattern might be more central to *Tukang Besi* than the ergative

pattern. According to this view, the ergative pattern really is a *second pattern* that acts alongside the basic accusative pattern. This analysis is based on the approach to nonconfigurality proposed by Jelinek (1984) and Baker (1996). Following these proposals, I will argue that *Tukang Besi* belongs to a class of ergative languages where verbal arguments have a dual representation in syntax. This representation consists of a Pronominal Argument (PA), which is obligatorily present, and a Lexical Argument (LA), which is optional. A PA is a pronoun which is base-generated in argument position and subsequently cliticized onto or incorporated into the predicate. It is the primary representation of the argument, and hence appears in its unmarked form in S- or A-function, and in a marked form when it is an O. An LA is an independent noun or pronoun that can only appear in adjunct position. It is the secondary representation of the argument, functioning as a double of the PA. LAs may be left unmarked, or display an accusative case pattern, just like the PAs. Alternatively, they may differ from the PAs in showing Ergative case. Warlpiri is the most famous example of such a language:<sup>1</sup>

- (1) **Warlpiri** (Australian, Pama-Nyungan, South-West, Ngarga)

|                    |                                      |                     |                |
|--------------------|--------------------------------------|---------------------|----------------|
| <i>ngalipa-rlu</i> | <i>ka-rlipa-jana</i>                 | <i>wawirri-patu</i> | <i>nya-nyi</i> |
| 1PL.INCL-ERG       | PRS-1PL.INCL.A-3PL.O                 | kangaroo-PL         | see-NPST       |
| LA <sub>A</sub>    | AUX-PA <sub>A</sub> -PA <sub>O</sub> | LA <sub>O</sub>     | V              |

'We see the several kangaroos.'

(Hale 1973:328)

In Warlpiri, a finite sentence consists minimally of a verb (*nya-nyi* 'see-NPST' in (1)) and an 'auxiliary' with clitic string (*ka-rlipa-jana* 'PRS-1PL.INCL.A-3PL.O'). The person/number markers in this string, which follow the accusative pattern, are the PAs. These are optionally doubled by LAs, which pattern

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<sup>1</sup> In chapter 1, I illustrate this pattern with examples from Djaru, which, like Warlpiri, belongs to the South-West sub-branch of Pama-Nyungan.

ergatively (*ngalipa-rlu* '1PL.INCL-ERG' and *wawirri-patu* 'kangaroo-PL'). The central claim to be made in this chapter is that languages with a 'second' ergative pattern are nonconfigurational, i.e. that the lexical arguments showing the ergative pattern are not in argument positions (rather, the pronominal arguments are). Although this claim is able to account for a range of ergative languages, it certainly does not apply to all of them. In particular, those languages in which the ergative pattern seems to extend to person/number marking on the predicate are problematic because they suggest that the accusative pattern is not as universal as the nonconfigurationality analysis seems to suggest. These cases will be dealt with in chapter 4, where I propose to allow for partial nonconfigurationality.

In section 2, I discuss the main properties of nonconfigurationality in Warlpiri in order to determine what ergative languages are predicted to look like. Next, two main theoretical approaches to the phenomenon are considered, focusing on the Jelinek-Baker view mentioned above. The key assumption of this view is the idea that LAs are base-generated as adjuncts. Theoretically, I will argue against Baker's analysis and in favour of Jelinek's, since the latter is compatible with the main hypothesis developed in the previous chapter. Section 3 deals with the implications this has for the referential properties of LAs. If these argument-doubles are indeed base-generated in an A-bar-position, forming a chain with a PA, conditions on coreference are expected to apply.<sup>2</sup> In particular, interpreting the PA as a variable is not possible in such an environment, because quantifier-variable readings are only possible if the quantifier is in an A-position. This means that LAs may never be inherently quantificational. An overview is given of quantification in Mohawk, Straits Salish and Warlpiri in order to see how languages may deal with such a restriction. In section 4, the issue of

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<sup>2</sup> In this study, I use the term A-bar position in order to refer to adjunct positions and specifiers of functional heads such as C. Crucially, the landing site for spec-head agreement (Spec,IP) is excluded from this notion. The reader is referred to Chomsky & Lasnik (1993) for some discussion (also in Chomsky (1995:55-66)).

ergativity is raised and an answer is sought to the question why languages would complement their accusative PA-system with an ergative pattern, instead of copying the Accusative case. It turns out that if the Accusative case is not morphologically available, an already existing oblique case is used in order to mark one of the LAs. A straightforward choice is a case like Locative or Instrumental, which is often also used for the A-argument of a passive construction (cf. the *by*-phrase in English). Since this case is already associated with A, it is only natural to use the same case for the A-argument of an active clause as well. An ergative pattern follows. Finally, I will formalize the main claim of this chapter as the Second Pattern Hypothesis (SPH).

## **2 Nonconfigurationality**

The three main properties of nonconfigurational languages are discussed in 2.1 and illustrated with examples from Warlpiri. In subsection 2.2, it will be shown that nonconfigurational languages also display several properties common to configurational languages. In 2.3, the two main types of analysis are discussed: one assigning configurational properties in nonconfigurational languages to the lexicon only and one accounting for these properties within syntax. The latter will be modified in order to be able to account for three nonconfigurational languages.

### **2.1 Nonconfigurational properties**

The theoretical debate on (non)configurationality roughly begins early in the eighties, with Chomsky (1981:127-135) proposing a nonconfigurational analysis of Japanese, based on Farmer (1980). Hale (1983) is the first to propose a parameter explaining why English and Warlpiri differ in the way described below. Traditionally, languages displaying the following three characteristics have been termed 'nonconfigurational':

## (2) Nonconfigurational properties:

- free word order;
- possible omission of all grammatical functions;
- possibility of having discontinuous NP constituents.

(Baker 2001:410)

These characteristics will be briefly illustrated on the basis of examples from Warlpiri, taken from the literature on nonconfigurationality. Within generative grammar, Warlpiri has become the standard example of this phenomenon (cf. Hale (1983), (1992), (1994); Jelinek (1984); Laughren (1989); Speas (1990); Baker (1996), (2001); Pensalfini (2004)).

Indeed, the way in which the predicate and its arguments are ordered in neutral, declarative Warlpiri clauses does not at all seem to be determined by any syntactic principle.

(3) **Warlpiri**: 'free word order'

- |    |                                 |           |                        |                         |     |
|----|---------------------------------|-----------|------------------------|-------------------------|-----|
| a. | [ <i>kurdu-ngku</i> ]           | <i>ka</i> | [ <i>maliki</i> ]      | [ <i>wajilipi-nyi</i> ] | AOV |
|    | child-ERG                       | PRS       | dog                    | chase-NPST              |     |
|    | 'The child is chasing the dog.' |           |                        |                         |     |
| b. | [ <i>maliki</i> ]               | <i>ka</i> | [ <i>kurdungku</i> ]   | [ <i>wajilipinyi</i> ]  | OAV |
| c. | [ <i>maliki</i> ]               | <i>ka</i> | [ <i>wajilipinyi</i> ] | [ <i>kurdungku</i> ]    | OVA |
| d. | [ <i>wajilipinyi</i> ]          | <i>ka</i> | [ <i>kurdungku</i> ]   | [ <i>maliki</i> ]       | VAO |
| e. | [ <i>wajilipinyi</i> ]          | <i>ka</i> | [ <i>maliki</i> ]      | [ <i>kurdungku</i> ]    | VOA |
| f. | [ <i>kurdungku</i> ]            | <i>ka</i> | [ <i>wajilipinyi</i> ] | [ <i>maliki</i> ]       | AVO |

(Hale 1981:1)

The only requirement the permutations in (3) seem to fulfill is that the 'auxiliary' *ka* ('PRS') appears in second position. That is, the auxiliary cliticizes to the first constituent of the clause (Hale 1983:6). This immediately provides us with a test for constituency: whatever group of words may precede the auxiliary, can be considered a constituent in Warlpiri. Hale (1994) points out that VP is not a constituent in this language, since the verb

and the direct object cannot precede the auxiliary as an intonational unit.<sup>3</sup>  
Hence, the following sequences are ruled out:<sup>4</sup>

(4) **Warlpiri**: constituency test

- a. \* [wawirri] [nya-nyi] ka-rna  
kangaroo see-NPST PRS-1SG  
'I see a kangaroo.'

- b. \* [nyanyi] [wawirri] karna  
(Hale, Laughren & Simpson 1995:1434)

Another test for VP-constituency would be to pronominalize the whole VP, as in *I ate meat, and so did you*. In this English example, the adverbial pronoun *so* replaces the VP *ate meat*. Alternatively, the verb alone can be gapped, as in *I ate meat, and you bread*. In Warlpiri, the latter is only possible if the auxiliary is omitted together with the verb:

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<sup>3</sup> Hale (1994:190) points out that "an object cannot precede a fronted (pre-AUX) verb (...) unless it is left-dislocated, a circumstance clearly marked intonationally." Left-dislocation in Warlpiri means that (4a) is grammatical if the fronted direct object is separated from the clause by an intonational break. Note that this type of dislocation has to be distinguished from the type I have assumed for several languages in the previous chapter, and will assume for Warlpiri as well. The difference is that there is no intonation break when the clitic-double is adjoined to IP, as I have assumed throughout. Hale's case probably has the double adjoined to CP, where it is 'sentence-external'. This is clearly signalled by an intonation break.

<sup>4</sup> On the basis of the examples in (3), it is possible to predict that the following sentence would also be ruled out.

(i) **Warlpiri**

- \* [maliki] [wajilipi-nyi] ka [kurdu-ngku]  
dog chase-NPST PRS child-ERG  
'The child is chasing the dog.'

(5) **Warlpiri**: gapping of V+auxiliary<sup>5</sup>

- a. [kuyu  $\emptyset$ -rna nga-rnu], manu [nyuntulu-rlu miyi ]  
 meat PFV-1SG eat-PST and 2SG-ERG bread  
 'I ate meat, and you (ate) bread.'
- b. \* [kuyu  $\emptyset$ -rna nga-rnu], manu [nyuntulu-rlu  $\emptyset$ -npa  
 meat PFV-1SG eat-PST and 2SG-ERG PFV-2SG.A  
 miyi ]  
 bread

(Laughren 1989:328)

The sentences in (5) show that whenever the verb is gapped, the auxiliary and the person/number markers cliticized to it must be gapped as well. With respect to the English sentence in which the VP of the second conjunct is pronominalized, Laughren argues that the closest Warlpiri equivalent lacks an auxiliary in the second conjunct.

(6) **Warlpiri**: 'VP-pronominalization'

- [kuyu  $\emptyset$ -rna nga-rnu], manu [Napaljarri-ri-yijala ]  
 meat PFV-1SG eat-PST and Napaljarri-ERG-also  
 'I ate meat, and Napaljarri (did) too.'

(Laughren 1989:327)

The disadvantage of an example like (6) is that the subject of the second conjunct, *Napaljarri*, is third person singular. Such subjects never trigger overt person/number marking, and since the auxiliary in these sentences is zero, we cannot judge on the basis of this example alone whether the auxiliary and person/number markers are present or not.<sup>6</sup> However, there

<sup>5</sup> When the auxiliary is zero, a person/number marker like *-rna* ('1SG.A') in (5a) actually cliticizes to the constituent preceding the auxiliary. For presentational reasons, I will include the empty auxiliary in these examples.

<sup>6</sup> The following example, based on (6), should only be grammatical when  *$\emptyset$ -npa* is omitted:

are more examples arguing against VP-constituency. For instance, if one tries to construe a Warlpiri equivalent of conjunction reduction by omitting the subject person/number marker in the second conjunct, paralleling the English construction, this results in ungrammaticality as well. Compare the following sentences:

(7) **Warlpiri:** 'conjunction reduction'

- a. [ngarru-rnu Ø-rna-nyarra ] manu [paka-rnu-lku  
 scold-PST PFV-1SG.A-2PL.O and hit-PST-then  
 Ø-rna-nyarra ]  
 PFV-1SG.A-2PL.O  
 'I scolded you and then (I) hit you.'
- b. \* [ngarru-rnu Ø-rna-nyarra] manu [paka-rnu-lku  
 scold-PST PFV-1SG.A-2PL.O and hit-PST-then  
 Ø-nyarra]  
 Ø-2PL.O
- c. [ngarru-rnu Ø-rna-nyarra] manu [paka-rnu-lku]  
 scold-PST PFV-1SG.A-2PL.O and hit-PST-then

(Laughren 1989:328-329)

The sentence in (7a) shows that coordination is possible if the second conjunct contains person/number markers for both subject and direct object. Leaving out the marker for the subject is bad (cf. (7b)), but omitting the auxiliary and clitics altogether is not (cf. (7c)). Apparently, then, the auxiliary plus person/number markers form a unit that cannot be decomposed. These facts have been taken to indicate that the verb does not form a syntactic constituent with the independent direct object, accounting for Warlpiri's

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(i) **Warlpiri**

- [kuyu Ø-rna nga-rnu], manu nyuntulu-rlu-yijala (\*Ø-npa )  
 meat PFV-1SG eat-PST and 2SG-ERG-also PFV-2SG.A  
 'I ate meat, and you (did (so)) too.'

extremely free ordering of constituents.<sup>7</sup>

A second well-known characteristic of nonconfigurational languages is the frequent omission of arguments. That is, each of the following sentences is perfectly grammatical:

(8) **Warlpiri**: omission of arguments

- a. *ngarrka-ngku ka wawirri panti-mi*  
 man-ERG PRS kangaroo spear-NPST

'The man is spearing the kangaroo.'

- b. *wawirri ka panti-mi*  
 kangaroo PRS spear-NPST

'S/he is spearing the kangaroo.'

- c. *ngarrka-ngku ka panti-mi*  
 man-ERG PRS spear-NPST

'The/a man is spearing him/her/it.'

- d. *panti-mi ka*  
 spear-NPST PRS

'S/he is spearing him/her/it.'

(Hale 1983:6-7)

In (8b), the independent subject *ngarrka-ngku* ('man-ERG') is omitted; in (8c), the independent direct object *wawirri* ('kangaroo') is absent; and omitting both of them is also fine (cf. (8d)). In actual speech, or in texts, sentences like (8b-d) occur much more often than a sentence like (8a). Hale has argued that among those sentences in which every argument is represented by an independent noun or pronoun, the order of constituents does not seem to be determined by syntactic principles (1992:76). Mithun has argued that constituent order in this kind of language is regulated by pragmatic principles (1986:199, 1992:16). The key notion here is 'newsworthiness': constituents

---

<sup>7</sup> With the term 'independent', I am anticipating my analysis of Warlpiri, which treats nonclitic argument-doubles as adjoined Lexical Arguments (LAs). These LAs may be nouns or pronouns.

tend to appear in descending order of newsworthiness.<sup>8</sup> Hale (1992) takes over this conclusion for Warlpiri.<sup>9</sup>

Applying Mithun's proposal to the sentences in (8) implies that (8b) will be uttered in a context where there is an established discourse referent, about whom it is stated that s/he is doing something to the kangaroo, namely spearing. The kangaroo is less topical than the (omitted) actor. It is even more newsworthy than the spearing, since the alternative ordering ('Vo') would be used if the spearing were more newsworthy than the fact that the kangaroo is undergoing it. In the case of (8c), the kangaroo is the least marked topic. The relevant information is that there is a man who is spearing it. The alternative ordering (VA) could be used in a situation where the action of spearing is more informative than the fact that the actor is a man.<sup>10</sup>

Thirdly, nonconfigurational languages are often able to split up nominal constituents.

(9) **Warlpiri**: discontinuous NP-constituents

- a. [maliki-rli wiri-ngki] Ø-ji yarlku-rnu  
 dog-ERG big-ERG PFV-1SG.ACC bite-PST  
 'The/a big dog bit me.'

---

<sup>8</sup> The three languages Mithun discusses are areally and genetically unrelated: Cayuga (Iroquoian: Canada (Ontario)), Ngandi (Australian, Gunwingguan: Australia (eastern Arnhem Land)) and Coos (Penutian: United States (Oregon)).

<sup>9</sup> Legate (2002, 2003), who argues for a configurational approach to Warlpiri, shows that there is an articulated left periphery containing a focus projection. Both contrastive and noncontrastive topics may precede a constituent that is in focus, which suggests that Mithun's generalization is not entirely correct for Warlpiri (see also Laughren (2002)).

<sup>10</sup> Mithun (1986:199) points out that this ordering of constituents differs significantly from the way constituents are ordered in more familiar Indo-European languages with flexible word order. In these languages, information is ordered according to an increasing degree of 'communicative dynamism' (Firbas 1972). This means that "speakers begin from an established point of departure, the theme or topic, and move toward newer, increasingly important information, the rheme or comment." In nonconfigurational languages, Mithun suggests, the order is from rheme or comment to theme or topic.

- b. [maliki-rli] Ø-ji yarlku-rnu [wiri-ngki]  
 dog-ERG PFV-1SG.ACC bite-PST big-ERG  
 'The/a big dog bit me.'  
 'The/a dog bit me and it was big.'

(Hale 1983:38)

As shown by the sentences in (9), a noun (*maliki-rli* 'dog-ERG') may be separated from its adjectival modifier (*wiri-ngki* 'big-ERG'). In the same vein, demonstratives, possessors, infinitival clauses and locatives are separable from the noun they modify (Hale 1994:188).

These three characteristics (free constituent order, frequent omission of independent nouns or pronouns in any grammatical function and the occurrence of discontinuous constituents) are generally considered to be primary evidence for the nonconfigurational status of languages like Warlpiri. The syntactic configuration discussed in chapter 2, which explains the cross-linguistic asymmetry between subjects and objects in terms of different structural positions, is argued to be absent from nonconfigurational languages. However, there are also data suggesting otherwise.

## 2.2 Configurational properties

Whereas the surface ordering of constituents in a Warlpiri sentence may not display any particular hierarchical syntactic structure, the morphology of the language does. The person/number markers that cliticize to the auxiliary have subject/object forms, and the universal subject/object asymmetries found with reflexivization and control are not different in Warlpiri either.

As is shown by several sentences above, the auxiliary functions as a host for person/number markers of subjects and objects. These markers are obligatorily present in every finite clause. There are overt forms for every possible combination of person and number values, except for third person singular. The full paradigms are given in (10). The leftmost paradigm is used for subjects of intransitive clauses (S) and subjects of transitive clauses (A). The second paradigm is used for direct objects (O) of monotransitive

clauses, and for indirect objects (IO) of ditransitive clauses.<sup>11</sup> This is a first indication that Warlpiri does employ configurationality: person/number marking distinguishes between subject and object.

(10) **Warlpiri:** person/number marking

|    |       | S/A                | O/IO                | Independent pronouns |
|----|-------|--------------------|---------------------|----------------------|
| SG | 1     | <i>-rna</i>        | <i>-ju</i>          | <i>ngaju(lu)</i>     |
|    | 2     | <i>-n(pa)</i>      | <i>-ngku</i>        | <i>nyuntu(lu)</i>    |
|    | 3     | -                  | -                   | <i>()</i>            |
| DU | 1INCL | <i>-rli</i>        | <i>-ngali(ngki)</i> | <i>ngali(jarra)</i>  |
|    | 1EXCL | <i>-rlijarra</i>   | <i>-jarrangku</i>   | <i>ngajarra</i>      |
|    | 2     | <i>-n(pa)-pala</i> | <i>-ngku-pala</i>   | <i>nyumpala</i>      |
|    | 3     | <i>-pala</i>       | <i>-palangu</i>     | <i>()</i>            |
| PL | 1INCL | <i>-rlipa</i>      | <i>-ngalpa</i>      | <i>ngalipa</i>       |
|    | 1EXCL | <i>-rna-lu</i>     | <i>-nganpa</i>      | <i>nganimpa</i>      |
|    | 2     | <i>-nku-lu</i>     | <i>-nyarra</i>      | <i>nyurula</i>       |
|    | 3     | <i>-lu</i>         | <i>-jana</i>        | <i>()</i>            |

(Hale (1973:315-316,328); Nash (1980:59))

The rightmost column contains the unmarked forms of the independent pronouns, illustrating that these forms often resemble the person/number markers morphologically. There are no third person pronouns.<sup>12</sup>

Apart from a formal distinction, subjects and objects are also distinguished by the order in which they cliticize to the auxiliary: the subject marker is directly attached to the auxiliary base (or the first constituent of the clause), and the object marker must follow it.<sup>13</sup>

<sup>11</sup> From now on, I will exclude ditransitives, and hence indirect objects, from the discussion. Therefore, the o/IO-paradigm will be consistently glossed as representing the o-argument.

<sup>12</sup> As in many languages, Warlpiri speakers use demonstratives for third person referents.

<sup>13</sup> This and the following examples only illustrate that there is an asymmetry between A and o. Whatever rule applies to A, applies to s as well.

(11) **Warlpiri**

*ngarrka-jarra ka-pala-jana wawirri-patu-ku*  
 man-DU PRS-3DU.A-3PL.O kangaroo-PAUC-DAT  
*wurru-ka-nyi*  
 stalk-move-NPST

'The (two) men are stalking the (several) kangaroos.'

(Hale, Laughren & Simpson 1995:1431)

In (11), the subject clitic *-pala* ('-3DU.A') precedes the object clitic *-jana* ('-3PL.O') and this order cannot be reversed.

As can be expected on the basis of the generalization that reflexive constructions always take the subject as the antecedent, we predict Warlpiri reflexivization to be equally configurational. Indeed, reflexive predicates trigger an invariant suffix *-nyanu* that appears in the position for O-person/number markers. When the subject is singular, this suffix is interpreted as being reflexive. With plural subjects it may be reciprocal as well. This is demonstrated in (12).

(12) **Warlpiri: reflexivization**

*kurdu-jarra-rlu ka-pala-nyanu paka-rni*  
 child-DU-ERG PRS-3DU.A-REFL.O strike-NPST

'The two children are striking themselves/each other.'

(Hale 1983:21)

The reflexive/reciprocal suffix *-nyanu* functions just like a reflexive pronoun in a configurational language: it is associated with the O-function and it is bound by *-pala*, the A-argument. The latter is the actual antecedent, and *kurdu-jarra-rlu* ('child-DU-ERG') functions as its lexical double. This phrase is in the Ergative case, which confirms the fact that *-pala* is the antecedent of *-nyanu*, and not the other way around.

Finally, infinitival predicates in Warlpiri show configurational behaviour. Nonfinite verbs typically occur without an auxiliary, and hence without person/number marking for subject or object. Only the subject of such a verb

may be controlled by an argument in the matrix clause.

(13) **Warlpiri:** control by matrix subject

- a. *karnta ka-ju wangka-mi [yarla karla-nja-karra]*  
 woman PRS-1SG.O speak-NPST yam dig-INF-COMP{S/A}

‘The woman is speaking to me while digging yams.’

- b. *ngarrka-nku ka purlapa yunpa-rni [karli]*  
 man-ERG PRS corroboree sing-NPST boomerang

*jarnti-rninja-karra ]-rlu*  
 trim-INF-COMP{S/A}-ERG

‘The man is singing a corroboree song while trimming the boomerang.’

(Hale (1983:20,21), Simpson & Bresnan (1983:51))

If we assume that an infinitive verb in Warlpiri takes an empty PRO argument, PRO can only be a subject. Furthermore, if the infinitival complementizer is *-karra*, as in the sentences in (13), the only possible controller of PRO is the matrix subject (*karnta* ‘woman’) in the a-sentence and *ngarrka-nku* ‘man-ERG’) in the b-sentence).<sup>14</sup> In other words, (13a) cannot be interpreted as ‘the woman is speaking to me while I am digging yams’, and neither can (13b) be interpreted as ‘the man is singing a corroboree song while the song is trimming the boomerang’ (if this were possible at all). As in English, it is nevertheless possible to have a matrix object control PRO, as in *I forced him<sub>i</sub> PRO<sub>i</sub> to leave*. For those cases, another complementizer (*-kurra*) is used.

(14) **Warlpiri:** control by matrix object

- a. *ngarrka-patu ka-rna-jana nya-nyi [wawirri]*  
 man-PL PRS-1SG.A-3PL.O see-NPST kangaroo

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<sup>14</sup> When the matrix subject carries Ergative case, the infinitive clause as a whole appears to be marked with Ergative case as well. This suggests that the infinitival clauses considered here are actually secondary predicates.

*panti-rninja-kurra ]*  
spear-INF-COMP{(I)O}

'I see the several men spearing a kangaroo.'

- b. *karnta*            *ka-rla*            *wangka-mi*    *ngarrka-ku*  
woman            PRS-DAT            speak-NPST    man-DAT

*[jarnti-rninja-kurra ] (-ku)*  
trim-INF-COMP{(I)O} (-DAT)

'The woman is speaking to the man trimming it.'

(Hale (1983:21); Simpson & Bresnan (1983:54))

The matrix verb in (14a) has a third person plural direct object (*ngarrka-patu* 'man-PL'), which is the only constituent that is able to control the PRO of the infinitival clause. Likewise, the indirect object *ngarrka-ku* ('man-DAT') is the only possible controller of PRO in (14b).<sup>15</sup> Again, not only does Warlpiri confirm the generalization that only subjects may be realized by PRO, it also makes a morphological distinction between control by the matrix subject and control by the object through different complementizers (*-karra* vs. *-kurra*).

Summarizing, on the one hand, languages like Warlpiri behave completely differently from well-known configurational languages like English. The ordering of constituents seems to be determined by pragmatic principles only. Also, independent (pro)nominal arguments are often omitted. When they are overtly present, they may be discontinuous. These properties have come to be known as nonconfigurational, suggesting that the languages at stake lack any hierarchical phrase structure that distinguishes subjects from objects. On the other hand, however, familiar subject/object asymmetries are found in the form and distribution of person/number markers that cliticize to the auxiliary, as well as in reflexivization and control. These asymmetries are no different from fully configurational languages like English.

Apart from Warlpiri, there are several other languages which have been

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<sup>15</sup> Notice that the object of the equivalent of 'trim' is also not overtly represented. Possibly, this can be explained by assuming that the verb is pseudotransitive here.

extensively argued to be nonconfigurational. Austin & Bresnan (1996) investigate Jiwari (Australian, Pama-Nyungan); Baker (1991, 1994, 1996, 2001, in preparation) discusses Mohawk (Iroquoian); Jelinek (1993, 1995, in preparation) analyzes Straits Salish and Farmer (1980), Chomsky (1981) and Baker (2001) deal with nonconfigurationality in Japanese (Altaic).<sup>16</sup> Baker (2001:411) presents a larger list of languages that have been called nonconfigurational.

### 2.3 A pronominal argument approach

Austin & Bresnan (1996) summarize the theoretical debate on nonconfigurationality, describing two major types of analysis: the 'dual structure' model and the 'pronominal argument' model.<sup>17</sup> Both models acknowledge that configurationality plays a role in every natural language, as I have suggested above. They differ in the way they account for nonconfigurational properties. The pronominal argument model essentially states that argument positions in nonconfigurational languages are somehow not accessible to full noun phrases or independent pronouns. These can only be attached as adjuncts to the clause, which accounts for the nonconfigurational properties discussed in subsection 1.1. The dual structure model assumes that a sentence has several levels of linguistic representation. These levels may be dissociated with respect to configurational properties, leading to nonconfigurational syntactic structures.

In this study, I will assume an elaborated version of the pronominal argument model. It creates an environment that is absent from languages without pronominal arguments, the LA-doubles of PAs. It is in this environment that ergativity is often found. The details of this model will be

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<sup>16</sup> It should be noted that the type of nonconfigurationality found in languages like Japanese is quite different from the type under investigation. Japanese does not have any person/number marking on the verb, and Baker (2001) assumes that the nonconfigurational behaviour of this language can be explained by scrambling.

<sup>17</sup> See also Legate (2002, 2003) for a more detailed discussion.

explained below, but I will start off with a brief outline of the dual structure model, which I will not implement (2.3.1). In the following sub-subsections, I will propose an analysis for Mohawk (2.3.2), Warlpiri (2.3.3.) and Straits Salish (2.3.4), three languages that have been successfully analyzed as pronominal argument languages. My own proposal will be based on the assumptions made in chapter 2.

### 2.3.1 Two types of analysis

The ‘dual structure’-model is instigated by Hale (1983) in government & binding theory, and has been implemented mainly within lexical-functional grammar (Simpson (1991); Kroeger (1993) and Austin & Bresnan (1996)). The key assumption of this approach is that (configurational) information about grammatical relations may be expressed both within the lexicon and phrase structure, as is the case in English, or within the lexicon only, as in Warlpiri. Hale (1983) proposes a level of ‘lexical structure’, which essentially corresponds to the argument structure of a predicate. This level consists of an argument array and a predicate name. The ‘dictionary definition’ of a predicate contains variables which are associated with theta roles, and the arguments of lexical structure are coindexed with these variables. Consider sentence (1), repeated below as (15):

(15) **Warlpiri** (repeated from (1))

*ngalipa-rlu ka-rlipa-jana wawirri-patu nya-nyi*  
 1PL.INCL-ERG PRS-1PL.INCL.A-3PL.O kangaroo-PL see-NPST

‘We see the several kangaroos.’

In the English translation of this sentence, the arguments are *we* and *the several kangaroos*, and these are associated with the theta roles of *see* at the lexical level. The contents of lexical structure is copied to another level, which is called ‘phrase structure’. The configurational relations established at the lexical level are preserved in the phrase structure level, and hence

English syntax is configurational. In the Warlpiri sentence, *ngalipa-rlu* ('1PL.INCL-ERG') and *wawirri-patu* ('kangaroo-PL') are not directly linked to the predicate. Instead, the theta roles of *nya-nyi* ('see-NPST') are assigned to the person/number markers *-rlipa* ('-1PL.INCL.A') and *-jana* ('-3PL.O') at lexical structure. The person/number markers function either like (definite) pronouns (recall the paradigms in (10)) or like anaphora (see the reflexive/reciprocal suffix in (12)). The configurational properties of Warlpiri morphology are established at lexical structure, which is a universal requirement. However, whether these are copied to phrase structure is parameterized: it happens in English, but not in Warlpiri. Instead, the independent (pro)nominal constituents *ngalipa-rlu* ('1PL.INCL-ERG') and *wawirri-patu* ('kangaroo-PL') are introduced at the phrase structure level, and they are linked to the person/number clitics via a linking rule. Warlpiri phrase structure does not reflect the configurational properties of lexical structure, as it is entirely flat. About the only requirement here is that the auxiliary is placed after the first constituent. Otherwise, all imaginable orderings of constituents are possible. The linking rule links every nominal constituent bearing a core case (unmarked, Ergative, Dative) at the phrase structure level to an argument (person/number marker) at the lexical structure level. This linking does not necessarily take place, which accounts for the possibility of omitting any independent argument. Furthermore, nothing prevents two independent nouns/pronouns from being associated with the same person/number marker, accounting for discontinuous constituents. Under reference to Chomsky's projection principle (1981), Hale arrives at the following parameter:<sup>18</sup>

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<sup>18</sup> Roughly put, the projection principle states that every feature in a particular syntactic representation is copied to another representation in syntax.

- (16) The configurationality parameter (dual structure model)
- a. In configurational languages, the projection principle holds of the pair (lexical structure, phrase structure).
  - b. In nonconfigurational languages, the projection principle holds of lexical structure alone.

(Hale 1983:26)

For a language like English, the projection principle ensures that for every argument that is selected by the predicate at lexical structure, a corresponding argument is selected at phrase structure.<sup>19</sup> This means that the configurational structure of the lexical level is copied onto phrase structure, resulting in a rigid word order. Arguments cannot be dropped and neither can they be discontinuous.

The dual structure approach assumes that independent nouns/pronouns in nonconfigurational languages are arguments. As we will see below, these constituents show properties that are typical of adjuncts, rather than arguments. The key feature of the pronominal argument model is the adjunct analysis of independent nouns and pronouns. The dual structure model does not make any predictions with respect to this. Moreover, in the pronominal argument model, there is no need to make a distinction between lexical structure and phrase structure. Only phrase structure is relevant, predicting that syntactic derivations in a nonconfigurational language differ significantly from derivations in configurational languages. Interestingly, the nonconfigurational derivation is related to clitic-doubling constructions, which occur independently in configurational languages. Therefore, my analysis of ergativity will assume a version of the pronominal argument model, rejecting the dual structure model. The pronominal argument model was instigated by Jelinek (1984), who in turn had been inspired by Hale (1983). Speas (1986, 1990), Baker (1991, 1995, 1996, 2001, to appear), Jelinek (1993, 1995, to appear), Hale (1994) and Pensalfini (2004) have assumed and refined the

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<sup>19</sup> The arguments at lexical structure are empty in English.

model. The key assumption here is that both the configurational and the nonconfigurational properties of languages like Warlpiri can be explained by one syntactic representation. The person/number markers in Warlpiri not only have the status of pronouns, as was the case in Hale's lexical structure, they *are* pronouns occupying argument positions. These elements are therefore called *pronominal arguments* (henceforth PAs). The PAs are optionally doubled by independent nouns/pronouns, the so-called *lexical arguments* (LAs).<sup>20</sup>

(17) **Warlpiri** (repeated from (1)/15)

|                    |                                      |                     |                |
|--------------------|--------------------------------------|---------------------|----------------|
| <i>ngalipa-rlu</i> | <i>ka-rlipa-jana</i>                 | <i>wawirri-patu</i> | <i>nya-nyi</i> |
| 1PL.INCL-ERG       | PRS-1PL.INCL.A-3PL.O                 | kangaroo-PL         | see-NPST       |
| LA <sub>A</sub>    | AUX-PA <sub>A</sub> -PA <sub>O</sub> | LA <sub>O</sub>     | V              |

'We see the several kangaroos.'

In (17), the person/number markers *-rlipa* ('-1PL.INCL.A') and *-jana* ('-3PL.O') are the actual arguments of the main verb, whereas *ngalipa-rlu* ('1PL.INCL-ERG') and *wawirri-patu* ('kangaroo-PL') are adjuncts.

The obligatory presence of pronouns in argument position prevents any LA from appearing there. Instead, LAs are adjoined to the clause, and hence must have the status of adjuncts. This status naturally accounts for the freedom with which LAs are ordered, assuming that they may attach to the left and to the right of a structure. As adjuncts are not selected by the main predicate of a clause, it is explained why LAs can be omitted. Although Jelinek does not discuss discontinuous constituency, we will see below that it is not problematic for her theory either. Jelinek formulates the configurationality parameter as follows:

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<sup>20</sup> The abbreviations PA and LA are not commonly used in the literature, but people do use the abbreviation PAH in order to refer to the pronominal argument hypothesis.

(18) The configurationality parameter (pronominal argument model)

- a. In a configurational language, object nominals are properly governed by the verb.<sup>21</sup>
- b. In a W-type nonconfigurational language, nominals are not verbal arguments, but are optional adjuncts to the clitic pronouns that serve as verbal arguments.<sup>22</sup>

(Jelinek 1984:73)

Recall from the paradigms in (10) that there the PA-paradigms contain a gap for third person singular subjects and objects. Hence, the pronominal argument model assumes that a sentence with third person singular arguments contains empty pronominal arguments.

(19) **Warlpiri** (partly repeated from (8))

- a. *ngarrka-ngku ka-∅-∅ wawirri panti-mi*  
man-ERG PRS-3SG.A-3SG.O kangaroo spear-NPST

'The man is spearing the kangaroo.'

- b. *panti-mi ka-∅-∅*  
spear-NPST PRS-3SG.A-3SG.O

'S/he is spearing him/her/it.'

(Jelinek 1984:40, citing Hale 1983:6,7)

Jelinek's motivation for this assumption comes from the difference in interpretation between the sentences in (19). The a-sentence may have definite or indefinite arguments, depending on the context, but the b-sentence can only be interpreted as having definite arguments. According to Hale, this is evidence that the person/number markers at the lexical level are

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<sup>21</sup> This particular formulation refers to the government & binding approach that was in use at the time.

<sup>22</sup> Jelinek does not claim that all nonconfigurational languages are like Warlpiri, and hence she distinguishes W-type nonconfigurationality from other types. As I have explained in footnote (16), Japanese is an example of another type, since this language lacks clitic pronouns that could be analysed as pronominal arguments. I will briefly come back to the issue at the end of this subsection.

pronominal, and Jelinek adopts his proposal. She explicitly argues that the pronominal arguments cannot be realized by *pro*, as is the case with subjects in null subject languages. In those languages, *pro* can have different combinations of person/number features. As the Warlpiri empty elements can only be third person singular, Jelinek treats them as empty third person singular pronouns. However, various authors have since shown that there are languages that only allow *pro* with certain person/number combinations. Hebrew, for instance, has *pro*-drop with first and second persons only, not with third person (cf. Borer (1989)). Therefore, it is imaginable that there are languages in which *pro* serves just one person/number combination.

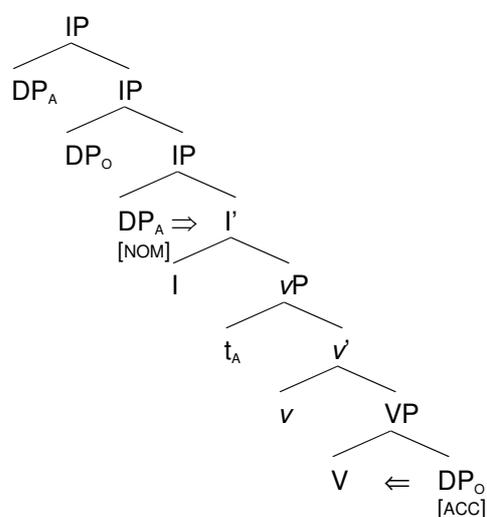
Interestingly, Baker (1996) provides an analysis of nonconfigurationality which is based on Jelinek's 'pronominal argument hypothesis', differing with respect to the question whether the arguments in nonconfigurational languages are realized by *pro* or not. Baker does not make any claim about Warlpiri, but he assumes that there is another type of pronominal argument language in which the pronominal arguments are always (empty) *pros*. These languages are termed 'polysynthetic', and Mohawk (Iroquoian) is Baker's main example. In this language, Baker argues, arguments are necessarily realized by *pro* because agreement is sufficiently rich in order to absorb structural case (Nominative and Accusative). Because of this, nothing else but empty *pro* is licensed in an argument position. In other words, polysynthetic languages have subject and object agreement, and both types of agreement are like agreement in null subject languages in requiring the argument at stake to be realized by *pro*.<sup>23</sup> Hence, independent nouns/pronouns that are interpreted as arguments, are necessarily adjoined to IP and licensed by coindexation with a corresponding *pro*.

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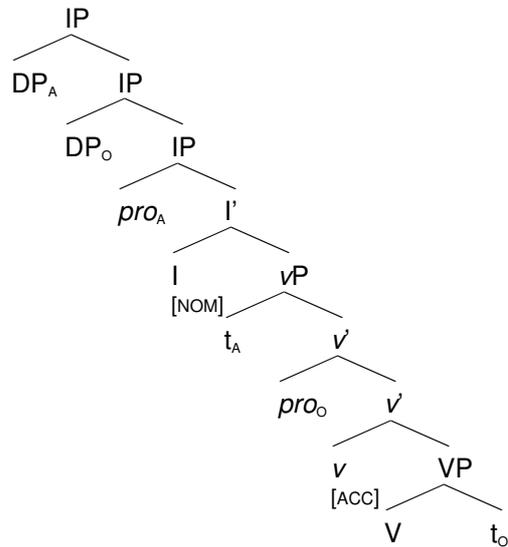
<sup>23</sup> Note that most analyses of *pro*-drop merely *allow* (instead of *require*) the relevant argument to be *pro* (cf. section 3 of chapter 2). Baker explains the obligatory presence of *pro* by assuming that agreement absorbs case, and *pro* does not need case. This is a controversial assumption, since Chomsky (1982) already assumes that *pro* bears case.

Both approaches to nonconfigurationality are represented by tree structures in (20) and (21), using current terminology for the nodes represented.

(20) Nonconfigurationality: obligatory overt pronouns (along the lines of Jelinek)



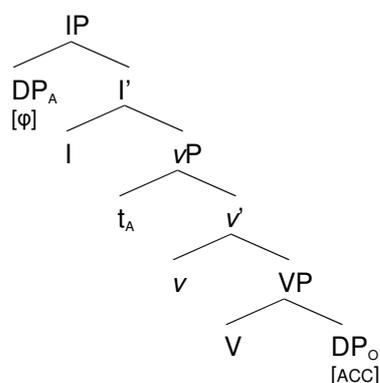
Both the A- and the O-arguments are obligatorily realized by pronouns. In Jelinek's approach, both of these PAs are licensed by case, and they standardly cliticize to the predicate. This is indicated in (20) by the familiar symbols ' $\Leftarrow$ ' and ' $\Rightarrow$ '. Note that this tree does not tell us how the clitics are attached to the auxiliary. I will discuss this below, when I present my own modified version of the pronominal argument model. Independent nouns and pronouns optionally attach to the left or to the right of IP. These LAs may bear overt case, as they do in Warlpiri, but they may also remain unmarked for case, as for example in Straits Salish. What is important is that they are coindexed with a PA, which is licensed by Accusative case or agreement and carries a theta role.

(21) Nonconfigurationality: obligatory *pros* (Baker)

Baker's approach assumes that both the A- and the O-argument are realized by *pro*. This element is licensed by the case absorbing agreement morphemes, in the tree above represented by *v* and *I*. Attachment of LAs happens in the same way as it does in (20), and they are coindexed with *pro*. Again, LAs may remain unmarked for case (as they do in Mohawk), but overt case marking is possible, as in Chukchi (Chukotka-Kamchatkan).

As stated above, my analysis for ergativity is based on a modified version of the pronominal argument approach. Recall that in chapter 2, I have argued that the tree structure in (22) shows the universal licensing of arguments by case and agreement (cf. subsection 2.2). Direct objects have an Accusative case feature that is checked by *v*. This checking is done in situ. Subjects are caseless and need to be licensed by checking their  $\phi$ -features (agreement). This involves movement to Spec,IP.

(22) Universal projection of a transitive verb



Assuming for the moment that nonconfigurational languages like Warlpiri and Mohawk are no different from configurational languages with respect to the licensing of arguments, the question is which of the two approaches presented above is more compatible with (22). Since both Jelinek and Baker assume that subjects are marked (and licensed) by Nominative case, none of them can be implemented directly. Baker's approach has the additional drawback that it assumes that internal arguments trigger agreement, just like subjects. In chapter 2, I have argued that this is not likely to be the case. At first sight, then, Jelinek's approach seems to be the most viable one. The only theoretical change that needs to be made is that subjects are licensed by agreement, instead of Nominative case.

In the following three sub-subsections, I will translate Jelinek's approach into my own framework, as developed in chapter 2. I will do this for Warlpiri and Straits Salish, the two languages that are discussed to a considerable extent by Jelinek. First, however, I will start by analyzing Mohawk, showing that Jelinek's approach can handle the structures discussed by Baker. In this respect I will argue against Baker's approach.

### 2.3.2 A proposal for Mohawk

Baker has motivated his analysis on the basis of principle C of the binding

theory, discussed in chapter 1 (subsection 3.1).<sup>24</sup> In Mohawk, a name inside a subordinate clause must not be coreferent with a PA in the matrix clause if the embedded clause is an argument.

(23) **Mohawk:** principle C<sup>25</sup>

- a. *wa-hí-'nha'-ne'* *[ne tsi [Sak]*  
 FACT-1SG.A>3SG.M.O-hire-PUNC because Sak  
*ra-yo'tΛ-hser-íyo ]*  
 3SG.M-work-NMLZ-be.good  
 'I hired [him]<sub>i/j</sub> [because [Sak]<sub>i</sub> is a good worker].'
- b. *wa-hi-hróri-'* *[tsi [Sak]*  
 FACT-1SG.A>3SG.M.O-tell-PUNC that Sak  
*ruwa-núhwe'-s ]*  
 3SG.F.A>3SG.M.O-like-HAB  
 'I told [him]<sub>i/j</sub> [that she likes [Sak]<sub>i</sub>].'

(Baker 1991:541)

The sentence in (23a) contains a name, *Sak*, which is inside an adjunct clause.<sup>26</sup> Apparently, *Sak* may be coreferent with the object-PA of the matrix clause. This means that the object-PA does not c-command *Sak*, since that would yield a violation of principle C. If *Sak* is in an argument clause, as is the case in (23b), it cannot be coreferent with the indirect object of the matrix verb.<sup>27</sup> Baker's analysis explains this by assuming that the indirect object is realized by *pro*, and that the direct object clause is the complement of the

<sup>24</sup> This principle states that nominal expressions must be free as long as they are not pronominal or anaphoric.

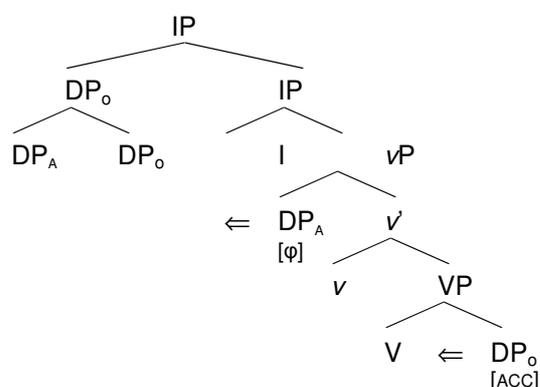
<sup>25</sup> PA-morphology in Mohawk is highly fusional. I, therefore, use the symbol '>' in order to separate two arguments in the gloss of a portmanteau morpheme, which is in accordance with the Leipzig glossing rules (see the list of abbreviations).

<sup>26</sup> Whatever is said with respect to names in this and the following examples applies to common nouns as well.

<sup>27</sup> Note that the same judgements apply to the English translations.

verb.<sup>28</sup> Baker argues that application of Jelinek's analysis to Mohawk would not provide a direct account for this contrast (1991:fn.3). According to the pronominal argument hypothesis, PAs cliticize to the predicate. This means that they incorporate into V or one of the functional heads in the extended verbal projection, as will be explained below. Because of this, Baker argues, it would be less obvious that the indirect object-PA would c-command *Sak* in the direct object clause in (23b). Nevertheless, Baker suggests that this problem could be solved by assuming that V, which he considers to dominate the indirect object-PA, does not count as a 'branching node' for c-command, as has been commonly assumed since Chomsky (1986). If this is correct, c-command of *Sak* by an incorporated indirect object-PA is possible. Although this raises certain other problems (as is the case according to Baker), I will accept this solution and assume with Jelinek that PAs are overt pronouns which incorporate into the predicate.<sup>29</sup> The tree structure in (24) contains my proposal for the analysis of nonconfigurality in Mohawk:

(24) Proposed analysis of nonconfigurality in Mohawk



<sup>28</sup> In Baker's theory, clauses may be generated in argument position, since they do not need case, unlike nominal arguments.

<sup>29</sup> The problems Baker refers to concern sloppy identity facts and purposive clauses in Mohawk, which suggest that subjects and objects do not have identical c-command domains. I will not discuss these problems.

In Mohawk, the direct object of a transitive verb is obligatorily realized by a pronoun, which is licensed by Accusative case. Suppose that *V* moves to *v*, and after that, incorporation of the object-PA takes place. In accordance with the literature on cliticization, this process is analyzed as movement to a functional head-position: the object-PA adjoins to *v*. Since only heads may adjoin to another head, the PAs have the status of D (instead of DP) after incorporation (cf. Postal (1966); Baker (1988); Baker & Hale (1990); Kayne (1994:42)).<sup>30</sup> Subsequently, the complex *v*-head moves to I.

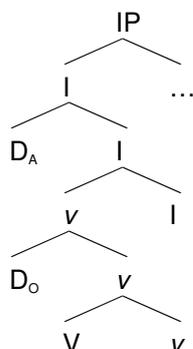
The subject in a Mohawk clause is an obligatory pronoun as well. It is merged in Spec,*v*P and incorporates into I. In line with the main hypothesis of this study, I will assume that this PA is licensed by agreement in Mohawk, although there is no morphological evidence for that. In chapter 5, we will see that Nez Perce does provide such evidence, as it has overt number agreement with incorporated subject-PAs.<sup>31</sup> Movement of the subject in (24) to Spec,IP would block incorporation. As Baker (1988:83) argues, the empty category principle (see chapter 1) requires the trace of an incorporated element to be c-commanded by the head in which the element has been incorporated. Considering the fact that I does not c-command its specifier, we need to assume that the subject-PA incorporates directly from Spec,*v*P. The various steps of head movement result in the following structure:

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<sup>30</sup> During movement, PAs are DPs, since this allows them to skip *V* when moving to *v*. In other words, pronominal clitics have a dual status (cf. Muysken (1982) and Chomsky (1995:242)). As we will see, this assumption is necessary in order to obtain the attested order of PAs and *V*.

<sup>31</sup> In chapter 4, we will see that passive constructions require us to assume that incorporation of a subject actually allows the object to be licensed by agreement. There, I will argue that incorporation is a morphological alternative to syntactic licensing of arguments, which may (but need not) co-occur with case marking or agreement.

(25) The functional head I after incorporation of PAs



Assuming that left branches precede right branches in pronunciation, the linear order of (25) is  $D_A$ - $D_O$ - $V$ - $v$ - $I$ . Whenever individual PAs can be recognized in a Mohawk portmanteau-PA, the subject indeed precedes the object, and together they precede the verb. The verb is followed by an aspectual morpheme, representing I.<sup>32</sup>

Baker takes the following sentences to present evidence for the fact that LAs are adjoined to IP. Crucially, adjuncts to IP cannot be c-commanded by any PA that is contained in I<sup>33</sup>

<sup>32</sup> The initial morpheme in the Mohawk predicates presented so far spells out mood or tense. Alternatively, it may follow the aspectual marker (cf. Baker (1996:30)). Although I will ignore the functional category this morpheme spells out, it should be pointed out that I must adjoin to the right of a higher functional head if it is realized as a prefix. As we will see below, the analysis of Warlpiri motivates the existence of this type of adjunction. Alternatively, I might phonologically cliticize to the higher functional head. I will discuss this alternative type of cliticization in the analysis of Straits Salish.

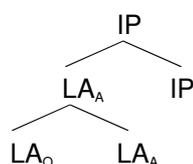
<sup>33</sup> As I have shown in (25), the PAs are within I. From there, they c-command every node that is dominated by IP. Since IP is a split node, the LAs are only dominated by a *segment* of IP. This is called *partial domination*, as only part of the IP-node dominates the adjoined LA(s). Chomsky has argued that partially dominated constituents do not count when it comes to c-command (1986:9).



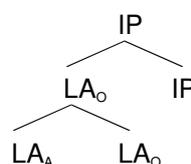
(cf. Kayne (1994:16)).<sup>34</sup> The structure in (27b), on the other hand, would be suitable for (26b), where *Sak* represents  $LA_A$ . An overt  $LA_O$  would not c-command *Sak*, as required by the binding theory.<sup>35</sup>

(27) **Mohawk**: adjunction of LAs

a.  $LA_O$  c-commands  $LA_A$



b.  $LA_A$  c-commands  $LA_O$



These structures allow for only one adjunction per constituent: only one LA may adjoin to IP, and probably only one other LA may adjoin to the first LA. The alternative, multiple adjunction to one constituent, should not be ruled out in principle. In (25), for example, both  $D_A$  and  $v$  adjoin to a single I-head.

We have seen that my interpretation of Jelinek's approach is able to capture several important facts in Mohawk. The fact that LAs do not c-command each other is captured by the way they adjoin to IP, as proposed in (27). Furthermore, pronoun incorporation in Mohawk is analyzed as adjunction to the left, resulting in the attested order of morphemes within the verb. In the next sub-subsection, we will see that Warlpiri can be accounted for by making slight adjustments with respect to these issues.

### 2.3.3 A proposal for Warlpiri

In (26b), the principle C effect expected if Mohawk were configurational appears to be absent. In Warlpiri, it is present, just like in English. Unlike

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<sup>34</sup> Kayne's definition of c-command is as follows: "X c-commands Y iff X and Y are categories and X excludes Y and every category that dominates X dominates Y." It is the notion of 'exclude' that makes the difference in (27). In (27a), for instance,  $LA_A$  contains  $LA_O$ , and hence does not exclude it. Therefore,  $LA_A$  cannot be said to c-command  $LA_O$ , whereas  $LA_O$  does c-command  $LA_A$ .

<sup>35</sup> Although the LAs are adjoined to the left hand side of IP, the sentences in (26) suggest that right adjunction is equally possible.

English, however, Warlpiri blocks coindexation in sentences like (26a) as well. In (28), coreference between the name *Jakamarra* and either of the pronominal arguments appears to be ungrammatical:

(28) **Warlpiri**: principle C

- a. *[[Jakamarra]-kurlangu maliki] ka-∅-∅*  
 Jakamarra-GEN dog PRS-3SG.A-3SG.O  
*[nyanungu-rlu] wajili-pi-nyi*  
 DEM-ERG chase-NPST  
 ‘[He]<sub>i</sub> is chasing [[Jakamarra]<sub>i</sub>’s dog].’ (coreference bad in English)
- b. *[[Jakamarra]-kurlangu maliki-rli] ka-∅-∅*  
 Jakamarra-GEN dog-ERG PRS-3SG.A-3SG.O  
*[nyanungu] wajilipi-nyi*  
 DEM chase-NPST  
 ‘[[Jakamarra]<sub>i</sub>’s dog] is chasing [him]<sub>i</sub>.’ (coreference allowed in English)

(Hale 1994:207)

First of all, the sentences in (28) differ from the ones in (26) in containing two overt LAs instead of one. One LA contains the name *Jakamarra*, the other is an independent demonstrative pronoun. As in (26), the LA containing the name doubles the O-PA in the a-sentence and the A-PA in the b-sentence. In both sentences, coreference between *Jakamarra* and the independent pronoun is bad, no matter how the constituents are ordered.

Baker (2001) proposes to account for the differences between Mohawk and Warlpiri by developing an alternative analysis, based on work by Speas (1986, 1990). Speas argues that the LAs in a language like Warlpiri compare to secondary predicates in English. Hale (1983:34) and Bittner & Hale (1995:82,83) distinguish five classes of Warlpiri nominals, ranging from a class that is mostly (and perhaps exclusively) made up of arguments to a class that is mostly (and perhaps exclusively) predicative (cf. sub-subsection 3.2.2). In (9b), we have already seen how a discontinuous argument can be interpreted as a secondary predicate. Another example is presented in (29):

(29) **Warlpiri**: secondary predication

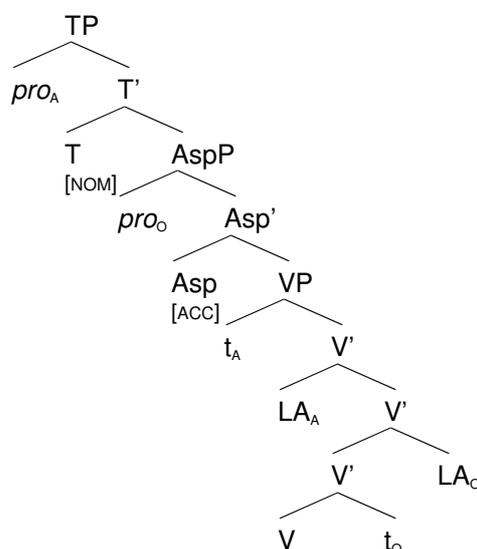
*nya-nyi ka-rna-ngku ngarrka-lku*  
 see-NPST PRS-1SG.A-2SG.O man-after

'I see you (as) a man now (i.e., as fully grown, or initiated).'

(Hale 1983:32)

The direct object in (29) is clearly not *ngarrka* 'man', since the auxiliary contains a second person singular object-PA (-*ngku*). Instead, the noun *ngarrka* predicates over this PA. Baker therefore proposes that LAs in Warlpiri adjoin to V', like secondary predicates in English. As in Mohawk, PAs in Warlpiri are supposed to be realized as *pros* that move out of their base position (cf. (21)). This results in a structure where every *pro* c-commands every LA (cf. Baker 2001:425):<sup>36</sup>

## (30) Nonconfigurationality in Warlpiri (Baker)



This tree explains why a name inside one argument cannot be coreferent

<sup>36</sup> Baker assumes different functional heads for Warlpiri (aspect (Asp) and tense (T)).

with the other argument. LAs are secondary predicates, which are not likely to be coindexed with a PA because of their predicative function. A name contained in such a predicate (for instance, *Jakamarra* in (28)) could in principle be coindexed with a PA, assuming that such a name does not function as a predicate itself. In a footnote, Baker points out that the clause-structure given in (30) should not be extended to NP-structure (2001:fn.15). He cites Simpson (1983, 1991), who argues that a Warlpiri possessor noun is not an argument of the head noun (or a secondary predicate predicating over such an argument), but an adjunct. This means that possessors are expected to be subject to principle C, unlike secondary predicate head nouns.<sup>37</sup> Thus, the structure in (30), where both PAs c-command the LAs, predicts that Principle C is violated whenever a name inside an LA is coindexed with either of the PAs. Finally, assuming that LAs order freely with respect to V, Warlpiri's free constituent order is also accounted for.<sup>38</sup> The fact that secondary predicates are not required in a sentence explains the free omission of LAs. The possibility of having discontinuous LAs is a potential problem for Baker's account (cf. Legate (2001, 2002:38)), especially if nominal predication in Warlpiri is supposed to be similar to English nominal predication.

I believe that there is a simpler solution to the problem that is caused by the different ways in which Mohawk and Warlpiri behave with respect to Principle C. If we assume that Warlpiri LAs are adjuncts to IP, just like their Mohawk counterparts, the following difference between adjunction structures

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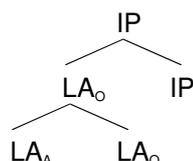
<sup>37</sup> Baker actually proposes to analyze nouns in Warlpiri as adjectives, since these two categories are collapsed into one class (cf. Bittner & Hale (1995)). Although he provides English equivalents with adjectives which are comparable to, and as bad as the sentences in (28), this is not likely to be the result of principle C and hence the main motivation of (30) would be lost under that proposal.

<sup>38</sup> Baker admits that this idea is questionable on the basis of English, showing on the basis of examples like *I only eat fish raw drunk* that depictive secondary predicates adjoin to the right of VP, with object depictives being adjoined closer to the head than subject depictives. He suggests that morphological case might play a role in the free ordering of Warlpiri secondary predicates (2001:fn.22).

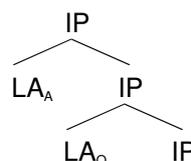
solves the problem immediately:

(31) Adjunction of LAs

a. Asymmetric c-command  
(Mohawk)



b. Symmetric c-command  
(Warlpiri)



As I have argued above, the structure in (31a) represents the situation in Mohawk: only one LA may be directly adjoined to IP, the second LA being adjoined to the first one. This way, the second LA asymmetrically c-commands the first one, and hence may contain a name that is coreferent with the LA that is adjoined directly to IP. In (31b), on the other hand, there is *symmetric* c-command between the LAs. In other words: each LA c-commands the other, implying that a noun in one of them may never be coreferent with the other LA. This explains the ungrammaticality of coindexation in both (28a) and (28b), but it still leaves the attested constituent orders unexplained.<sup>39</sup>

In order to predict the correct order of constituents in Warlpiri, one additional step must be taken. Recall from the examples given earlier that the Warlpiri auxiliary, consisting of an aspectual marker and the PAs of a clause, invariably occurs after the first constituent. This is not accounted for if the auxiliary is in I, like in Mohawk, and multiple LAs precede it, as they are adjoined to IP. Therefore, I will assume that Warlpiri has I-to-C raising, resulting in the structures presented in (33) and (34). This assumption is

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<sup>39</sup> Note that this analysis depends on the presence of both LAs. When only one LA is present, as in the Mohawk examples, my analysis is unable to predict the principle C violations in (28), unless it is assumed that the other LA is structurally present (but phonologically empty). I have not been able to ascertain whether coindexation is still ruled out if the independent pronoun is left unexpressed in (28), so nothing definitive can be said here.

motivated by the syntactic position of complementizers in embedded finite clauses.

(32) **Warlpiri:** complementizer clauses

[*karli-ngki*            *kuja-∅-npa-∅*            *yankirri*    *luwa-rnu* ],  
 boomerang-INST    COMP-PRF-2SG.A-3SG.O    emu        shoot-PST  
*ngulaju*    *rdilyki-ya-nu*  
 DEM        broken-go-PST

‘The boomerang you hit the emu with broke.’

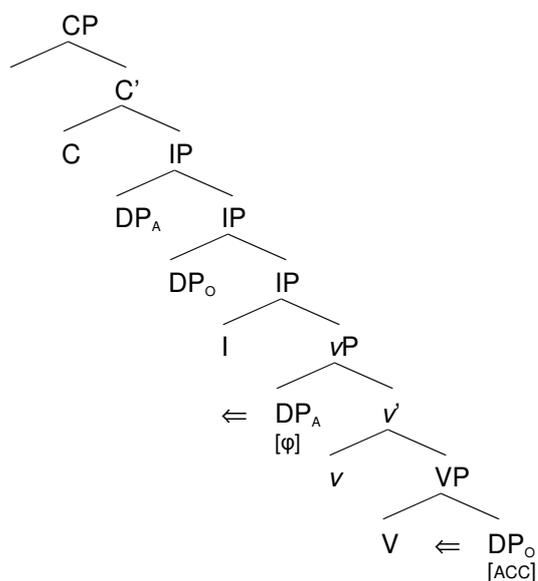
(Hale 1994:205)

In (32), the complementizer *kuja* hosts the auxiliary in a relative clause. If we assume that main clauses have an empty complementizer, raising of I to C can be viewed as a general property of Warlpiri syntax.<sup>40</sup>

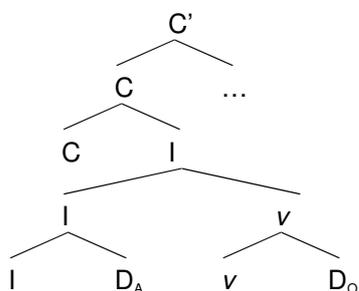
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<sup>40</sup> In (13) and (14), we have seen that the complementizer in *nonfinite* embedded clauses is suffixed to the verb. As pronominal arguments appear to be absent from nonfinite clauses, the distribution of C can be accounted for by assuming that V-to-I-to-C movement takes place before Spell Out, and adjunction to C is to the left.

(33) Proposed analysis of nonconfigurality in Warlpiri



(34) The functional head C after I-to-C movement



The verb in Warlpiri is a separate phonological constituent. It does not function as a host for PAs. This can be accounted for by assuming that V does not move to *v* before a derivation is sent to PF. Therefore, the derivation of a transitive sentence in Warlpiri starts with incorporation of the object-PA into *v*. As is shown in (34), *D<sub>O</sub>* adjoins to the right, instead of to the left, as is the case in Mohawk. After this, *D<sub>A</sub>* adjoins to (the right-hand side) of *I*. Subsequently, *v*-*D<sub>O</sub>* adjoins to *I*, and finally, *I* moves to *C*. This results in the attested C-I-*D<sub>A</sub>*-*D<sub>O</sub>* order.

As we have seen in (3), exactly one constituent precedes the Warlpiri auxiliary, which is explained by movement of any constituent to Spec,CP. Note that the assumption of I-to-C movement provides further motivation for the way LAs adjoin to IP in Warlpiri (cf. (31b)). The way LAs adjoin to IP in Mohawk (cf. (31a)) cannot be applied to Warlpiri, because it implies that two LAs may move as one constituent. In Warlpiri, it is impossible to have two LAs precede the auxiliary, and this follows from (31b).<sup>41</sup> It should be noted that movement to Spec,CP does not change anything with respect to Principle C effects, as Chomsky (1993) has argued that this condition applies under reconstruction, that is, to the positions where constituents are base-generated.

To sum up, my analysis of Warlpiri is essentially the same as the one proposed for Mohawk, differing only in the five following points: 1) multiple adjunction instead of singular adjunction to IP; 2) V-to-*v* movement after Spell Out instead of before; 3) adjunction to the right instead of to the left in head movement; 4) incorporation of  $D_A$  before *v*-to-I movement instead of after; 5) overt instead of covert I-to-C movement.

### 2.3.4 A proposal for Straits Salish

One of the differences between Mohawk and Warlpiri is the location of adjunction of a moved head. In Mohawk, adjunction is to the left of a higher head (cf. (25)), in Warlpiri it is to the right (cf. (34)). In this sub-subsection, we will see an example of a language that combines both strategies: Straits Salish. Furthermore, this language is like Mohawk in moving both V and  $D_O$  before Spell Out, whereas *v*-to-I movement is postponed until after Spell Out (as is the case with V in Warlpiri). Some basic Straits Salish clauses are presented in (35). These sentences show that both nouns and verbs take the same inflections when functioning as a predicate. Subject-PAs attach to a

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<sup>41</sup> However, recall from footnote 3 that a second constituent may precede the auxiliary when it is separated from the rest of the clause by an intonation break. I have analyzed this as 'sentence-external' dislocation, representing adjunction to CP.

tense morpheme, which in turn may appear as an enclitic on the predicate.

(35) **Straits Salish** (Salishan, Central Salish, Straits): basic clauses

- a. *swi'qo'ət=lə'-sx<sup>w</sup>*  
 young.man=PST-2SG.S  
 'You were a young man.'
- b. *i'enk<sup>w</sup>əs=lə'-sx<sup>w</sup>*  
 brave=PST-2SG.S  
 'You were brave.'
- c. *t'iləm=lə'-sx<sup>w</sup>*  
 sing=PST-2SG.S  
 'You sang.'
- d. *leŋ-t-oŋət=lə'-sx<sup>w</sup>*  
 see-TR-1PL.O=PST-2SG.A  
 'You saw us.'

(Jelinek 1995:489,492)

In (35), the equals sign indicates that the morpheme following it is a clitic in phonology, but not in syntax. Such a clitic does not adjoin to a higher functional head, as is the case with incorporation, but stays in its base position. Only when the derivation enters PF does such a clitic form a unit with the preceding morpheme(s). Hence, the glosses in (35) indicate that I and the subject-PA form a phonological clitic that attaches to whatever constituent precedes I. In (35c), for instance, *=lə'-sx<sup>w</sup>* ('=PST-2SG.S') attaches to the verb *t'iləm* ('sing').<sup>42</sup>

The complete paradigm of PA-forms is given in (36):

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<sup>42</sup> Note that my glosses are different from the ones provided by Jelinek. In her work, both the tense morpheme (I) and the subject-PA are separated from preceding material by '=', as she does not assume incorporation of the subject into I.

(36) **Straits Salish:** PA paradigm

|    |   | S/A                   | O/IO  |
|----|---|-----------------------|-------|
| SG | 1 | -sən                  | -oŋəs |
|    | 2 | -sx <sup>w</sup>      | -oŋəs |
|    | 3 | -∅/-s                 | =∅    |
| PL | 1 | -t                    | -oŋət |
|    | 2 | -sx <sup>w</sup> hele | -oŋəs |
|    | 3 | -∅/-s                 | -∅    |

(Jelinek 1995 :491,493; in preparation)

Third person PAs are often represented by zero morphemes, as was the case with third person singular in Warlpiri (cf. (10)). The overt form, -s, is only used with *transitive* subjects, which means that it appears to be an ergative marker. I will ignore this rather disturbing fact for the time being. In chapter 5, I will hint at a possible analysis of this suffix. Jelinek (in preparation) argues that independent pronouns are nonexistent in Straits Salish.

I does not always (phonologically) cliticize to the *verb*. When a sentence contains an adverb, for instance, this adverb will precede the predicate and I-D<sub>A</sub> phonologically cliticizes to the adverb:

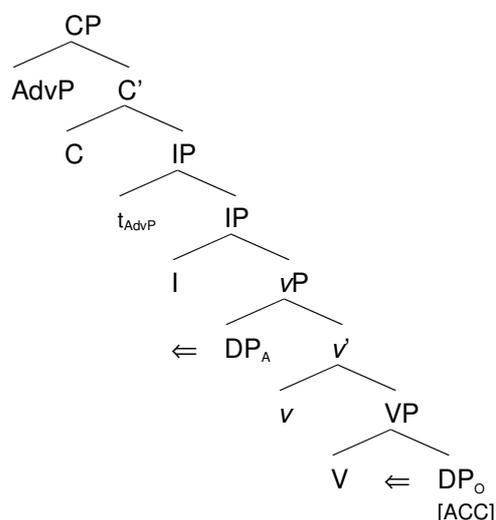
(37) **Straits Salish:** phonological cliticization

λ'e'=∅-sən            'əw'    t'əm'-t-∅  
 again=PRS-1SG.A    LK       hit-TR-3.O  
 'I hit him again.' / 'I also hit him.'

(Jelinek 1995:515)

Assuming that the adverb λ'e' ('again') adjoins to Spec,IP, the following tree structure shows how the sentence in (37) may be derived:

(38) Proposed structure for (37)



In (38), the adverb is moved to Spec,CP. This movement is probably driven by the need to check a focus feature. It leaves behind a linking particle (*əw* 'LK' in (37)) in the IP-adjoined position, between the adverb (plus tense and subject-PA) and the verb (plus object-PA). Since this linker may serve other functions as well, I will not have anything specific to say about its exact position or status, but will merely assume that *əw* ('again') has moved out of the AdvP.<sup>43</sup> Note that if I phonologically cliticized to the preceding element, it would cliticize to the linking particle, instead of the adverb. Therefore, I will make the additional assumption that there is obligatory I-to-C movement, as in Warlpiri. This assumption is motivated by sentences with overt complementizers.

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<sup>43</sup> Alternatively, the linking particle can be analyzed as a functional element heading its own projection. This would mean that the adverb is base-generated as the specifier of *əw*.

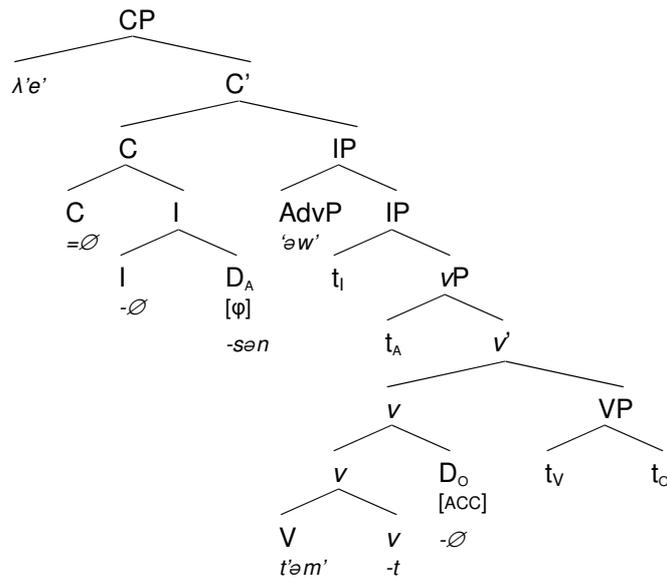
(39) **Straits Salish:** overt complementizer

*nəp-t-∅='ə-lə'-sx<sup>w</sup>*  
 advise-TR-3.O=Q-PST-2SG.A  
 'Did you advise him?'

(Jelinek, in preparation)

Sentences like the one in (39) have an overt complementizer, =*'ə*, which precedes the tense morpheme and cliticizes to the sentence-initial constituent. Like in Warlpiri, we need to assume that sentences without an overt complementizer have an empty C-head, to which I moves in overt syntax. Specifically, the tree in (38) looks like (40):

## (40) Specific structure for (37)

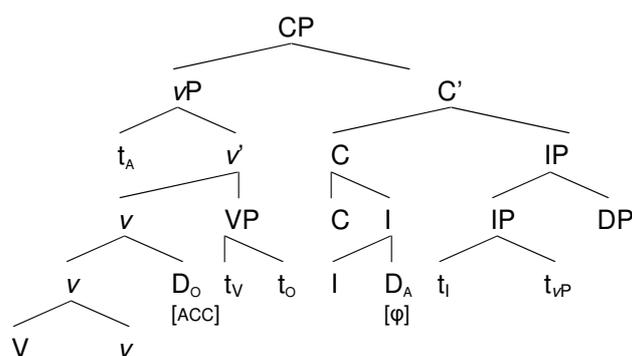


As usual, the direct object-PA is base-generated in the complement of the verb, where it is licensed by Accusative case. The verb adjoins to *v*, which is overtly realized by the transitivizer *-t*. Since the latter appears as a suffix on *V*, I assume that *V*-to-*v* movement results in left adjunction. Incorporation of the object-PA, however, takes place at the right-hand side of *v*, resulting in

the attested V-*v*-D<sub>o</sub> order. Movement of *v* to I does not take place before Spell Out. The subject-PA, which is merged next, adjoins to the right-hand side of I, and later on I right-adjoins to C, giving the linear order C-I-D<sub>A</sub>. The adverbial phrase adjoins to IP, λ'e' is raised to Spec,CP, leaving 'əw' in situ. The complex C-head phonologically cliticizes to λ'e'.

As we have seen in (35d), C may also cliticize to the verb. I will assume that this is accounted for by movement of *v*P to Spec,CP.<sup>44</sup> This movement is obligatory when there is no adverb.

(41) General proposal for Straits Salish



Notice that although head-movement of the complex *v* (to C) would perhaps yield the attested linear order, it would leave Spec,CP available for another constituent, which does not seem to be possible in this language. Therefore, only phrasal movement of *v*P to Spec,CP yields the correct result here.

In Straits Salish, LAs typically follow the predicate, even when it is preceded by an adverb. This means that they adjoin to the right-hand side of IP, as indicated in (41). Jelinek notes that it is quite uncommon to have more than one overt LA (1995:514). She refers to Kinkade (1983), who has suggested that sentences with two overt LAs represent English language influence. For this reason, I will not speculate on the way LAs are adjoined to

<sup>44</sup> This is compatible with Jelinek (in preparation).

IP (in terms of (31)). In any case, when a noun or verb functions as an LA, it is preceded by a demonstrative.

(42) **Straits Salish: LAs**

- a.  $t'ilə m=lə'=\emptyset$        $[cə \quad swi'qo'ət \quad ]$   
 sing=PST=3.S      DEM      young.man

'The young man sang.' /  
 'He sang, the one who is a young man.'

- b.  $swi'qo'ət=\emptyset$        $[cə \quad t'ilə m=lə']$   
 young.man=3.S      DEM      sing=PST

'He is a young man, the one who sang.' /  
 'The one who sang is a young man.'

(Jelinek 1995:490)

Jelinek suggests that LAs are (headless) relative clauses, as becomes clear from the English translations. On this analysis, nouns are always predicates, even when functioning as an LA. The demonstrative could be analyzed as a relative pronoun, the antecedent is the pronominal argument on the main predicate.

To conclude this sub-subsection, I state that my analysis for Mohawk and Warlpiri carries over to Straits Salish, except for the following details which are specific to Straits Salish: 1) adjunction to the right of IP; 2)  $v$ -to-I movement after Spell Out; 3) adjunction to the left and to the right in head movement; 4) overt I-to-C movement; 5) phonological cliticization of C-I-D<sub>A</sub> to the sentence-initial constituent.

In the next section, I will focus on the structural relation between LAs and their corresponding PAs. The fact that the LA is in an adjunct position puts restrictions on its referential properties, which leads to the prediction that LAs cannot be inherently quantified in languages like Mohawk, Warlpiri and Straits Salish. Since the main claim of this chapter is that ergative case patterns are only to be found in LAs of pronominal argument languages, we need to determine how we can test adjunct-LA status. It is therefore

important to investigate any restrictions on the referential content of the LAs in the languages at stake.

### 3 Quantification in natural language

The central idea of this study is that ergative case marking is found on LAs in nonconfigurational languages. The pronominal argument approach presented in the previous section has semantic implications for the type of DPs that may occur as LAs, and hence for ergatively patterning DPs in general. In particular, it has been argued that LAs must be referential. Inherently quantified LAs are predicted to be absent from languages with PAs. Quantifier/variable binding in a configurational language like English is only possible when the quantifier is in an argument position. Considering the fact that an LA by definition c-commands a coindexed PA from an A-bar-position, quantifier/variable binding is impossible. Especially Baker has argued that the relation between LA and PA involves coreference, rather than binding. I will start this section with a brief discussion of the difference between 'coreference' and 'quantifier/variable binding' in English (3.1). Next, I will explore the evidence with respect to quantification that has been adduced from Mohawk (3.2.1), Straight Salish (3.2.2) and Warlpiri (3.2.3). The main conclusion will be that LAs are indeed not *directly* quantified in these languages. Various methods of *indirect* quantification are used in order to fill this apparent gap.

#### 3.1 Binding versus coreference

In the previous sections, we have seen various applications of the binding theory in pronominal argument languages. For instance, reflexivization in Warlpiri showed that anaphors may only take the place of an object-PA (cf. (12)), suggesting that their antecedent is the subject-PA. This is an instance of principle A of the binding theory. Furthermore, I have discussed principle C-effects in Mohawk and Warlpiri, which were almost absent from the former

but omnipresent in the latter. In discussing these phenomena, I have assumed that binding requires a c-command relation, as well as coindexation. However, there appears to be more to it when we investigate dependencies between quantified DPs and pronouns. A pronoun that depends on a referential DP receives a referential interpretation (43a), but a pronoun dependent on a quantified DP receives a variable interpretation (43b).

(43) Coreferent/bound pronouns

- a. *[Mary]<sub>i</sub> was washing [[her]<sub>ij</sub> daughter]*
- b. *[every mother in this street]<sub>i</sub> was washing [[her]<sub>ij</sub> daughter]*

In (43a), *Mary* is the unique referent to which the pronoun *her* refers if the two are coindexed. In the b-sentence, however, *every mother in this street* ranges over a set of mothers, and for every one of them, *her* is able to refer to that particular mother under coindexation. In other words, the pronoun in the object receives a variable interpretation because the subject is quantified. Apparently, the subject must c-command the pronoun, since reversing the arguments results in ungrammaticality (under coindexation).

(44) Bound pronouns: obligatorily c-commanded

- a. *[[her]<sub>ij</sub> daughter] was washing [Mary]<sub>i</sub>*
- b. *[[her]<sub>ij</sub> daughter] was washing [every mother in this street]<sub>i</sub>*
- c. *[the man [who talked to [Mary]<sub>i</sub> yesterday]] said that [[her]<sub>ij</sub> daughter] had been very helpful*
- d. *[the man [who talked to [every mother in this street]<sub>i</sub> yesterday]] said that [[her]<sub>ij</sub> daughter] had been very helpful*

In (44a), *Mary* does not c-command the pronoun. However, the pronoun *her* can be coindexed with *Mary*. We cannot say that the pronoun is bound by *Mary* here, since binding explicitly requires c-command between antecedent and pronoun. Therefore, these kinds of dependencies have traditionally been

referred to with another term: 'coreference'. The only requirements that apply to coreference are the binding principles B and C. Principle C rules out coindexation in *She<sub>i</sub> was washing Mary<sub>i/j</sub>*, as I have demonstrated before. Principle B states that pronouns must be free in their 'governing category' (Chomsky 1981:188) or 'local domain' (Chomsky 1995:95). This principle accounts for the difference between the grammatical (43a) and the ungrammatical *Mary<sub>i</sub> was washing her<sub>i/j</sub>* (under coindexation). The b-sentence in (44) shows that a pronoun in the subject cannot be coindexed with a quantified object. This construction has been termed weak crossover (cf. Wasow (1972)), and will be discussed shortly. Although (44b) might suggest that linear order may be responsible for the ungrammaticality of coindexation in the b-sentence, the sentences in (44c/d) show that it is really c-command, rather than linear order. From these facts, people have concluded that dependencies between quantifiers and pronouns involve binding, instead of coreference (cf. Reinhart (1983); (1986:125)). That is, a pronoun can only be interpreted as a variable if it is c-commanded by and coindexed with a quantified DP.

C-command and coindexation are, however, not the only requirements for binding.

(45) Bound pronouns: obligatorily c-commanded from an A-position

- a. *[she]<sub>i</sub> was washing the baby boy, [Mary]<sub>i</sub>*
- b. \* *[she]<sub>i</sub> was washing a baby boy, [every mother in this street]<sub>i</sub>*

The pronominal subjects in (45) are c-commanded by a right dislocated DP.<sup>45</sup> This DP is in an A-bar-position. Again, coindexation is only possible in the a-sentence, where the dislocated DP is fully referential. The b-sentence shows that without coindexation, the whole sentence is in fact

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<sup>45</sup> The same is expected to hold for left dislocation. The reason why I have chosen right dislocation in these examples is that it makes them a bit more acceptable without context.

ungrammatical. It turns out that antecedents must occupy an A-position in order to be able to bind a pronoun. The same requirement can be shown on the basis of constituent questions in which the question word is an argument. Question words are generally interpreted as quantifiers, since they do not have a specific reference. A questioned subject may bind a pronoun in the object, although it moves to an A-bar-position (Spec,CP). A questioned object cannot bind a pronoun in the subject, although the c-command requirement is met.

(46) Weak crossover

- a. *[who]<sub>i</sub> t<sub>i</sub> was washing [[her]<sub>ij</sub> daughter]?*
- b. *[whom]<sub>i</sub> did [[her]<sub>ij</sub> mother] wash t<sub>i</sub>?*

In (46a), the pronoun is bound by the trace of the questioned subject. This trace is in a c-commanding A-position, meeting every requirement for successful binding. The questioned object in the b-sentence also leaves a trace, but this trace does not c-command the pronoun in the subject, and coindexation fails (cf. Reinhart (1983), Cinque (1990) for this analysis; cf. Higginbotham (1980), Koopman & Sportiche (1981), Chomsky (1982) for different proposals formulating the exact conditions that produce this effect). This is another example of the weak crossover effect (cf. (44)).

By now, it should be clear why the pronominal argument approach posits restrictions on the referentiality of LAs. LAs can only occur in adjoined positions, since the argument positions are occupied by PAs. As we saw in Warlpiri, the only PA that can ever be an anaphor serves as a direct object (cf. (12)). Such an element is necessarily bound by the subject-PA in order to satisfy principle A of the binding theory. Apparently, it may not be bound by an LA, although coindexation is possible. All the other PAs are pronouns, since they can only be c-commanded by an antecedent in A-bar-position. As we have seen in the examples above, such a configuration only allows for *coreference*, not for *binding*. As quantifier/variable readings are only possible in a binding configuration, quantified LAs are not supposed to be present in

a pronominal argument language. In other words, if ergativity is found on LAs only, it is expected to correlate with absence of quantified DPs.

However, this statement is too strong. When talking about quantifiers, we should take into account that not every quantifier automatically implies a bound variable-reading. A universal quantifier like *all*, for instance, keeps the interpretation of a DP referential, and hence any pronoun dependent on such a DP is coreferent with it (cf. Baker 1995, summarizing Vendler 1967 and Reinhart 1983). Rather than triggering a distributive reading, as is the case with the universal *every*, *all* implies a collective reading. This is signalled by the fact that *all* almost exclusively occurs with plural nouns, triggering plural agreement when it is a subject in English.<sup>46</sup> Therefore, a pronoun that is coreferent with an *all*-DP is also a plural form (cf. (47a)).

(47) Universal quantifier *all*: coreference

- a. [*all the mother\*(s) in this street*]<sub>i</sub> were/\*was washing [[*their*]<sub>ij</sub> / [*her*]<sub>\*ij</sub> daughter(s)]
- b. [[*their*]<sub>ij</sub> daughters] were washing [*all the mothers in this street*]<sub>i</sub>
- c. [*the man [who talked to [all the mothers in this street]<sub>i</sub> yesterday]*] said that [[*their*]<sub>ij</sub> daughters] had been very helpful
- d. [*they*]<sub>i</sub> were washing the baby boys, [*all the mothers in this street*]<sub>i</sub>

The sentences in (47b-d) are grammatical under coindexation between the pronoun and the *all*-DP. Hence, the *all*-DP behaves more like *Mary*, unlike *every*-DPs, as shown above. They would not be grammatical under coindexation if *all* behaved like *every*. Thus, when looking for quantificational readings in (ergative) pronominal argument languages, one might expect to find a universal quantifier like *all*.

True quantifiers like *every*, on the other hand, are supposed to be

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<sup>46</sup> It should be added that it is not impossible for quantifiers like *all* to participate in distributive readings. In (*all*) *the soldiers defended themselves well*, the implication is that every soldier defended himself well. However, this reading seems to be specific for the verb *defend*, since leaving the quantifier out does not change the meaning. This type of distributive reading will be left out of the discussion.

structurally absent from nonconfigurational languages. One other such quantifier is negative *nobody*, as is shown in the sentences in (48).

(48) Negative quantifiers: binding

- a. *[nobody in this street]<sub>i</sub> was washing [[her]<sub>ij</sub> daughter]*
- b. *[[her]<sub>ij</sub> daughter] was washing [nobody in this street]<sub>i</sub>*
- c. *[the man [who talked to [nobody in this street]<sub>i</sub> yesterday]] said that [[her]<sub>ij</sub> daughter] had been very helpful*
- d. \* *[she]<sub>i</sub> was washing the baby boy, [nobody in this street]<sub>i</sub>*

Coindexation between the *none*-DP and the pronoun is only possible in (48a), where the latter c-commands the pronoun from an A-position. In (48b-d), coindexation is ungrammatical, suggesting that any pronoun depending on a negative quantifier must be bound by the DP containing that quantifier.

Finally, it should be noted that coreference effects can also be measured across sentence boundaries. A pronoun may have an antecedent in a preceding sentence, unless the antecedent contains a true quantifier, as in (49b,d):

(49) Coreference across sentence boundaries

- a. *[Mary]<sub>i</sub> was washing [the baby girl]<sub>j</sub>. [She]<sub>ij/k</sub> was having lots of fun.*
- b. *[Every mother in this street]<sub>i</sub> was washing [a baby girl]<sub>j</sub>. [She]<sub>ij/k</sub> was having lots of fun.*
- c. *[All the mothers<sub>i</sub> in this street] were washing [baby girls]<sub>j</sub>. [They]<sub>ij/k</sub> were having lots of fun.*
- d. *[None of the mothers in this street]<sub>i</sub> was washing [the baby girl]<sub>j</sub>. But [she]<sub>ij/k</sub> was having lots of fun.*

The sentences in (49a,c) show that a pronoun may be coreferent with DPs like *Mary* and *all the mothers in this street*, suggesting again that *all* is not a true quantifier.

In the next subsection, I will review what has been said with respect to

the absence of true quantifiers in Mohawk, Straits Salish and Warlpiri, and the ways in which these languages deal with quantificational readings.

### 3.2 Quantification in nonconfigurational languages

#### 3.2.1 Mohawk

Baker (1995, 1996) discusses at length the behaviour of two quantifier-like elements in Mohawk. One of them, *akwéku*, clearly has universal force.

(50) **Mohawk:** universal quantification

- a. *akwéku wa'-t-hu-[a]hsÁ'tho-*  
 all FACT-DUP-3PL.M.S-cry-PUNC  
 'Everybody cried.'
- b. *Akwéku t-a-hu-[a]táweya't-e'. Sok wa-hú-[a]tyΛ-'.  
 all CIS-FACT-3PL.M.S-enter-PUNC then FACT-3PL.M.S-sit-  
 PUNC*  
 'Everyone<sub>i</sub> came in. Then they<sub>i/j</sub> sat down.'

(Baker 1996:55,57)

The PA coindexed with the LA *akwéku* in (50a/b) is obligatorily plural. In the b-sentence, a pronoun in another sentence may even be coreferent with *akwéku*. In transitive clauses, if both LAs are overtly represented, *akwéku* may be coindexed with a pronoun in the other LA.

(51) **Mohawk:** coreference with *akwéku*

- a. [*akwéku*] *wa'-ti-shakoti-noru'kwányu-* [*ne raotí-skare'*]  
 all FACT-DUP-3PL.M.A>3O-kiss-PUNC PRT 3PL.M.POSS-  
 friend  
 'All (of them)<sub>i</sub> kissed their<sub>i</sub> girlfriends.'
- b. [*raotí-skare'*] *wa'-t-huwati-noru'kwányu-* [*akwéku*]  
 PL.M.POSS-friend FACT-DUP-3PL.A>3PL.M.O-kiss-PUNC all  
 'Their<sub>i</sub> girlfriends kissed all (of them)<sub>i</sub>.'

(Baker 1995:24,26; 1996:57)



Baker explains this requirement by analyzing *yah* as sentential negation. Indeed, this element occurs independently in cases of predicate negation.<sup>47</sup>

(54) **Mohawk**

|             |            |                            |  |                   |              |
|-------------|------------|----------------------------|--|-------------------|--------------|
| <i>Tyer</i> | <i>yah</i> | <i>te-ha-yéna-∅</i>        |  | <i>ne</i>         | <i>takós</i> |
| Peter       | not        | NEG-3SG.M.A>Z.O-catch-STAT |  | PRT <sup>48</sup> | cat          |

'Peter did not catch the cat.'

(Baker 1995:29)

On this hypothesis, the examples in (52) and (53b) are the sentential negations of (55).

(55) **Mohawk**

|              |                               |
|--------------|-------------------------------|
| <i>uhkák</i> | <i>wa-shakó-kA-'</i>          |
| someone      | FACT-3SG.M.A>3SG.F.O-see-PUNC |

'He saw somebody.'

(Baker 1996:59)

However, this suggests that Mohawk at least contains an indefinite pronoun, *uhkák* 'someone', which in English can be both referential and quantificational (cf. Heim 1982, Reinhart 1983).<sup>49</sup> All of the sentences in (56) (at least) have a reading in which the *some*-DP refers to a specific person.

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<sup>47</sup> Note that the verb also carries a negative prefix (*te-*) in all of these cases. As this prefix appears to contribute to the negative meaning of *yah*, one might analyze it as a functional head. This head projects a specifier in which *yah*, an adverb, is base-generated (cf. footnote 43).

<sup>48</sup> The function of this particle is unclear, it mainly marks a nominal constituent that appears postverbally (cf. Baker (1996:137)).

<sup>49</sup> Note that *úhkak* 'somebody' loses its final consonant when it appears under the scope of a negative adverb or, as we will see below, in an interrogative context. Baker suggests that it is a polarity item under these circumstances. The final /k/ might be a reduction of the particle *khok* ('only') (1996:90).

(56) Indefinites: referential interpretation

- a. [*some mother in this street*]<sub>i</sub> was washing [[*her*]<sub>ij</sub> daughter]
- b. [[*her*]<sub>ij</sub> mother] was washing [*some girl in this street*]<sub>i</sub>
- c. [*the man [who talked to [some mother in this street]<sub>i</sub> yesterday]*] said that [[*her*]<sub>ij</sub> daughter] had been very helpful
- d. [*she*]<sub>i</sub> was washing a baby boy, [*some mother in this street*]<sub>i</sub>
- e. [*Some mother in this street*]<sub>i</sub> was washing [*a baby girl*]<sub>j</sub>. [*She*]<sub>ij/k</sub> was having lots of fun.

Again, the *some*-DP c-commands the pronoun from an A-position in (56a) only. In the remaining sentences, where there is no c-command relation, coindexation appears to be possible, suggesting that these indefinites are like *all*-DPs in allowing for coreference with a pronoun. Heim (1982) has argued that indefinites are not inherently quantificational. Their interpretation may depend on other elements in the clause. Under certain circumstances they might receive a quantificational interpretation. For instance, *some mother* may be interpreted as *some mother or other* when (56a) is extended as in (57).

(57) *every time we passed through this street, [some mother]<sub>i</sub> was washing [[her]<sub>ij</sub> daughter]*

This sentence can be interpreted as describing a situation in which we saw a different mother washing her daughter, each time we passed through a particular street. The adverbial clause quantifies over events, and for each event, *some mother* may receive a different interpretation. Hence, the pronoun *her* covaries with *some mother*, not because *some mother* is inherently quantificational, but because it is a variable receiving different values under the scope of the adverbial quantifier *every time* (cf. Heim 1982). The quantificational reading is even present when there is no c-command relation between the indefinite and the pronoun.

- (58) a. *every time we passed through this street, [the man [who talked to [some mother]<sub>i</sub> ] ] said that [[her]<sub>ij</sub> daughter] had been very helpful*  
 b. *every time we passed through this street, [the man [who talked to [every mother]<sub>i</sub> ] ] said that [[her]<sub>ij</sub> daughter] had been very helpful*

In a context where we frequently pass through a particular street together with a man who usually talks to mothers about their daughters, the sentence in (58a) clearly has a quantificational reading. Reinhart (1987) proposes a rule of ‘quantifier indexing’, which allows the index of an indefinite to be copied onto another quantificational element, such as an adverbial. It should be noted that this strategy only works with indefinites, and not with true quantifiers like *every*. The b-sentence shows that *every mother* and the pronoun may not be coreferent. Returning to the Mohawk indefinite, Baker (1995, 1996) argues that *úhkák* may receive a quantificational reading as well.

(59) **Mohawk:** indefinite quantification

- a. *tyótku* *uhkák* *Λ-yúk-kΛ-‘* *nónΛ*  
 always someone FUT-3SG.F.A>1SG.O-see-PUNC when  
*kanát-a-ku* *y-Á-k-e-‘*  
 town-Ø-LOC TRLOC-FUT-1SG.S-go-PUNC  
 ‘Someone always sees me when I go to town.’
- b. *niyesorek* *uhkák* *yuk-yenawá’s-e’*  
 rarely someone 3SG.F.A>1SG.O-help-HAB  
 ‘Rarely does someone help me.’

(Baker 1996:60-61)

In (59), *tyótku* ‘always’ and *niyesorek* ‘rarely’ are adverbs that trigger a quantificational reading of the indefinite LA *uhkák*. The index of this LA is copied onto the adverbs, making it possible for the corresponding subject-PA to be interpreted as a variable. The adverbs range over events, and in each event, *uhkák* has a fixed value, with which the subject-PA is coreferent.

Finally, question words are a source of quantificational readings in

English, suggesting that we should look at constituent questions in pronominal argument languages. Consider the following sentences:

(60) **Mohawk**: constituent questions

- a. *úhka t-á'-yΛ-[e]-'?*  
 who CIS-FACT-3SG.F.S-go-PUNC  
 'Who is coming?'
- b. *nahótΛ wa-hs-hnínu-'?*  
 what FACT-2SG.A>3.N.O-buy-PUNC  
 'What did you buy?'

(Baker 1996:67)

These sentences show that Mohawk seems to possess question words that function as LAs. Weak crossover effects show that the interpretation of these words is truly quantificational.

(61) **Mohawk**

- a. *Sak wa-ha-tekat-e'* *[ne óyvte' [ne*  
 Sak FACT-SG.M.A>N.O-burn-PUNC PRT wood PRT  
*wa'-t-há-ya'k-e'* *]]*  
 FACT-DUP-SG.M.A>N.O-chop-PUNC  
 'Sak<sub>i</sub> burned [the wood [that he<sub>i</sub> chopped]].'
- b. *uhka wa-ha-tekat-e'* *[ne óyvte' [ne*  
 who FACT-SG.M.A>N.O-burn-PUNC PRT wood PRT  
*wa'-t-há-ya'k-e'* *]]*  
 FACT-DUP-SG.M.A>N.O-chop-PUNC  
 'Who<sub>i</sub> burned the wood that he<sub>\*ij</sub> chopped?' (coreference allowed in English)

(Baker 1995:45)

In (61a), *Sak* is an LA that is primarily coreferent with the subject-PA of the main clause. It may also be coreferent with the subject of the relative clause, which is contained in the object-LA. As I have pointed out above, this possibility is predicted by the way in which both LAs are adjoined to the main

IP in Mohawk (cf. (31a)). Replacing *Sak* by the question word *uhka* makes coindexation with the relative clause subject impossible, as is shown by (61b). This can be interpreted as a weak crossover configuration: the question word is in an adjunct position, from where it is impossible to bind the relative clause subject.

Apart from this, the problem is how the question word can bind the *matrix* subject-PA. Baker suggests that the answer lies in a movement analysis. Contrary to other LAs, question words are base-generated in an argument position, from which they move to Spec,CP. This appears to be confirmed by the requirement that *wh*-constituents are sentence initial in Mohawk. Since PAs are empty *pros* on Baker's account, the subject morphology found on the verb in (61) is analyzed as agreement, which absorbs case (as usual in Baker's theory, cf. (21)). Baker further argues that the trace of a question word does not need case, and hence there is no immediate problem for his analysis. Further evidence for this claim comes from sentential complements. These also occupy an argument position, and hence they may contain a pronominal argument that is coreferent with the questioned matrix subject.

(62) **Mohawk**: binding into a sentential complement

|             |                     |                |              |                            |
|-------------|---------------------|----------------|--------------|----------------------------|
| <i>úhka</i> | <i>í-hr-ehr-e'</i>  | [ <i>Uwári</i> | <i>raúha</i> | <i>ruwa-núhwe'-s</i> ]     |
| who         | Ø-SG.M.A-think-IPFV | Mary           | 3SG.M        | SG.F.A>SG.M.O-<br>like-HAB |

'Who<sub>i</sub> thinks that Mary likes him<sub>i/j</sub>?' (coreference allowed in English)

(Baker 1996:78)

This example is similar to (46b), where a direct object pronoun is interpreted as a variable because it is bound by the trace of a question word in subject position. In (62), the independent pronoun *raúha* ('3SG.M') is an LA of the sentential complement. According to Baker's account, it is c-commanded by the trace of the question word, which is in the subject argument position of the matrix verb. The requirements for binding are met, and hence there is no

problem with the fact that Mohawk contains interrogative pronouns in Baker's analysis.

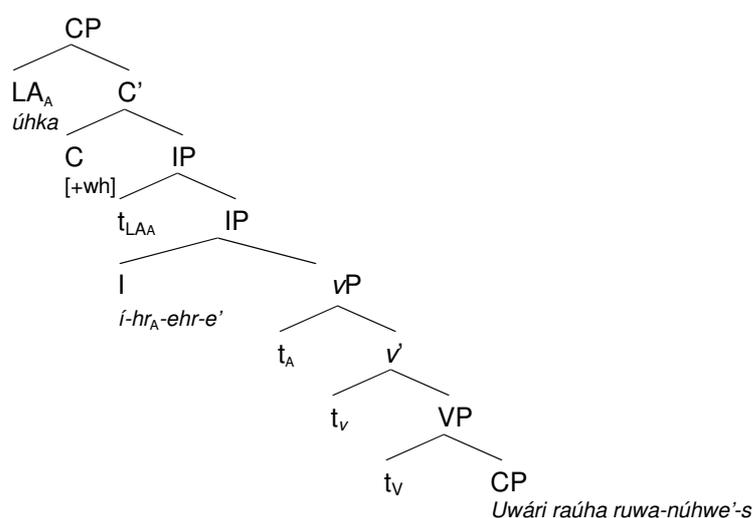
However, the idea that independent representations of arguments in Mohawk are sometimes adjuncts and sometimes arguments is somewhat unexpected. It raises the question why only question words may be base-generated as arguments in Mohawk, whereas quantified NPs may not. According to Baker (1995:47, 1996), this question is also raised for configurational languages like English, since it is very common to move question words, but never possible to move quantifiers, at least not before Spell Out. Furthermore, Baker's claim that *wh*-traces do not need case is strange. Chomsky (1981:175) has argued that traces may not remain caseless. Finally, my own approach analyzes the person/number markers on the verb as the actual arguments, and therefore Baker's assumption that question words move out of an argument position is not tenable.

Instead, I assume that question words in Mohawk are LA-adjuncts, doubling a PA. This is only possible if question words are not inherently quantificational. Considering the fact that their phonological shape is similar to that of indefinites, a plausible assumption would be that they are indefinites. As we have seen above, indefinites may receive a quantificational interpretation under the influence of a *c*-commanding adverb, like *yah* ('not'). I propose that such a reading may also arise under the influence of a functional head. Suppose that the interrogative feature of *C* is responsible for the quantificational reading of *úhka* in (60), (61b) and (62). Again, the indefinite is a free variable, the value of which depends on *C*. *C* ranges over situations, and in each situation there is a specific value for the indefinite. This explains why there can be a coreference relation between the question word and the PA that is primarily associated with it. Reinhart's rule of 'quantifier indexing' establishes the link between the interrogative *C*-head and the indefinite LA. This rule applies in overt syntax, as question words invariably appear sentence-initial in Mohawk. Hence, I assume part of Baker's movement analysis. The difference is that *wh*-movement on my

account is movement from an IP-adjoined position to Spec,CP, whereas on Baker's account there may be movement from an argument position.<sup>50</sup>

My approach makes the same predictions with respect to the sentences in (61b) and (62), where an argument in a subordinate clause may or may not be coreferent with the question word. First of all, the sentence in (62) is unproblematic because the object of the sentential complement is c-commanded by the matrix subject-PA. This constituent originates in an argument position, and hence there is no weak crossover effect.

(63) Proposed structure for (62)



The indefinite *úhka* is an adjunct to the matrix IP. The subject-PA of the matrix clause is coreferent with this adjunct. The variable interpretation arises under the influence of the interrogative C, the specifier of which is filled by *úhka* after movement. The variable interpretation carries over to the embedded LA *raúha* and the PA that is coreferent with it in the sentential complement (under coindexation). This is due to the fact that the CP is c-

<sup>50</sup> Naturally, when adjuncts are questioned, the question word will always originate in an adjunct position, irrespective of the analysis of question words in other contexts.

commanded by the trace of the matrix subject-PA in Spec,vP.<sup>51</sup>

The structure in (63) applies to sentences with a sentential direct object. Often, however, the direct object of a transitive verb is nominal. Nominal direct objects in Mohawk can only be realized by LA-adjuncts, which are never c-commanded by an element in an argument position. Hence, we do not expect coreference between a questioned constituent and an argument contained in an LA to be possible. This is confirmed by the ungrammaticality of sentences like (61b), when the subject of a relative clause modifying the direct object nominal is to be coreferent with the matrix subject.

(64) Repeated from (61b)

|             |                               |            |               |            |
|-------------|-------------------------------|------------|---------------|------------|
| <i>uhka</i> | <i>wa-ha-tekat-e'</i>         | <i>[ne</i> | <i>óyvte'</i> | <i>[ne</i> |
| who         | FACT-SG.M.A>N.O-burn-PUNC     | PRT        | wood          | PRT        |
|             | <i>wa'-t-há-ya'k-e'</i>       | <i>]]</i>  |               |            |
|             | FACT-DUP-SG.M.A>N.O-chop-PUNC |            |               |            |

'Who<sub>i</sub> burned the wood that he<sub>\*i/j</sub> chopped?' (coreference allowed in English)

Before considering (64), it is useful to have a look at another pair of examples discussed by Baker. In (65), the object-LA contains a possessive pronoun. This pronoun can be covert, as in the a-sentence, or overt, as in the b-sentence (*akaúha* '3SG.F'). Only in the former case can this pronoun be coreferent with a questioned subject.

(65) **Mohawk:** possessed objects

|    |             |  |            |                     |           |
|----|-------------|--|------------|---------------------|-----------|
| a. | <i>úhka</i> | <i>wa'-akó-[a]ti-'</i>                                   | <i>[ne</i> | <i>ako-núhkwa</i>   | <i>]?</i> |
|    | who         | FACT-SG.F.A>N.O-PUNC                                     | PRT        | 3SG.F.POSS-medicine |           |
|    |             | 'Who <sub>i</sub> lost [[her] <sub>i/j</sub> medicine]?' |            |                     |           |
| b. | <i>úhka</i> | <i>wa'-akó-[a]ti-'</i>                                   | <i>[ne</i> | <i>akaúha</i>       |           |
|    | who         | FACT-SG.F.A>N.O-PUNC                                     | PRT        | 3SG.F               |           |

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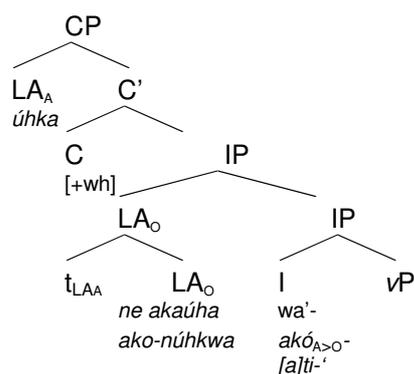
<sup>51</sup> It is additionally assumed here that direct objects do not have to incorporate when they are CPs.

*ako-núhkwa* ]?  
 3SG.F.POSS-medicine  
 'Who<sub>i</sub> lost [[her]<sub>i/j</sub> medicine]?'

(Baker 1996:78,80)

The explanation for (65b) is straightforward on Baker's account: *ne akaúha ako-núhkwa* ('PRT 3SG.F 3SG.F.POSS-medicine') is an LA-adjunct doubling the object-PA. The subject is realized by *úhka*, which starts out as an argument and moves to Spec,CP. Because *akaúha* is not c-commanded by the trace of *úhka*, the two cannot be coreferent. According to my own proposal, the trace of *úhka* is in an IP-adjoined position, where it may c-command the object-LA.

(66) LA-adjuncts in (65b)



In principle, a variable reading would be possible under this configuration, since the subject-PA, which incorporates into I, is c-commanded by *úhka* and its trace.<sup>52</sup> In order to exclude coreference in (65b), I will assume that the independent pronoun *akaúha* is a contrastive topic. In null subject languages, subjects are only overt when they introduce a new referent or when the referent is unexpected, for example because it has not been prominent for some time. Independent possessors are often omitted in

<sup>52</sup> Recall that the trace of LA<sub>A</sub> is able to c-command into IP, since the segment of LA<sub>O</sub> dominating it does not count as a branching node.

Mohawk. In this respect, they are similar to subjects in null subject languages.<sup>53</sup> In other words, (65b) asks ‘who lost HER medicine?’, where it is clear that the stressed pronoun must have a referent that is salient in the discourse, or else within sight of speaker and hearer. The speaker knows whose medicine he is talking about, but he wants to know who lost it. Hence, coreference in (65b) is blocked for pragmatic reasons. This immediately explains why coreference is grammatical in (65a). The contrastive pronoun is absent, so the possessor is not necessarily contrasted with the subject of the sentence.

Baker needs an alternative explanation for (65a). I make use of this to explain absence of coreference in (64). According to Baker, (65a) is a parasitic gap construction, meaning that both the subject argument position and the possessor in the object-LA are occupied by a trace. As is well known, adjuncts are islands for extraction. Hence, an element inside an adjunct cannot normally be questioned. However, when another constituent is questioned as well, an adjunct may contain a so-called *parasitic gap* (cf. Chomsky (1982)). According to Baker, the LA *ne ako-núhkwa* (‘PRT 3SG.F.POSS-medicine’) in (65a) contains a gap that is licensed by the trace of the subject. If this is the correct analysis for (65a), it can be maintained under my own analysis. Moreover, it explains why coreference is impossible in (64). Following Chomsky (1986), parasitic gaps are not licensed when an adjunct contains an island for extraction (e.g., *\*which book<sub>i</sub> did you read t<sub>i</sub> [without knowing [who wrote t<sub>i</sub>]]?*, where the parasitic gap is in a *wh*-island that is contained in an adjunct-CP). The example in (64) does contain such an island: the object-LA is a complex DP, one of the canonical islands for extraction. This explains why the subject-PA in the relative clause cannot be coreferent with *úhka*: the complex DP is also an adjunct, which means that

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<sup>53</sup> I will not try to answer the question of whether the possessive agreement morpheme is real agreement or an incorporated pronoun, because it is not important for the point I want to make here.

the parasitic gap is not licensed.<sup>54</sup>

In sum, then, true quantifiers can be argued to be absent from Mohawk. Universal quantification is achieved by an equivalent of English *all*, which is not a true quantifier. Negative and interrogative quantification appear to be realized by an indefinite under the scope of an appropriate adverbial quantifier or C-head. Assuming with Heim (1982) that indefinites are free variables, the pronominal argument approach makes the right predictions for Mohawk.

### 3.2.2 Warlpiri

Bittner & Hale (1995) claim that the Warlpiri lexicon does not contain any other grammatical categories except for N and V. These categories can be distinguished on the basis of their morphological properties. Determiners and adjectives, which are cross-linguistically suitable for bearing quantificational readings, do not exist in Warlpiri. Hale (1983) and Bittner & Hale (1995) argue that the class of Warlpiri nouns has the following subcategories:

(67) **Warlpiri:** distinctions within the lexical category N

a. Pronouns, demonstratives, and other indexicals

e.g. *ngaju* 'I', *nyampu* 'this', *yangka* 'evocative demonstrative, i.e. the one we both know about', *jintakumarrarni* 'all of it, all of them', *nyarrpara* 'which one', etc.

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<sup>54</sup> Note that coreference in (64) is not ruled out if c-command by *úhka* and its trace are sufficient conditions, as I have suggested with respect to (65a). Hence, I need to assume that the parasitic gap construction is the only possible strategy in (64). This might have to do with the fact that the relative clause is headed by a non-interrogative C. Apparently, this constituent blocks a variable reading on any constituent that is c-commanded by it, at least if this reading is to be the result of a higher interrogative C.

## b. Names

e.g. *Jamakarra*, *Namakarra*, *Napaljarri*, ..., in general, the subsection terms used as names; dreaming names, European names, place names, and so on; *ngana* 'who'.

## c. Common nouns

e.g. *karnta* 'woman', *ngarrka* 'man', *miyi* 'vegetable food', *nyiya* 'what', etc.

## d. Expressions of quality or cardinality

e.g. *wiri* 'big', *nyurnu* 'sick', *panu* 'many', *nyajangu* 'which ones, how many', etc.

## e. Expressions of psychological states

e.g. *pina* 'knowledgeable about DAT', *ngampurrpa* 'wanting DAT', etc.

## f. Locatives and directionals

e.g. *kulkurru* 'in the middle', *yatijarra* 'north', *nyarrpara* 'where', etc.

(Bittner & Hale 1995:82,83)

Group (a) is more likely to be used as an argument of a predicate, whereas group (f) is restricted to serve as a main or secondary predicate. With respect to *panu* ('many', class d), Bittner & Hale (1995) argue that it is a noun which basically means 'large group'. Depending on its definiteness, it can more or less function as universal *all*, but that is not a problem for my analysis, if Baker is right. I have not been able to detect true quantifiers like 'every' and 'no' in Warlpiri. Question words, however, do occur. As is the case in Mohawk, they often occupy sentence-initial position.

(68) **Warlpiri:** question words

|              |                 |                        |                   |
|--------------|-----------------|------------------------|-------------------|
| <i>ngana</i> | <i>ka-∅-∅</i>   | <i>nyanungu-nyangu</i> | <i>maliki-rli</i> |
| who          | PRS-3SG.A-3SG.O | DEM-GEN                | dog-ERG           |

*wajilipi-nyi?*  
chase-NPST

'Who<sub>i</sub> is his<sub>i,j</sub> dog chasing?' (coreference bad in English)

(Hale 1994:203)

In (68), the object-LA is realized by a question word, *ngana* 'who'. According to my proposal, this element is either an indefinite pronoun under the scope of an interrogative C or a secondary predicate. As far as I have been able to ascertain, *ngana* is only used interrogatively, just like question words in configurational languages. The secondary predicate option, then, seems to be preferred. Although I have rejected Baker's (2001) analysis, which states that every LA in Warlpiri is a secondary predicate, my proposal does not exclude this possibility for a subclass of LAs, i.e. question words. In the next sub-subsection, as well as in chapter 4, we will see examples from other languages where question words are actually secondary predicates. Note that the sentence in (68) compares to (65b), which shows that coreference between an overt possessor and a questioned argument is not possible in Mohawk. I have explained this by assuming that overt possessors in Mohawk serve as contrastive topics. For Warlpiri, where coreference appears to be possible (cf. (68)), I need to assume that the pragmatics of overt possessors differs from their Mohawk counterparts. This might follow from another difference between the two languages, possessor agreement (cf. footnote 53). Unlike Mohawk, Warlpiri lacks person/number marking on the possessed noun, and hence it is to be expected that possessors are more often overtly present in Warlpiri than in Mohawk. If a secondary predicate analysis is correct for elements like *ngana*, the fact that both the object-PA and the possessor in the subject-LA are under its scope allows us to predict the coindexation in (68). For this it is necessary to assume that *ngana* is in Spec,CP.

Although the data are quite scarce, there are good reasons to believe that true quantifiers are absent from Warlpiri, as expected on the basis of a pronominal argument approach.

### 3.2.3 Straits Salish

Jelinek (1995) discusses quantification in Lummi and Samish, both

considered to be dialects of Straits Salish (Salishan). Remember from the previous subsection that the pronominal arguments and the demonstrative  $cə$  (cf. (42)) are the only candidates for the category D. Although Jelinek glosses the latter as a determiner, it is probably better viewed as a relative pronoun. Real determiners are absent from Straits Salish, and so are true quantifiers (cf. Jelinek (1995:511-512)). The only quantificational elements that are encountered are either main predicates or adverbials. For instance, the adverbial  $mək^w$  ‘all/completely’ has universal quantificational force.

(69) **Straits Salish:** universal quantification

- a.  $mək^w = lə' - t$                        $'əw'$      $t'əm' - t = \emptyset$   
 all/completely=PST=1PL    LK            hit-TR=3  
 ‘We hit them all.’
- b.  $mək^w = \emptyset - t$      $'əw'$      $\eta a - t = \emptyset$      $[cə \quad sčeenəx^w]$   
 all=PST=1PL    LK            eat-TR=3    DEM    fish  
 ‘We ate all the fish.’ / ‘We all ate the fish.’ /  
 ‘We ate the fish up completely.’

(Jelinek 1995:513-514)

Apparently, an adverb like  $mək^w$  may scope over the whole predicate, or either of the arguments. In the following example, this adverb functions as a main predicate:

(70) **Straits Salish:** adverb as main predicate

- $mək^w - t - \emptyset = yeq - sx^w$   
 all-TR-3.O=OPT-2SG.A  
 ‘Wish you would take them all / finish them off.’

(Jelinek 1995:517)

In (70), the transitivizer  $-t$  is attached to  $mək^w$  as if it is a verb. As I have done in (35d), I assume that  $vP$  has moved to Spec,CP (cf. (41)). The subject-PA incorporates into an optative marker, the result of which

phonologically cliticizes to the (empty) direct object. Jelinek shows that Straits Salish has a negative predicate,  $\text{'əwə}$ , which can also be used as an adverb or as a main predicate (1995:517). Although she does not discuss constituent negation, I assume that this is established by using  $\text{'əwə}$  as well.

Given the fact that nouns are used as predicates, even when they function as LAs (where they are the main predicate of a free relative clause), it is not surprising that Straits Salish contains question words. These question words behave like predicates.

(71) **Straits Salish:** constituent questions

- a.  $wet=le'-\emptyset$   
 who/person=PST-3.S  
 Who was it?
- b.  $wet=\emptyset-\emptyset$                        $[cə \quad swi'qo'ət \quad ]$   
 who/person=PRS-3.S            DEM    young.man  
 'Who is he, the young man?'

(Jelinek 1995:522)

The noun  $wet$  ('person') can only function as a predicate. In (71), it is interpreted as 'who', but it may also be interpreted as an indefinite predicate, for example 'be someone' (cf. Jelinek 1995:523). Since it is a predicate, it will never be coindexed with a PA. Finally, it should be noted that there is a sentential question marker, probably of category C, which surfaces in yes/no questions.

(72) **Straits Salish:** yes/no questions

- $nəp-t-\emptyset='ə-le'-sx^w$   
 advise-TR-3.O=Q-PST-2SG.A  
 'Did you advise him?'

(Jelinek, in preparation)

In short, in Straits Salish adverbial quantification plays an even more

important role than in Mohawk. Every instance of quantification is realized by quantificational adverbs or main predicates. LAs are never inherently quantificational, which is predicted by their adjunct status.

In this section, I have given an overview of the various ways in which Mohawk, Warlpiri and Straits Salish deal with the overall absence of inherently quantified noun phrases. It turns out that in these languages, arguments may acquire a quantificational reading under the influence of adverbs or functional heads. I do not want to claim here that this is the only way in which quantification in pronominal argument languages is done. Mithun (1988:87) observes that there are languages where indefinite arguments trigger their own person/number markers on the verb. It might well be the case that these languages incorporate not only definite pronouns, but indefinite pronouns as well. If the latter are free variables, as I have assumed above, quantificational readings are expected to occur under the influence of PAs. Mithun cites various native North American languages, and Van der Voort (2000, 2004) discusses similar facts in Kwaza, an isolate from Brazil. In chapter 5, we will see an example of a verbal prefix in Nez Perce which calls for a distributive reading of a PA.

#### **4 Nonconfigurationality and ergativity: the Second Pattern Hypothesis (SPH)**

In this chapter, I have shown that the main hypothesis, developed in chapter 2 and repeated in (73) below, applies to pronominal arguments (PAs) in nonconfigurational languages. In other words, the nominative/Accusative pattern, which emerges from the way in which verbal arguments in configurational languages are licensed, is also encountered in nonconfigurational languages.

|               |   |                  |                       |
|---------------|---|------------------|-----------------------|
| (73)          | Main hypothesis: universal licensing of arguments (preliminary version) |                  |                       |
| Intransitive: | [ <sub>IP</sub> DP <sub>S,φ</sub>                                       | V+I <sub>φ</sub> | ]                     |
| Transitive:   | [ <sub>IP</sub> DP <sub>A,φ</sub>                                       | V+I <sub>φ</sub> | DP <sub>O,Acc</sub> ] |

In the previous sections, we have seen that PAs distinguish subjects from objects, which I have taken to be evidence for the fact that there is Accusative case on object-PAs. A further assumption has been that subject-PAs are licensed by agreement, although they do not move to Spec,IP.<sup>55</sup> Instead, they trigger agreement by incorporating into I. The only difference between configurational and nonconfigurational languages is that in the latter, arguments are always pronominal, and in addition, arguments are incorporated. In the following scheme, incorporation is represented by the + symbol:

|               |  |  |   |
|---------------|--|--|---|
| (74)          | Licensing of arguments in pronominal argument languages                    |  |   |
| Intransitive: | [ <sub>IP</sub> PA <sub>S,φ</sub> + V+I <sub>φ</sub>                       |  | ] |
| Transitive:   | [ <sub>IP</sub> PA <sub>A,φ</sub> + V+I <sub>φ</sub> + PA <sub>O,Acc</sub> |  | ] |

Because of the fact that verbal arguments should also be able to carry emphasis or lexical information, nonconfigurational languages of the kind discussed here may double their PAs by independent pronouns or full noun phrases. As I have argued in the preceding sections, these LA-doubles are adjuncts to IP.<sup>56</sup> Every LA is coindexed with a PA, which is coreferent with it. Baker (1996:112), referring to Cinque (1990), argues that LAs are licensed by forming a chain with a PA. A typical property of chains is that only one

<sup>55</sup> Recall that the reason for this is that incorporation into I would be blocked after movement of the subject-PA to Spec,IP, because of the empty category principle.

<sup>56</sup> Except for question words in Warlpiri: these are taken to be adjuncts to the V-projection, if I am correct in analyzing them as secondary predicates.

member is case-marked. In terms of the main hypothesis of this study, this means that only one member (i.e., the PA) is licensed by either case or agreement. Therefore, it is to be expected that LAs appear without morphological case. In the following sentence from Mohawk, for instance, *Sak* can be interpreted as A or O:

(75) **Mohawk:** caseless LAs

*Sak wa-hó-[a]hseht-e'*  
 Sak FACT-3SG.M.A>3SG.M.O-kill-PUNC  
 'Sak killed him.' or 'He killed Sak.'

(Baker 1996:130)

The sentence in (75) is ambiguous because both (pronominal) arguments are third person singular masculine. As soon as one PA differs in gender, number or person from the other one, ambiguity disappears. Mohawk distinguishes only four genders, but it is well-known that many Bantu languages have much richer inventories of noun classes, including gender and number distinctions. As I have mentioned in section 3 of chapter 2, several of these languages have been analysed as pronominal argument languages.<sup>57</sup> Their LAs are unmarked for case, just like the Mohawk counterparts. Baker also discusses other languages that have fewer gender distinctions than Mohawk but which nevertheless do not mark their LAs for case. Examples are Wichita (Caddoan), Nahuatl (Uto-Aztecan), Ainu (isolate: Japan), Mayali and Nunggubuyu (Australian). Straits Salish, (discussed in the previous section), Papago (Uto-Aztecan), mentioned by Jelinek (1984:66), and Somali (Afro-Asiatic, cf. Saeed (1999); Svolacchia &

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<sup>57</sup> Although Baker (1996, 2002, to appear) explicitly excludes Bantu languages like Chicheŵa and Kinande from the polysynthetic languages, there is no problem analyzing them as pronominal argument languages. We only need to allow for optionality in the realization of an argument by a PA. Apparently, Bantu languages have both options for the object argument, as do the other languages with optional object 'agreement' mentioned in chapter 2. This has important implications for parameter theory, as I will discuss in chapter 6.

Puglielli (1999)) can be added to this list.

Other pronominal argument languages do have case marking on LAs. In the previous sections, we have seen quite a few examples of Warlpiri, which uses an ergative pattern. The following example, repeated from (28a), is illustrative:

(76) **Warlpiri**: ergative LAs (cf. (28a))

- a. *Jakamarra-kurlangu maliki ka-∅-∅ nyanungu-rlu*  
 Jakamarra-GEN dog PRS-3SG.A-3SG.O DEM-ERG  
*wajili-pi-nyi*  
 chase-NPST  
 'He is chasing Jakamarra's dog.'

Because of the fact that *Jakamarra-kurlangu maliki* ('Jakamarra-POSS dog) is unmarked for case, it can only be interpreted as being coreferent with the object-PA. The independent pronoun *nyanungu-rlu* ('DEM-ERG') is necessarily coreferent with the A-argument, because it carries an Ergative case marker. If Warlpiri were like Mohawk in having no overt case marking on LAs, the sentence in (76) would be ambiguous. The syntactic chain consisting of an LA and a PA seems to differ fundamentally from syntactic chains in configurational languages. Whereas the PA is licensed by case or agreement, the LA may be case-marked as well. However, there are indications that LA-cases are not related to the licensing of arguments. Baker (1996) argues that these cases can only be semantic.

In addition to Warlpiri, Baker (1996) mentions Ngandi, Ngalakan, and Rembarrnga, three members of the Gunwinjguan branch of Australian (like Mayali and Nunggubuyu), as well as Chukchi (Chukotko-Kamchatkan). In all of these languages, transitive subject-LAs receive an overt case marker (Ergative), whereas LAs with s/O-functions remain caseless. According to Baker, the Ergative is not a grammatical case, but a semantic case that serves other functions as well (1996:129-133). And indeed, in languages like Warlpiri, Ngandi and Chukchi, the Ergative case has the same morphology

as the Instrumental case. Dixon (1994) notes that in general, Ergative case tends to be homophonous with an Instrumental or Locative case. These cases are typically used for nonargumental DPs, and hence it does not come as a surprise that LAs, which do not occupy argument positions, can only be marked by such cases. The fact that the overt case marker attaches to LA<sub>A</sub>, rather than LA<sub>O</sub>, is likely to be explained by the fact that passive constructions often have their A-argument in an oblique case. This link between oblique case markers and transitive subjects can be expected to be crucial in the development of ergative case patterns. Further evidence for the fact that Ergative case does not license an LA comes from the fact that in languages like Ngalakan and Rembarrnga, Ergative morphology is not obligatorily present.

Apparently, then, ergative case marking primarily functions as a device needed for disambiguating sentences with overt LAs, as discussed with respect to (76).<sup>58</sup> It creates a *second pattern*, which occurs alongside the universal nominative/Accusative marking shown by the PAs. Compare the bracketed structures in (77) with the ones in (74):

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<sup>58</sup> In Lakhota, another language that is likely to be of the pronominal argument type, ambiguity may arise in sentences with two third person singular arguments. Rather than using LA-case marking, Lakhota uses word order to disambiguate such sentences: the leftmost noun phrase is the subject. Hence, the following sentence can have only one meaning:

(i) **Lakhota** (Siouan, Siouan Proper, Central, Mississippi Valley, Dakota)

|                |           |              |           |                  |
|----------------|-----------|--------------|-----------|------------------|
| <i>wičháša</i> | <i>ki</i> | <i>mathó</i> | <i>wā</i> | <i>Ø-Ø-kté</i>   |
| man            | ART       | bear         | ART       | 3SG.O-3SG.A-kill |

‘The man killed a bear.’

|               |                                     |                                 |  |     |
|---------------|-------------------------------------|---------------------------------|--|-----|
| (77)          | Second Pattern Hypothesis (SPH)     |                                 |  |     |
| Intransitive: |                                     | [ <sub>IP</sub> LA <sub>S</sub> | [ <sub>IP</sub> PA <sub>S,φ</sub> + V+I <sub>φ</sub>                       | ]]  |
| Transitive:   | [ <sub>IP</sub> LA <sub>A,Erg</sub> | [ <sub>IP</sub> LA <sub>O</sub> | [ <sub>IP</sub> PA <sub>A,φ</sub> + V+I <sub>φ</sub> + PA <sub>O,Acc</sub> | ]]] |

Recall from chapter 1 that the typological distribution of ergativity is marked in two ways. First of all, the class of non-ergative languages outnumbers the class of ergative languages. Furthermore, languages that do display ergative patterns, often do so in only part of their grammar. In other words, ergativity is marked both across and within languages. With the Second Pattern Hypothesis (SPH), we have a ready explanation for the first fact: ergativity can only arise in nonconfigurational languages of the pronominal argument-type. Moreover, it is not likely to arise in languages that can rely on gender distinctions in their PA-system or strict constituent order in order to avoid ambiguous sentences. Put differently: only a subclass of the world's (nonconfigurational pronominal argument) languages has the potential to develop ergativity of the type described here. The fact that ergativity is often restricted within languages is also captured to a considerable extent: the SPH restricts ergativity to case marking on independent arguments. Although we are not yet able to cover all the varieties of ergativity discussed in chapter 1, the SPH already achieves an impressive result.

There is no a priori reason to exclude the possibility that oblique case markers are used on object-LAs, rather than transitive subject-LAs. Therefore, it is to be expected there are pronominal argument languages using an accusative case pattern on their LAs. Recall that languages like Spanish have case marking on clitic left-dislocated objects:

- (78) **Spanish:** Accusative case on clitic-double (repeated from chapter 2, section 3)

*a un niño nosotros lo esta-mos lavando*  
 ACC a child 1PL 3SG.M.ACC be.PRS-1PL wash.GER  
 'A child, we are washing it.'

The fact that *a un niño* ('ACC a child') carries an Accusative case marker might be explained by the fact that the Accusative case is morphologically separable from the DP that it is associated with. This, in turn, can be explained by the fact that clitic-doubling in Spanish is optional. In transitive sentences without clitic-doubling, nominal direct objects carry overt Accusative case, which is therefore a productive morpheme. Furthermore, the Accusative marker supposedly stems from a preposition, and is identical to the Dative marker, which is compatible with oblique case marking of object-LAs. Languages with subject/object marking on the verb combined with accusatively patterning independent arguments are Kwaza (mentioned in the previous section) and several Uto-Aztecan languages (see for instance Jelinek (1984:66) on Cupeño; Casad (2002) on Cora; Comrie (1982) on Huichol). The hypothesis that UG does not allow for object agreement, as made explicit in chapter 2 (section 3), forces us to assume that these languages can only be pronominal argument languages. Although I have not seen much data from these languages, I assume that this is correct. With respect to the relatively small class of ergative languages, this possibility is helpful, since it restricts that class of languages even more. That being said, nothing in my theory is against having both an Ergative and an Accusative marker available for LAs. This predicts that there are SPH languages with tripartite LA-case marking. In chapter 5, I will argue that this happens in Nez Perce. Another case in point is perhaps Kham, the tripartite system of which is illustrated in chapter 1 (subsection 2.4).

Before moving on to chapter 4, where I deal with those instances of ergativity that are not explained by the SPH, I will close this chapter with some brief remarks on *Tukang Besi*, the Austronesian language discussed in section 4 of chapter 2. Applying the SPH to this language appears to be successful (cf. Donohue (1999:123-129)). Recall that subjects in *Tukang Besi* always seem to be realized by a pronominal argument. There are two ways of realizing the object, depending on the presence or absence of object

'agreement'. In the latter case, the direct object is an independent pronoun or full DP marked by *te*, which I have analyzed as an Accusative marker. Such a direct object may only appear immediately after the verb:

(79) **Tukang Besi** (repeated from chapter 2, section 4)

- a. *ku-ʻita te ana (na iaku)*  
 1SG.A-see ACC child ART 1SG  
 'I saw a child.'
- b. \* *kuʻita na iaku te Ana*

In chapter 2, the marker *na*, which accompanies the subject-LA, was analyzed as a caseless article. When object 'agreement' is present, this has to be analyzed as an incorporated pronoun, since it allows the additional independent pronoun / full DP to follow the subject-LA:

(80) **Tukang Besi** (repeated from chapter 2, section 4)

- a. *ku-ʻita-ʻe na ana (te iaku)*  
 1SG.A-see-3.O ART child ART.ERG 1SG  
 'I saw the child.'
- b. *kuʻitaʻe (te iaku) na ana*

In (80), the subject-LA is obligatorily accompanied by *te*, whereas the object-LA co-occurs with *na*. As (postverbal) *intransitive* subjects always co-occur with *na* as well, we are dealing with ergative marking. In *Tukang Besi*, *te* is not homophonous with any other case. Nevertheless, *te* has other uses besides Accusative and Ergative. Donohue notes that any nominal accompanied by *na* may be fronted, in which case *na* is replaced by *te*. The fronted constituent accompanied by *te* is focused. Apart from that, there is a strategy which allows any nominal to be preposed. Such nominals are separated from the clause by an intonation break, and their pragmatic status is that of a topic. Core arguments, whether marked by *na* or *te*, co-occur with *te* when topicalized in this way (1999:59-63). Hence, *te* appears to function

as a focus or topic marker when occurring in a preverbal constituent, and which pragmatic function it fulfills depends on the position this constituent occupies: Spec,CP (for focus) or a CP-adjoined position (for topic). This shows that the Ergative marker is not necessarily related to an oblique case marker.<sup>59</sup>

The next chapter deals with languages showing ergative person/number marking on the verb. I will develop a separate hypothesis that is closely linked to the SPH in order to account for these patterns. The main idea will be that these languages have PAs for one argument only, which is the transitive subject. The conclusions reached with respect to the referential properties (cf. section 3 of the current chapter) will be used in order to prove that the transitive subject (A) indeed behaves differently from S and O.

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<sup>59</sup> So far, I have ignored evidence from quantifiers in the discussion of *Tukang Besi*, due to lack of data. However, as shown by Donohue (1999:128-129), question words appear to have a promising distribution. In s/o-function, words like *emai* are unable to double the PA on the verb. Direct objects can only be questioned in a clause without object-doubling. An intransitive subject may only be questioned in a cleft construction employing a relative clause. The same goes for transitive subjects in constructions without object-doubling. Quite unexpectedly, however, a transitive subject can be readily questioned when the object is realized as a PA. I do not have a suitable explanation for this quirky behaviour.

## chapter 4

# Ergative as passive

### 1 Introduction

The basic hypothesis of this study states that every language is basically nominative/Accusative. So far, I have been assuming that languages have one agreement projection, and hence that a verb may agree with only one argument per clause, the subject. Any language in which verbal morphology refers to more than one argument is not directly covered by this hypothesis. As I have shown in the previous chapter, there are nonconfigurational languages that realize their arguments as incorporating pronouns. These pronominal arguments (PAs) form part of the explanation for agreement patterns that seem to refer to both subjects and objects. Rather than analyzing the person/number markers appearing in the predicate as agreement, I consider them to be the actual arguments of the verb, incorporated pronouns. In the languages discussed in chapter 3, incorporated subjects (S and A) differ from incorporated objects (DO and IO) with respect to their form and their position in the predicate. These differences were taken to be evidence for the configurational status of the languages in question. Objects, unlike subjects, carry structural Accusative or inherent Dative case, and a subject is clearly base-generated in a position c-commanding any objects. The assumption that incorporated objects are licensed by case, and incorporated subjects by agreement, enabled us to maintain the basic hypothesis. In other words, base-generation and licensing

of PAs in nonconfigurational languages does not differ fundamentally from the way verbal arguments in configurational languages are base-generated and licensed. Both follow an accusative pattern. Ergativity only appears incidentally as a case pattern applied to lexical arguments (LAs). The latter are adjuncts doubling the PAs. The fact that these constituents may follow an ergative pattern is covered by the Second Pattern Hypothesis (SPH).

However, as we have seen in chapter 1, other ergative languages require the transitive verb to agree with the object, instead of the subject. Furthermore, in languages like Basque, where person/number marking on the verb refers to both subject and object, the pattern is strictly ergative. Intransitive subjects and direct objects (S and O) are registered by identical markers, which are predominantly prefixal. Transitive subjects (A) trigger suffixes, which differ to some extent from the prefixes. Hence, the language seems to distinguish between an ‘absolute’ and an ‘ergative’ verbal paradigm. This is shown in (1).<sup>1</sup>

(1) **Basque** (repeated from chapter 1, subsection 2.3)

- a. *ni*            *ibil-tzen*    *naiz*  
 1SG.ABS walk-IPFV 1SG.be.PRS  
 ‘I am walking.’
- b. *zu*            *ibil-tzen*    *zara*  
 2SG.ABS walk-IPFV 2SG.be.PRS  
 ‘You are walking.’
- c. *zu-k*        *ni*            *garbi-tzen*    *nau-zu*  
 2SG-ERG 1SG.ABS wash-IPFV 1SG.have.PRS-2SG.A  
 ‘You are washing me.’
- d. *ni-k*        *zu*            *garbi-tzen*    *zaitu-t*  
 1SG-ERG 2SG.ABS wash-IPFV 2SG.have.PRS-1SG.A  
 ‘I am washing you.’

(Sonia Ortiz de Arri)

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<sup>1</sup> Note that Basque also has an ergative case system on independent pronouns and full DPs, just like Warlpiri.

In Basque, independent pronouns and full DPs are often omitted, and constituent order has a high degree of flexibility. This suggests that Basque may be a pronominal argument language, which happens to apply ergative case marking on its PAs. Such an approach would of course be inconsistent with the theory that I have been developing so far, and in the present chapter I will therefore explain how this type of ergative morphology can be derived without having to reject the basic hypothesis.

The main hypothesis in this chapter is that languages like Basque have PAs for transitive subjects only. Moreover, instead of being licensed by agreement, these arguments are incorporated into the predicate. Agreement is used for the object, as is illustrated by the following sentence:

(2) **Basque** (cf. (1c))

|                 |                  |                   |                         |
|-----------------|------------------|-------------------|-------------------------|
| <i>zu-k</i>     | <i>ni</i>        | <i>garbi-tzen</i> | <i>nau-zu</i>           |
| 2SG-ERG         | 1SG              | wash-IPFV         | 1SG.have.PRS-2SG.A      |
| LA <sub>A</sub> | 1SG <sub>O</sub> | V                 | 1SG.AUX-PA <sub>A</sub> |

'You are washing me.'

In (2), *-zu* ('2SG.A') is the incorporated subject-PA. The independent pronoun *ni* ('1SG') (O) is base-generated in the complement position, from where it is moved to Spec,IP in order to be licensed by agreement. The independent pronoun *zu-k* ('2SG-ERG') is adjoined to IP, doubling the incorporated pronoun. It carries an oblique case, which in other languages may be absent. Since intransitive subjects are not incorporated in Basque, this case is only found on transitive subjects, and hence it is interpreted as Ergative.

My ideas are inspired by an analysis of passive put forward by Hoekstra (1986), Jaeggli (1986) and Baker et al. (1989). The key assumption of this analysis is that passive verbs assign an external theta role to a part of their own morphology. In my interpretation of this theory, which will be developed in the course of this chapter, I assume that passive verbs obligatorily generate an empty subject, which is incorporated into the predicate. This

subject is optionally doubled by a *by*-phrase, which can be compared to the Ergative DP in Basque.

(3) English passives

*I*      *am-∅*                  *wash-ed by you*  
 1SG<sub>O</sub>   AUX.1SG-PA<sub>A</sub>   V-PASS   LA<sub>A</sub>

I propose that transitive constructions in languages like Basque are always ‘passive’ in the sense that transitive subjects are realized by incorporated pronouns. These pronouns differ from the empty nominal category in English passive constructions in having specific reference, although I will argue later on that such an empty category is nevertheless available in Basque. Since the analysis of ergative constructions in Basque highly resembles the analysis of passives in non-ergative languages, I will term the central claim of this chapter the Ergative as Passive Hypothesis (EPH). This hypothesis is related to the SPH in that it applies to ‘partially nonconfigurational’ languages, languages that have PAs for transitive subjects only.

In section 2, I will discuss the idea that passive constructions are transitive, rather than intransitive. Next, I will argue that languages may lose their active constructions in favour of the passive, in which case a morphologically ergative pattern may arise that is characterized with inflection of the verb for s and o only. This pattern is illustrated by Kurmanji (Kurdish), one of the languages cited in chapter 1. In section 3, I will focus on languages in which the verb is overtly marked for person/number of the A-argument. In Basque, for instance, the incorporated transitive subject may be empty, as is the case in Kurmanji, but it may also be an unmarked pronoun. Morphological and syntactic evidence from Basque, as well as from Northwest Caucasian and Mayan, will be presented in order to provide evidence for this claim. Languages from the latter two families are morphologically ergative in the way Basque is, but some of them appear to

lack an incorporated empty category, which means that every transitive subject is realized as a PA. As I have made clear in the previous chapter, this imposes restrictions on the referentiality of the Ergative LA-double. In so far as I have been able to check, these restrictions indeed play a role in the languages in question. Section 4 concludes the chapter.

## 2 The passive

Many (accusative) languages have at least two voices: active and passive. The difference between these voices is traditionally explained by a different distribution of grammatical functions over arguments. Whereas the prototypical subject of an active clause is the A-argument, in a passive clause the O-argument is considered to be the grammatical subject. Morphological evidence comes from case and agreement. The O-argument of a passive construction is typically caseless and the verb agrees with it. The A-argument, when overtly realized, carries an oblique case or appears in a prepositional phrase. Syntactic evidence for the subject status of the O-argument comes from coordinated sentences. Recall from chapter 1 that the subject of the second conjunct may be left unexpressed if it is coreferent with the subject of the first conjunct. If the first conjunct is an active construction, the A-argument determines the reference of the omitted subject. In a passive first conjunct, the argument that is coreferent with the omitted subject is O.

(4) Conjunction reduction: active versus passive

- a.  $I_i$  hit you<sub>j</sub> and  $\emptyset_{i/r_j}$  fell over
- b. you<sub>i</sub> were hit (by me<sub>j</sub>) and  $\emptyset_{i/r_j}$  fell over

In (4a), the subject of *fell over* can only be the speaker, whereas in (4b) the omitted subject must be the hearer. Conversely, when the second conjunct

contains two arguments, A is left out when it is active, and O when it is passive.

(5) Conjunction reduction: active versus passive

- a. *I<sub>i</sub> fell over and Ø<sub>i</sub> hit you*
- b. *I<sub>i</sub> fell over and Ø<sub>i</sub> was hit (by you)*

In (5a), the speaker hits the hearer, but in (5b), the speaker undergoes the hitting. Other reliable tests for subjecthood, such as control constructions, equally identify the O-argument of a passive verb as the subject.

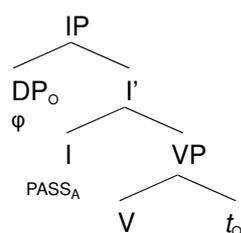
The question is how syntactic theory accounts for the fact that the argument receiving the internal theta role acquires the status of subject, both morphologically and syntactically. On the basis of the assumptions made in chapter 2, we have two logical possibilities, both of which have been proposed by various researchers. The first one is the traditional assumption that passive verbs are really intransitive. They lack an external theta role, and hence the internal argument naturally shows the morphosyntactic behaviour of an intransitive subject (s). The alternative rests on the assumption that passive verbs do have an external theta role, but the argument receiving it is not realized in the canonical way. Specifically, people like Hoekstra (1986), Jaeggli (1986) and Baker et al. (1989) have argued that passive verbs assign their external theta role to part of their own verbal morphology. Somehow, this affects the constituent carrying the internal theta role, so that it behaves as if it were a subject. In subsection 2.1, I will develop a proposal along the lines of this latter option. The main idea will be that passivization does not change the valency of a predicate. All that changes is the way in which arguments are realized. In subsection 2.2, I will show how morphologically ergative patterns fit in this particular analysis of passive clauses. Data from Kurmanji will illustrate a simple case, where the verb only agrees with s and O. More complex systems like the one found

in Basque, which appear to employ a separate verbal paradigm for the A-argument, will be dealt with in the next section.

## 2.1 Passives are syntactically transitive

As I have indicated above, I will adopt an analysis of passive constructions that treats them as transitive. In other words, both active and passive transitive verbs are supposed to assign at least two theta roles: an internal role and an external role. If a passive transitive verb has the same valency as its active counterpart, the obvious question is what it is that makes it agree with the O-argument, rather than with the A-argument. Assuming, as I do throughout this study as well, that agreement is spelled out under the functional head I, Baker et al. (1989) argue that the external theta role of a passive verb cannot be assigned to an independent DP-constituent. Instead, the passive morpheme, which in a language like English is base-generated under I, receives this role. It is evident that only the O-argument can be moved to Spec,IP in order to be licensed by agreement. This analysis is illustrated by the tree in (6).<sup>2</sup>

(6) English passive construction (Baker et al. 1989)



According to Baker et al., passive constructions lack a Spec,VP position which is normally filled by the A-argument. By definition, the external theta role is assigned to the passive morpheme (PASS) in I. In English, this

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<sup>2</sup> The structure in (6) abstracts away from the fact that passive clauses in English involve a form of the auxiliary *be*. Baker et al. (1989:241-248) argue that the passive auxiliary heads its own VP on top of IP.

morpheme receives case from V, forcing  $DP_o$  to be licensed by agreement. In other languages, passive constructions may contain an Accusative internal argument, implying that in those cases the passive morpheme remains caseless. Ukrainian is a case in point.

(7) **Ukrainian** (Indo-European, Slavic, East)

a. *cerkv-u*      *bul-o*      *zbudova-n-o* *v* 1640 *roc'i*  
 church-F.ACC    be.PST-N    build-PASS-N in 1640

b. *cerkv-a*      *bul-a*      *zbudova-n-a* *v* 1640 *roc'i*  
 church-F        be.PST-F    build-PASS-F in 1640

'The church was built in 1640.'

(Baker et al. (1989:236), citing Sobin (1985:653-654))

In (7), the passivizing suffix *-n* carries the verb's external theta role. The internal argument, *cerkv-a* ('church-F'), either carries an Accusative marker (cf. (7a)) or is unmarked for case (cf. (7b)).<sup>3</sup>

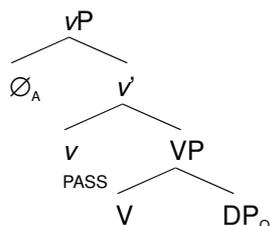
My proposal translates Baker et al.'s analysis of the passive to the minimalist approach of Chomsky (1995:chapter 4), where transitive structures contain a  $vP$ -projection. As I have explained in chapter 1 (subsection 3.1), the light verb *v* is responsible for assigning the external theta role. Therefore, we need to assume that passive constructions have a  $vP$ -projection, just like their active counterparts. Unlike Baker et al.'s account, I will not assume that the external theta role is assigned to a functional head. It seems to me that the existence of empty categories makes such an option superfluous. Therefore, on my analysis of the passive,

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<sup>3</sup> Notice that when the internal argument carries an Accusative marker, agreement with the verb apparently is not possible. Feminine *-a* has switched to neuter *-o* in (7a). Although Baker et al. do not discuss agreement phenomena, this could perhaps be explained by assuming that neuter inflection in (7a) signals agreement between the verb and the external argument (cf. Sobin (1985:653)). This would make up for the fact that the external argument does not absorb structural case. However, as we will see below, Baker et al. argue that in these cases the passive morpheme incorporates into *I*. This means that it does not need case in order to be licensed.

$v$  is filled by the passive morpheme and projects a specifier, which may be filled by an empty category only.

(8) Passive constructions (proposal)



It will be clear from the assumptions made in chapter 2 that case cannot be used for the licensing of the empty A-argument. Since I have assumed that a subject is universally base-generated as a caseless DP, a case-feature on  $v$  can never be checked by it. It follows that either something else is responsible for the licensing of the empty A-argument or it is not subject to ordinary licensing conditions at all. Again, as stated in chapter 2, the only other licensing mechanism available would be agreement. This mechanism, however, is commonly used for the internal object. Therefore, I conclude that the syntactic licensing does not play a role with respect to the empty argument. A plausible explanation for this is the morphological process extensively discussed in chapter 3: incorporation. As Baker (1988) and Baker et al. (1989) point out, data from noun incorporation show that the incorporated noun sometimes carries morphological case and sometimes does not. For Baker et al., incorporation is the answer to cases like Ukrainian, where the internal argument of a passive clause is able to carry Accusative case (cf. 7).<sup>4</sup> My analysis is a departure from Baker et al.'s

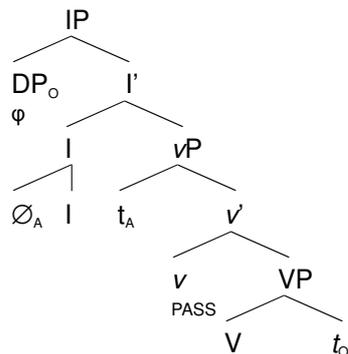
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<sup>4</sup> The same analysis is given for languages like Turkish, which allow the verb to carry two passive morphemes (cf. Özkaragöz (1988)). Only one morpheme can be base-generated under I, according to Baker et al., and hence the other one must be incorporated from an argument position. The fact that contemporary syntactic theory assumes an additional functional projection ( $vP$ ) weakens this argument, since one

account in that it assumes incorporation of the A-argument to be a standard characteristic of passive clauses. In order to account for the difference between languages like English on the one hand and those like Ukrainian on the other, I stipulate that passive-*v* may simply lack a case feature. In English, passive *v* always lacks case, whereas in Ukrainian the feature is optionally present, explaining sentences like (7a) where the internal argument carries Accusative case.

In any given language, the extended projection principle (cf. Chomsky (1994:55)) forces the *o*-argument of a passive clause to move to Spec,IP. In a language like English, this movement is also driven by the need to check  $\phi$ -features of I:<sup>5</sup>

(9) English passive constructions (proposal)



The question is what the properties of the empty A-argument are. So far, we have encountered two different empty categories that may serve as an argument. The first one is called PRO, an element that is associated with

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could easily imagine having one passive morpheme under I and the other one under *v*.

<sup>5</sup> Apparently, agreement is neutralized when the *o*-argument carries Accusative case (cf. (7a)). This suggests that arguments may not be doubly licensed. An alternative explanation was given in footnote (3), where I have argued that the 'neutralized' verb agrees with the empty A-argument. In my analysis, this means that incorporated arguments may trigger agreement, a tacit assumption that played a role in the previous chapter. In the next chapter I will provide evidence for this analysis.

infinitives. Recall from the discussion of control constructions in chapter 1 (subsection 3.1) that control verbs select for infinitival complements. These complements cannot have an overt subject, only PRO is allowed in order to satisfy the extended projection principle. It is licensed by a special *null* case marker, at least according to recent versions of the minimalist program (cf. Chomsky & Lasnik (1993)). The second empty category, *pro*, was briefly discussed in chapter 2 (section 3) in relation to null subject languages. This element, according to most approaches, stands in the position of an overt subject whenever it is retrievable from the morphosyntactic and/or pragmatic context.<sup>6</sup> Just like an overt subject, it is normally assumed to carry Nominative case and trigger agreement.

Semantically, the A-argument of a passive clause seems to have the same properties as PRO, according to Baker et al.. In the absence of a *by*-phrase, for instance, the interpretation of the incorporated A is typically arbitrary.

- (10) a. *you were visited last week*  
 b. *someone or other visited you last week*

The b-sentence in (10) is a natural paraphrase of the a-sentence, suggesting that the A-argument in the a-sentence has arbitrary reference, just like PRO in *it will be difficult PRO to visit you there*. Also, anaphors that are supposedly dependent on the A-argument are necessarily arbitrary.<sup>7</sup>

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<sup>6</sup> For a recent discussion of the inventory of empty nominal categories, see Holmberg (2005). There, the properties of PRO and *pro* are discussed, and an overview is given of how they have been accounted for in the history of generative syntactic theory.

<sup>7</sup> The anaphoric pronoun in (11b) might as well be interpreted as a logophor, in which case it is not subject to syntactic binding. Adding a subject-double like *by everyone* might make an anaphoric reading of *oneself* more natural, but it will not exclude the logophoric reading completely (Martin Everaert, p.c.).

- (11) a. ?\* *this privilege was kept to themselves*  
 b. *such priviliges should be kept to oneself*

(Baker et al. 1989:228)

In (11b), the anaphor can only be realized by the nonspecific *oneself*. In the presence of a *by*-phrase (or sufficient context), however, the interpretation of the A-argument is not arbitrary at all:

- (12) a. *you were visited by me last week*  
 b. *you were visited by them last week*

The A-arguments in the examples in (12) have two completely different interpretations: first person singular in (12a) and third person plural in (12b).

These examples, together with the fact that passive constructions do not show agreement with their A-argument, suggest that there is a strong resemblance between the A-argument of a passive clause and the empty subject of an infinitival clause (PRO). However, the same could perhaps be stated with respect to the empty subject of null subject languages (*pro*). It is well-known that languages like Chinese, which do not have overt agreement at all, allow for null subjects. Furthermore, Rizzi (1986b) has argued that *pro* receives an arbitrary reading when it functions as an object in Italian. Holmberg (in preparation) claims that the empty subject in Finnish may have an arbitrary interpretation.<sup>8</sup> Therefore, I will not choose between PRO and *pro*, but rather use the term 'empty argument' for the A of a passive verb.

The *by*-phrase of a passive construction is like an LA in nonconfigurational languages like Warlpiri, Mohawk and Straits Salish: it functions as a double of an incorporated argument, and hence is not obligatorily present. From a syntactic point of view, I will treat the *by*-phrase as an adjunct, which raises the question whether its interpretation is as

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<sup>8</sup> Interestingly, the arbitrary reading only arises when *pro* is the A-argument of a construction which some people believe is a passive in Finnish. The arbitrary use of Finnish *pro* is not discussed in Holmberg (2005).

restricted with respect to quantification as the interpretation of LAs in the languages discussed in chapter 3. The answer to this question is negative, as is demonstrated by the following sentences:

- (13) a. *by whom were you visited last week?*  
 b. *I was visited by nobody last week*

In (13a), the *by*-phrase is questioned, whereas in the b-sentence it contains a negative quantifier. Hence, in both sentences, the empty A-argument receives a nonreferential interpretation. As I have discussed in chapter 3, overt definite pronouns may only receive such an interpretation when bound by a quantifier. In other words, they must be c-commanded by a quantified DP in argument position. Considering the fact that the *by*-phrase is in an A-bar position, it cannot be the case that the empty argument has the status of a definite pronoun. I will assume that PRO and *pro* are arbitrary pronouns like *one*, at least in sentences like the ones in (13).<sup>9</sup>

As I mentioned above, the present proposal assumes that the empty A-argument incorporates into I, which means that there is no need for syntactic licensing by case or agreement. In this respect, the empty argument of a passive construction differs from both PRO in control constructions and *pro* in null subject languages. I take it that these arguments are licensed by *agreement*, just like any overt subject. With respect to *pro*, this is a reasonable assumption, but it might seem more controversial in the case of PRO, since this element is rarely associated with overt agreement. However, the idea of assuming a special null case, as proposed by Chomsky & Lasnik (1993), is quite far-fetched. The idea could be translated to ‘null agreement’,

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<sup>9</sup> When it comes to quantifier-variable readings, nonspecific pronouns appear to be in complementary distribution with definite pronouns. Compare *who<sub>i</sub> t<sub>i</sub> loves himself<sub>i</sub>/\*oneself<sub>i</sub>?* with *who<sub>i</sub> does one/\*he<sub>i</sub> love t<sub>i</sub>?* In the first sentence, the question word binds the anaphor via its base position, which is an argument position. Therefore, the anaphor cannot be nonspecific. In the second sentence, however, a specific anaphor results in weak crossover, whereas a nonspecific anaphor is grammatical.

which actually makes sense, considering the fact that PRO occurs in infinitival complements. The verb of such a complement is not inflected for *any* nominal  $\phi$ -feature, a fact that corresponds to the inherently nonspecific content of PRO.<sup>10</sup> If we consider the absence of  $\phi$ -features as a paradigmatic option that exists alongside specific values, the idea of null agreement becomes quite plausible.<sup>11</sup>

As I pointed out earlier, Baker et al. (1989:237-239) argue that noun incorporation makes syntactic licensing superfluous. In Niuean, for instance, overt case marking on the direct object is dropped when the object incorporates (cf. Baker (1988:105-129)). In other languages, case marking is preserved in object noun incorporation structures. Recall from the previous chapter that in Mohawk, Warlpiri and Straits Salish the shape of object-PAs differs from the shape of subject-PAs. This has been explained by assuming that the former show Accusative case, whereas the latter are caseless. Thus, in those languages, the object appears to be incorporated together with its Accusative case marker.

It is reasonable to assume that pronominal subjects have similar possibilities.<sup>12</sup> They may either trigger agreement or incorporate, or both. In English, overt subjects in finite and PRO in nonfinite sentences are licensed by agreement alone. Incorporation of overt material does not seem to be possible at all in the present-day stage of the language. Incorporation of an

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<sup>10</sup> Here, PRO differs from other arbitrary pronouns like *one*, which typically trigger third person singular agreement. However, since this pronoun implies a *human* referent, it is perhaps not entirely devoid of  $\phi$ -features.

<sup>11</sup> Ackema (2002) argues that the external theta role of a verb is always assigned to the agreement affix. In languages with poor agreement, such as English, the content of finite Agr needs to be identified by a DP in its specifier. In null subject languages, this is not necessary, overt subjects simply being adjoined to the clause. In both language types, nonfinite Agr does not belong to the finite agreement paradigm, and hence, since there is no need to identify its content, it is never accompanied by an overt DP.

<sup>12</sup> The fact that subject incorporation, unlike object incorporation, is restricted to pronouns, may be related to the fact that subjects can only incorporate into I, a functional head. Objects, on the other hand, incorporate into V, which is a lexical head, suggesting that the incorporated constituent may be lexical, too.

empty subject is possible, leaving agreement features to be checked by the object. This happens whenever a construction is passive.

|      |  |
|------|--|
| (14) | Licensing of arguments in passive constructions (cf. (3) and (9))                          |
|      | [ <sub>IP</sub> DP <sub>O,φ</sub> ∅ <sub>A</sub> + V <sub>PASS+I</sub> φ LA <sub>A</sub> ] |

It should be noted that LA<sub>A</sub> (the *by*-phrase) attaches to the right of vP, not to IP. If we allowed it to adjoin to IP, we would not be able to account for sentences like the following:

- (15) *John thought that Mary was washed by Sue, and [washed by Sue]<sub>i</sub> she was indeed t<sub>i</sub>*

Assuming that the part between brackets is a preposed vP, (15) suggests that the *by*-phrase is at least partly dominated by the vP-node. The following sentence from Dutch provides additional evidence:

- (16) **Dutch:** attachment of *by*-phrase equivalent to vP
- ... [<sub>CP</sub> [<sub>C</sub> *dat* [<sub>IP</sub> *ik* [<sub>vP</sub> [<sub>PP</sub> *door jou* ]
- that 1SG by 2SG.OBL
- [<sub>VP</sub> *werd-∅* *ge-was-sen* ]]]]]
- become<sup>13</sup>.PST-1SG PTCP-wash-PTCP
- '... that I was washed by you.'

In (16), the complementizer *dat* ('that') is in C, and the o-argument *ik* ('1SG') is in Spec,IP where it is licensed by agreement. The adjunct *door jou* ('by 2SG.OBL') must be adjoined to a projection dominated by IP, i.e. vP or VP. In the next subsection, I will return to this issue when discussing conjunction reduction.

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<sup>13</sup> Dutch differs from English in using a form of *worden* ('become') as the auxiliary in a passive construction.

The languages discussed in the previous chapter perhaps provide further evidence for the idea that incorporation makes syntactic licensing superfluous. Recall that, apart from the actual subject-PAs, no overt agreement morphology was found anywhere in the verbal template of Mohawk, Warlpiri and Straits Salish.<sup>14</sup> If my incorporation analysis is correct for these languages, a reasonable assumption would be that agreement is simply not being used in these languages, suggesting that I does not have  $\phi$ -features. The question then is how the extended projection principle is to be satisfied if there is no Spec,IP that can be filled by a maximal projection. An obvious answer to this question would be that the incorporated subject argument satisfies the extended projection principle. This is something that has to be parameterized, since passive constructions in English always have the o-argument being moved to Spec,IP. Even in a language like Ukrainian, where Accusative case is available in passive constructions, the internal argument appears in sentence-initial position (cf. (7)).<sup>15</sup> This movement would be unaccounted for if there were no extended projection principle to be satisfied.

Finally, my theory predicts that it is also possible to have agreement with an incorporated subject, just like the Accusative case we often find on incorporated objects. To my knowledge, this particular combination is not found in English, but we will see in chapter 5 that evidence from languages like Nez Perce suggest that it is possible.

At this point, a refinement of the basic hypothesis, as developed in chapter 2, is in place. Compare the schema in (17) with the one in (18):

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<sup>14</sup> In chapter 3 my analysis assumed that subject-PAs incorporated and at the same time triggered agreement.

<sup>15</sup> Besides Ukrainian, passive clauses with Accusatively marked o-arguments are found in various other members of the Slavic branch of Indo-European, as well as in Welsh (Indo-European) (Baker et al. (1989:236)). Unfortunately, I have not been able to check whether the internal argument moves to Spec,IP in those languages as well.

|               |   |   |  |                |
|---------------|---|---|--|----------------|
| (17)          | Main hypothesis: universal licensing of arguments (preliminary version) |   |  |                |
| Intransitive: |   | $[_{IP} DP_{S,\varphi}$                     | $V+I_{\varphi}$  | $]$            |
| Transitive:   |   | $[_{IP} DP_{A,\varphi}$                     | $V+I_{\varphi}$  | $DP_{O,Acc} ]$ |
| (18)          | Main hypothesis: universal licensing of arguments (final version)       |   |  |                |
| Intransitive: |   | $[_{IP} DP_{S,\varphi}$                     | $V+I_{\varphi}$  | $]$            |
| (nonconfig.)  | $[_{IP} LA_S$   | $[_{IP} PA_{S,(\varphi)} + V+I_{(\varphi)}$ |  | $]]$           |
| Transitive:   |   | $[_{IP} DP_{A,\varphi}$                     | $V+I_{\varphi}$  | $DP_{O,Acc} ]$ |
| (nonconfig.)  | $[_{IP} LA_A$   | $[_{IP} LA_O$                               | $[_{IP} PA_{A,(\varphi)} + V+I_{(\varphi)} + PA_{O,(Acc)}$ | $]]]$          |

As I have indicated several times in the previous chapters, incorporation can be seen as a replacement mechanism for syntactic licensing (case and agreement). The schematic representation in (18) states that an intransitive subject (s) is either licensed by agreement (first line) or incorporated (second line). In the latter case, the option of agreement remains, which is represented by round brackets. Transitive subjects (A) follow exactly the same strategies (third and fourth lines). A direct object (O) is either licensed by Accusative case (third line) or incorporated (fourth line). In the latter case, Accusative case is optional. The representations in (17) and (18) are statements about active clauses.

Configurational languages like English do not realize their arguments as PAs, and hence every argument of an active clause is syntactically licensed, necessarily resulting in an accusative pattern (cf. first and third lines in (18)). Pronominal argument languages like Warlpiri realize every verbal argument as a PA, which leads to accusative morphology as well, leaving aside any additional case marking on LA-doubles (cf. second and fourth lines in (18)). In short, the main hypothesis of this study distinguishes between two types of language, based on the absence or presence of incorporation. However, we have seen that even English may resort to incorporation in passive

constructions, although it is restricted to empty A-arguments. This leads to the question whether there are languages allowing for incorporation in more contexts than English does, but in less contexts than Warlpiri. We could, for instance, imagine that there is a subtype of language that consistently realizes all of its A-arguments as PAs.<sup>16</sup> When agreement is not involved in this type of incorporation, and is used for the licensing of the O-argument instead, morphological ergativity appears. In such a system, A is distinguished morphologically from s and o, which is typical of ergative systems. In the next section, I will argue that this is the correct analysis for languages like Basque, Northwest Caucasian and Mayan. Because of the fact that realizing the A-argument as a PA is highly similar to the idea that passive constructions incorporate an empty A, I will call this the Ergative as Passive Hypothesis (EPH).

|               |   |                                   |                    |                      |
|---------------|---|-----------------------------------|--------------------|----------------------|
| (19)          | Ergative as Passive Hypothesis (EPH, preliminary version) |                                   |                    |                      |
| Intransitive: |   | [ <sub>IP</sub> DP <sub>s,φ</sub> | V+I <sub>φ</sub>   | ]                    |
| Transitive:   | [ <sub>IP</sub> LA <sub>A</sub> ,                         | [ <sub>IP</sub> PA <sub>A</sub>   | + V+I <sub>φ</sub> | DP <sub>o,φ</sub> ]] |

In EPH-languages, A is the only argument that can be realized twice: by a PA and an LA. The LA may remain caseless, but it may also show overt case, which is interpreted as Ergative because of the fact that it applies to A only.

Before moving to Basque, I will discuss Kurmanji (Kurdish), a language that appears to realize every transitive clause in the past as a passive construction.

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<sup>16</sup> In chapter 2, we saw that languages like Amharic only realize their O-argument as an incorporating pronoun, whereas subjects do not incorporate. Instead, these are licensed by agreement. It can be argued that the same is true for animate O-arguments in Romance languages like Spanish, but all of this hinges on the analysis of null subjects, which, as I pointed out in chapter 2, are sometimes explained by assuming subject-PAs.

## **2.2 Obligatory passives**

As early as the 19<sup>th</sup> century, linguists have been claiming that ergative constructions are in fact old passive constructions. See Trask (1979) and Dixon (1994) for an overview. Hale (1970), discussing Australian languages, provides the first generative approach to this effect. The similarities are obvious: the direct object (O) appears in the unmarked case, just like an intransitive subject (S), whereas the transitive subject (A) appears in an oblique case (Ergative, Instrumental) or is accompanied by a preposition (*by*). For those ergative languages where verbal inflection employs the same paradigm for S and O, an analysis that considers the ergative to have evolved from a passive is especially interesting. Hence, such an analysis would apply to Basque and all of the other ergative languages to be discussed in the following sections. In these languages, the verb is also overtly marked for its A-argument. This is not the case in Kurmanji (Kurdish), the language I turn to in the present subsection.

Among Indo-European languages, ergativity is only found within the Indo-Iranian branch. As I pointed out in chapter 1, the ergative construction in these languages is most often restricted to past tense (Iranian) or perfective aspect (Indo-Aryan). Scholars working on these languages commonly reconstruct the ergative construction to a periphrastic perfective construction. In transitive clauses, this construction was in fact a passive. This construction was an alternative for the regular, synthetic past tense or perfective aspect. Due to an overall loss of verbal inflectional morphology, the synthetic past/perfective disappeared. Hence, the periphrastic construction became the only way to convey past tense or perfective aspect. This is the present-day ergative construction (cf. Dixon (1994), Dorleijn (1996:75-77), Bubeník (1998)). The sentences in (21), repeated from chapter 1, illustrate the ergative construction in Kurmanji, one of the main dialects of the Kurdish language. In Kurmanji, (pro)nouns come in two forms, 'direct' and 'oblique'. In present tense clauses, the 'direct' form is used for S and A, whereas the 'oblique' form is used for O-function. Considering the fact

that the verb only agrees with subjects (S/A), the ‘direct’ form is glossed as being caseless, and the ‘oblique’ as Accusative. This is shown in (20), repeated from chapter 1.

(20) **Kurmanji**: accusative pattern (present tense)

- a. *ez di-meş-im*  
1SG PROG-walk.PRS-1SG  
‘I am walking.’
- b. *tu di-meş-î*  
2SG PROG-walk.PRS-2SG  
‘You are walking.’
- c. *ez te di-şû-m*  
1SG 2SG.ACC PROG-wash.PRS-1SG  
‘I am washing you.’
- d. *tu min di-şû(-yî)*  
2SG 1SG.ACC PROG-wash.PRS-2SG  
‘You are washing me.’

(Subhî Ahmed)

In past tense clauses, the verb only agrees with intransitive subjects or direct objects (S/O). In these clauses, the ‘oblique’ is glossed as Ergative, as it is used in A-function.

(21) **Kurmanji**: ergative pattern (past)

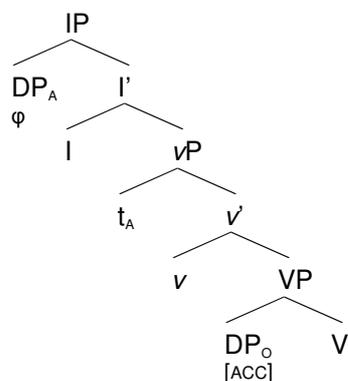
- a. *ez meş-îm*  
1SG walk-PST.1SG  
‘I walked.’
- b. *tu meş-î*  
2SG walk-PST.2SG  
‘You walked.’
- c. *min tu şû-şt-î*  
1SG.ERG 2SG wash-PST-2SG  
‘I washed you.’

- d. *te ez şû-şt-im*  
 2SG.ERG 1SG wash-PST-1SG  
 ‘You washed me.’

(Subhî Ahmed)

Constituent order in Kurmanji is strict: in transitive clauses, AOV-order is consistently used, irrespective of tense. Based on the main hypothesis of this study, I propose the following derivation for present tense transitive clauses:

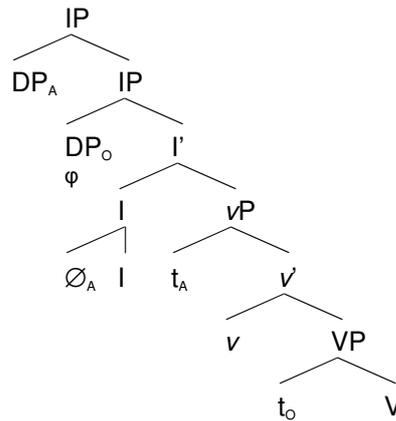
(22) Kurmanji transitive clauses: present tense (cf. (20c/d))



This tree is similar to the one I am assuming for English, except for the directionality of VP. In English, VP is head initial, whereas in Kurmanji, it is head final. The internal argument is licensed by Accusative case, whereas the external argument is licensed by agreement.

Historically, the ergative construction has developed out of a passive construction. The analysis of passive clauses presented in the previous chapter appears to be suitable for the ergative construction in Kurmanji. Consider the following tree:

(23) Kurmanji transitive clauses: past tense (cf. (21c/d))



In past tense clauses, the A-argument is obligatorily realized as an empty category. This argument is incorporated into I. The direct object moves to Spec,IP in order to satisfy the extended projection principle. It is licensed by agreement. An oblique DP is attached to the left of IP. This DP doubles the empty category with which it is coindexed. Furthermore, it appears in the oblique case. Since this case distinguishes A from s and o, it is interpreted as Ergative.

Although this analysis is almost identical to the analysis of the passive in (9), there are two important differences between ergative constructions in Kurmanji and passive constructions in a language like English. First of all, the hierarchical position of the adjunct differs. In the English passive, the *by*-phrase adjoins to vP, whereas the Ergative DP in Kurmanji attaches to IP (cf. (14)). This is in line with the overall AOV word order and we will soon see that it blocks syntactic ergativity. Second, the *by*-phrase is often omitted from English passives, but the Ergative DP in Kurmanji is almost always present. These syntactic differences can be explained by pragmatic factors. Researchers working in the tradition of Functional Grammar have concluded that the A-argument in an active clause is generally more topical than the o-

argument.<sup>17</sup> In passive clauses, this situation is reversed. It can even be described in stronger terms: O has the highest degree of topicality, whereas A is extremely nontopical (cf. Cooreman (1982), (1985), (1987), Givón (1994:8)). These pragmatic tendencies are reflected in hierarchical relations between core arguments. In English active clauses, the subject typically c-commands the object (in the unmarked order). In other words, the most topical argument is structurally higher than the less topical co-argument. This hierarchy is preserved in passive clauses when the object c-commands the *by*-phrase. Therefore, the *by*-phrase adjoins to *vP* or *VP*, which are c-commanded by *Spec,IP*. Of course, the fact that this constituent is often omitted from passive clauses is also entirely compatible with a low topical status. As we have seen in (10) and (11), the empty category representing the A-argument has arbitrary reference when there is no *by*-phrase and no context identifying its content.

Although I believe that the ergative construction in Kurmanji has the syntactic make-up of a passive construction, I do not claim that it still *functions* as such. It has taken over the function of the original active construction because it is the only way to express a transitive clause with past tense. It therefore behaves like an active construction in that the Ergative DP adjoins to *IP*, from where it c-commands the object in *Spec,IP*.<sup>18</sup> Additional evidence for the claim that the ergative construction does not anymore function as a passive comes from another construction, which seems to be a recent innovation (cf. Haig (1998:165)). It uses the verb *hatin* 'come' in combination with the infinitive of the main verb, and is translated as

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<sup>17</sup> I assume with Givón (1994:9-10) that one referent is *more topical* than another referent if it is *more anaphorically accessible* and *more cataphorically persistent*. Greater anaphoric accessibility means that the number of clauses separating the present occurrence of a referent from its most recent occurrence is relatively low. Greater cataphoric persistence means that the number of times a particular referent recurs in the following clauses is relatively high.

<sup>18</sup> Recall from chapter 3 (sub-subsection 2.3.3) that a segmented node (*IP*) does not asymmetrically c-command a node that it partially dominates (*DP<sub>A</sub>*). Instead, the reverse holds: the adjoined node c-commands the node that it adjoins to.

a passive. This construction is used both in the present (24b) and in the past (25b).

(24) **Kurmanji**: passive construction (present)

- a. *ez te di-şû-m*  
 1SG 2SG.ACC PROG-wash.PRS-1SG  
 'I am washing you.'
- b. *tu t-ê(-yî) şûşt-in (ji aliyê min ve)*  
 2SG PROG-come-2SG wash-INF from my side  
 'You are being washed (by me).'

(Subhî Ahmed)

(25) **Kurmanji**: passive construction (past)

- a. *min tu di-şû-şt-î*  
 1SG.ERG 2SG PROG-wash-PST-2SG  
 'I was washing you.'
- b. *tu di-hat-î şûşt-in (ji aliyê min ve)*  
 2SG PROG-come.PST-2SG wash-INF from my side  
 'You were being washed (by me).'

(Subhî Ahmed)

The passive in Kurmanji has a lot in common with its English counterpart. First of all, there is an auxiliary *hatin* ('come'), which can be compared to *be* in the English construction.<sup>19</sup> Furthermore, the O-argument is caseless,

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<sup>19</sup> Notice that the main verb in Kurmanji is an infinitive, whereas in English it is a past participial form. In Dutch, passive constructions with potential modality, using *kunnen* ('can'), can often be rephrased using a construction without the passive auxiliary, using an infinitive main verb:

(i) **Dutch**

- a. *deze hypothese kan begrepen word-en*  
 this hypothesis can understand.PTCP become-INF  
 'This hypothesis can be understood.'
- b. *deze hypothese is te begrijp-en*  
 this hypothesis be.3SG to understand-INF  
 'This hypothesis can be understood.'

appears sentence-initially and triggers agreement on the auxiliary. So far, the passive resembles the ergative construction, except for the presence of the auxiliary. I assume that both constructions obligatorily base-generate A as an empty argument, which incorporates into I. The difference lies in the way the adjunct-double is realized. In Kurmanji, the Ergative DP invariably appears sentence-initially, as expected on the basis of its topical status in an active clause. In the passive construction, the A-argument may only be realized in an adpositional phrase like *ji aliyê ...* ('from the side of...') or *bi destê ...* ('with.the.hand of...') (cf. Dorleijn (1996:42)). Such phrases appear in the right periphery of the clause, as expected on the basis of their typical discourse function (nontopical). I will assume that it adjoins to the right of vP/VP, just like the English *by*-phrase and its Dutch equivalent (cf. (14) and (16)).

The main problem faced by any approach that traces the origins of ergativity back to a passive construction, is the fact that most ergative patterns treat S and A as one class with respect to certain syntactic phenomena, whereas passive constructions treat S and O as one class. This becomes especially clear in the case of conjunction reduction. Compare the patterns in (26), repeated from (5).

(26) Conjunction reduction: active versus passive (repeated from (5))

- a. *I<sub>i</sub> fell over and Ø<sub>i</sub> hit you*
- b. *I<sub>i</sub> fell over and Ø<sub>i</sub> was hit (by you)*

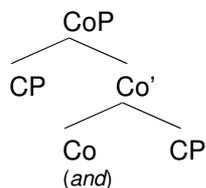
As I have indicated above, an active second conjunct allows for omission of its A-argument, if it is coreferent with the subject of the first conjunct (cf. (26a)). A passive second conjunct, however, only allows for omission of its O-argument, all other things being equal (cf. (26b)). Traditionally, this has been explained by assigning subject status to the O-argument of a passive construction, but in the present proposal, this will be explained differently.

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The subject of a passive clause is an empty argument that incorporates into I. The complement of the passive verb, O, moves to Spec,IP in order to be licensed by agreement. I believe that the explanation for the omission of this constituent in (26b) lies in the fact that the English *by*-phrase attaches to *vP*, where it is c-commanded by the O-argument. I will build my claim on work by Johannessen (1998), who treats conjunction reduction as a process of deletion, in line with Gleitman (1965), Van Oirsouw (1987), Kayne (1994) and Wilder (1994, 1997). For an overview of analyses that deal with coordination in general, the reader is referred to Progovac (2002).

Following Thiersch (1985), Munn (1993) and Kayne (1994), Johannessen treats the conjunction (Co) as a functional element that heads its own projection (CoP). The specifier and complement of this projection are always occupied by fully projected CPs, as illustrated in (27).

(27) Conjunction phrase (Johannessen 1998)



Conjunction reduction means that some part of a conjunct may be deleted if it has an antecedent in the other conjunct. As I pointed out in chapter 1 (subsection 3.1), there are two reduction processes, each one of them following its own rules. The conditions these processes are subjected to are constraints on LF, Johannessen argues (1998:178). So-called forward deletion deletes material from non-initial conjuncts, whereas backward deletion deletes in the initial conjunct. In what follows, I will limit myself to forward deletion. This is illustrated in (28) for the sentences in (26).<sup>20</sup>

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<sup>20</sup> Notice that the bracketing in this example and the ones to follow is quite informal. One could assume either, as Johannessen does, that the subject of these conjuncts

(28) Conjunction reduction through forward deletion (cf. (26))

- a. [*I fell over [and I hit you]]]*
- b. [*I fell over [and I was hit (by you)]]]*

Among the rules that apply to forward deletion is a condition stating that the contents of the elided material must be identical to those of the antecedent. This condition only refers to the semantic content, since the two may differ with respect to their phonological and morphosyntactic make-up.<sup>21</sup>

(29) [*John drinks wine [and [his kids ~~drink~~ / \*~~drinks~~ cola]]]*

(Johannessen (1998:179), citing Wilder (1995))

In (29), the deleted verb is *drink*, not *drinks*, meaning that the form of this verb is irrelevant for deletion. Furthermore, an ellipsis site may not be c-commanded by a nondeleted head in the same conjunct (cf. Wilder (1997:74)). This condition is illustrated in the following pair of sentences:

- (30) a. [*John bought the book, [and [Mary ~~bought the book~~ (too)]]]*
- b. \* [*John bought the book, [and [Mary read ~~the book~~]]]*

(adapted from Johannessen (1998:179), citing Wilder (1995))

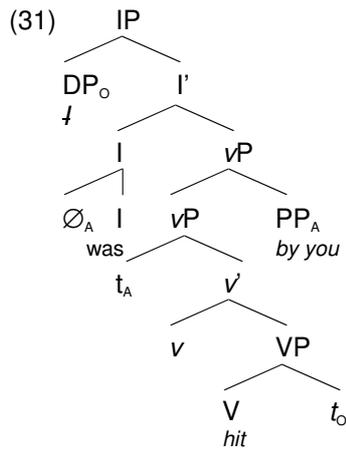
In (30a), deletion of the verb and the direct object is possible because they are not c-commanded by any overt head within their CP. In the b-sentence, however, the verb is not deleted, and hence there is an overt head c-commanding the direct object. Deletion of this constituent is not possible. Wilders calls this the 'head condition on forward deletion'. Intuitively, then, it seems that the object can only be deleted because it forms a constituent

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is in Spec,CP and the verb in C, or that there is no overt material in the CP-projection.

<sup>21</sup> It should be added that this condition is thought to apply to gapping only, which means that only verbs are involved. The verb in (29) contains lexical and functional information, of which only the functional information differs ( $\phi$ -features).

with the verb.<sup>22</sup> When it comes to argument ellipsis, however, a single direct object may only be deleted in a passive clause. Suppose that the IP of the second conjunct in (26b/28b) looks like (31):



As I have claimed above, the *by*-phrase in an English passive construction adjoins to *vP*. The *O*-argument, which is moved to Spec,IP because of the extended projection principle (and agreement), is hierarchically higher than the *by*-phrase. It is obvious that this is the determining factor in argument ellipsis. The same applies to the antecedent: only the highest argument can be the antecedent of a deleted argument in the second conjunct. A passive first conjunct allows the subject of the second conjunct to depend on its *O*-argument, not on *A*, as we have seen in (4).

(32) Conjunction reduction through forward deletion (cf. (4))

- a. *[[hit you [and [t fell over]]]*  
 b. *[you were hit (by me)[and [you fell over]]]*

In (32b), it is not possible to have coreference between the deleted subject and the *by*-phrase *by me*. Hence, the subject can only be interpreted as *you*.

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<sup>22</sup> Williams (1997) contains counterexamples though.

This is explained by the fact that the *by*-phrase is c-commanded by the O-argument in Spec,IP.

With the condition that an argument may only be the antecedent when it is in a position c-commanding its co-arguments, we will be able to analyze the following Kurmanji sentences:

(33) **Kurmanji**: conjunction reduction

- a. *jîn<sub>i</sub>*      *cotkar-î<sub>j</sub>*      *di-bîn-e*      *û*      *paşê*       $\emptyset_{i/j}$   
 woman    farmer-ACC    PROG-see.PRS-3SG    and    then  
*tere-∅*      *bazar-ê*  
 go.PRS-3SG    market-OBL

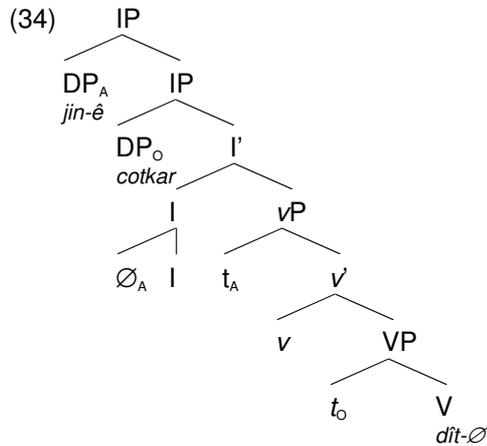
'The woman sees/meets the farmer and then (she) goes to the market.'

- b. *jîn-ê<sub>i</sub>*      *cotkar<sub>j</sub>*      *dît-∅*      *û*      *paşê*       $\emptyset_{i/j}$   
 woman-ERG    farmer    see.PST-3SG    and    then  
*çû-∅*      *bazar-ê*  
 go.PST-3SG    market-OBL

'The woman saw/met the farmer and then (she) went to the market.'

(Haig 1998:161)

The empty subject of the second conjunct in (33a) can only be coreferential with the A-argument of the first conjunct. This is similar to (32a), the regular active construction in English. In the b-sentence, however, one would perhaps expect that the O-argument of the ergative clause, *cotkar* ('farmer'), would be the antecedent, since the ergative construction is highly similar to a passive. The first conjunct of this sentence looks as in (34) (cf. (23)):



As I have pointed out in chapter 3 and footnote 18, the Ergative DP *jin-ê* ('woman-ERG') technically c-commands the O-argument in Spec,IP. This means that the Ergative adjunct counts as the structurally highest instantiation of an argument, and hence it is the only possible antecedent of the deleted subject in the second conjunct.<sup>23</sup>

Recall from chapter 1 that Dyirbal is exceptional in displaying syntactic ergativity. On the basis of the assumptions made so far, I claim that the sentences in (35) suggests that every transitive construction in Dyirbal is really a passive, at least with respect to conjunction reduction.

(35) **Dyirbal**: syntactic ergativity (cf. chapter 1, subsection 3.2)

- a. [*ŋuma*<sub>i</sub>      *banaga-n<sup>y</sup>u*] [*Ø*<sub>i</sub>    *yabu-ŋgu*    *bura-n* ]  
       father.ABS    return-NFUT                    mother.ERG    see-NFUT

<sup>23</sup> An additional assumption would have to be that an Ergative DP can be the antecedent of a deleted caseless DP, and vice versa. This assumption seems to be reasonable, given (29) and footnote 21. Both DPs differ with respect to functional information only, namely the presence or absence of a case feature. According to the minimalist approach, the case feature of a DP is uninterpretable, like the  $\phi$ -features of a verb. I would speculate that it is only the lexical content together with interpretable features that should be shared by a deleted constituent and its antecedent.

'Father<sub>i</sub> returned and mother saw (him)<sub>i</sub>.'  
 NOT: 'Father<sub>i</sub> returned and (he)<sub>i</sub> saw mother.'

- b. [*ŋuma*<sub>i</sub>     *yabu-ŋgu*     *bura-n*]     [*∅*<sub>i</sub> *banaga-n<sup>y</sup>u*]  
 father.ABS     mother.ERG     see-NFUT             return-NFUT

'Mother saw father<sub>i</sub> and (he)<sub>i</sub> returned.'  
 NOT: 'Mother<sub>i</sub> saw father and (she)<sub>i</sub> returned.'

(Dixon 1994:10,12)

These constructions are explained if the transitive conjunct is translated as a passive: 'Father returned and (he) was seen by mother,' for (35a), and, 'Father was seen by mother and (he) returned' for (35b). The explanation for this different behaviour lies in the position of the Ergative DP in Dyirbal: like the *by*-phrase in English, it adjoins to *vP/VP* (cf. (31)).<sup>24</sup>

Now that we have found a possible analysis of syntactic ergativity, the question of why it is so rarely found in languages with morphological ergativity arises. A plausible answer to this question has already been formulated above. When passive clauses take over the function of their active counterparts, the universal tendency to assign a higher topical status to A compared to O will force the *by*-phrase to be attached to IP, where it has c-command over the O-argument. On this view, Dyirbal would be in a transition stage, as has been claimed by some researchers, including Hale (1970). The next stage in the development from an accusative to an ergative system would be a situation like the one found in Kurmanji and Basque.

Although the suggested development allows for syntactic ergativity with respect to conjunction reduction, it still differs significantly from Marantz (1984), where it was proposed to reverse the theta roles in languages like

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<sup>24</sup> I argue in Van de Visser (2003) that in Dyirbal, the object is topicalized in a clitic-left dislocation construction. The present proposal confirms the topical status of the O-argument, but derives it in a different way. Clitic-left dislocation appears to affect topics when the doubling DP adjoins to IP (or even CP), but it affects nontopics like the *by*-phrase of a passive (or the Ergative DP in Dyirbal) when adjoining to *vP*. It would be interesting to investigate whether syntactic ergativity in Austronesian languages like Balinese can be derived in the way proposed here. I consider this to be a topic for future research.

Dyirbal, and Murasugi (1992), where it was assumed that syntactic ergativity is much more wide-spread than is actually the case (cf. chapter 1, subsections 3.2 and 3.3). In my proposal, theta role assignment does not differ between accusative and ergative systems. Moreover, even when the arguments of an active clause are realized by means of the 'passive' form, as in Kurmanji and Basque, syntactic ergativity will almost always be overruled by universal pragmatic tendencies.

To conclude, I emphasize an advantage of analyzing ergative constructions as (former) passive constructions, namely that the parameter needed in order to generate them is also needed for languages without ergativity. Any non-ergative language displaying passive constructions has the possibility of realizing the A-argument as an empty, incorporating argument. This implies that the O-argument can be licensed by agreement. As long as this is merely an option that is associated with a marked discourse status (topical O and an extremely nontopical A), existing alongside the canonical way of licensing arguments in a transitive clause (Accusative case for O and agreement for A), a language will not be called ergative. However, as soon as this construction becomes obligatory, the label 'ergative language' is used.

Additional evidence for the Ergative as Passive Hypothesis comes from non-ergative languages in which the passive is obligatory under certain circumstances. This may be the case when a language employs a person/animacy hierarchy, as discussed in chapter 1 (subsection 2.4). Such a hierarchy may block the use of an active construction when the A-argument is ranked lower on the hierarchy than the O-argument. In Straits Salish, for instance, active constructions with a third person A and a first or second person O are ungrammatical. Instead, a passive construction must be used.

(36) **Lummi**: obligatory passive

- a. *xč̣i-t-oŋəs=sən*  
 know-TR-2.O=1SG.A  
 'I know you.'
- b. *xč̣i-t-∅=sən*  
 know-TR-3.O=1SG.A  
 'I know him.'
- c. *xč̣i-t-s*  
 know-TR-3.A→3.O  
 'He knows him.'
- d. \* *xč̣i-t-oŋəs=s*                      \* *xč̣i-t-s-oŋəs*  
 know-TR-1SG.O=3(A)                      know-TR-3(A)-1SG.O  
 'He knows me.'
- e. *xč̣i-t-ŋ=sən*  
 know-TR-PASS=1SG  
 'I am known.'

(Jelinek (1993:18), (in preparation:13))

Recall from chapter 3 that every argument in Straits Salish is realized as an incorporated pronoun. Direct objects, I have assumed, are incorporated into *v* and are marked by Accusative case. This applies to *-oŋəs* ('2.O') and *-∅* ('3.O') in (36a/b). Subjects incorporate into I, which in turn incorporates into C. The complex head under C phonologically cliticizes to the first constituent of the clause (the fronted *vP* in the examples above). This is what happens when a clause has a first or second person subject. When the subject is third person, there are two possibilities: either the verb carries a suffix *-s*, where the object is also third person (cf. (36c)), or the construction is ruled out, where the object is higher on the person/animacy hierarchy (36d). Even when the suffix *-s* is left out, as in *xč̣i-t-oŋəs*, would the sentence be ungrammatical. The only way to realize the intended constellation of

arguments is by using a passive construction (36e).<sup>25</sup> In the passive, the A-argument is empty and it is licensed by incorporation. The pronominal O-argument moves to Spec,IP, where it is licensed by agreement.<sup>26</sup>

If a passive construction is obligatory under particular circumstances in language X, it is imaginable that it may progressively be used more frequently under more different circumstances, thereby gradually replacing the active construction, until it eventually causes X to become a full-fledged ergative language.<sup>27</sup>

### 3 Further evidence for the EPH

So far, we have assumed that ergative constructions of the type investigated in this chapter have an incorporated A-argument, which is empty. This was demonstrated in the previous section on the basis of Kurmanji past tense clauses. Northeast Caucasian languages like Avar, as presented in subsection 2.3 of chapter 1, use this construction irrespective of tense. Languages like Basque, Northwest Caucasian and Mayan, however, add an additional feature to the ergative construction, a verbal person/number(/gender) paradigm referring to the A-argument of the clause. This paradigm differs from the agreement paradigm, both with respect to form and position in the predicate. The central claim of this section will be that the paradigm used for the transitive subject is a paradigm of pronominal arguments (PAs). These PAs neither carry morphological case, nor do they trigger agreement. This is possible because these pronouns incorporate into I, just like the empty A-argument of a canonical passive. In subsection 3.1, I

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<sup>25</sup> I will speculate on the exact nature of the suffix –s in chapter 5, when discussing person split ergativity.

<sup>26</sup> Notice that this pronoun still cliticizes to the first constituent in phonology, probably together with C and I.

<sup>27</sup> If the active construction is not completely replaced by the passive, the development may result in a language with an ergative split. This system will be discussed in chapter 5.

will provide morphological evidence for this claim, using data from the languages mentioned above. The focus will be on the idea that the incorporated A-argument in these languages is caseless. In subsection 3.2, syntactic evidence will be provided, focusing on the referential properties of the Ergative DP that doubles the incorporated A.

### **3.1 Morphological evidence**

My main hypothesis states that in every transitive clause, the O-argument is base-generated in the complement of the verb, whereas the A-argument is base-generated in Spec,vP. Furthermore, there are two different means of licensing: structural case marking and agreement. Structural case is a feature that can be checked in the complement position only, under the influence of the case feature on *v*. Agreement is related to the checking of  $\phi$ -features, which happens in Spec,IP. Instead of these means of licensing, or in addition to them, O may incorporate into *v*, and A may incorporate into I. According to the Ergative as Passive Hypothesis (EPH), A-arguments incorporate without triggering agreement. On the other hand, O-arguments are licensed by agreement, and not by Accusative case.<sup>28</sup> This is the canonical realization of the passive and ergative constructions investigated here. Although most analyses of the passive assume that Accusative case is somehow 'absorbed' by passive morphology, and Murasugi (1992) and Ura (2000:206-207) specifically claim that it is used for the A-argument of ergative languages, the present proposal excludes these possibilities. The only structural case allowed for by UG is checked by *v* in the complement of V, and hence it may only be used for an O-argument. In passive/ergative constructions of the type under consideration, *v* simply lacks a case feature. Ergative case is an oblique case that is put on an adjoined nominal in A-

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<sup>28</sup> An exception to this is the situation found in Ukrainian and certain other languages, where passive objects may be licensed by Accusative case. Under these circumstances agreement is neutralized (cf. (7) and footnote 3, 5 and 15). In the final section of this chapter, I will address the question of whether there are morphologically ergative languages which allow the object to carry Accusative case.

function. The element that is base-generated in Spec,vP and incorporated into I never bears case. This is confirmed by morphological data from various languages, to be described in the following sub-subsections.

### 3.1.1 Basque

In Basque, the incorporated A is realized by a suffix on the auxiliary *\*edun* 'have' or main verb (cf. Saltarelli et al. (1988); Hualde & Ortiz de Urbina (2003), Van de Visser (2005)).<sup>29</sup> Agreement, as triggered by the O-argument on *\*edun* and by the s-argument on *izan* 'be' (or a main verb) is predominantly prefixal. The following forms occur:

(37) **Basque:** verbal marking, independent pronouns

|    |         | Verbal marking |             | Independent pronouns |              |
|----|---------|----------------|-------------|----------------------|--------------|
|    |         | S/O            | A           | S/O                  | A            |
| SG | 1       | <i>n-</i>      | <i>-t</i>   | <i>ni</i>            | <i>ni-k</i>  |
|    | 2.FAM.M | <i>h-</i>      | <i>-k</i>   | <i>hi</i>            | <i>hi-k</i>  |
|    | 2.FAM.F | <i>h-</i>      | <i>-n</i>   | <i>hi</i>            | <i>hi-k</i>  |
|    | 2       | <i>z-</i>      | <i>-zu</i>  | <i>zu</i>            | <i>zu-k</i>  |
|    | 3       | <i>d-, z-</i>  | <i>-∅</i>   | <i>hura</i>          | <i>har-k</i> |
| PL | 1       | <i>g-</i>      | <i>-gu</i>  | <i>gu</i>            | <i>gu-k</i>  |
|    | 2       | <i>z-</i>      | <i>-zue</i> | <i>zuek</i>          | <i>zuek</i>  |
|    | 3       | <i>d-, z-</i>  | <i>-te</i>  | <i>haiek</i>         | <i>haiek</i> |

The table of independent pronouns in (37) shows that Ergative case is mainly formed by suffixing *-k* to the unmarked form. This suffix is consistently absent from the verbal A-paradigm, providing evidence for its status as a paradigm of unmarked pronouns that are incorporated.<sup>30</sup>

<sup>29</sup> Examples of verbs that (may) occur without an auxiliary are *etorri* 'come, arrive', *joan* 'go', *egon* 'stay', *ekarri* 'bring', *jakin* 'know', *eraman* 'take'. This class of verbs is relatively small, but it was bigger in earlier stages of the language (cf. Laka (1993:29)).

<sup>30</sup> There is one exception, though. For a second person singular familiar *masculine* referent, the verbal suffix *-k* is used. I will argue below that this is probably a matter of coincidence.

Furthermore, the forms used for first person plural (*-gu*) and second person singular/plural (*-zu / -zue*) are almost identical to the unmarked pronoun (*gu* '1PL', *zu* '2SG', *zuek* '2PL'). The vowel retained in these suffixes is absent from the agreement markers (*z-* '2SG-', *g-* '1PL-', *z-* '2PL').

Less obvious is the link between first person singular *-t*, second person singular familiar masculine/feminine *-k/-n* and third person plural *-te* and their respective independent forms *ni*, *hi* and *haiek*. At present, I can only speculate about why these members of the paradigm are different. One way to go about it would be to assume that an earlier form of the independent pronoun *ni* contained */t/*. This consonant is still present in the incorporated pronoun, but the independent form has lost it. If this is correct, the same can be said with respect to *hi*, a second person singular form which is only used in order to refer to familiar addressees like siblings or close friends (Hualde & Ortiz de Urbina 2003:151). It should be noted that *zu* is the more common form for second person singular. Nevertheless, *hi-k* '2SG.FAM-ERG', like *ni-k* '1SG-ERG', does not show any morpho-phonological resemblance to the corresponding verbal suffix. In fact, the gender distinction in the second person singular familiar is found nowhere else in the grammar of Basque. If it is true that the incorporated pronouns show older stages of the independent pronoun, a plausible assumption is that there have been two independent pronouns for second person singular informal in an older stage of the language, a masculine and a feminine variant. The modern pronouns *ni* and *hi*, on the other hand, show a striking resemblance with the corresponding agreement prefixes (*n-* '1SG', *h-* '2SG.FAM.M/F'). On the basis of this resemblance, I conclude that the new forms of the pronouns have been shaped after the agreement prefixes. So far, I have not been able to find similar claims or counterclaims in the literature, so nothing definitive can be said with respect to this issue. However, as we will see in sub-subsection 3.1.4, a similar explanation is needed for the Mayan languages. As for third person plural *-te*, this is probably merely a pluralizer, because */t/* is found in many places with precisely that function (compare for instance the agreeing

forms *zara* '2SG.PRS.be' and *zaitu* '2SG.PRS.have(=3SG(A))' with *zarete* '2PL.PRS.be' and *zaituzte* '2PL.PRS.have(=3SG(A))'. Whenever the A-argument is third person plural, *-te* functions as an incorporated pronoun.

The suffix paradigm shows one obvious gap. Third person singular is represented by the absence of an overt suffix. This may be in line with the fact that Basque does not possess real third person pronouns, using demonstratives instead. However, I will demonstrate in sub-subsection 3.2.1.1 that the gap is actually predicted by the fact that Ergative DPs in Basque can be nonreferential. The empty incorporated pronoun thus resembles the incorporating PRO/*pro* that I have argued to be present in English passives and Kurmanji past tense clauses.

### 3.1.2 Northwest Caucasian: Abkhaz-Abazin

The Western branch of North Caucasian consists of three sub-branches: Abkhaz-Abazin, Circassian and Ubyx (cf. Dumézil (1932), Hewitt (2005)). The latter contains only one member, the extinct Ubykh, which will not be discussed here. Circassian consists of Adyghe and Kabardian, and will be discussed next. In the present sub-subsection, I focus on Abkhaz and Abaza, two languages with identical verbal inflectional morphology. Both the incorporating A-argument and the agreement morpheme are realized by prefixes. The former occupies a slot that is closer to the verb stem than the latter (see Hewitt (1979), (1989) and Chirikba (2003) on Abkhaz, Lomtadze & Klychev (1989) and O'Herin (2002) on Abaza). There is no overt case marking on either S, A or O in these languages. The relevant forms for Abkhaz are presented in (38).

(38) **Abkhaz** (North Caucasian, West Caucasian, Abkhaz-Abazin)

|          | Verbal marking |                    | Independent pronouns |
|----------|----------------|--------------------|----------------------|
|          | S/O            | A                  |                      |
| SG 1     | <i>s(ə)-</i>   | <i>s(ə)-/z(ə)</i>  | <i>sa(rá)</i>        |
| 2.M/NHUM | <i>w(ə)-</i>   | <i>w(ə)-</i>       | <i>wa(rá)</i>        |
| 2.F      | <i>b(ə)-</i>   | <i>b(ə)-</i>       | <i>ba(rá)</i>        |
| 3.M      | <i>d-</i>      | <i>y(ə)-</i>       | <i>ya(rá)</i>        |
| 3.F      | <i>d-</i>      | <i>l(ə)-</i>       | <i>la(rá)</i>        |
| 3.NHUM   | <i>y(ə)-</i>   | <i>(n)a-</i>       | <i>ya(rá)</i>        |
| PL 1     | <i>h(a)-</i>   | <i>h(a)-/aa-</i>   | <i>ha(rá)</i>        |
| 2        | <i>šʷ(ə)-</i>  | <i>šʷ(ə)-</i>      | <i>šʷa(rá)</i>       |
|          |                | <i>/žʷ(ə)-</i>     |                      |
| 3        | <i>y(ə)-</i>   | <i>r(ə)-/d(ə)-</i> | <i>da(rá)</i>        |

Chirikba (2003:32,40)<sup>31</sup>

At first sight, there is much overlap between the agreement paradigm and the paradigm of incorporating pronouns in A-function. On closer inspection, however, there are interesting differences between the two paradigms, just like in Basque. First of all, the paradigm for incorporated pronouns is more articulated than the agreement paradigm. The incorporated pronoun paradigm has a three-way gender distinction for third person singular, *y(ə)-* ('3SG.M.A-'), *l(ə)-* ('3SG.F.A-'), *(n)a-* ('3SG.NHUM.A-'). Furthermore, the form used for third person plural differs from the singular forms, *r(ə)- / d(ə)-* ('3PL.A-'). The agreement paradigm only distinguishes between human (*d-*) and nonhuman (*y-*) with respect to third person singular, and the third person plural form (*y-*) is homophonous with the form used for singular nonhuman. What is more, those distinctions not made by the agreement paradigm are present in the independent pronouns, and here again, there is much resemblance with the verbal A-prefix, *y(ə)-* versus *ya(rá)* ('3SG.M'), *l(ə)-*

<sup>31</sup> In order to use spelling consistently throughout this study, I have replaced Chirikba's *j* with *y*, representing the palatal glide.

versus *la(rá)* ('3SG.F') and *r(ə)- / d(ə)-* versus *da(rá)* ('3PL').<sup>32</sup> Exactly the same paradigmatic differences are found in Abkhaz' sister language Abaza, which is sometimes considered to be a dialect of Abkhaz (Habat Bekir Yılmaz (p.c.), O'Herin 2002).

The fact that the paradigm of incorporating pronouns does not show a gap suggests that the transitive subject is always realized by a definite pronoun. In sub-subsection 3.2.2 I will discuss evidence which points in this direction.

### 3.1.3 Northwest Caucasian: Circassian

Circassian is the common designation for Adyghe and Kabardian. The verbal template of these languages closely resembles the one in Abkhaz-Abazin: it contains two distinct prefixal slots for person/number marking of core arguments, with the prefix for transitive subjects closer to the verb stem than the agreement slot. Unlike Abkhaz-Abazin, there are no gender distinctions. Kabardian and Adyghe have an ergative case marker that appears on a limited set of third person arguments, among which are the third person pronouns (see Paris (1989) on Adyghe, Colarusso (1989), (1992) on Kabardian).<sup>33</sup> This is summarized in the table below.

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<sup>32</sup> Note, however, that there is no separate independent form for third person singular nonhuman. Instead, there is syncretism with the masculine pronoun. In order to account for this, I have to assume that there has been a separate independent pronoun, but that this form has been lost.

<sup>33</sup> Like Basque and unlike Abkhaz-Abazin, Circassian lacks third person pronouns. Instead, demonstratives are used.

(39) **Kabardian** (North Caucasian, West Caucasian, Circassian)

|    |   | Verbal marking |       | Independent pronouns |                  |
|----|---|----------------|-------|----------------------|------------------|
|    |   | S/O            | A     | S/O                  | A                |
| SG | 1 | sə-            | s-    | <i>sa</i>            |                  |
|    | 2 | wə-            | b-/w- | <i>wa</i>            |                  |
|    | 3 | ∅              | y-    | <i>a-r</i>           | <i>a-bə</i>      |
| PL | 1 | də-            | d-    | <i>da</i>            |                  |
|    | 2 | fə-            | f-    | <i>fa</i>            |                  |
|    | 3 | ∅              | y-ha- | <i>a-ha-r</i>        | <i>a-bə-ha-m</i> |

Colarusso (1992:65,66,132)

The differences between the two paradigms of verbal markers are minimal. Most of the markers use the same consonant in both paradigms, and hence are cognate to the independent pronouns. This does not apply to the third person 'ergative' verbal markers. Thus *y-* is not present in the independent pronouns. However, there is an additional number distinction that is absent from the third person agreement markers. The pluralizer *ha-* is only used in the A-paradigm. This marker is clearly nominal. It is present in the independent pronouns *a-ha-r* ('3PL') and *a-bə-ham* ('3-ERG-PL'), and also functions as a plural suffix in nouns. This supports the idea that the 'ergative' paradigm of verbal markers consists of incorporated pronouns, although the third person forms are merely demonstratives, as we have seen in Basque. Alternatively, one could perhaps analyze *y-* as part of the verb, which is deleted when a first or second person transitive subject triggers an overt A-prefix. In the latter case, we have to assume that third person singular is consistently realized by an empty nominal like PRO/*pro*, as will be assumed for Basque. In sub-subsection 3.2.3, I will discuss some evidence for both analyses, suggesting that there are dialectal differences with respect to this issue.

### 3.1.4 Mayan

The entire Mayan family has the odd characteristic that independent pronouns resemble the agreement markers, and not the incorporated A-argument (cf. Robertson (1980)).<sup>34</sup> There is no case marking, so there is no way to tell whether the paradigm of incorporating pronouns contain an ergative case marker, which would falsify my theory. The following table shows the relevant markers in Tzeltal (Oxchuc dialect). Agreement is suffixal, whereas the pronominal paradigm triggers prefixal morphology, which may be complemented by suffixes for plural forms. As in so many Mayan languages, the A-paradigm consists of two sets of allomorphs: the first one is used with consonant-initial verbs, the second one with verbs that start with a vowel.

(40) **Tzeltal** (Mayan, Cholan-Tzeltalan, Tzeltalan)

|      | Verbal marking |  | Independent pronouns |
|------|----------------|--|----------------------|
|      | S/O            | A  | S/O/A                |
| SG 1 | -on            | <i>j-</i> / <i>(j)k-</i>                 | <i>jo'on</i>         |
| 2    | -at            | <i>(j)a-</i> / <i>(j)aw-</i>             | <i>ja'at</i>         |
| 3    | -∅             | <i>s-</i> / <i>y-</i>                    | <i>ja'</i>           |
| PL 1 | -otik          | <i>j-...-tik</i> / <i>(j)k-...-tik</i>   | <i>jo'otik</i>       |
| 2    | -ex            | <i>(j)a-...-ik</i> / <i>(j)aw-...-ik</i> | <i>ja'ex</i>         |
| 3    | -∅ (+ -ik)     | <i>s-...-ik</i> / <i>y-...-ik</i>        | <i>ja'ik</i>         |

(Polian (2004:75,77), Penny Brown (p.c.))

A striking fact about the independent pronouns is that they are all based on the same root, starting with *ja'*. According to Polian (2004:76), this is a focalizer. I will assume that this focalizer is an intransitive predicate that is inflected as such. The suffixes it takes are exactly the same as the individual agreement suffixes listed in (40). This analysis allows for the option that the

<sup>34</sup> According to Gilles Polian (p.c.), Tojolab'al is an exception to this rule.

verbal A-paradigm consists of unmarked pronouns that do not function independently anymore. Therefore, I believe that the EPH applies to Mayan as it does to Basque and Northwest Caucasian.

In sub-subsection 3.2.4, we will see that evidence from several Mayan languages suggests that the DP doubling the A-pronoun cannot be nonreferential. This would be expected on the basis of the A-paradigm, which does not contain any gap (cf. (40)).

### 3.2 Syntactic evidence

As I have discussed extensively in subsection 3.1 of the previous chapter, a pronominal argument must not be doubled by a nonreferentially quantified DP. A definite pronoun only receives a variable reading when it is c-commanded by a quantifier. When this quantifier heads a DP, there is an additional requirement that this DP be in an argument position. The pronominal argument approach developed in chapter 3 predicts the absence of real D-quantifiers by assuming that A-positions are always occupied by pronominal arguments. For the languages discussed in the previous subsection, my theory makes a different prediction. The EPH, first presented in (19), repeated below, states that there are languages allowing pronominal arguments to appear in one particular grammatical function only, the transitive subject (A).

|               |   |   |  |
|---------------|---|---|--|
| (41)          | Ergative as Passive Hypothesis (EPH, preliminary version) |   |  |
| Intransitive: |   | $[_{IP} DP_{S,\varphi} \quad V+I_{\varphi} \quad ]$                     |  |
| Transitive:   | $[_{IP} LA_A,$  | $[_{IP} PA_A \quad + \quad V+I_{\varphi} \quad DP_{O,\varphi} \quad ]]$ |  |

This *partial* nonconfigurationality predicts that whenever an EPH-language has nonreferential D-quantifiers at its disposal, they may not be used in Ergative DPs doubling an incorporated pronoun. In the following, I will test this hypothesis for each of the languages discussed in subsection 3.1.

### 3.2.1 Basque

In Basque, there does not seem to be any restriction on the referentiality of arguments. As shown in (42), the language distinguishes between universal *guzti* and distributive *bakoitz*, in the same way as English distinguishes between *all* and *every*.<sup>35</sup>

(42) **Basque:** universal quantification

a. *gizon guzti-ek ja-ten du-te sagar-rak*  
 man all-PL.ERG eat-IPFV 3.have.PRS-3PL.A apple-PL

‘All the men are eating apples.’

b. *emakume-ak neska guzti-ak garbi-tzen du-∅*  
 woman-DEF.ERG girl all-PL wash-IPFV 3.have.PRS-3SG.A

‘The woman is washing all the girls.’

c. *gizon bakoitz-ak sagar bat ja-ten du-∅*  
 man every-DEF.ERG apple one eat-IPFV 3.have.PRS-3SG.A

‘Every man is eating an apple.’

d. *emakume-ak neska bakoitz-a garbi-tzen du-∅*  
 woman-DEF.ERG girl every-DEF wash-IPFV 3.have.PRS-3SG.A

‘The woman is washing every girl.’

(Sonia Ortiz de Arri, Asier Alcazar)

On the basis of (42), we can conclude that there is no restriction on the referential properties of transitive subjects. The distributive quantifier *bakoitz* may appear in an Ergative DP (cf. *gizon bakoitz-ak*, ‘man every-DEF.ERG’ in (42c)) in the same way as it appears in a caseless DP (cf. *neska bakoitz-a*, ‘girl every-DEF in (42d)). Like its English equivalent, it triggers singular marking on the verb, a third person singular PA (-∅) in (42c). This is not

<sup>35</sup> Constituent order in Basque is not rigid. The only requirement that seems to apply is that the auxiliary and the verb cannot be separated. As the incorporated A-pronoun invariably appears in the final slot of the auxiliary, I assume that the auxiliary is base-generated in I and that the pronoun attaches to its right. The verb head-moves to *v*, and *v*-V subsequently attaches to the left of I. With respect to head-movement, Basque resembles Straits Salish (cf. chapter 3, sub-subsection 2.3.4).

compatible with the EPH as presented in (41): an inherently quantified DP-adjunct is ruled out because the incorporated A-argument is a pronoun. However, as we have seen in (37), the pronominal argument happens to be empty when it is third person singular.

(43) **Basque**: verbal marking, independent pronouns (repeated from (37))

|    |         | Verbal marking |             | Independent pronouns |              |
|----|---------|----------------|-------------|----------------------|--------------|
|    |         | s/O            | A (PA)      | s/O                  | A            |
| SG | 1       | <i>n-</i>      | <i>-t</i>   | <i>ni</i>            | <i>ni-k</i>  |
|    | 2.FAM.M | <i>h-</i>      | <i>-k</i>   | <i>hi</i>            | <i>hi-k</i>  |
|    | 2.FAM.F | <i>h-</i>      | <i>-n</i>   | <i>hi</i>            | <i>hi-k</i>  |
|    | 2       | <i>z-</i>      | <i>-zu</i>  | <i>zu</i>            | <i>zu-k</i>  |
|    | 3       | <i>d-, z-</i>  | <i>-∅</i>   | <i>hura</i>          | <i>har-k</i> |
| PL | 1       | <i>g-</i>      | <i>-gu</i>  | <i>gu</i>            | <i>gu-k</i>  |
|    | 2       | <i>z-</i>      | <i>-zue</i> | <i>zuek</i>          | <i>zuek</i>  |
|    | 3       | <i>d-, z-</i>  | <i>-te</i>  | <i>haiek</i>         | <i>haiek</i> |

This is exactly compatible with the analysis presented in section 2. There, I argued that an incorporated empty argument may be interpreted as having arbitrary reference, comparable to PRO/*pro*. It turned out that this allows for a quantificational interpretation, which is what happens in the above example. On the basis of these facts, I conclude that Basque has pronominal A-arguments for every person/number combination except for third person singular. This combination results in the Basque ergative construction resembling the Kurmanji ergative construction.

Interrogative pronouns and negative pronouns also exist in Basque. Like *bakoitz*, these elements occur freely in Ergative DPs. However, they are clearly related to each other and to the indefinite pronoun, taking the following forms: *nor(-k)* ('who(-ERG)'); *inor(-k)* ('nobody(-ERG)'); *norbait(-ek)* ('somebody(-ERG)') (Hualde & Ortiz de Urbina 2003:154-156). This reminds us of the situation in Mohawk. As I explained in chapter 3 (sub-subsection 2.3.2), question words and negative pronouns in Mohawk are best analyzed as indefinites under the scope of an interrogative C head or a negative

adverb. This would be a suitable analysis for Basque as well.<sup>36</sup> I will not choose here for one particular analysis. The fact that Basque has an empty category in the predicted place in the PA-paradigm means that the precise analysis of individual quantifiers does not matter.

I conclude that the gap in the Basque PA-paradigm is not a coincidence. It rather predicts that true quantifiers can be construed with the transitive subject-LA. The distributive *bakoitz* appears to be one such quantifier.

### 3.2.2 Northwest Caucasian: Abkhaz-Abazin

Like Basque, Abkhaz and Abaza also seem to display two different types of universal quantifier. On the one hand, there is *zegə* ('all'), which triggers plural marking on the verb (*r-*, '3PL.A' in (44a)). On the other hand there is *darbanzaalak'gə* ('every'), which triggers singular marking (*yə-*, '3SG.M.A' in (44b)). Both elements can occur in transitive subject-LAs.<sup>37</sup>

(44) **Abkhaz:** universal quantification

- |    |                                  |                        |               |                               |
|----|----------------------------------|------------------------|---------------|-------------------------------|
| a. | <i>a-kha-cva</i>                 | <i>rə-zegə</i>         | <i>a-cva</i>  | <i>∅-r-fa-wa-yt'</i>          |
|    | DEF-man-PL                       | 3PL.POSS-all           | GNR-apple     | 3NHUM-3PL.A-eat-PRS-DYN:FIN   |
|    | 'All the men are eating apples.' |                        |               |                               |
| b. | <i>a-kha-cva</i>                 | <i>darbanzaalak'gə</i> | <i>cva-k'</i> | <i>∅-yə-fa-wa-yt'</i>         |
|    | DEF-man-PL                       | 'every'                | apple-INDEF   | 3NHUM-3SG.M.A-eat-PRS-DYN:FIN |

<sup>36</sup> Interrogative pronouns tend to occur in a preverbal focalization position (Hualde & Ortiz de Urbina 2003:464), which I take to be an overt reflection of movement to Spec,CP. Negative pronouns are negative polarity items, and hence obligatorily co-occur with a negative adverb *ez* ('not') (Hualde & Ortiz de Urbina 2003:156).

<sup>37</sup> Recall that Abkhaz-Abazin does not have overt Ergative case markers. Although constituent order in Abkhaz displays a certain amount of flexibility, a basic AO V order can be established (cf. Hewitt (1979:103), (1989:66), Chirikba (2003:60)). The incorporated A-argument is a prefix that follows person/number agreement. This can be captured by assuming that the pronoun attaches to the right of I. Tense inflection, however, is to the right of the verb stem, which might indicate that I is split. As it is irrelevant for the point I want to make here, I will not attempt to give a detailed analysis of verbal morphology in Abkhaz.

'Every man is eating an apple.'

(Khibla Amychba; Viacheslav Chirikba)

Again, the existence of a distributive quantifier is unexpected on the basis of the EPH, the more so because Abkhaz and Abaza lack an empty PA. As I have shown in (38), the paradigm of incorporating pronouns has an overt form for every possible person/number/gender combination. It is even more elaborate with respect to third person singular than the agreement paradigm and the paradigm of independent pronouns.<sup>38</sup>

(45) **Abkhaz**: verbal marking, independent pronouns (repeated from (38))

|          | Verbal marking |                                 | Independent pronouns |
|----------|----------------|---------------------------------|----------------------|
|          | S/O            | A (PA)                          |                      |
|          |                |                                 | S/O/A                |
| SG 1     | <i>s(ə)-</i>   | <i>s(ə)-/z(ə)</i>               | <i>sa(rá)</i>        |
| 2.M/NHUM | <i>w(ə)-</i>   | <i>w(ə)-</i>                    | <i>wa(rá)</i>        |
| 2.F      | <i>b(ə)-</i>   | <i>b(ə)-</i>                    | <i>ba(rá)</i>        |
| 3.M      | <i>d-</i>      | <i>y(ə)-</i>                    | <i>ya(rá)</i>        |
| 3.F      | <i>d-</i>      | <i>l(ə)-</i>                    | <i>la(rá)</i>        |
| 3.NHUM   | <i>y(ə)-</i>   | <i>(n)a-</i>                    | <i>ya(rá)</i>        |
| PL 1     | <i>h(a)-</i>   | <i>h(a)-/aa-</i>                | <i>ha(rá)</i>        |
| 2        | <i>šʔ(ə)-</i>  | <i>šʔ(ə)-</i><br><i>/žʔ(ə)-</i> | <i>šʔa(rá)</i>       |
| 3        | <i>y(ə)-</i>   | <i>r(ə)-/d(ə)-</i>              | <i>da(rá)</i>        |

However, there are reasons to assume that *darbanzaalak'gə* is not a real D-quantifier, as it seems to be. It can actually be decomposed into several

<sup>38</sup> It should be noted that the direct object in the sentences in (44) seem to trigger an empty agreement prefix, which is not listed in the table in (45). According to Chirikba (2003:119), the agreement marker has been deleted. This appears to be a peculiarity of sentences in which the argument triggering agreement directly precedes the verb. There is only one prefix that can be deleted, *y-*, which cuts across categories (it shows agreement with a third person singular nonhuman or third person plural argument). I will have nothing to say about this issue, as it is not important for the present topic.

morphemes, the most important part of which consists of *darban*, the equivalent of ‘who’. Before moving on to the exact analysis of the distributive quantifier, we need to take a look at this question word, which is also a potential candidate for analysis as a true quantifier.

Closer inspection of *darban* reveals that it consists of an agreement-prefix *d-* (‘3SG.HUM-’) and an etymologically complex stem *-ar+ba+n* (Chirikba 2003:33). According to Chirikba (p.c.), the latter at least consists of a deictic part *ar* and an interrogative part *-ba*. The word *darban* therefore appears to be a predicate/argument structure by itself, to be translated as ‘who is s/he?’ This is an intransitive clause that can be used to identify nonthird persons as well. Thus *s-arban* translates as ‘who am I?’, *w-arban* as ‘who are you’, etcetera. Note that in these examples, the intransitive subject is omitted. It can nevertheless be identified by the agreement prefix. In this respect, Abkhaz seems to behave like a null subject language, allowing for the agreement-triggering argument to be realized as *pro*.<sup>39</sup>

Constituent questions are realized by relative clauses modifying the argument with which *d-arban* agrees. This is illustrated in the following sentences:

(46) **Abkhaz:** constituent questions

- a. *darban yacə a-baht-šačə yə-nək-wa-z?*  
 ‘who yesterday DEF-garden-in REL-stroll-IMP-Q(HUM)-INF  
 ‘Who walked in the garden yesterday?’
- b. *darban yacə yə-r-dzvdzv-wa?*  
 ‘who yesterday REL-3PL-wash-IMP  
 ‘Whom did they wash yesterday?’
- c. *darban yacə wə-z-dzvdzv-wa*  
 ‘who yesterday 2SG-REL(A)-wash-IMP  
 ‘Who washed you yesterday?’

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<sup>39</sup> The difference between Abkhaz and null subject languages is that *pro* in Abkhaz covers s/o (the absolutive relation), rather than s/A (the nominative relation).

(Khibla Amychba, Viacheslav Chirikba)

I take sentences like the ones in (46) to be best paraphrased as *who is (the one) who walked in the garden yesterday?* (46a), *who is (the one) they washed yesterday?* (46b), *who is the one that washed you yesterday?* (46c). The main predicate is *-arban*, which predicates over an empty argument (*pro*). This argument is modified by a relative clause, in which it has S/O-function in (46a/b) and A-function (46c). These sentences show Abkhaz lacks interrogative quantifiers, which is compatible with the EPH. Note, that the EPH actually predicts that only A-arguments may not be truly quantified. Nothing is predicted with respect to S/O, so ideally we would like to see some evidence that the quantification of A-arguments differs from quantification of S/O-arguments. In the following sub-subsections, we will see that this evidence indeed exists.<sup>40</sup>

Returning to the example in (44b), repeated in (47) below, I will now attempt to explain the occurrence of the equivalent for ‘every’. First of all, the fact that *darbanzaalak’gə* contains the identifying predicate *-arban* is captured when translated as ‘whoever’, *darbanzaalak’gə* further consists of -

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<sup>40</sup> Note, that the relative constructions in (46) show another subtle difference between A and S/O. When relativizing an intransitive subject or direct object, the agreement prefix is replaced by a relative prefix *yə-* (cf. (46a/b)). This prefix is homophonous with the third person singular nonhuman and third person plural prefixes (cf. (45)). Relativizing a transitive subject, however, implies the use of a prefix that does not belong to the regular paradigm of PAs, *z-* (cf. (46c)). This prefix might be related to the Proto-Abkhaz numeral *\*za* ‘one’, which resembles the Circassian *zə* ‘one’ (Chirikba 2003:23, fn. 33). This might suggest that we are dealing with an indefinite pronoun (like ‘someone’), which, as we have seen in chapter 3, can be interpreted as a question word under the scope of an interrogative C-head. Indeed, leaving out *d-arban* in (46a-c) and adding an interrogative suffix to the verbal predicate (*-da* for questioned humans) leads to grammatical sentences with the same interpretation (Chirikba 2003:70). The verbal suffix *-da* could then be interpreted as an interrogative C-head, determining the variable interpretation of *z-*. Note that S/O-arguments can be questioned in the same way, which would be explained by assuming that they are realized by an arbitrary *pro* which receives a variable reading under the interrogative C. The theory of pronoun incorporation does not prohibit incorporation of indefinite pronouns. In chapter 5, for instance, we will see that Nez Perce appears to have similar PAs. Theoretically speaking, then, an indefinite PA like *z-* could perhaps open the door to having inherently quantified LAs as well.



As in Basque and Mohawk, I assume that these elements are negative polarity items. They are inherently referential indefinites, which acquire their negative interpretation through *mə-*, the verbal negator. Unlike Basque and Mohawk, Abkhaz does not seem to possess negative adverbs, so the verb and its negative prefix should reach a position in which they c-command the indefinite at some point in the syntactic derivation. Finding evidence for the required syntactic movements will be a task for future research.

To conclude, the morphology of Abkhaz and Abaza provides evidence for the EPH. The hypothesis that only A-arguments are incorporated is compatible with the attested absence of true D-quantifiers. We have not yet encountered a convincing difference between the referential properties of A versus S/O. For this purpose, I will turn to the other branch of the Northwest Caucasian languages.

### **3.2.3 Northwest Caucasian: Circassian**

Syntax and morphology of Kabardian and Adyghe, the two Circassian languages, is largely similar to the syntax and morphology of their sister languages. Nevertheless, the agreement and pronominal paradigms (repeated in (49)) are less complex, since Circassian does not distinguish gender categories:

(49) **Kabardian**: verbal marking, independent pronouns (repeated from (39))

|    |   | Verbal marking |        | Independent pronouns |                  |
|----|---|----------------|--------|----------------------|------------------|
|    |   | S/O            | A (PA) | S/O                  | A                |
| SG | 1 | sə-            | s-     | <i>sa</i>            |                  |
|    | 2 | wə-            | b-/w-  | <i>wa</i>            |                  |
|    | 3 | ∅              | y-     | <i>a-r</i>           | <i>a-bə</i>      |
| PL | 1 | də-            | d-     | <i>da</i>            |                  |
|    | 2 | fə-            | f-     | <i>fa</i>            |                  |
|    | 3 | ∅              | y-ha-  | <i>a-ha-r</i>        | <i>a-bə-ha-m</i> |

As there is no gap in the PA-paradigm, we predict on the basis of the EPH that transitive subjects cannot be nonreferential. The way in which inherently quantified DPs translate into Kabardian is rather interesting, and somewhat different from Abkhaz and Abaza. As constituent questions and negated constituents roughly follow the same patterns as described in the previous sub-subsection, I will restrict the discussion to universal quantification.

First of all, it should be noted that Ergative case in Circassian appears on third person nouns and demonstrative forms only.<sup>41</sup> In this regard, the languages seem to follow the general pattern that Ergative case marking is restricted to DPs that are relatively low on the person/animacy hierarchy (cf. chapter 1, subsection 2.4). First and second person independent pronouns are never overtly marked for case when functioning as a core argument.<sup>42</sup> When functioning as S or O, these arguments trigger a verb-initial agreement prefix, whereas in A-function, a PA occupies a position between the agreement prefix and the verb stem. On the basis of this, we can safely assume that the EPH applies irrespective of person/number, and Ergative

<sup>41</sup> The third person independent pronouns in (49) are actually demonstratives.

<sup>42</sup> Hewitt (2005:104) mentions one exception in Adyghe. In this language, Ergative case sometimes appears on a first or second person pronoun.

case is simply morphologically restricted to LAs that double a third person PA.

However, Ergative case marking is also restricted in a different, somewhat unexpected way. Only *referential* DPs are overtly marked for Ergative case. This split does not make much sense from the viewpoint of the person/animacy-hierarchy, discussed in chapters 1 and 2. Recall that if ergative marking applies to a certain kind of DP, it also applies to every DP that is ranked lower according to the hierarchy. In chapter 2, we have seen examples of differential Accusative case marking where nonspecific objects did not carry an overt case marker, whereas specific objects did. Hence, specific DPs generally outrank nonspecific DPs on the nominal hierarchy. The opposite seems to be true for Kabardian.

(50) **Kabardian**: case and referentiality

|   | S,O                               | A                                |
|---|-----------------------------------|----------------------------------|
| 'some donkey or other' /<br>'donkeys'     | <i>šəd</i><br>donkey              |                                  |
| 'the donkey' / 'a (particular)<br>donkey' | <i>šəd-ə-r</i><br>donkey-?-ABS'   | <i>šəd-ə-m</i><br>donkey-?-ERG   |
| 'the donkeys'                             | <i>šəd-ha-r</i><br>donkey-PL-ABS' | <i>šəd-ha-m</i><br>donkey-PL-ERG |

(constructed on the basis of Colarusso 1992:52)

When a DP has nonspecific indefinite or generic reference, no case ending or number marking is used, irrespective of the grammatical function (cf. *šəd* 'donkey' in (50)). Definite or specific indefinites carry a suffix *(-ə)-r/-ha-r* (singular/plural) when functioning as S/O, and *(-ə)-m/-ha-m* when functioning as A. Colarusso analyzes the former as a pair of Absolutive markers, which is incompatible with the idea that the absolutive relation is expressed by caseless nouns. In order to solve both the hierarchical problem and the problem of having an unwanted Absolutive marker, I suggest that we are

dealing with some kind of determiner system. The suffixes in (50) imply that a DP is specific, whereas absence of a suffix corresponds to nonspecific reference. The pair *(-ə)-m/-ha-m* shows a combination of the article and Ergative case, much like the German determiner system. If we assume further that case marking can only be expressed by articles, we can solve the problem Kabardian poses with respect to the nominal hierarchy. Ergative case marking on nonspecific DPs cannot be overt, because these DPs do not have an overt article. As an abstract feature, Ergative case can still be present on a phonologically empty article, which expresses nonspecific reference. However, having concluded that Ergative case is present on every transitive subject-LA in Kabardian, we encounter another puzzling phenomenon which will actually turn out to be quite beneficial for the EPH.

Contrary to what the EPH predicts, Colarusso states that Kabardian DPs may become nonreferential for a reason separate from their being nonspecific and indefinite.<sup>43</sup> The language appears to possess several nominal modifiers that look like true quantifiers. When used in the LA-double of the incorporated A-argument, the referential properties of the LA interact with the choice of PA. Nonreferential DPs do not allow for a the third person plural form, even when they are clearly semantically plural. Instead, the singular form has to be used.

(51) **Kabardian**: nonreferentially quantified LAs

- a. *ɬ'ə*            *zə-bʒaana-Ø*    *Ø-y-a-š'ə-f*  
 man            one-few-ERG    3-3SG.A-PRS-do-able  
 'Several men can do it.'
- b. *ɬ'ə-q'as-Ø*            *Ø-y-a-š'ə-f*  
 man-each-ERG    3-3SG.A-PRS-do-able  
 'Each man can do it.'

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<sup>43</sup> Note that indefinites are not really problematic for the pronominal argument approach, as I discussed in chapter 3.

- c. *ɪ'ə-psaw-∅ ∅-y-a-š'ə-f*  
 man-all-ERG 3-3SG.A-PRS-do-able  
 'All men can do it.'

(Colarusso 1992:57, empty affixes added)

According to (51b), the suffix *-q'as* is the equivalent of the distributive quantifier 'every'. As a PA, *y-* ('3(SG).A-') must be used, which is as expected (though problematic for the EPH). However, other quantifiers like *zə-bžaana* ('one-few') and *-psaw*, the equivalent of 'all', are also unable to co-occur with *y-ha-* ('3PL.A-'). This is rather unexpected since these quantifiers normally have a collective interpretation. Note, however, that this is reminiscent of the situation in Basque, where true quantifiers also co-occur with a third person singular PA. This is an empty suffix, which I have taken to be evidence for the fact that the ergative construction in Basque resembles the passive in English, since they are characterized by the incorporation of an empty A-argument. Making a similar assumption for Kabardian leaves us with the question why third person transitive subjects always trigger *y-*. As I have mentioned in 4.3.1.3, and as can be seen in (49), this morpheme does not resemble the independent pronouns, which are actually demonstratives. I will therefore speculate that *y-* does not belong to the PA-paradigm. Instead, I assume that it is part of the verb, indicating that it is passive.<sup>44</sup> It is not the incorporated argument itself, but signals that an empty A-argument has been incorporated. In case of a third person plural A-argument, only the marker *ha-* represents the incorporated argument, which is not empty.

In sum, then, Colarusso's observation that nonreferentially quantified DPs never trigger plural marking on the verb is captured under the EPH by assuming that the PA-paradigm of Kabardian contains an empty element,

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<sup>44</sup> Recall from subsection 2.1 that I have assumed that passive morphemes are realized under *v*. It should be noted, however, that the passive morpheme in Kabardian does not imply that a sentence will have the functional interpretation of a passive (i.e., with a highly topical O and an A that is low in topicality). It could perhaps be analyzed as a relic from an earlier stage of the language, when ergativity did not exist.

just like Basque. This analysis is primarily based on the sentences in (51). However, by consulting native speakers for both Kabardian and Adyghe, I have found that Colarusso's observation probably does not hold for all the Circassian dialects.<sup>45</sup> All of my informants used the third person plural PA (*y-ha-*) in combination with *ɿ 'ə-ɸsaw* ('man-all'), as expected under the EPH. With respect to the translation of 'every'/'each', they differed. One Kabardian informant used *-q'as* in combination with *y-* (the supposed 'passive' morpheme), which is in accordance with Colarusso's observation. Another informant happily provided *-ɸsaw*, also in combination with *y-*. Yet two other informants, one for Kabardian and one for Adyghe, suggested that their language does not have an equivalent for 'every'/'each'. In their translation, *-ɸsaw* was the only universal quantifier, and it consistently co-occurred with the plural PA (*y-ha-*). When asked whether they knew *-q'as*, they suggested that this morpheme may only be used in time adverbials such as 'every day' and 'every year'.<sup>46</sup> More research is needed in order to point out whether Circassian dialects really differ with respect to their inventory of quantificational elements. If there are true quantifiers, as suggested by Colarusso, we need to assume that the PA-paradigm contains an empty element for third person singular. Thus the EPH can be maintained for these languages, and is actually confirmed by the fact that only A-arguments trigger prohibit plural marking on the verb when quantified. This suggests that the person/number markers for A differ from the ones triggered by S/O, which I have taken to be agreement markers. Dialects without true quantifiers may resemble Abkhaz-Abazin in having a complete PA-paradigm with overt forms for every person/number combination. In these dialects, *y-* will be analyzed as a third person singular form.

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<sup>45</sup> I am grateful to Ender Kankoç, Alim Shom, Mehmet Ali Yavan and Tülay Yavan-Karakuş for providing me with data. I also would like to thank Monika Höhlig, who generously passed on my questions to a native speaker of Adyghe.

<sup>46</sup> Remarkably, Colarusso (1992:57) mentions that his informant has pointed out that *-zahwɛλ* ('several') is an acceptable alternative for *zə-bžaaŋa* ('one-few') in (51a), although in the literary standard, *-zahwɛλ* is restricted to 'several times'.

In the next sub-subsection, I will discuss some compelling evidence from the Mayan family, showing that transitive subjects are excluded from certain syntactic constructions.

### 3.2.4 Mayan

As I discussed in sub-subsection 3.1.4, Mayan nouns and independent pronouns only have one form that is used for all three core grammatical functions. As they show a one-to-one correspondence with the verbal markers triggered by s/O-arguments, I have proposed to analyze the pronouns as consisting of a focalizer *ja-* followed by an agreement affix. The supposed PA-paradigm does not contain any gap, and hence we expect that there are no true quantifiers possible in transitive subject function. The relevant forms for Tzeltal are repeated in (52).

(52) **Tzeltal**: verbal marking, independent pronouns (repeated from (40))

|      | Verbal marking                |  | Independent pronouns |
|------|-------------------------------|--|----------------------|
|      | s/O                           | A (PA)   | s/O/A                |
| SG 1 | - <i>on</i>                   | <i>j-</i> / ( <i>j</i> ) <i>k-</i>                           | <i>jo'on</i>         |
| 2    | - <i>at</i>                   | ( <i>j</i> ) <i>a-</i> / ( <i>j</i> ) <i>aw-</i>             | <i>ja'at</i>         |
| 3    | - $\emptyset$                 | <i>s-</i> / <i>y-</i>  | <i>ja'</i>           |
| PL 1 | - <i>otik</i>                 | <i>j-...-tik</i> / ( <i>j</i> ) <i>k-...-tik</i>             | <i>jo'otik</i>       |
| 2    | - <i>ex</i>                   | ( <i>j</i> ) <i>a-...-ik</i> / ( <i>j</i> ) <i>aw-...-ik</i> | <i>ja'ex</i>         |
| 3    | - $\emptyset$ (+ <i>-ik</i> ) | <i>s-...-ik</i> / <i>y-...-ik</i>                            | <i>ja'ik</i>         |

As far as I have been able to ascertain, Tzeltal does not contain true quantifiers. Universal quantification, for instance, is expressed by the noun *pisil* ('all') or the numeral *juju* ('each'), both of which trigger plural marking on the verb.<sup>47</sup>

<sup>47</sup> Although constituent order in Tzeltal is a matter of debate (cf. Robinson (2002) and Polian (in preparation:204-207)), most transitive clauses that have both arguments expressed by an independent constituent will have the verb followed by its

(53) **Tzeltal** (Tenejapa dialect): universal quantification

- a. *s-pisil*      *winik-etik*    *ya*      *x-ben-Ø-ik*  
 3POSS-all    man-PL      ICOMPL    ICOMPL-walk-3-PL  
 ‘All the men/every man walk(s).’
- b. *s-pisil*      *winik-etik*    *ya*      *s-lo’-ik-Ø*      *mantzana*  
 3POSS- all    man-PL      ICOMPL    3.A-eat-PL.A-3    apple  
 ‘All the men/every man eat(s) apples.’
- c. *juju-tul*      *ya*      *x-ben-Ø-ik*      *te*      *winik-etik*  
 each-HUM    ICOMPL    ICOMPL-walk-3-PL    DEF    man-PL  
 ‘Each of the men walks.’
- d. *ya*      *s-k’ux-ik-Ø*      *mantzana*    *juju-tul*      *te*  
 ICOMPL    3.A-eat-PL.A-3    apple      each-HUM    DEF  
*winik-etik=e*  
 man-PL=DEF  
 ‘Each man is eating an apple.’

(via Penny Brown)

Both types of quantifier can be used in an argument (s in (53a/c)) and in an adjunct-LA (A in (53b/d)). This is compatible with the EPH, since we have no indication that either of the universal quantifiers trigger singular marking. It should be added, however, that the informant consulted accepted an alternative to the d-sentence where *-ik* (‘-PL.A’) was absent, although he preferred the version where it was present. I have been unable to check whether this is an accident, but if it is a serious possibility in this language, then we need to assume that Tzeltal is like Circassian (and Basque) in having an empty PA. The third person PA-prefix (*s-/y-*) would then have to

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arguments (with A following o). Assuming that in such constructions, the direct object is in Spec,IP, I suppose that the verb is in C, whereas the LA doubling the PA is adjoined to the right of IP. The position immediately preceding the verb is used for focalization, whereas a sentence-initial position is reserved for topicalized constituents. Either of these positions seems to be occupied in (53). Finally, the fact that PAs appear to be split into a verbal prefix and a suffix makes it hard to decide how incorporation takes place in Tzeltal. I can at least say that the PA-suffix is closer to the stem than the agreement suffix, at least in the Tenejapa dialect (Gilles Polian, p.c.). Without further comment, I will assume that the splitting up is due to morphophonological processes.

be analyzed as a passive morpheme, as in Kabardian. There is not sufficient data to decide on this issue, so I will have to leave it for future research.<sup>48</sup>

With respect to questioned and negated arguments, the literature on several other Mayan languages shows excellent evidence for the EPH. Larsen (1987), for instance, shows that in Quiché, s/o-arguments are questioned as follows:<sup>49</sup>

(54) **Quiché** (Quichean-Mamean, Greater Quichean, Quichean, Quiche-Achi)

a. *jas*    *x=Ø=uu-paq'*            *ri*    *achii*  
 what    PFV=3SG=3SG.A-split    DEF    man

'What did the man split?'

b. *jachin*    *ka=Ø=q'ab'ar-ik*  
 who    IPFV=3SG=get.drunk-SUF<sup>50</sup>

'Who gets drunk?'

(Larsen 1987:43)

Following the generative framework, Larsen assumes that the question words in these examples have undergone *wh*-movement to Spec,CP. With transitive subjects, this movement is impossible. The EPH predicts that this is because transitive subjects are realized by an obligatory pronoun, which is incorporated.<sup>51</sup> A question word could only be realized as an LA, which would be unable to bind the PA from its adjoined position. Relative clauses and cleft constructions involve the same movement operation, and hence operate on an s/o-pivot, excluding the transitive subject. Similar restrictions

<sup>48</sup> According to Gilles Polian (p.c.), the distributive *juju(n)* is more like an adverbial with the meaning 'one by one'. If this is correct, the fact that my consultant allowed for a plural PA in (53d) would not be problematic. In general, Polian adds, plural marking in Tzeltal is almost optional, under appropriate discourse conditions.

<sup>49</sup> It should be noted that this type of behaviour is absent from Tzeltal.

<sup>50</sup> The 'phrase final suffix' appears on every verb that is the last overt constituent of a sentence or clause followed by another finite clause (cf. Larsen (1987:38)).

<sup>51</sup> Note that Quiché differs from Tzeltal in having agreement clitics which precede the verb. The PAs are prefixes to the verb.

with respect to the A-argument have been reported for other languages in the Quichean-Mamean branch, such as Mam (cf. England (1983)) and Aguacatec (cf. Larsen (1981)). In Mam, transitive subjects also cannot be negated. Mam negation is also done by relativization. All these facts indicate that the EPH is basically right.

It should be noted that in the languages just mentioned, there is an alternative construction that allows the A-argument to be questioned, negated or focused. This construction, the so-called antipassive, is present in many ergative languages. The antipassive is often thought of as the 'ergative' answer to passive constructions in nonergative languages.<sup>52</sup> As we have seen in section 1, passive verbs differ from active ones in reversing the relative topicality of their core arguments. In the active construction, the A-argument tends to be more topical than the O-argument, whereas the O of a passive construction is much more topical than the A. Grammatically, I have assumed that this switch is realized by incorporation of A, in which case O triggers agreement. The antipassive differs from the ergative construction in that the A-argument becomes much more topical than the O-argument (cf. Givón (1994:8)). Superficially, antipassivization often means that a transitive verb becomes intransitive, and instead of demoting the A-argument, O is demoted and often omitted, while A acts like an intransitive subject and, hence, triggers agreement. This is illustrated for Tzeltal in the following sentences:

(55) **Tzeltal:** antipassivization

- a. *ya j-bijtes-Ø te alal-etik=e*  
 ICOMPL 1.A-teach-3 DEF child-PL=DEF  
 'I teach the children.'

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<sup>52</sup> This view stems from the time when it was believed that ergative languages do not have passive constructions. This is not true. In fact, Mayan languages in particular often have more than one passive construction, as well as one or more antipassive construction. The reader is referred to Dayley (1981) for a complete overview of voice mechanisms in Mayan languages.

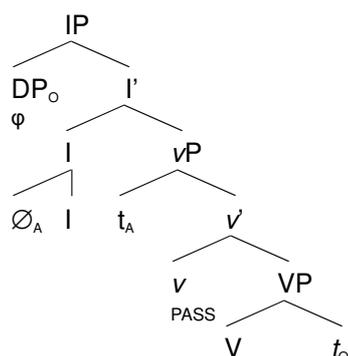
- b. *ya x-bijtes-wan-on*  
 ICOMPL ICOMPL-teach-ANTIP-1SG  
 'I teach.' / 'I am a teacher.'

(Polian (in preparation:148,149))

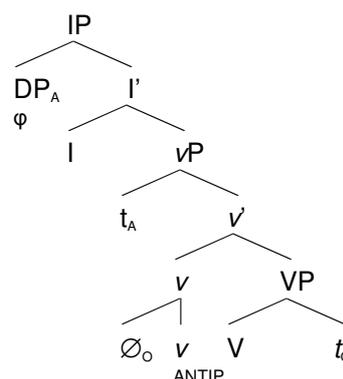
In (55b), the verb carries an antipassive morpheme (*-wan*) and the O-argument is absent. The A-argument, normally expressed by a PA (cf. (55a)), is now expressed by a *pro* in Spec,IP (omitted in (55b)) with which the verb agrees. If the passive analysis in section 1 is on the right track, the analysis of antipassive constructions can be assumed to look like (56b):

(56) Passive and antipassive (LAs omitted)

a. Passive tree (cf. (9))



b. Antipassive tree



The antipassive morpheme is base-generated under *v*, just like the passive morpheme. Unlike the latter, however, the antipassive *v* requires the O-argument to be base-generated as an empty element. This argument incorporates into *v*, enabling the A-argument to be licensed by agreement. In Mayan, we have to assume that this argument is no longer obligatorily pronominal in the antipassive.

By now it will be clear that this construction should allow the A-argument to be quantified. Hence, the antipassive may be used in order to question a transitive subject. Compare the following sentence to the ones in (54):

(57) **Quiché:** questioning the transitive subject

*jachin*      *x=Ø=paq'-ow*      *ri*      *sii'*  
 who      PFV=3SG=split-ANTIP      DEF      firewood

'Who split the firewood?'

(Larsen 1987:43)

In this sentence, the A-argument is base-generated as a question word, which first moves to Spec,IP in order to trigger third person singular agreement. It then moves to Spec,CP. This is possible because the verb is antipassive. Similar constructions circumvent the restrictions with respect to transitive subjects in Mam and Aguagatec.

I close this section by concluding that there is a class of Mayan languages that pose syntactic restrictions on the transitive subject. The transitive subject may not be questioned, negated or put in focus. This supports the EPH, which states that the A-argument is realized as a PA. This PA can be doubled by an LA, which may not contain an inherently quantified DP. Data from Tzeltal have shown that this language does not possess universal quantifiers like 'every'. The same was seen in Abkhaz-Abazin, whereas Basque and, to a lesser extent, Circassian allow true quantifiers in LAs. For Basque this was not a problem, as the PA-paradigm contains an empty slot, suggesting an analysis that is identical to Kurmanji. For Circassian, and perhaps for Tzeltal as well, it might be the case that the overt third person singular PA really is a passive morpheme, which indicates that an empty A-argument has incorporated.

#### **4 Partial nonconfigurationality and ergativity: the Ergative as Passive Hypothesis**

The Ergative as Passive Hypothesis (EPH) is needed in order to account for ergative patterns in verbal person/number marking. Transitive subjects either

trigger no marking at all (cf. Kurmanji) or they trigger markers that differ from the ones triggered by intransitive subjects and direct objects (cf. Basque, Northwest Caucasian, Mayan). The S/O-markers are assumed to be agreement markers, whereas A-markers are incorporated arguments. The following structures summarize the EPH:

(58) Ergative as Passive Hypothesis (EPH, final version)

|               |                                      |   |
|---------------|--------------------------------------|---|
| Intransitive: |                                      | [ <sub>IP</sub> DP <sub>S,φ</sub> V+I <sub>φ</sub> ]                                    |
| Transitive:   | [ <sub>IP</sub> LA <sub>A(Erg)</sub> | [ <sub>IP</sub> ∅ <sub>A</sub> + V+I <sub>φ</sub> DP <sub>O,φ</sub> ]]                  |
|               | [ <sub>IP</sub> LA <sub>A(Erg)</sub> | [ <sub>IP</sub> ∅ <sub>A</sub> /PA <sub>A</sub> + V+I <sub>φ</sub> DP <sub>O,φ</sub> ]] |
|               | [ <sub>IP</sub> LA <sub>A(Erg)</sub> | [ <sub>IP</sub> PA <sub>A</sub> + V+I <sub>φ</sub> DP <sub>O,φ</sub> ]]                 |

Intransitive constructions in EPH-languages are the same as their counterparts in English in that the sole argument is licensed by agreement. Transitive constructions may be similar to passive constructions in English in that the A-argument is realized as an empty category which incorporates into I. There is, however, one important difference: passive constructions are an alternative to active constructions, whereas ergative-as-passive constructions are active constructions themselves. This means that the discourse functions of passives and ergatives are not the same. Under the EPH, this difference is reflected in the location of attachment of the LA-double. In passive constructions, it adjoins to vP, where it is structurally lower than the O-argument. In ergative constructions, the LA attaches to IP, where it is the structurally highest argument. The result of this is that most EPH-languages are syntactically accusative, rather than ergative. The LA may carry an overt oblique case marker, which is automatically interpreted as Ergative. Finally, EPH-languages appear to differ with respect to the form of the incorporating A-argument. In Kurmanji, it is always empty, in Basque, it is either empty or a caseless pronoun, and in Northwest Caucasian/Mayan languages it is often exclusively a caseless pronoun.

The fact that ergativity is a marked option in UG may be understood from the perspective of non-ergative languages. Among these, only a subclass has a passive construction. In order to have passives, a language needs to have the possibility of realizing transitive subjects by incorporated pronouns. EPH-ergativity will only occur in languages in which this possibility exists. Furthermore, the syntax in EPH-languages will almost always differ from morphology. Although the latter may be exclusively ergative, syntax is bound to be accusatively organized. As is to be expected on the basis of Ukrainian, Accusative case may still be available in EPH-languages. In the next chapter, I will discuss data which suggest that this prediction is borne out. Furthermore, I will be looking at languages with split ergativity, since these are the only ones that I have not yet discussed from the perspective of my proposal. It will become clear that application of the EPH is sometimes limited to a certain domain in the grammar, which is in line with the marked status of ergativity.

## chapter 5

# Split ergativity

### 1 Introduction

The main hypothesis of this study is that UG allows for two syntactic licensing mechanisms, Accusative case in the complement of V and agreement in the specifier of I. Languages depending on these mechanisms for the realization of their verbal arguments will never be ergative. Their clauses always look as in (1).

(1)

| Syntactic licensing of verbal arguments (chapter 2) |                                   |                  |                       |
|---|-----------------------------------|------------------|-----------------------|
| Intransitive:                                       | [ <sub>IP</sub> DP <sub>S,φ</sub> | V+I <sub>φ</sub> | ]                     |
| Transitive:   | [ <sub>IP</sub> DP <sub>A,φ</sub> | V+I <sub>φ</sub> | DP <sub>O,Acc</sub> ] |

So far, we have encountered two different environments in which ergativity can occur. The first environment is found in nonconfigurational languages with pronominal arguments (PAs), discussed in chapter 3. In these languages, every argument of the verb is base-generated as a pronoun which is incorporated into the predicate. The predicate-internal positions of the PAs show a clear nominative/Accusative pattern. We can account for this by assuming that object-PAs incorporate into  $v$ , whereas subject-PAs incorporate into I. Moreover, the phonological shape of the object-PAs often differs from the shape of the subject-PAs, which is explained by Accusative

case marking. Hence, in nonconfigurational languages, UG allows for the following structures:<sup>1</sup>

|               |  |   |  |
|---------------|--|---|--|
| (2)           | Second Pattern Hypothesis (SPH, chapter 3) |   |  |
| Intransitive: | [ <sub>IP</sub> LA <sub>S</sub>            | [ <sub>IP</sub> PA <sub>S(φ)</sub> + V+I <sub>φ</sub> | ]]   |
| Transitive:   | [ <sub>IP</sub> LA <sub>A,Erg</sub>        | [ <sub>IP</sub> LA <sub>O</sub>                       | [ <sub>IP</sub> PA <sub>A(φ)</sub> + V+I <sub>(φ)</sub> + PA <sub>O(Acc)</sub> ]]] |

In order to highlight an argument in the discourse, or in order to provide lexical information about it, a PA may be doubled by an independent pronoun or a full noun phrase. These lexical arguments (LAs) form a chain with their respective PAs, which means that they do not need any additional syntactic licensing. However, as we saw in chapter 3, languages with relatively simple PA-paradigms often use an oblique case marker on one of the LAs. If this marker appears on LA<sub>A</sub>, it will be called Ergative.

In chapter 1, I introduced the central problem of this study. Ergativity is a marked phenomenon, both between and within languages. This means that most ergative languages are not exclusively ergative. The accusative pattern is always present somewhere in the grammar. This is called ‘split ergativity’, and it will be clear that the first type of split discussed in chapter 1 is inherent to the SPH, since this hypothesis entails ergatively patterning LAs versus accusatively patterning PAs.<sup>2</sup> From this point of view, split ergativity appears to be the standard case, rather than an exception.

Things are slightly different for the languages discussed in chapter 4. In those systems, only transitive subjects (A) incorporate, creating a morphologically ergative pattern by having agreement between the verb and

---

<sup>1</sup> Case and agreement are put between brackets, since they are not strictly necessary for the licensing of PAs. In principle, incorporated pronouns are morphologically licensed, which means that there is no need for syntactic licensing as well.

<sup>2</sup> The language I mentioned in chapter 1 with respect to this type of split is Djaru.

the intransitive subject (s) or direct object (o). Clauses in these languages will display the structures in (3).

|               |   |   |  |
|---------------|---|---|--|
| (3)           | Ergative as Passive Hypothesis (EPH, chapter 4) |   |  |
| Intransitive: |   | [ <sub>IP</sub> DP <sub>s,φ</sub> V+I <sub>φ</sub> ]                      |  |
| Transitive:   | [ <sub>IP</sub> LA <sub>A(Erg)</sub>            | [ <sub>IP</sub> ∅/PA <sub>A</sub> + V+I <sub>φ</sub> DP <sub>o,φ</sub> ]] |  |

Person/number marking in these systems always shows an ergative pattern: agreement affixes refer to S/O, the absolutive relation, whereas the A-argument is incorporated. It is either realized by an empty element, as in Kurmanji, or by a fully specified PA, as in Basque, Northwest Caucasian and Mayan.<sup>3</sup> The LA-double of the PA may carry an oblique case marker which will be interpreted as Ergative, as in SPH-languages. The LA typically adjoins to IP, ruling out syntactically ergative constructions.<sup>4</sup> This could be conceived of as a second kind of split ergativity, opposing morphological ergativity against syntactic accusativity. Again, split ergativity is a rule, rather than an exception, even from the perspective of the EPH.

However, apart from the two kinds of splits discussed above, there are at least two other types of morphological splits. In the present chapter, I will focus on these splits and see to what extent my proposal explains each one of them. In section 2, I will discuss systems that reserve the ergative pattern for certain tenses, aspects, moods, or particular types of clauses.<sup>5</sup> It will become clear that both the SPH and the EPH are compatible with such systems, provided that we allow for restrictive application. In section 3, however, we will see that it is less straightforward to account for splits that

<sup>3</sup> As I argued in chapter 4 (section 3), PA-paradigms in EPH-languages sometimes contain an empty category for third person singular.

<sup>4</sup> Dyrbal appears to be one of the few exceptions. The explanation offered in chapter 4 is based on the assumption that the LA in Dyrbal adjoins to vP, as it does in canonical passive construction. A further assumption was that the language is in a transitional stage between nonergative and ergative.

<sup>5</sup> The typical example of this split in the present study is Kurmanji (Kurdish).

are determined by grammatical person features. Languages displaying this type of split refer to the same nominal hierarchy that plays a role in differential object marking (cf. chapter 2). DPs below a certain cutoff point pattern ergatively, whereas higher ranking DPs pattern accusatively. In other words, the nominal hierarchy is divided into two (and sometimes three) zones, each of which has its own type of marking. When both arguments of a transitive clause are within the same zone, the clause will either show nominative/Accusative or absolutive/Ergative marking. When both arguments are located in different zones, however, nominative/absolutive or Ergative/Accusative marking occurs. These unexpected patterns are found both within case marking and verbal person/number marking. I will show on the basis of Nez Perce, a native American language from the Penutian stock, that these patterns are best captured under the SPH. This means that every argument in these languages is base-generated as a PA, which is optionally doubled by an LA. For this analysis to apply, it will be necessary to show that the person/number markers on the verb show a neat nominative/Accusative pattern, as we would expect when they are PAs. This approach is new, as it needs additional assumptions about the interplay of person/number markers and *inverse* markers.<sup>6</sup> Once we have taken this step, the only difference with SPH-languages like Warlpiri will be the split in LA-case marking. This split, in turn, will find a straightforward explanation thanks to detailed information in the literature about the historical development of the case markers in Nez Perce. Before moving to the concluding chapter 6, I will summarize the main findings of the current chapter in section 4.

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<sup>6</sup> Several languages have a special mechanism for expressing the relative position of the arguments of a transitive clause on the nominal hierarchy. When A is higher than O with respect to this hierarchy, a *direct* marker will be used. In situations where A is lower than O, an *inverse* marker is in place (cf. Givón (1994)).

## **2 Splits conditioned by tense, aspect, mood or clause type**

As already discussed in the previous chapter, Indo-Aryan languages often have an ergativity split that is conditioned by tense or aspect. The Iranian branch is characterized by an ergative pattern that occurs in past tenses only. In Indo-Aryan languages, it occurs in perfective aspect. There is little controversy about the historical explanation for these restrictions: the ergative construction has developed out of a passive construction. This construction once functioned as a periphrastic alternative to a synthetic verbal form indicating past tense/perfective aspect. When the latter was lost, the periphrastic construction became the only way to express past/perfective, thus entirely replacing the active construction in that particular tense/aspect (Dixon 1994, Bubeník 1998). In subsection 2.1, I discuss the ergative construction in Kurdish, which is restricted to past tense. It will become clear that this split can be explained by simply restricting the EPH to past tense environments. In passing, we will see that Sorani, a Southern Kurdish dialect, gives an interesting twist to the EPH in that it has constructions where Accusative case is used in order to license the direct object, instead of agreement. In subsection 2.2, I will briefly look at Georgian, for which it can be argued that the SPH is active in the aorist/perfective. Finally, in subsection 2.3, several Mayan languages will be discussed in order to show that accusative patterns are sometimes derived from an ergative EPH-pattern. In 2.4, I will summarize the implications of these splits for my proposal. The main observation will be that split ergativity of the type discussed in this section is to be expected on the basis of inflectional variation found across languages.

### **2.1 Kurdish**

Under the present proposal, a split governed by tense, aspect, mood (henceforth TAM) or clause type suggests that the SPH or the EPH applies to a subset of TAM-combinations or clause types. Recall from Kurmanji,

discussed in the previous chapter (subsection 2.2), that present tense clauses in this language show the accusative pattern. In these clauses, Kurmanji is just like English in having Accusative objects and verbs agreeing with their subjects. In past tense clauses, however, the language uses an ergative pattern on the basis of the EPH: the A-argument is realized by an incorporating empty category, whereas s and o are licensed by agreement. The LA-double is marked for Ergative case.

The second variant of the EPH, according to which transitive subjects are realized by fully specified PAs (cf. (3)), is found elsewhere in Kurdish. As is the case in Kurmanji, this ergative pattern is found in past tense clauses only. Consider the following examples from Sorani.<sup>7</sup> This dialect lacks overt case marking, but in present tense the verb agrees with the subject.

(4) **Sorani** (Indo-European, Indo-Iranian, Iranian, Kurdish)

- a. *min da-ro-m*  
1SG PROG-go.PRS-1SG  
'I am going.'
- b. *to da-ro-ît*  
2SG PROG-go.PRS-2SG  
'You are going.'
- c. *min to da-bîn-im*  
1SG 2SG.ACC PROG-see.PRS-1SG  
'I am seeing you.'
- d. *to min da-bîn-ît*  
2SG 1SG.ACC PROGT-see.PRS-2SG  
'You are seeing me.'

(Mariwan Kanie)

---

<sup>7</sup> Sorani, which is predominantly spoken in Iran and Iraq is often called Suleimaniye Kurdish. Most Kurmanji speakers originate from Turkey and Syria. Whereas Sorani is referred to as Central Kurdish, Kurmanji is termed Northern Kurdish. A third group of dialects is called Southern Kurdish, but I do not have any linguistic information about them (source: Ethnologue).

In (4a/c), verbal agreement with a first person singular subject is indicated by the suffix *-(i)m*; in (4b/d), the suffix *-ît* indicates agreement with a second person singular subject. Assuming that the direct objects in the above sentences bear abstract Accusative case, Sorani is no different from English in present tense clauses.

In past tense clauses, only intransitive subjects seem to be able to trigger agreement on the verb. Transitive subjects are obligatorily represented by a PA that cliticizes to some constituent that comes early in the sentence, for instance the direct object.

(5) **Sorani**: ergative constructions

- a. *min ro-îsht-im*  
1SG go-PST-1SG  
'I went.'
- b. *to ro-îsht-ît*  
2SG go-PST-2SG  
'You went.'
- c. *min to=m bîn-î*  
1SG 2SG=1SG.A see-PST  
'I saw you.'
- d. *to min=it bîn-î*  
2SG 1SG=2SG.A see-PST  
'You saw me.'

(Mariwan Kanie)

The agreement suffixes *-im* and *-ît* in (5a/b) belong to the same agreement paradigm as the verbal suffixes in (4).<sup>8</sup> The suffixes that attach to the direct object in (5c/d) belong to a different paradigm. Not only do the forms of this paradigm differ from the agreement markers, they also show different

---

<sup>8</sup> There is one difference though. In past tense clauses, third person singular triggers an empty morpheme, which contrasts with *-et* in present tense environments.

syntactic behaviour.<sup>9</sup> Rather than exclusively attaching to the verb, they seem to behave like second position clitics (cf. MacKenzie (1961), Bynon (1979) for more details). This is perfectly compatible with the EPH, which states that PAs incorporate into I. Both MacKenzie (1961:76,77) and Bynon (1979:217) argue that these markers have the status of pronouns, as they allow for omission of an independent noun or pronoun, which is supposed to be an adjunct under the EPH. Indeed, the following sentences have been accepted as alternatives to the ones in (5c,d):

(5') **Sorani:**

- a. *to-m*            *bîn-î*  
 2SG=1SG.A    see-PST  
 'I saw you.'
- b. *min-it*          *bîn-î*  
 1SG=2SG.A    see-PST  
 'You saw me.'

(Mariwan Kanie)

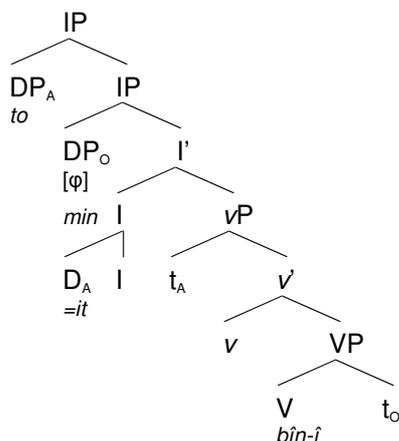
The fact that PAs attach to constituents like the direct object can be captured by assuming that in this type of sentence, the verb stays in its base-position. V-to-I movement takes place after Spell Out. The structure of (4d) is given in (6).<sup>10</sup>

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<sup>9</sup> The formal differences are found with the following person/number combinations (agreement vs. PA): third person singular (*-(ê)t* vs. *-î/-y*) and plural (*-in* vs. *-yân*); first person plural (*-în* vs. *-mân*) and second person plural (*-in* vs. *-tân*). The corresponding independent forms are *aw* ('3SG'), (*h*)*êma* ('1PL'), *êwa* ('2PL') and *awân* ('3PL') (MacKenzie 1961:73,76,89). These independent pronouns do not correspond to either of the PAs in any transparent way, except perhaps for *awân*, which seems to be closer to the PA (*-yân*) than the agreement suffix (*-in*), as we would expect. As I have done in the case of Basque, I will assume that the PAs use roots that are no longer available in the independent forms.

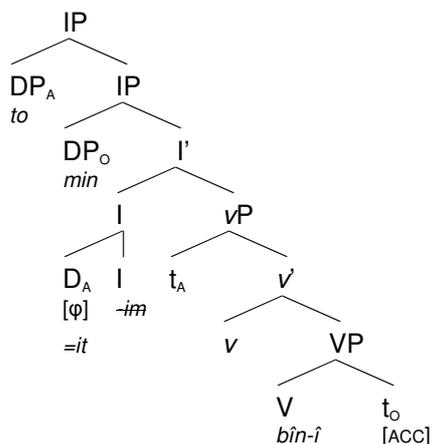
<sup>10</sup> Note that although the verbal suffix *-î* represents past tense, it does not originate under I. According to the recent minimalist view, lexical items are fully inflected when they enter the syntactic derivation.

(6) Past tense transitive clause in Sorani: standard EPH-approach (cf. (4d))



The tree in (6) suggests that licensing of the object is done by agreement. However, there is no overt agreement morphology in the transitive sentences (5c,d). Both MacKenzie and Bynon argue that such sentences contain an *empty* agreement morpheme, which, according to MacKenzie, is an allomorph of the agreement suffixes in intransitive clauses (cf. (5a,b)). Bynon (1979:220-224), on the other hand, argues that the transitive subject is the trigger of such an empty agreement morpheme. Because of the fact that we are dealing with empty agreement, we should consider both options. Following MacKenzie appears to be the most logical option according to the EPH. Bynon's analysis, however, should not be ruled out either. Recall from chapter 4 (subsection 2.4) that languages like Ukrainian have passive constructions in which the internal argument is licensed through Accusative case. The explanation I proposed in order to deal with these examples, assumes that agreement must be unavailable to the object. This effect is ascribed to the empty A-argument, which triggers agreement while incorporating. Translating this analysis to Sorani results in the following tree:

- (7) Past tense transitive clause in Sorani: alternative EPH-approach (cf. (4d))



In (7), the direct object is licensed by Accusative case. The transitive subject is an incorporating PA which triggers agreement. I assume that the agreement suffix is realized in the structure, but that it is deleted in the pronunciation. The reason for this might be that it marks the verb redundantly for the same argument. The direct object moves to Spec,IP because of the extended projection principle, not in order to check agreement. By itself, the analysis in (6) is not better or worse than the one presented in (7), but I will prefer the latter because it more or less explains why intransitive clauses have overt agreement, unlike transitive clauses: in the latter, agreement is triggered by an incorporating PA, whereas in the former, it is triggered by an independent DP.

It is not impossible for a transitive verb to show overt person/number marking referring to the internal argument. This is illustrated in (8). In these sentences, a suffix belonging to the agreement paradigm is used in order to refer to the direct object. Remarkably, this type of verbal marking must not co-occur with an independent object noun or pronoun.

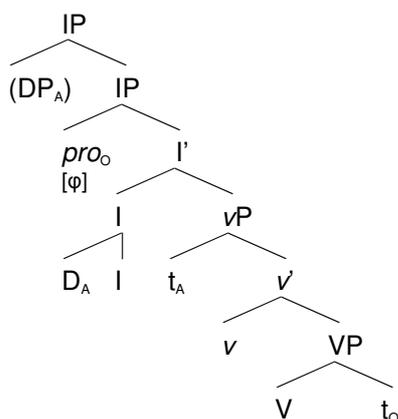
(8) **Sorani**: transitive verbs marked for person/number of the object

- a. (\*to)      bîn-î-m-ît  
 2SG        see-PST-1SG.A-2SG  
 'I saw you'
- b. (\*min)     bîn-î-t-im  
 1SG        see-PST-2SG.A-1SG  
 'You saw me'

(Mariwan Kanie)

The following situation obtains in Sorani past tense clauses: unlike intransitive subjects, direct objects appear to be in complementary distribution with their corresponding person/number suffix. Recall from chapter 2 (section 3) that exactly this distribution is the key characteristic of *anaphoric agreement*. This type of agreement often represents the first stage of the development from pronoun to agreement marker. Thus a plausible analysis for this state of affairs is that the anaphoric agreement marker only allows for a *pro* object. Compare the tree below with the one in (7).

(7') Past tense transitive clause in Sorani: agreement with *o* (cf. (8), (8'))



In this tree, the transitive subject incorporates but does not trigger agreement. Hence, the direct object is licensed by agreement, and not by Accusative case. The agreement suffix follows the incorporated A, and is not

deleted because it provides relevant information, namely person and number of the O-argument. The following sentences show that doubling the incorporated A is still possible in these constructions:

(8') **Sorani:**

- a. (*min*) (*\*to*) *bîn-î-m-ît*  
 1SG 2SG see-PST-1SG.A-2SG  
 'I saw you'
- b. (*to*) (*\*min*) *bîn-î-t-im*  
 2SG 1SG see-PST-2SG.A-1SG  
 'You saw me'

(Mariwan Kanie)

Concluding the discussion of Kurdish, we can say that Northern Kurdish (Kurmanji) and Southern Kurdish (Sorani) both have an ergative construction that is restricted to past tenses. Historical analysis shows that the ergative construction developed out of a passive construction. This calls for an analysis along the lines of the EPH. Kurmanji appears to follow the pattern in which transitive subjects are licensed by an incorporating empty argument. Sorani, however, chooses to incorporate overt pronouns, and hence has a PA-paradigm. This language differs from the languages discussed in chapter 4 in having constructions where incorporation apparently goes along with agreement. In these constructions, the direct object is licensed by Accusative case. This, in turn, resembles certain passive clauses in Ukrainian. Alternative constructions show that the transitive verb does show agreement with the internal argument, which is necessarily empty (*pro*).

In languages with the type of ergative split found in Kurdish, the EPH appears to be active in only a subset of its clauses. Application of the EPH in these languages is conditioned by functional features such as tense, aspect or mood. Whatever the exact cause may be of this conditioning, it is clear that the attested patterns fit in well with my proposal. Not a single assumption made in the previous chapters needs to be dropped.

## 2.2 Georgian

Theoretically speaking, it is imaginable that a given language X would restrict application of the SPH similarly to Kurdish. However, I am not aware of any language that has PAs for all verbal arguments for only part of its TAM-combinations. Usually, nonconfigurational PA-languages seem to be consistent in having PAs in every utterance that involves a finite verb and one or more arguments. What we do find, are full-fledged PA-languages in which ergative case marking on LAs is restricted by tense/aspect. Georgian appears to be such a language.<sup>11</sup> Recall from chapter 1 (subsection 3.1) that every finite verb in Georgian carries subject and object markers that pattern nominative/Accusatively irrespective of tense, aspect or mood. In non-aorist, nonperfect tenses, the corresponding LAs follow the same pattern. Subjects are in the unmarked case, whereas objects appear in the Accuative.<sup>12</sup>

(9) **Georgian:** accusative LA-marking in non-aorist, nonperfect tenses

- a. *is seirn-ob-s*  
 3SG walk.PRS-TS-3SG.S  
 ‘S/he is going.’
- b. *is ∅-ban-s mas*  
 3SG 3O-wash.PRS-3SG.A 3SG.ACC  
 ‘S/he is washing him/her/it.’

(Kakhi Sakhltkhutsishvili)

In (9), *-s* is the third person singular subject PA. This argument may be doubled by *is* which is the unmarked independent pronoun for third person singular. The direct object-LA, which is empty for third person singular, is doubled by the independent pronoun *mas*, carrying Accusative case. In aorist and perfect tense, the LA-case pattern is ergative.

<sup>11</sup> For an analysis of Georgian along the lines of Jelinek (1984), see Boeder (1989).

<sup>12</sup> In Georgian, core case distinctions on LAs are only shown by third person nouns and pronouns. The direct object case is usually called Dative because it is homophonous to the case marker found on indirect object-doubles.



Mayan languages, and can be explained by the EPH as depicted in (3).<sup>14</sup> Mayanists seem to agree on the hypothesis that proto-Mayan was morphologically ergative too (John Justeson (p.c.), see also England (1983:261)). Hence, any alternative pattern is probably best analyzed as a deviation from the ergative pattern. Interestingly, quite different kinds of patterns are found (cf. Dixon 1994:100). At least three different kinds of deviation from the standard ergative pattern have been reported in the literature.

The first alternative pattern is found in two languages of the Ch'olan sub-branch, Chontal and Ch'ol. In imperfective contexts, *intransitive* subjects trigger the verbal paradigm that is normally used for transitive subjects. This is shown in the following sentences, notably (11b).

(11) **Ch'ol** (Mayan, Ch'olan-Tzeltalan, Ch'olan): imperfective clauses

- a. *ca til-iy-on*  
ASP come-PRF-1SG  
'I came.'
- b. *mi-h suht-el*  
ASP-1SG.S return-IPFV  
'I return.'
- c. *mi-h wahl-en-et*  
ASP-1SG.A mock-IPFV-2SG  
'I ridicule you.'

(Quizar & Knowles-Berry 1988:77,78)

Aspect in Ch'ol is expressed by means of a particle that hosts PAs and by a verbal suffix.<sup>15</sup> In (11a), a sentence with perfective aspect, there is

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<sup>14</sup> Recall from the previous chapter that Mayan languages lack overt case marking, and that they have a PA-paradigm for transitive subjects (A) and an agreement paradigm referring to the absolutive relation (s/o).

<sup>15</sup> In general, the PA-markers are considered to be a set of verbal prefixes in Ch'olan, but these examples show that the members of this set suffix to preceding aspectual particles.

agreement between the verb and the intransitive subject (*-on* ‘-1SG’). In (11b), which has imperfective aspect, agreement morphology is absent. Instead, the aspectual particle hosts a suffix (*-h* ‘1SG.S’) which is identical to the transitive subject-PA in the c-sentence, the occurrence of which is independent of aspect. Although I do not have any data on quantification, I will henceforth assume that imperfective clauses in Chontal and Ch’ol instantiate the following pattern:<sup>16</sup>

(12) **Chontal & Ch’ol:** alternative pattern (cf. (3))

|               |                                 |  |                      |
|---------------|---------------------------------|--|----------------------|
| Intransitive: | [ <sub>IP</sub> LA <sub>S</sub> | [ <sub>IP</sub> PA <sub>S</sub> + V+I              | ]]                   |
| Transitive:   | [ <sub>IP</sub> LA <sub>A</sub> | [ <sub>IP</sub> PA <sub>A</sub> + V+I <sub>φ</sub> | DP <sub>O,φ</sub> ]] |

According to (12), subjects (S/A) incorporate, whereas objects (O) are licensed by agreement. The morphological pattern depicted here is formally *accusative*, instead of *ergative*, since subjects are treated alike, and opposed to the object.<sup>17</sup> According to Larsen & Norman (1979:354), the deviant accusative pattern found in Chontal and Ch’ol is also attested in Ixil, Pocomam (both in the Quichean-Mamean branch) and the Yucatecan branch.

In Ch’orti’, the third Ch’olan language, a variation on the pattern described above is encountered: intransitive subjects in imperfective clauses are marked by a *third* set of verbal affixes (termed Set C).<sup>18</sup> Compare the following examples from Ch’orti’ with the Ch’ol sentences in (11):

<sup>16</sup> In Chontal, the alternative pattern is restricted to affirmative imperfective contexts, the ergative pattern being maintained when an imperfective sentence is negated.

<sup>17</sup> It is imaginable that the subject-PAs will eventually be reanalyzed as agreement markers, whereas the agreement paradigm functions as a set of object-PAs.

<sup>18</sup> Note that the paradigm that I refer to as ‘PA’ is traditionally called ‘Set A’, whereas my ‘Agr.’ paradigm is commonly called Set B by Mayan linguists.

(13) **Ch'orti'** (Mayan, Cholan-Tzeltalan, Ch'olan)

- a. *wayan-et*  
sleep-2SG  
'You slept.'
- b. *i-wayan*  
2SG.S-sleep  
'You sleep.'
- c. *a-ira-en*  
2SG.A-see-1SG  
'You see me.' or 'You saw me.'

(Quizar 1994:122,133,134)

Unlike its sister languages, Ch'orti' does not have overt aspectual morphology. Aspectual differences are marked through different person/number markers for intransitive subjects. The use of the agreement marker *-et* ('2SG') in (13a) implies perfective aspect. In order to interpret the sentence as having imperfective aspect, a Set C marker (*-i* '2SG.S') has to be used (cf. (13b)). Remarkably, transitive clauses are ambiguous with respect to aspect, since they always have a PA marker for the subject and an agreement marker for the object (cf. (13c)). Markers of Set C do not occur in transitive sentences. The three paradigms of verbal person/number marking in Ch'orti' are listed in (14) below.<sup>19</sup>

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<sup>19</sup> Allomorphs are not listed in Quizar & Knowles-Berry's table because they involve the metathesis of vowels and are thus too numerous.

## (14) Ch'orti': verbal marking

|    |   | Verbal marking |           |             |
|----|---|----------------|-----------|-------------|
|    |   | S/O            | A (PAs)   | 'Set C' (s) |
| SG | 1 | -en            | in-/ni-   | in-         |
|    | 2 | -et            | a-        | i-          |
|    | 3 | -∅             | u-        | a-          |
| PL | 1 | -on            | ka-       | ka-         |
|    | 2 | -oš            | i-        | iš-         |
|    | 3 | -ob'           | u-...-ob' | a-...-ob'   |

(Quizar &amp; Knowles-Berry 1988:75)

The table in (14) suggests that *imperfective* clauses employ a tripartite system: transitive verbs carry a PA-prefix for the A-argument and an agreement suffix referring to O.<sup>20</sup> Intransitive verbs carry a unique prefix expressing features of the intransitive subject. *Perfective* clauses never use Set C, they are subject to the EPH. Comparison of Set C with the other two paradigms reveals that Set C and the PA-paradigm are closely related, both with respect to the type and form of the affixes. Therefore, it is very likely that Set C has been developed out of the PA-paradigm, and hence has the same status (as I have indicated in the glosses in (14)). I will assume that Ch'orti' is like its sister languages Ch'ol and Chontal in using the PA-markers for all subjects of imperfective verbs.

I propose to explain the difference between the PA-paradigm and Set C as follows: Set C consists of PA-markers plus imperfective morphology. In other words, intransitive clauses with imperfective aspect contain an overt aspectual marker in I, unlike other clauses. When a PA-marker incorporates into imperfective I, a Set C-marker spells out the complex I-head. This is shown in (15b):

<sup>20</sup> Recall from chapter 1 (subsection 2.4) that languages like Kham show tripartite case marking.



marker). A tentative conclusion is that introducing new referents is preferably done in argument position, not in adjunct positions. This fact is compatible with the idea that set C markers are PAs, rather than agreement markers. Of course, more data will be needed in order to fully investigate this claim. For more morphological details on the patterns discussed above, see Larsen & Norman (1979) for Mopán (Yucatecan) and Quizar & Knowles-Berry (1988) for the three Ch'olan languages.

So far, we have seen two examples of split ergativity in Mayan that is determined by aspect. Another determining factor is clause type. The two non-ergative patterns described above not only occur in Ch'olan clauses with imperfective aspect, but also in certain kinds of subordinated clauses. The same is true for the Kanjobalan sub-branch (cf. Larsen & Norman 1979:354) and Mamean (England 1983:259-276). In Mam, as well as in Aguagatec, a third alternative to the general Mayan ergative construction is found: in certain *subordinated* clauses, agreement morphology is absent and all arguments seem to be represented by a member of the PA-paradigm. This is illustrated by the temporally subordinated clauses in (16b,c):

(16) **Mam** (Quichean-Mamean, Greater Mamean, Mam)

- a. *ma chi kub' t-tx'ee7ma-n xiinaq tzee7*  
 RPST 3PL DIR.AUX 3SG.A-cut-DR man tree  
 'The man cut the trees.'
- b. [*ok t-ku'-x ky-awa-'n xjaal kjo7n* ], ...  
 when 3SG.O-DR-DR 3PL.A-plant-DR person cornfield  
 'When the people plant the cornfield, ...'
- c. *n-chi ooq' [t-poon ky-txuu' ]*  
 PROG-3PL cry 3SG.S-arrive 3PL.POSS-mother  
 'They were crying when their mother arrived.'

(England 1983:259; 1988:527)

Consider *t-* ('3SG.A-') in (16a). This prefix represents the A-argument in a main clause, which is typical of the Mayan ergative construction. While the main clause predicates in (16a,c) contain agreement morphology referring to

o or s (-*chi* '3PL'), the embedded clauses exclusively employ members of the PA-paradigm. In (16b), *t-* appears to realize '3SG.O', whereas in (16c), it realizes '3SG.S'. In main clauses, these two arguments would only trigger an agreement prefix, which has the allomorphs  $\emptyset$ -/t-/tz'-/k- (cf. England (1988:526)). In subordinated clauses, however, there is no formal difference between the person/number marking triggered by s, A or o. Note that subordinate clauses do not differ from main clauses with respect to the positions occupied by the markers referring to s/o. The PA-forms in s/o-function of subordinated verbs occur in the same position as agreement markers on main clause predicates.<sup>21</sup>

Under the present proposal, a possible explanation for this phenomenon is that every core argument is realized by a pronominal argument in Mamean subordinated clauses. If we assume that all these PAs are licensed by incorporation, we expect to find patterns typical of SPH-languages. As I showed in chapter 3 (sub-subsection 2.3.2), direct object PAs incorporate into *v*, whereas subject-PAs incorporate into *I*. This means that s/A-PAs occupy the same slot, which differs from the slot occupied by o-PAs. This is not true for Mamean subordinated clauses, so this cannot be the whole story. Thus an additional assumption would have to be that s/o-PAs first move to Spec,IP, where they trigger agreement. Unlike in main clauses, agreement is covert in the clauses under investigation. Finally, s/o-PAs

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<sup>21</sup> More specifically, the order of elements in the predicate is as follows:

ASPECT + s/o + (DIRECTIONAL AUXILIARY) + (A) + stem + ENCLITIC

(England 1988:526)

It should be noted that England's examples do not distinguish between morphemes and words in a consistent way. For example, although the agreement marker *chi* ('3PL') in (16c) is analyzed as a verbal prefix, it is written as a separate word. I will analyze every agreement marker as a bound affix, but I will remain indeterminate with respect to aspectual morphemes and so-called directional auxiliaries.

cliticize phonologically to preceding or following material.<sup>22</sup> This is shown in the following structures:<sup>23</sup>

|               |  |                   |                   |
|---------------|--|-------------------|-------------------|
| (17)          | <b>Mamean:</b> alternative pattern (cf. (3) and (12))  |                   |                   |
| Intransitive: | [ <sub>IP</sub> [ <sub>IP</sub> PA <sub>S,φ</sub> = V+I <sub>φ</sub> ]                                   | LA <sub>S</sub> ] |                   |
| Transitive:   | [ <sub>IP</sub> [ <sub>IP</sub> [ <sub>IP</sub> PA <sub>O,φ</sub> = V+I <sub>φ</sub> + PA <sub>A</sub> ] | LA <sub>A</sub> ] | LA <sub>O</sub> ] |

Recall from chapter 4 (sub-subsection 3.2.4) that Mamean languages provide syntactic evidence for the EPH by prohibiting interrogation, negation and focusing of the A-argument. The patterns in (17) suggest that in subordinated clauses, these restrictions apply to every verbal argument. As I have not been able to check this, I have to leave the issue for future research. What is important here, is that Mamean points us to another theoretical possibility predicted by my proposal: the pattern in (17) is an alternative version of the EPH in (3).

Concluding the discussion on Mayan languages, we have seen that it seems to be possible to extend the use of PAs, normally used for transitive subjects only, to intransitive subjects. This only happens in imperfective clauses, as exemplified by the Ch'olan branch.<sup>24</sup> Subordinated clauses in Mamean suggest that the EPH allows for a version where every core argument is realized as a PA. The EPH in its original version, then, appears to be restricted to clauses with perfective aspect or main clauses. Again, this fact does not urge us to change any of the assumptions made so far.

<sup>22</sup> Recall from chapter 3 (sub-subsection 2.3.4) that phonological cliticization plays a role in Straits Salish. For this language, I have assumed that C phonologically cliticizes to its specifier. In Mamean subordinate clauses, this type of cliticization is of course only possible when the aspectual morpheme is an independent word, instead of a verbal morpheme (see footnote 21).

<sup>23</sup> Notice that in Mam, independent argument-doubles attach to the right of IP.

<sup>24</sup> Note that the same pattern is found in certain subordinate clauses, which I have not discussed for these languages. More information can be found in Quizar & Knowles-Berry (1988).

## 2.4 Conclusion

In this section, I have discussed various kinds of split ergativity based on TAM/clause type. In most cases, we are dealing with restrictive application of some version of the EPH. In Kurdish, only past tense clauses are subject to the EPH. In Mayan languages, perfective aspect or main clauses may trigger EPH-ergativity. Non-ergative contexts in Kurdish are comparable to accusative patterns in English, but in Mayan they appear to be derived by extending the use of verbal PA-markers to s-function and/or O-function.

The question is of course why the languages in question restrict the application of the EPH in the ways just described. According to Dixon (1994:97-104), there is a general tendency to reserve the ergative pattern for clauses that describe some definite result, which is exactly what past tense and perfective aspect seem to do. There are other examples of languages where ergativity is obligatory in the indicative mood, but optional in non-indicative moods. Dixon suggests that the rationale behind this is that speakers tend to describe events from the perspective of the *agent* in present and future tense, imperfective aspect and non-indicative moods. In past tense, perfective aspect and indicative mood, speakers tend to describe events from the perspective of the *undergoer*. This reminds us of the functional distinction between active and passive clauses. The A-argument of an active clause is more topical than the O-argument, whereas in a passive clause, O is much more topical than A.

Recall that the ergative construction in languages like Kurdish is historically related to a passive construction. At a certain stage in the proto-language, this construction functioned as an alternative to the synthetic past. Although the ergative construction in present-day Kurdish dialects does not function as a passive anymore, we can at least understand why it is restricted to past tense, assuming that Dixon's explanation is on the right track. The same might be true for Georgian, which I analyze as an SPH-language. Recall from chapter 3 that LA-case marking in SPH-languages depends on the availability of oblique cases. If a language has several cases

available, both the A-argument and the O-argument may be marked. The tendency to describe past/perfective events from the perspective of the undergoer is compatible with an ergative case pattern, which leaves the O-LA unmarked. The tendency to describe present/imperfective events from the perspective of the actor is compatible with an accusative case pattern, which leaves the A-argument unmarked.

With respect to Mayan languages, Dixon's explanation is less straightforward. There is no evidence at all suggesting that the ergative construction in these languages once functioned as a passive construction. By assuming that the non-ergative constructions in these languages are recent innovations, we could perhaps say that the similar treatment of S and A are driven by the tendency to describe events from the perspective of the actor. When both S and A are realized by a PA, and O is licensed by agreement, as appears to be the case in Ch'olan, the treatment of O is actually marked with respect to S/A, resembling the situation in accusative systems. Realizing every argument by a PA, as appears to be done in Mamean, is perhaps a step in the same direction.

Considering the fact that the inflectional domain often shows variation triggered by certain TAM-values or clause types, it does not come as a surprise that incorporation of the A-argument or choosing a particular LA-case pattern shows similar variation. Whatever may be the exact motivation for the general patterns found in TAM/clause type-split ergativity, the most important conclusion is that my proposal can deal with it. All we need to do is assume that the SPH or EPH sometimes applies in a restricted area of the grammar. For Kurdish and Mayan, we can roughly say that the behaviour of I is parameterized. When I represents past tense (in Kurdish), it allows for incorporation of A, following the EPH. When representing present tense, incorporation is impossible. In Mayan, I always allows for incorporation of the A-argument. Imperfective I, however, allows for incorporation of S as well (in Cholan). Combined with Dixon's observation, we now have a plausible account for the fact that ergativity is often restricted within languages. In

comparison to other approaches to ergativity, the present proposal has the advantage of relating the phenomenon to specific behaviour of I. Just like other types of behaviour of I, incorporation behaviour may show variation determined by TAM/clause type. The mere fact that ergativity is restricted in one way or another, is in accordance with the idea that it is a marked grammatical option.

There is, however, a further type of split ergativity causing the ergative and the accusative pattern to co-occur in the same clause: the split determined by grammatical person. For instance, when a certain language has nominative/Accusative marking on first and second person arguments, and absolutive/Ergative on third person arguments, it may produce transitive sentences with nominative/absolutive or Ergative/Accusative marking. The former situation obtains when A is first/second person and O is third person; the latter situation has a third person A and a first/second person O. Within Mayan, this split is only found in Mocho (Kanjobalan, see Larsen & Norman (1979:352-353)). In the next section, I will discuss person split ergativity with respect to Nez Perce, showing that the SPH can account for it.

### **3 Splits conditioned by grammatical person: the case of Nez Perce**

Person split ergativity is found in a large number of languages scattered over the world. Often, this type of split applies to the case system of languages that do not have overt person/number marking on the verb. This is the case in many Australian languages, such as Dyirbal (cf. Blake (1977), (1987); Silverstein (1976)). Other Australian languages, as well as various Tibeto-Burman and native North American languages (DeLancey 1980:2), have split ergativity in combination with overt verbal person/number marking. In those cases, person split ergativity is found in the case system and/or in the verbal markers. In the present section, I will focus on languages of the latter type. The fact that they have overt verbal person/number markers means

that they are good candidates in order to determine to what extent the SPH or the EPH applies.

According to Silverstein (1976), the most common pattern found with respect to person splits is as follows:

(18) Person split ergativity

|     | 1st | 2nd | 3rd |     |
|-----|-----|-----|-----|-----|
| S/A | NOM | NOM | ERG | A   |
| O   | ACC | ACC | ABS | S/O |

(see also subsection 2.4 (chapter 1))

Recall from chapter 1 that in a language like Dyirbal, first and second person pronouns show nominative/Accusative case marking, whereas third person pronouns and nouns pattern absolutive/Ergatively. There is a universal person/animacy hierarchy, according to which first person is ranked higher than second person, which in turn is ranked higher than third person. The category of third person may further be divided into pronouns and nouns, and the latter may distinguish nominal categories like animacy and definiteness. Every language that has split ergativity determined by the person/animacy hierarchy applies the ergative pattern to the lower ranking categories, whereas the accusative pattern is used for the higher ranking categories. Dyirbal draws a neat vertical line, as in (18), resulting in a purely accusative pattern for first and second person and a purely ergative pattern for third person. Other languages, however, draw a less neat line, resulting in a transition zone where both Ergative and Accusative are used. This results in tripartite marking: unmarked case on S, Ergative case on A and Accusative case on O. In chapter 1, this pattern was exemplified by Kham. In the following subsection, I will present data from Nez Perce, another language that is famous for its tripartite marking (cf. (Dixon 1994); (Bittner and Hale 1996)).

### 3.1 Split case marking

Nez Perce is a native North American language from the Penutian stock, spoken in Northern Idaho. The data presented in this subsection stem from personal communication with Noel Rude and from Rude (1987, 1988, 1991, 1992, 1994, 1997).

In Nez Perce, Accusative case is found on every direct object. Ergative case, however, only applies to third person transitive subjects.

(19) **Nez Perce** (Penutian, Plateau Penutian, Sahaptin): case marking

|   | 1st        | 2nd        | 3rd        |
|---|------------|------------|------------|
| A | nominative | nominative | Ergative   |
| S | nominative | nominative | unmarked   |
| O | Accusative | Accusative | Accusative |

The result of this is that first and second person arguments are case-marked according to the nominative/Accusative pattern, and that third person arguments display a tripartite pattern. Some example sentences are given in (20).<sup>25</sup>

(20) **Nez Perce**

- a. *'iin* Ø-*'ipsqiliik-ce*  
1SG 1-walk.PRS.PROG.SG  
'I am walking.'
- b. *'iin* Ø-*capáakayk-sa*  
1SG 1>2SG-wash.PRS.PROG.SG  
'I am washing you.'

---

<sup>25</sup> Since I am using the term 'nominative' exclusively for the combination of (unmarked) s and A, and 'absolutive' for the combination of (unmarked) s and o, I use the label 'unmarked' (unm) when s does not share its form with any other grammatical function.

- c. *'íin-ne*    *Ø-capáakayk-sa-m*  
 1SG-ACC    2>1SG-wash.PRS.PROG.SG-CIS  
 'You are washing me.'
- d. *'ipí*    *hi-'psqilíik-ce*  
 3SG    3-walk.PRS.PROG.SG  
 'S/he is walking.'
- e. *'ip-ním*    *'ip-né*    *páa-capakayk-sa*  
 3SG-ERG    3SG-ACC    3>3SG-wash.PRS.PROG.SG  
 'S/he is washing him/her.'

(Noel Rude)

Although it should be noted that independent nouns and pronouns are often omitted when functioning as arguments, they have been included in the examples above for expository reasons. The sentences in (20a-c) show that a first person singular subject triggers the use of (nominative) *'íin*, whereas in object function the form *'íine* (Accusative) must be used. Third person singular, however, has *'ipí* for S, *'ip-ním* for A and *'ip-né* for O function, as can be seen in (20d-e). These are the unmarked, Ergative and Accusative forms, respectively.

Ignoring verbal person/number marking for the moment, we roughly have two possible accounts for the appearance of Ergative case on third person transitive subjects: either the SPH or the EPH applies to Nez Perce. According to the SPH, every argument is realized as a PA that is optionally doubled by an LA. Because of the fact that there is Accusative case marking as well, Nez Perce presents us with a rare case, as most languages either apply an accusative or an ergative pattern, or no pattern at all when it comes to LA-case marking. However, as we have seen in subsection 2.2, SPH-languages like Georgian may have different oblique cases available, so there is no reason to exclude the possibility that these are used within the same clause (as Ergative and Accusative). If Nez Perce is an SPH-language, it displays the patterns in (21).

|               |   |  |   |
|---------------|---|--|---|
| (21)          | <b>Nez Perce: Second Pattern Hypothesis (cf. (2))</b> |  |   |
| Intransitive: | $[_{IP} LA_S$   | $[_{IP} PA_{S(\varphi)} + V+I_\varphi$ | ]]  |
| Transitive:   | $[_{IP} LA_{A,Erg}$                                   | $[_{IP} LA_{O, Acc}$                   | $[_{IP} PA_{A(\varphi)} + V+I_{(\varphi)} + PA_{O(Acc)}]]]$ |

According to the EPH, Nez Perce might display one of the two patterns found in Sorani, in which A incorporates *and* triggers agreement, forcing O to be licensed by Accusative case (cf. (5') and (7)). This situation is depicted in (22).

|               |  |   |                   |
|---------------|--|---|-------------------|
| (22)          | <b>Nez Perce: Ergative as Passive Hypothesis (cf. (3))</b> |   |                   |
| Intransitive: | $[_{IP} DP_{S,\varphi}$                                    | $V+I_\varphi$   | ]                 |
| Transitive:   | $[_{IP} LA_{A(Erg)}$                                       | $[_{IP} \emptyset_{A,\varphi} / PA_{A,\varphi} + V+I_\varphi$ | $DP_{O, Acc}] ]]$ |

Alternatively, we could even try to account for the facts in (20) by partial application of either the SPH or the EPH. Although third person arguments show Ergative case, first and second persons pattern nominative/Accusatively. This might suggest that first and second person arguments are licensed syntactically, just like in English. Below, I will argue on the basis of verbal inflection and nonconfigurational properties that overall application of the SPH (cf. (21)) is the analysis we should opt for. The historical analysis of the Nez Perce case suffixes provides further support for this hypothesis.

### 3.2 The PA-status of verbal marking

Person/number marking on the Nez Perce verb is complicated, but economical. Most arguments trigger overt person/number prefixes on the predicate. In (23), the *intransitive* paradigm is given.

(23) **Nez Perce:** intransitive verbal marking

|        |   | Number |        |
|--------|---|--------|--------|
|        |   | SG     | PL     |
| Person | 1 | ∅-     | ∅-pe-  |
|        | 2 | ∅-     | ∅-pe-  |
|        | 3 | hi-    | hi-pe- |

An odd characteristic of Nez Perce is that the absence of an overt prefix implies first or second person singular, whereas third person triggers an overt prefix *hi-*. An additional prefix, *pe-*, indicates plurality for all persons. This marker is absent whenever the verb is in progressive or habitual aspect, or in imperative mood. Under those circumstances, the number of the intransitive subject is expressed by the verb's TAM suffix (cf. Rude (1987:34-38)).<sup>26</sup>

(24) **Nez Perce:** plural subject marking

- a. *hi-'psqilíik-in*  
3SG-walk-PFV  
'S/he has walked.'
- b. *hipe-'psqilíik-in*  
3PL-walk-PFV  
'They have walked.'
- c. *hi-'psqilíik-ce*  
3-walk-PRS.PROG.SG  
'S/he is walking.'
- d. *hi-'psqilíik-cix*  
3-walk-PRS.PROG.PL  
'They are walking.'

(Noel Rude)

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<sup>26</sup> This applies to transitive subjects as well.

In (24a,b), plurality is marked by the presence of *pe-*. In (24c,d), *pe-* is absent, and the present progressive suffixes *-ce* and *-cix* distinguish between a singular and a plural subject.

In *transitive* clauses, the A-argument triggers exactly the same verbal markers as intransitive subjects, provided that the object is first or second person.

(25) **Nez Perce:** transitive clauses with first/second person object

- a. 'ée Ø-*capáakayk-sa*  
 2SG 1-wash-PRS.PROG.SG  
 'I am washing you.'
- b. 'íp-ním 'íin-ne *hi-capáakayk-sa*  
 3SG-ERG 1SG.ACC 3-wash-PRS.PROG.SG  
 'S/he is washing me.'

(Noel Rude)

In (25a), the empty prefix refers to a first person subject, whereas *hi-* in the b-sentence refers to a third person subject. When the object of a transitive verb is singular, as is the case in (25), person/number marking is entirely similar to that of an intransitive verb. In case of a plural object, *-nées* follows the subject prefix. This is illustrated in the table in (23).<sup>27</sup>

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<sup>27</sup> In this table, cells representing an equal A and O are marked with 'XX' because these combinations trigger a special reflexive marker on the verb. Those combinations of subject and object that are marked with '??' have not been elicited because they are pragmatically odd.

(26) **Nez Perce**: transitive verbal marking (1<sup>st</sup>/2<sup>nd</sup> person object)

| A-argument |   | O-argument |       |             |             |
|------------|---|------------|-------|-------------|-------------|
|            |   | SG         |       | PL          |             |
|            |   | 1          | 2     | 1           | 2           |
| SG         | 1 | XX         | ∅-    | ??          | ∅-nées-     |
|            | 2 | ∅-         | XX    | ∅-nées-     | ??          |
|            | 3 | hi-        | hi-   | hi-nées-    | hi-nées-    |
| PL         | 1 | ??         | ∅-pe- | XX          | ∅-pe-nées-  |
|            | 2 | ∅-pe-      | ??    | ∅-pe-nées-  | XX          |
|            | 3 | hi-pe      | hi-pe | hi-pe-nées- | hi-pe-nées- |

So far, verbal inflection shows a neat accusative pattern. The prefixes *∅-*, *hi-* and *pe-* exclusively refer to subjects, whereas *nées-* refers to plural objects only. Note that the presence of both subject and object markers already suggests that we are dealing with PAs, pointing to an analysis along the lines of either the SPH or the EPH. The fact that verbal marking shows an accusative pattern implicates that an analysis along the lines of the SPH is the best candidate.

However, the SPH-analysis seems to be contradicted immediately by constructions with a third person object.

(27) **Nez Perce**: transitive verbal marking (3<sup>rd</sup> person object)

| A-argument |   | O-argument |             |
|------------|---|------------|-------------|
|            |   | 3SG        | 3PL         |
| SG         | 1 | 'e-        | 'e-nées-    |
|            | 2 | 'e-        | 'e-nées-    |
|            | 3 | pée-       | hi-nées-    |
| PL         | 1 | 'e-pe-     | 'e-pe-nées- |
|            | 2 | 'e-pe-     | 'e-pe-nées- |
|            | 3 | pée-       | hi-pe-nées- |

Here again, the main division is between first/second and third person subjects. First and second person subjects trigger *'e-(pe-)* instead of *∅-pe-*,

whereas a third person subject triggers *pée-* instead of *hi-(pe-)* (provided that the object is singular).<sup>28</sup> The markers *'e-(pe-)* and *pée-* cannot be prefixed to an intransitive verb (cf. (23)), and therefore they are generally regarded as 'ergative' markers. In other words, these markers are uniquely associated with transitive subjects. We could try to account for this by assuming that the EPH applies to Nez Perce just whenever a clause contains a third person direct object. This would mean that *'e-(pe-)* and *pée-* are PAs, whereas the subject markers in (23) and (26) are agreement prefixes. According to what I have assumed so far with respect to ergativity, this cannot be right. Ergative case appears to occur on every independent DP that is a third person transitive subject, irrespective of the verbal prefix.

(28) **Nez Perce:** Ergative case with every kind of direct object

- a. *'ip-ním*    *'ip-né*    *páa-capakayk-sa*  
 3SG-ERG    3SG-ACC    3>3SG-wash-PRS.PROG.SG  
 'S/he is washing him/her.'
- b. *'ip-ním*    *'iine*    *hi-capáakayk-sa*  
 3SG-ERG    1SG.ACC    3>1SG-wash-PRS.PROG.SG  
 'S/he is washing me.'

(Noel Rude)

In (28a), the direct object is third person, and *páa-* ('3>3SG-') is doubled by a DP with Ergative case (*'ip-ním* '3SG-ERG'). This is predicted if we assume that *páa-* is a PA. In the b-sentence, however, there is a first person singular direct object, requiring *hi-* ('3>1SG') instead of *páa-*. The independent pronoun referring to the subject still carries Ergative case, which is not to be expected if *hi-* can only be an agreement prefix. Moreover, the EPH is not at all able to account for the object prefix *nées-* in (27). According to the EPH, direct objects are licensed by agreement. If, however, *nées-* is considered to be an agreement prefix, it could never co-occur with *hi-*, because a verb

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<sup>28</sup> It should be noted that *pée-pe* does not occur.

maximally agrees with one argument. Furthermore, the fact that *nées-* never refers to an intransitive subject suggests that an agreement analysis is most unlikely.

In order to capture all the facts discussed above, I would like to propose a much more elegant solution based on the SPH. Suppose that the 'ergative' verbal paradigm contains an overt marker for a third person singular object: 'e-(*nées-*).<sup>29</sup> Suppose further that *first and second person subjects* are invariably expressed by  $\emptyset$ -(*pe-*). When the object is third person singular, we get 'e-(*pe-*) (cf. first column of (27)), which is actually analyzed as  $\emptyset$ -(*pe-*) + 'e-.<sup>30</sup> The prefixes used in case of a third person plural object, 'e-(*pe-*)*nées-* (cf. second column of (27)) are analyzed as  $\emptyset$ -(*pe-*) + 'e-*nées-*.<sup>31</sup> For *third person subjects*, we obviously need a rule that turns *hi-* + 'e- into *pée-* (cf. (27), first column). An interesting explanation for this emerges when we compare *pée-* to its counterpart in Nez Perce's sister language Sahaptin, which I will do in the next sub-subsection. Furthermore, there must be a rule deleting 'e- in *hi-(pe-) + 'e-nées-*, which surfaces as *hi-(pe-)nées-*. This deletion process finds independent support in a phonological rule mentioned by Rude. According to this rule, 'inherently short vowels often delete when not in an initial syllable (and not word final) and not stressed' (Rude 1987:19). Thus, 'e- is dropped when *hi-(pe-)* is prefixed. Implementing these rules, my proposal results into the following PA-paradigms:

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<sup>29</sup> Rude suggests that there might be historical evidence for this claim. The pronoun 'é was a classic North American obviative pronoun.

<sup>30</sup> I will neglect the fact that these prefixes surface in the reversed order ('e-*pe-* instead of *pe-'e*).

<sup>31</sup> The remark made in footnote 30 applies here as well.

(29) **Nez Perce:** Pronominal Arguments (proposal)

|    |   | S/A           | O               |
|----|---|---------------|-----------------|
| SG | 1 | ∅-            | ∅-              |
|    | 2 | ∅-            | ∅-              |
|    | 3 | <i>hi-</i>    | <i>'e-</i>      |
| PL | 1 | <i>∅-pe-</i>  | <i>∅-nées-</i>  |
|    | 2 | <i>∅-pe-</i>  | <i>∅-nées-</i>  |
|    | 3 | <i>hi-pe-</i> | <i>'e-nées-</i> |

Additional (phonological) rules:

- delete *pe-* when the TAM-suffix shows overt number agreement (cf. (24))
- replace *hi-(pe-) + 'e-* by *pée-* (cf. (27))
- delete *'e-* in *hi-(pe-) + 'e-nées-* (cf. (27))

On the basis of (29), Nez Perce is like the languages discussed in chapter 3 in having PAs that show a neat accusative pattern. Split ergativity only occurs in the LAs: first and second person independent pronouns show a nominative/Accusative pattern, whereas third person independent pronouns and nouns show tripartite marking.

(30) **Nez Perce:** Lexical Arguments (proposal)

|    |   | S                           | A                                 | O                                 |       |
|----|---|-----------------------------|-----------------------------------|-----------------------------------|-------|
| SG | 1 |                             | <i>'iin-</i>                      | <i>'iine</i>                      |       |
|    | 2 |                             | <i>'iim</i>                       | <i>'imené</i>                     |       |
| PL | 1 |                             | <i>núun</i>                       | <i>núune</i>                      |       |
|    | 2 |                             | <i>'imé</i>                       | <i>'imuuné</i>                    |       |
| SG | 3 | <i>'ipí</i><br><i>háama</i> | <i>'ipním</i><br><i>háama-nm</i>  | <i>'ipné</i><br><i>háama-ne</i>   | 'man' |
| PL | 3 | <i>'imé</i><br><i>háham</i> | <i>'iméem</i><br><i>hahám-nim</i> | <i>'imuuné</i><br><i>hahám-na</i> | 'men' |

Schematically, the situation in Nez Perce can be represented as follows:

|               |   |  |  |
|---------------|---|--|--|
| (31)          | <b>Nez Perce: Second Pattern Hypothesis (cf. (2), (21))</b> |  |  |
|               | a. first and second person arguments:                       |  |  |
| Intransitive: | [ <sub>IP</sub> LA <sub>S</sub>                             | [ <sub>IP</sub> PA <sub>S,φ</sub> + V+I <sub>φ</sub> | ]]   |
| Transitive:   | [ <sub>IP</sub> LA <sub>A</sub>                             | [ <sub>IP</sub> LA <sub>O,Acc</sub>                  | [ <sub>IP</sub> PA <sub>A,φ</sub> + V+I <sub>φ</sub> + PA <sub>O,Acc</sub> ]]] |
|               | b. third person arguments:                                  |  |  |
| Intransitive: | [ <sub>IP</sub> LA <sub>S</sub>                             | [ <sub>IP</sub> PA <sub>S,φ</sub> + V+I <sub>φ</sub> | ]]   |
| Transitive:   | [ <sub>IP</sub> LA <sub>A,Erg</sub>                         | [ <sub>IP</sub> LA <sub>O, Acc</sub>                 | [ <sub>IP</sub> PA <sub>A,φ</sub> + V+I <sub>φ</sub> + PA <sub>O,Acc</sub> ]]] |

Note that in this language, incorporation of the subject-PA may trigger overt number agreement, as I have shown in (24). As we will see below, constituent order is entirely free, which supports the SPH-approach. Moreover, inherently nonreferential LAs are not encountered in Nez Perce.

### 3.3 Nez Perce as an SPH-language

In the following sub-subsection, I will first discuss historical and comparative data from the literature supporting the analysis proposed in the previous sub-subsection. This will yield a convincing argument for the hypothesis that a third person subject and a third person singular object trigger the PA *pée-* rather than *hi-(pe-)'e-*. Finally, I will present evidence for the fact that independent nouns (and pronouns) are adjuncts, which means that they cannot be inherently nonreferential.

First of all, the Ergative case marker *-nim/-nm/-m* can be reconstructed to a cislocative directional ('hither') (cf. Rude (1987:142-146), (1991:36-44), (1997:119-122)).

(32) **Nez Perce:** cislocative suffix

- a. *hi-kúu-ye*  
3SG.S-go-PFV  
'He went.'
- b. *hi-kúu-me*  
3SG.S-go-CIS.PFV

'He came.'

(Rude (1987:49), citing Phinney (1934:81))

The Nez Perce equivalent of 'come' is derived from the equivalent of 'go' via the cislocative suffix *-m*. In (20b/c), repeated below, we saw that the cislocative helps to disambiguate sentences with first/second person singular arguments.

(33) **Nez Perce**: disambiguating function of the cislocative (cf. (20b/c))

- b. *'iin*  $\emptyset$ -*capáakayk-sa*  
 1SG 1.A>2SG.O-wash-PRS.PROG.SG  
 'I am washing you.'
- c. *'íine*  $\emptyset$ -*capáakayk-sa-m*  
 1SG.ACC 2.A>1SG.O-wash-PRS.PROG.SG-CIS  
 'You are washing me.'

First and second person singular are always represented by empty PAs. When the LAs are omitted from a sentence like  $\emptyset$ - $\emptyset$ -*capáakayk-sa*, all that is stated is that there is some washing activity between speaker and hearer. However, the cislocative suffix is added whenever the activity proceeds in the direction of the speaker, that is, if the hearer is subject and the speaker is object. The default interpretation, in absence of the cislocative marker, assumes that the activity is instigated by the speaker. This is similar to a system of direct/inverse marking, where situations are assessed according to the person/animacy hierarchy (cf. footnote 6). When, according to this hierarchy, the subject of a transitive sentence outranks the object, the *direct* construction is used. Sentences describing a situation in which the object outranks the subject, must use the *inverse* construction. Third person subjects are the lowest category on Nez Perce's person hierarchy (cf. (19)), and therefore they will never outrank the object. At most, they equal the object (when it is third person). Rude (1991:41-44) suggests that the cislocative marker was a clitic in an earlier stage of the language, which

explains why it appears on third person transitive subjects. There, it has grammaticalized into an Ergative case marker.<sup>32</sup> The reason why first person subjects never bear overt Ergative case is clear: they have the highest ranking on the person/animacy hierarchy, and therefore never appear in inverse constructions. Second person subjects do appear in inverse constructions, but they never carry overt Ergative case either. Unlike third person subjects, they always co-occur with the verbal cislocative suffix. This is probably so because second person (singular) PAs are zero, whereas third person PAs are always overt. Given the fact that independent pronouns are commonly omitted, leaving the cislocative on the verb in case of a second person subject is particularly useful, because of its disambiguating function.

The Nez Perce Accusative case *-ne* can be reconstructed to a directional 'thither' (cf. Rude (1987:147), (1991:39-40,46-48), (1997:115-119)).<sup>33</sup> The Accusative pronoun *'iine* in the b-sentence in (33), then, re-emphasizes that the washing is directed towards the speaker. Similarly, the

<sup>32</sup> And also into a Genitive marker, which attaches to (pro)nouns of any person (cf. Rude (1987:147), (1991:44-45), (1997:126-129)).

<sup>33</sup> Note that there is a second set of independent pronouns for first and second person which do not show any case distinctions (cf. (25a)).

- (i) **Nez Perce:** indeclinable independent pronouns

|        |   | Number       |              |
|--------|---|--------------|--------------|
|        |   | SG           | PL           |
| Person | 1 | <i>kíyex</i> | <i>kíye</i>  |
|        | 2 | <i>'ée</i>   | <i>'éetx</i> |

(Rude 1987:125-127)

Rude (p.c.) suggests that these pronouns are recent innovations, since they do not have equivalents in the only sister language (Sahaptin), whereas the declinable pronouns show great similarity with declinable pronouns throughout the Penutian stock. The first person plural form *kíye* includes the addressee, whereas the declinable form *núun* does not.

following sentence, repeated from (20e), could be paraphrased as follows:  
 ‘from him/her to him/her, there is washing going on’:

(34) **Nez Perce** (cf. (20e))

*ʔip-ním    ʔip-né    páa-capakayk-sa*  
 3SG-ERG    3SG-ACC    3.A>3SG.O-wash-PRS.PROG.SG

‘S/he is washing him/her.’

This brings us to the analysis of the verbal prefix *pée-*, realized by the allomorph *páa-* in the sentence above. The Sahaptin equivalent, *pa-*, is a true inverse marker which is obligatorily present when the object outranks the subject, but optionally present when both arguments are third person. I propose that in Nez Perce, *pée-* stems from a similar inverse marker, which has grammaticalized into a portmanteau morpheme for two third person singular PAs (cf. (27), (29)).<sup>34</sup>

As I have argued in the previous sub-subsection, person/number marking in Nez Perce appears to reflect a nominative/Accusative pattern. Assuming the basic hypothesis in chapter 2, the fact that the transitive verb is inflected for two arguments and the occurrence of Ergative case marking suggest that we are dealing with a full-fledged SPH-language. This is confirmed by constituent order. Each of the permutations of A, O and V occurs (Rude p.c.). Rude (1987:227-241; 1992) illustrates this with examples from Nez Perce texts gathered by Aoki (1979) and Phinney (1934).<sup>35</sup> The conclusions Rude (1992) reaches for the principles underlying this freedom of word order, resemble Mithun’s (1986) notion of ‘newsworthiness’ (see

<sup>34</sup> Recall from chapter 4 (subsection 2.2) that Straits Salish speakers never produce an active construction in which a third person subject acts upon a first or second person object. Instead, a passive construction has to be used. When both arguments are third person, the verb carries a suffix *-s* which is normally perceived as a third person singular transitive subject suffix. Alternatively, this suffix could be analyzed as an inverse marker, just like Nez Perce *pée-*.

<sup>35</sup> So far, every example cited shows sV or AOV order. These sentences, however, have been elicited in isolation, and Rude explicitly mentions that the order in none of these examples should be considered as fixed.

chapter 3, subsection 2.1). This means that focalized information comes first in the sentence, whereas less newsworthy constituents appear towards the end of a sentence, if they are overtly realized at all. This is compatible with an SPH-analysis.

Like Warlpiri, Mohawk and many other nonconfigurational PA-languages, DP constituents in Nez Perce can be discontinuous. This is shown in the following examples:

(35) **Nez Perce:** discontinuous constituents

- a. *kii* 'ee *ku'ús* Ø-'i-ní-se *cúukwe*  
 this 2SG thus 1SG.A-3SG.O-give-PRS.PROG.SG spirit/  
 knowledge

'Thus I am giving you this spirit.'

(Rude 1987:249)

- b. ..., *kaa hi-néés-'nehna'n-yo'qa* *konmá neqéey sík'em*  
 and 3SG.A-PL.O-take-PST.COND that.PL across horse

'..., and they would take those horses of ours [back] across.'

(Rude 1987:251)

In (35a) the direct object-LA *kii cúukwe* ('this spirit') is discontinuous. The first half occupies the leftmost position in the sentence, the second half appears sentence-finally. In the b-sentence, *konmá sík'em* ('those horses') is split up by the particle *neqéey* ('across'). Discontinuous LAs like these can be found easily in the texts at hand, which is to be expected on the basis of the SPH.

As for the referential properties of LAs, there is good evidence that true D-quantifiers are absent from Nez Perce, as predicted by the SPH predicts. First of all, universally quantified DPs invariantly trigger plural PAs.

(36) **Nez Perce:** universal quantification

- a. *hi-'psqilíik-cix* *la'ám-wa-m háham*  
 3SG.S-walk-PRS.PROG.PL all-HUM-PL man.PL

'All the men are walking.'

- b. *la'ám-wa-m* *hahám-nim* *pée-p-cix*  
 all-HUM-ERG man.PL-ERG 3SG.A>3SG.O-eat-PRS.PROG.PL

*timaaní-na*  
 apple-ACC

'All the men are eating apples.'

- c. *'áayat-om* *hi-náas-capakayk-sa* *la'ám-wa-na*  
 woman-ERG 3SG.A-PL.O-wash-PRS.PROG.SG all-HUM-ACC

*pipít'ini-ne*  
 girl.PL-ACC

'The woman is washing all the girls.'

(Noel Rude)

The universal quantifier *la'ám* ('all') is able to quantify over every grammatical function. In (36a,b), this element occurs in the subject-LA and hence requires plural agreement via the TAM-suffix *-cix* ('-PRS.PROG.PL'). When occurring in the direct object, as is the case in the c-sentence, the plural object-PA *nées-* has to be prefixed to the verb. Distributive readings are not impossible in Nez Perce.<sup>36</sup> However, they do not involve a universal D-quantifier. Instead, a distributive prefix *wíi-* is added to the verb, which again overtly agrees with a plural subject or contains *nées-*.

(37) **Nez Perce:** distributive readings

- a. *hi-wíi-'psqilíik-cix* *háham*  
 3SG.S-DISTR-walk-PRS.PROG.PL man.PL

'Each of the men is walking.'

- b. *hahám* *hi-wíi-p-six* *náaqc* *timáanit*  
 man.PL 3.A-DISTR-eat-PRS.PROG.PL one apple

'Each of the men is eating an apple.'

<sup>36</sup> Rude (1987:42) states that in order to be able to interpret the transitive subject distributively, the verb must be used in an antipassive construction. The antipassive in Nez Perce is formed by removing all the case markers (Ergative and Accusative) from the LAs and by treating the verb as an intransitive predicate, that is, by allowing it to have a PA for the intransitive subject only. Indeed, (37b) suggests that the distributive prefix cannot be construed with an ordinary transitive subject.

- c. 'áayatom      hi-náas-wi-capakayk-sa      pipít'ini-ne  
 woman-ERG    3SG.A-PL.O-DISTR-wash-PRS.PROG.SG    girl.PL-ACC  
 'The woman is washing each of the girls.'

(Noel Rude)

The plural LAs in (37) c-command plural PAs.<sup>37</sup> The verb itself, by means of the distributive marker *wíi-*, ensures that the described action is interpreted as applying to every member of the plural argument it is supposed to modify.<sup>38</sup> Even with respect to distributive quantification, then, the behaviour of Nez Perce LAs is compatible with the SPH.

When arguments are questioned or negated, Nez Perce appears to use words that are interpreted as indefinite pronouns in affirmative contexts.

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<sup>37</sup> Rude (1987:43) notes that direct objects with a distributive interpretation often correspond to a singular marker on the verb. There are two possible explanations for this. Firstly, we might be dealing with a simplification of Nez Perce morphology, which in this case is expressed by deletion of the direct object plurality marker *nées-*. This analysis is perhaps supported by the fact that the plural forms of the indeclinable pronouns listed in footnote 33 also allow for the omission of *nées-*. Alternatively, one could assume that *wíi-* somehow turns a singular PA into a syntactic variable. This analysis does not violate the referentiality restrictions on LAs. On the contrary, it could actually pave the way for the development of inherent D-quantifiers, since their absence is solely motivated by the fact that PAs are always definite. Recall from chapter 4 (sub-subsection 3.2.3) that I make a similar proposal with respect to the PA *z-* in Circassian, which realizes the A-argument in relative clauses.

<sup>38</sup> Rude (1987:80) mentions a further (nominal) distributive prefix: *pe-*. This prefix attaches to nominals in adverbial expressions like *péemmey* ('every.morning') and *pée'inwim* ('every.year'), but is also found on LAs.

- (i) **Nez Perce:** nominal distributive *pe-*

Ø-'e-nées-hek-ce      pe'túu-ne  
 1.A-3PL.O-see-PRS.PROG.SG      various.things-ACC  
 'I see things.'

(Noel Rude)

This example shows that *pe-* co-occurs with a plural PA (*nées-* 'PL.O'), and that the interpretation is not strictly distributive. According to Rude (p.c.), this prefix is at best only semi-productive. Recall that *pe-* is also used as a PA-pluralizer for subjects in sentences where the TAM-suffix does not show overt number agreement (cf. 29).

(38) **Nez Perce**: indefinite pronouns

- a. *'inekíix*      *'ée*    *'itúu-ne*      *Ø-'a-mc'í-yo'*,  
 even.though 2SG **something-ACC** 2SG.A-3SG.O-hear-IRR  
*'isíi-ne*      *Ø-'e-mssú'-ku'*,      *méetmet*  
**someone-ACC** 2SG.A-3SG.O-voice.recognize-IRR do.not  
*q'o'*    *Ø-q'íilaw-no'*  
 INTS 2SG.S-look.back-IRR

'Even though you hear anything, recognize anyone, absolutely do not look back.'

(Rude (1987:131), citing Phinney (1934:213))

- b. ... *ka-koná*      *ke*      *'itúu-nm*  
 REL-DEM.LOC    REL      **something-ERG**  
*pa-payn-óo-sa*      *ke*      *'itúu-nm*  
 3.A>3SG.O-arrive-DT-PRS.PROG.SG    REL      **something-ERG**  
*pée-te'nwe-se*  
 3.A>3SG.O-speak-PRS.PROG.SG

'..., where something which comes to one, something which speaks to one, ...'

(Rude 1987:249)

The roots *'isíi* ('someone') and *'itúu* ('something') may occur in every syntactic function, as is illustrated above for A and O. The following sentences illustrate how these words are used in negative and interrogative contexts:

(39) **Nez Perce**: negative quantification

- a. *wéet'u*    *'isíi*      *hi-'sqilíik-caqa*      *temeníkées-pe*  
 not      **somebody** 3SG-walk-PST.PROG.SG    garden-LOC  
*watíisx*  
 yesterday  
 'Nobody was walking in the garden yesterday.'
- b. *wéet'u*    *'isíi-ne*      *páa-capakayk-siqa*  
 not      **somebody-ACC** 3.A>3SG.O-wash-PST.PROG.PL  
*watíisx*  
 yesterday

'They were not washing anybody yesterday.'

- c. *wéet'u* **'isii-nm** *timaaní-na* *pée-p-e*  
 not **somebody-ERG** apple-ACC 3SG.A>3SG.O-eat-PST

*watíisx*  
 yesterday

'Nobody ate an apple yesterday.'

(Noel Rude)

In (39), the presence of the negative adverb *wéet'u* implies a negative interpretation on the indefinite pronouns, which is perfectly compatible with the SPH. Independent pronouns cannot be inherently negative, but they may have a negative reading under the scope of a negative adverb, as I have discussed in chapter 3 with respect to Mohawk (sub-subsection 3.2.1).

Constituent questions apparently cannot depend on such an adverb.

(40) **Nez Perce**: interrogative quantification

- a. **'isii** *hi-'sqiliik-caqa* *temeníkées-pe* *watíisx?*  
 who 3SG.S-walk-PST.PROG.SG garden-LOC yesterday

'Who was walking in the garden yesterday?'

- b. **'itúu-ne** *∅-'e-hípe* *watíisx?*  
 what-ACC 2SG.A-3SG.O-eat yesterday

'What did you eat yesterday?'

- c. **'isii-nm** *timaaní-na* *pée-p-e* *watíisx?*  
 who-ERG apple-ACC 3SG.A>3SG.O-eat-PST yesterday

'Who ate an apple yesterday?'

(Noel Rude)

One of the few requirements on word order in Nez Perce is that question words appear sentence-initially. There are no separate question words, only indefinite pronouns receiving an interrogative interpretation in sentences like the ones in (40). I take it that these pronouns are inherently indefinite, and hence, that they are free variables. Free variables can be translated as quantifiers when they are under the scope of a quantificational adverb.

Alternatively, as I have discussed with respect to Mohawk in chapter 3, they receive a quantificational interpretation when there is an interrogative C-head. Just like any other LA, they adjoin to IP. Subsequently, they move to Spec,CP, from where their index is copied onto the interrogative C.

I close this section by concluding that the person split pattern in Nez Perce finds a natural explanation in terms of the SPH. First of all, I have argued that the PA-paradigms can be interpreted as showing a neat accusative pattern. Furthermore, there is historical evidence showing that the Ergative and Accusative LA-case markers have the status of oblique cases. First and second person LAs show a nominative/Accusative pattern, whereas third person show tripartite marking. This is explained by the fact that the Ergative case marker stems from a cislocative marker that only appears in contexts where the O-argument outranks the A-argument on the person/animacy hierarchy. Finally, my SPH-analysis is supported by flexible constituent order, the possibility of having discontinuous LAs and the structural absence of true D-quantifiers.

#### **4 Split ergativity under the SPH and EPH**

As discussed in chapter 1, there are two reasons for calling ergativity a marked phenomenon. First, there is the fact that non-ergative languages outnumber ergative languages by far. Second, ergative patterns often have a limited occurrence within languages. The two hypotheses that I have developed in chapters 3 and chapter 4, namely the SPH and the EPH, supposedly account for the fact that only a minority of the world's languages displays ergativity. Furthermore, as they are derived from the main hypothesis presented in chapter 2, they entail split ergativity in each language that applies either of them. PAs will always show an accusative pattern according to the SPH, whereas the EPH predicts that ergative languages will always be syntactically accusative.

In the current chapter, I have discussed several examples of languages that show clear splits with respect to morphological ergativity. In these languages, accusative morphology appears in one context, ergative morphology in the other. When the split in a given language L is determined by tense, aspect or mood (TAM) or by clause type, it turns out that L applies the SPH or the EPH in a restricted area of its grammar. Structurally, this is explained by the assumption that I only allows for incorporation of the transitive subject when it has a certain value. In languages where the A-argument is always realized by an incorporated PA, intransitive subjects may be realized similarly when I has certain values. This way, the present proposal can deal with these patterns quite easily. More research is needed, but it seems that a plausible explanation for the distribution of accusative and ergative pattern in split ergative languages relies on discourse considerations. Dixon (1994:97-104), for instance, argues that there is a universal tendency to describe events in the past from the perspective of the O-argument.

At first sight, ergativity that is split by grammatical person seems to be more problematic for my proposal. It may feature the combination of both the accusative and the ergative pattern in one and the same clause, suggesting that arguments can only be PAs when, for instance, they are third person. I have shown on the basis of Nez Perce that this type of split appears to be less dramatic than it seems. Verbal person/number marking in Nez Perce can be argued to be entirely nominative/Accusative, shifting the problematic person split to LA-case marking. Analyzing Nez Perce as an SPH-language, it is less difficult to account for the occurrence of both Ergative and Accusative LA-case. As discussed in chapter 3 (section 4), the cases that appear on LAs in SPH-languages are largely determined by the availability of oblique case markers. There is nothing against having a tripartite pattern, and this is attested in Nez Perce. Furthermore, the language appears to meet all the SPH-criteria mentioned in chapter 3, empirically supporting my analysis.

## chapter 6

### Concluding remarks

From the perspective of the empirically marked status of ergativity, it is not desirable to assume a separate macro-parameter, as proposed by Marantz (1981, 1981), Murasugi (1992), Bobaljik (1993), Bittner & Hale (1996a,b), and others. Such a macro-parameter predicts that languages are either ergative or non-ergative, whereas it does not account for the fact that ergativity is absent from most of the world's languages, or the fact that ergative languages are rarely fully ergative. From the perspective of the proposal put forward in this study, the marked status of ergativity is by no means coincidental. The cause of this lies in the fact that my proposal derives ergativity from another parameter explaining different phenomena. According to this parameter, languages either require their verbal arguments to be realized by independent DPs or by pronominal arguments (PAs). A well-known instantiation of this parameter is the polysynthesis parameter, proposed as a macro-parameter by Baker (1996). This parameter states that the grammars of pronominal argument languages include a morphological condition that is lacking from languages without PAs.<sup>1</sup> Configurational

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<sup>1</sup> This condition, called the morphological visibility condition, is stated below:

“A phrase X is visible for  $\theta$ -role assignment from a head Y if it is coindexed with a morpheme in the word containing Y via:

- (i) an agreement relationship, or
- (ii) a movement relationship” (Baker 1996:496).

languages like English do not display PAs. This means that their verbal arguments rely solely on the following means of licensing, which belong to the syntactic component of UG:

|               |   |                  |                       |
|---------------|---|------------------|-----------------------|
| (1)           | Syntactic licensing of verbal arguments (chapter 2) |                  |                       |
| Intransitive: | [ <sub>IP</sub> DP <sub>S,φ</sub>                   | V+I <sub>φ</sub> | ]                     |
| Transitive:   | [ <sub>IP</sub> DP <sub>A,φ</sub>                   | V+I <sub>φ</sub> | DP <sub>O,Acc</sub> ] |

Structural case can only be checked by *v* on the O-argument in situ. It spells out as Accusative. Subjects (S/A) are licensed by agreement, which means that their  $\phi$ -features are checked in Spec,IP. Languages depending on (1) will never show ergativity. This is the main claim of my proposal.

Ergative patterns only occur in languages realizing one or more of their verbal arguments as a PA. Naturally, this is the case in pronominal argument languages, which require S, A and O to be realized as pronouns. These pronouns are incorporated into the predicate, following an accusative pattern. The O-argument undergoes head movement to *v*, the S/A-argument to I. In addition, Accusative case and subject agreement may be shown. A PA is optionally doubled by an independent noun or pronoun, which adjoins to IP. This so-called lexical argument (LA) forms a chain with the corresponding PA, and may hence remain caseless. This happens in languages like Mohawk and Straits Salish. Alternatively, LAs may carry oblique case markers. When application of a particular oblique case marker is restricted to the LA in A-function, an ergative pattern is attested. Warlpiri is a case in point. My Second Pattern Hypothesis (SPH) accounts for this type of ergativity.

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Recall from chapter 3 that Baker's approach assumes multiple agreement. The morphological visibility condition thus requires the verb to either agree with its arguments or incorporate them. As I have argued for an incorporation analysis, the parameter would have to be reformulated in order to fit my proposal. This amounts to removing alternative (i).

|               |  |   |   |
|---------------|--|---|---|
| (2)           | Second Pattern Hypothesis (SPH, chapter 3) |   |   |
| Intransitive: | [ <sub>IP</sub> LA <sub>S</sub>            | [ <sub>IP</sub> PA <sub>S(φ)</sub> + V+I <sub>φ</sub> | ]]  |
| Transitive:   | [ <sub>IP</sub> LA <sub>A,Erg</sub>        | [ <sub>IP</sub> LA <sub>O</sub>                       | [ <sub>IP</sub> PA <sub>A(φ)</sub> + V+I <sub>(φ)</sub> + PA <sub>O(Acc)</sub> ]]]] |

It should be noted that the ergative case pattern in (2) is only one of the possibilities permitted by pronominal argument languages. An accusative LA-case pattern is equally possible, and even tripartite patterns are found, as attested on Nez Perce third person arguments. Georgian, on the other hand, employs the ergative pattern for only a subset of TAM-combinations, using an accusative pattern elsewhere. Both Nez Perce and Georgian show that a macro-parameter like the one proposed by Baker does not suffice to explain the attested distribution of ergative patterns. In order to account for the restricted occurrence of Ergative case in Nez Perce, a condition based on the person/animacy hierarchy is needed. In Georgian, a condition based on TAM-restrictions appears to play a role. The exact formulation of these conditions is a topic for future research.

Baker (1996:497) admits that partial application of the condition generating polysynthetic languages should be considered as a serious possibility. My proposal supports this view, and shows that partial PA-behaviour is actually needed in order to account for the ergative pattern found in languages like Kurmanji. Ergative constructions in this language resemble passive constructions in English. Within my proposal, these constructions are explained by assuming incorporation of the A-argument. This argument is phonologically empty, but languages like Basque, Northwest Caucasian and Mayan show that it can also be a PA. An important finding is that incorporation may exempt an argument from being licensed syntactically. Therefore, the verb in a passive or ergative construction typically agrees with the O-argument. Again, the LA that doubles the incorporated A-argument may remain caseless, as in Abkhaz-Abaza and Mayan. Alternatively, it is marked by an oblique case, as in

Kurmanji, Basque and Circassian. The hypothesis accounting for these patterns has been dubbed the Ergative as Passive Hypothesis (EPH).

|               |   |   |  |
|---------------|---|---|--|
| (3)           | Ergative as Passive Hypothesis (EPH, chapter 4) |   |  |
| Intransitive: |   | $[_{IP} DP_{s,\varphi} \quad V+I_{\varphi} \quad ]$                     |  |
| Transitive:   | $[_{IP} LA_{A,(Erg)}$                           | $[_{IP} \emptyset_A/PA_A + V+I_{\varphi} \quad DP_{o,\varphi} \quad ]]$ |  |

Languages like English apply (3) optionally, depending on discourse.<sup>2</sup> There is always an alternative in the form of (1). When this is employed the language is considered to be non-ergative. Only when (3) applies obligatorily will a language be called ergative. Since not every non-ergative language has passive constructions indicates that the EPH also predicts that ergative languages are scarcer than non-ergative languages. Moreover, the fact that the LA adjoins to IP, rather than  $vP/VP$ , ensures that EPH-languages will always be syntactically accusative.<sup>3</sup> Finally, application of (3) appears to be restricted within languages. Kurdish and several members of the Mayan family apply the EPH in only a subset of TAM-combinations or in a specific clause type. Depending on its feature specification, the functional head I incorporates A, A and s, or neither of these two arguments. Here, too, additional conditions are needed in order to account for the behaviour of I. This fits in well with cross-linguistic variation in the inflectional domain.

Instead of the A-argument, o may be the only argument that can be incorporated. This happens in languages like Spanish and Amharic, which allow for clitic-doubling. Theoretically speaking, there could also be a language that allows for incorporation of s only. My proposal allows for eight different patterns, each one displaying incorporation of a unique grammatical

<sup>2</sup> English, like all other non-ergative languages, differs from (3) in adjoining the LA to  $vP/VP$ .

<sup>3</sup> Syntactically ergative languages like Dyirbal are exceptional in that they appear to adjoin the LA to  $vP/VP$ . I have accounted for this fact by assuming that Dyirbal is changing from accusative to ergative. Syntactic ergativity represents an intermediate stage in this change (cf. chapter 4, subsection 2.2).

function or combination of grammatical functions. These patterns are listed under (4), numbered 1 to 8. The first column of this table features the arguments that are incorporated into the predicate. The second column shows which means of syntactic licensing are used for which arguments. In types 3 and 5, this leads to different subtypes, a and b. The third column lists the possibilities with respect to LA-case marking. One of these possibilities is absence of LA-case, represented by a dash. The rightmost column gives examples of languages in which a specific pattern is found. Most of these languages have been discussed in the preceding chapters. Languages between brackets have not been mentioned before, and will be discussed briefly below.

**(4) The marked status of ergativity: the proposal in a nutshell**

| Realization and licensing of verbal arguments (s, A, O) in active clauses |                |           |                 |                |   |
|---|----------------|-----------|-----------------|----------------|---|
|   | Incorporation  | Agreement | Accusative case | LA-case(s)     | Found in:   |
| 1   | does not apply | S/A       | O               | does not apply | English, Kurmanji (PRS), Sorani (PRS)   |
| 2   | O              | S/A       | O               | - ACC          | not attested Spanish, Amharic   |
| 3   | A (EPH)        | S/O       | -               | (3a) -         | Abkhaz-Abazin, Circassian (1/2), Mayan, Sorani (PSTA)                                 |
|   |                | S/A       | O               | (3b) -         | Basque, Circassian (3), Kurmanji (PST)<br>Sorani (PSTB), Dyirbal (1/2)<br>Dyirbal (3) |

|   | Incorporation | Agreement | Accusative case | LA-case(s)                 | Found in:   |
|---|---------------|-----------|-----------------|----------------------------|---|
| 4 | S             | S/A       | O               | -                          | not attested  |
| 5 | S/A           | O         | -               | (5a) -<br>ERG              | Ch'olan (IPFV)<br>not attested  |
|   |               | S/A       | O               | (5b) -<br>ERG              | Tukang Besi (INDEF.O), (Udi (1/2))<br>(Udi (3))   |
| 6 | S/O           | S/A       | O               | -<br>ACC                   | not attested  |
| 7 | A/O           | S/A       | O               | -<br>ACC<br>ERG<br>ERG/ACC | not attested  |
| 8 | S/A/O (SPH)   | S/A       | O               | -<br>ACC<br>ERG<br>ERG/ACC | Mohawk, Straits Salish<br>Georgian (NAOR, NPF)<br>Tukang Besi (DEF.O), Warlpiri, Georgian (AOR, PF),<br>Nez Perce |

Type 1 represents total absence of incorporation, as is typical of non-ergative languages like English. Split ergative languages like Kurmanji and Sorani use this pattern in present tense contexts.

Type 2 has incorporation of the O-argument only, as attested in languages that apply object clitic-doubling. The incorporated object may but need not carry structural Accusative case, but this does not yield any

subdivision of type 2 languages.<sup>4</sup> In these languages, there is only one LA, which doubles the O-argument. In principle, this LA could remain caseless, but at present I do not know of any language in which this happens. Languages like Spanish and Amharic have an overt marker on the LA, which automatically yields an accusative pattern because subjects are caseless. It should be noted that clitic-doubling of the object is often optional. This suggests that we are dealing with another instance of restrictive application of incorporation.

Type 3 incorporates the A-argument. Depending on the question whether this argument triggers agreement, two subtypes emerge. In both subtypes, there is only one LA. This constituent may remain unmarked or it may carry an oblique case marker, which will be interpreted as Ergative. As I have explained above, languages of this type are EPH-languages, most examples of which have agreement with S/O and not with A (type 3a). Alternatively, as we have seen in particular past tense clauses in Sorani, the incorporated A-argument does trigger agreement (type 3b). This means that the O-argument must be licensed by Accusative case (see chapter 5, subsection 2.1). Dyirbal, which has overt Accusative case on first and second person pronouns, may be of the same type.<sup>5</sup> Third person arguments cannot be inflected for Accusative case, implying that Dyirbal has differential object marking. Ergative case, on the other hand, is not found on first and second person. This suggests that Dyirbal displays the two possibilities with respect to LA-case marking predicted under subtype 3b.

Type 4, showing incorporation of S only, is not attested. It implies a difference between intransitive and transitive clauses for which it is hard to

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<sup>4</sup> I ignore the fact that in languages like Spanish, indirect objects and obliques can be doubled as well.

<sup>5</sup> It should be noted that Dyirbal does not have overt verbal agreement, so this claim is quite speculative. In fact, my proposal makes similar claims with respect to every ergative language lacking overt verbal marking. In chapter 1, examples of the following languages were cited: Aghul, Rutul, Yalarrnga and Tongan. The Ergative pattern in these languages can only be explained by assuming either incorporation or agreement.

come up with a motivation. Unlike the type 2-languages lacking LA-case marking, the absence of type 4 does not seem to be a coincidence. As we will encounter two further types that seem to be entirely absent, I will come back to type 4 below.

Type 5 represents incorporation of both s and A. This enables the o-argument to be licensed by agreement, a pattern which I have argued occurs in the Ch'olan branch of Mayan (see chapter 5, subsection 2.3). This is type 5a, and there is no reason to assume that overt LA-case marking would be impossible in this type of language. The LA-marker would be called Ergative, and the fact that I have not found an example of this is probably a matter of coincidence. Alternatively, the A-argument triggers agreement and the o-argument is licensed by Accusative case (type 5b). This is attested in *Tukang Besi*, more specifically in clauses where the object is indefinite (see chapter 2, section 4). The same pattern, combined with overt Ergative case, is found in a language like Udi (North Caucasian). Udi is famous for displaying a combination of Ergative case marking and nominative 'agreement'. Harris (2001) has convincingly argued that verbal subject markers in Udi have the status of clitics, which fits the analysis here. Furthermore, this language has Accusative case.<sup>6</sup>

Type 6 has incorporation of s and o, which requires two different paradigms of PAs and an additional agreement paradigm (used for A). LA-case marking is either absent or Accusative. The fact that this type is not attested might be related to the absence of type 4. A tacit assumption, also present in the discussion of the other types, is that case marking of the intransitive subject-double is never overt. Below, I will speculate on this when discussing the absence of types 4, 6 and 7.

Type 7, again, does not seem to be instantiated by any language that I know of. It has in common with type 4 that it implies a fundamental difference between intransitive and transitive clauses. Intransitive clauses do

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<sup>6</sup> This case is generally referred to as Dative in the literature on Udi..

not allow for incorporation, whereas transitive clauses do. It should be noted that each of the types 4, 6 and 7 allow for a subdivision based on agreement co-occurring with incorporation or not. I have not specified the subtypes where the s-argument does not trigger agreement, because it does not affect the way syntactic licensing is used in transitive clauses. Theoretically, type 7 allows four different possibilities with respect to LA-case marking, just like type 8.

Type 8 covers the SPH-languages, in which every argument is incorporated. Because the o-argument necessarily incorporates into *v*, whereas s/A incorporate into I, case and agreement do not split type 8 into subtypes. As discussed, LA-case marking shows four different patterns.

Before concluding this chapter with a few remarks on the absence of type 4, 6 and 7, I should stress that I have omitted two logical options from the table in (4). The first option concerns phonological cliticization. Recall from chapter 5 (subsection 2.3) that Mamean subordinated clauses were analyzed according to an alternative version of the EPH. In these clauses, s and o are licensed by agreement, but at the same time they are obligatory pronouns which cliticize in phonology. Such a pattern may have an LA for every syntactic function, and hence each of the four LA-case marking systems listed under type 8 are possible. However, as Mayan languages do not show overt case on LAs, nothing definitive can be said until more examples of such a pattern show up. Secondly, the reader will have noticed that there is a discrepancy between the EPH and the other incorporation patterns. As I have argued in chapter 4, EPH-languages may realize their A-argument by an empty element or by a fully specified pronoun. In both cases, the argument is incorporated into I, but this is of course only visible when the incorporated element is overt. We could imagine that the other incorporation patterns, the SPH among them, also allow for incorporation of an empty element. Such an empty argument can be inherently nonspecific, having arbitrary reference. This implies that there are no restrictions whatsoever on the referentiality of the corresponding LA. Although this

possibility is certainly worth investigating, other tests for adjuncthood will be needed in order to find out whether it really exists.

Even without phonological cliticization and arbitrary PAs, my proposal accounts for all the ergative patterns introduced in chapter 1, as well as for the fact that they are marked with respect to accusative patterns. Moreover, the assumptions made in this study successfully predict the existence of additional patterns. A separate parameter accounting for ergativity is no longer needed. Instead, ergative patterns may only follow from the positive setting of the parameter allowing languages to apply pronoun incorporation. This parameter can no longer be seen as a macro-parameter, since its application appears to be restricted in various ways.

Finally, some remarks with respect to the structural absence of language types 4, 6 and 7 in table (4) are in place. Type 4 has incorporation of the S-argument only, type 6 has incorporation of S and O and type 7 of A and O. Assuming that these three patterns are not attested because they are ruled out by UG, the initial observation is that if S is incorporated, the same must happen to A. This implicational statement correctly rules out types 4 and 6, where S is incorporated and A is licensed by agreement. All of the remaining types are permitted, which is desirable except for type 7. The EPH-languages of type 3 show that the reverse is not true. If the A-argument is incorporated, the S-argument does not have to be incorporated as well.

As noted in chapter 1, subsection 3.1, S does not differ fundamentally from either A or O. It receives an internal theta role when the intransitive verb is unaccusative and an external role when the verb is unergative. In the former case, S resembles the O-argument of a transitive construction, whereas in the latter case it is like transitive A. The difference is that *v* in an unaccusative construction is unable to check Accusative case. As a result, unaccusative S is like unergative S in that it must be licensed by agreement in configurational languages such as English. Because of this, S and A form a natural class called subject, which forms the backbone of the unmarked status of accusativity. The implicational statement mentioned above also

hints at a uniform category consisting of *s* and *A*, as it allows *s* to be incorporated only when *A* is incorporated as well, irrespective of the behaviour of *o*. We can understand this by assuming that incorporation is caused by certain properties of the functional head to which a PA is moved. Incorporation of *A* is caused by the hosting properties of *I* for incorporating elements, whereas incorporation of *o* is caused by similar properties of *v*. In languages of type 2, for instance, *o* is the only argument to which incorporation applies. This means that in this type of language, *v* is a host for incorporating PAs, unlike *I*. Type 6, according to which both *s* and *o* are incorporated, requires that both *I* and *v* are hosts. If *I* functions as a host, it is to be expected that *A* can be incorporated as well, which is not the case in this type of language. This must be the reason why type 6-languages are ruled out. I suspect that incorporation has a function similar to structural case, verbal agreement and constituent order in that it helps distinguishing between *A* and *o* in a transitive construction. Therefore, languages making use of incorporation will always at least apply it to either *A* or *o*. It does not make much sense to have incorporation of *s* alone. For the same reason, we do not find languages which have a separate, marked case for *s* or verbal agreement with *s* but not with one of the transitive arguments. Incorporation of *A* or *o* alone is natural, and only when *A* is incorporated, *s* may be incorporated too.

The absence of type 7 suggests that incorporation of *s* is more or less obligatory if both arguments of a transitive clause are incorporated. This is unexpected, because in type 3-languages, *s* does not follow the incorporation behaviour of *A* at all. The relevant distinction here seems to be between incorporation and mere syntactic licensing. If none of the transitive arguments are licensed by case or agreement only, the intransitive subject *s* is neither. In other words, *s* may only choose between syntactic licensing and incorporation if both options are used in transitive clauses. Once more, this might be caused by the fact that *s* is not considered to be an independent grammatical function. It will always follow the behaviour of one

of its transitive counterparts, A or O. Obviously, a more detailed explanation for the absence of type 7 will require future research.

## Language index

The following pages list the languages and language families cited in the preceding chapters, as well as their genetic affiliation and the location where they are mentioned or discussed. Information on Abkhaz, for example, can be found in subsection 2.3 of chapter 1, sub-subsections 3.1.2 and 3.2.2 of chapter 4 and in chapter 6.

|                                |   |
|--------------------------------|---|
| Abkhaz (North Caucasian)       | 1.2.3; 4.3.1.2; 4.3.2.2; 6  |
| Abaza (North Caucasian)        | 1.2.3; 4.3.1.2; 4.3.2.2; 6  |
| Adyghe (North Caucasian)       | 1.2.3; 2.2.1; 4.3.1.3; 4.3.2.3  |
| Aghul (North Caucasian)        | 1.1; 1.2.5; 6   |
| Aguagatec (Mayan)              | 4.3.2.4; 5.2.3  |
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| Amharic (Afro-Asiatic)         | 2.1; 2.3; 2.5; 4.2.1; 6   |
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| Bandjatang (Australian)        | 1.3.2   |
| Bantu sub-branch (Niger-Congo) | 2.1; 2.3 ; 3.4  |
| Basque (Basque)                | 1.2.3; 1.2.5; 1.4; 4.1; 4.2 ;<br>4.2.1; 4.3; 4.3.1.1; 4.3.1.2; 4.4;<br>5.1; 6 |

|   |  |
|---|--|
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| Chontal (Mayan)                         | 5.2.3  |
| Chukchi (Chukotko-Kamchatkan)           | 3.2.3.1  |
| Ch'ol (Mayan)                           | 5.2.3  |
| Ch'olan sub-branch (Mayan)              | 5.2.3; 5.2.4; 6  |
| Ch'orti' (Mayan)                        | 5.2.3  |
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| Cora (Uto-Aztecan)                      | 3.4  |
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| Djaru (Australian)                      | 1.2.4; 1.2.5; 1.4; 3.1; 5.1                              |
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| Dyirbal (Australian)                    | 1.2.4; 1.3.1; 1.2.5; 3.2; 1.3.4;<br>1.4; 4.2.2; 5.3; 6   |
| English (Indo-European)                 | 1.2.1; 1.3.1; 2.2.1; 1.4; 3.3.1;<br>4.1; 4.2.1; 4.2.2; 6 |
| Eskimo-Aleut family                     | 1.2.2; 1.3.2   |
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| Kapampangan (Austronesian)            | 1.2.3  |
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| Kinande (Niger-Congo)                 | 2.3  |
| Kham (Sino-Tibetan)                   | 1.2.1; 1.2.4; 1.2.5; 1.4; 3.4; 5.1;<br>5.2.3; 5.3                  |
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| Kwaza                                 | 3.3.2.3; 3.4   |
| Latin (Indo-European)                 | 1.3.1; 2.2.2   |
| Lakhota (Siouan)                      | 3.4  |

|  |  |
|--|--|
| Lummi dialect of Straits Salish (Salishan) | 3.3.2.3; 4.2.2   |
| Malayo-Polynesian branch (Austronesian)    | 2.3  |
| Mam (Mayan)                                | 4.3.2.4; 5.2.3   |
| Mamean sub-branch (Mayan)                  | 5.2.3; 5.2.4; 6  |
| Mayali                                     | 3.4  |
| Mayan family                               | 1.2.3; 1.2.4; 4.1; 4.2; 4.2.1;<br>4.3.1.1; 4.3.1.4; 4.3.2.4; 4.4;<br>5.1; 5.2; 5.2.3; 5.2.4; 6 |
| Miriam (Trans-New Guinea)                  | 1.2.2  |
| Mohawk (Iroquoian)                         | 3.2.2; 3.2.3.1; 3.2.3.2; 3.3.2.1;<br>3.3.2.3; 3.4; 4.2.1; 5.3.1.3; 6                           |
| Mocho (Mayan)                              | 5.2.4  |
| Mopán (Mayan)                              | 5.2.3  |
| Muna (Austronesian)                        | 2.3  |
| Nahuatl (Uto-Aztecan)                      | 3.4; 4.2.1   |
| Nadëb (Maku)                               | 1.3.2  |
| Nepali (Indo-European)                     | 1.2.4  |
| Nez Perce (Penutian)                       | 1.2.3; 3.2.3.2; 3.3.2.3; 3.4;<br>4.2.1; 4.3.2.2; 5.1; 5.3; 5.4; 6                              |
| Ngiyambaa (Australian)                     | 3.4  |
| Nias (Austronesian)                        | 1.2.3  |
| Niue(an) (Austronesian)                    | 1.2.3; 1.3.3; 4.2.1  |
| Norwegian (Indo-European)                  | 2.2.1  |
| Ngandi (Australian)                        | 3.2.1  |
| Nunggubuyu                                 | 3.4  |
| Oxchuc dialect of Tzeltal (Mayan)          | 4.3.1.4  |
| Palauan (Austronesian)                     | 2.3  |
| Pama-Nyungan branch (Australian)           | 1.2.3  |
| Penutian family                            | 5.3.1.3  |
| Papago (Uto-Aztecan)                       | 3.4  |

|   |  |
|---|--|
| Persian (Indo-European)                     | 2.2.1  |
| Pocomam (Mayan)                             | 5.2.3  |
| Portuguese (Indo-European)                  | 1.3.1; 1.3.3   |
| Quiché (Mayan)                              | 4.3.2.4  |
| Romance branch (Indo-European)              | 2.2.1; 2.3; 4.2.1  |
| Rutul (North Caucasian)                     | 1.2.2; 6   |
| Sahaptin (Penutian)                         | 5.3.1.2; 5.3.1.3   |
| Sakha (Altaic)                              | 2.2; 2.2.1; 2.2.2; 2.3   |
| Samish dialect of Straits Salish (Salishan) | 3.3.2.3  |
| Selayarese (Austronesian)                   | 2.3  |
| Slavic branch (Indo-European)               | 4.2.1  |
| Somali (Afro-Asiatic)                       | 3.4  |
| Sorani (Indo-European)                      | 5.2.1; 5.3.1.1; 6  |
| Spanish (Indo-European)                     | 2.2.1; 2.3; 3.4; 4.2.1; 6  |
| Straits Salish                              | 3.2.2; 3.2.3; 3.2.3.4; 3.3.2.3;<br>4.2.1; 4.2.2; 5.2.3; 5.3.1.3; 6 |
| Suleimaniye Kurdish (Indo-European)         | see Sorani   |
| Swahili (Niger-Congo)                       | 2.3  |
| Tagalog (Austronesian)                      | 1.3.2  |
| Tauya (Trans-New Guinea)                    | 1.2.4  |
| Tenejapa dialect of Tzeltal (Mayan)         | 4.3.2.4  |
| Tibeto-Burman branch (Sino-Tibetan)         | 1.2.4; 5.3   |
| Tojolab'al (Mayan)                          | 4.3.1.4  |
| Tongan (Austronesian)                       | 1.2.3; 1.2.5; 6  |
| Tukang Besi (Austronesian)                  | 1.2.4; 2.1; 2.4; 2.5; 3.1; 6                                       |
| Turkish (Altaic)                            | 2.2.1; 4.1; 4.2.1  |
| Tzeltal (Mayan)                             | 4.3.1.4; 4.3.2.4   |
| Ubykh (North Caucasian)                     | 1.2.3; 4.3   |
| Udi (North Caucasian)                       | 1.2.4; 6   |

|                                  |   |
|----------------------------------|---|
| Ukrainian (Indo-European)        | 4.2.1; 4.3.1; 5.2.1                               |
| Urdu (Indo-European)             | 1.2.4   |
| Wangkumara (Australian)          | 1.2.4   |
| Warrgamay (Australian)           | 1.3.2   |
| Warlpiri (Australian)            | 1.2.4; 3.1; 3.3.4; 3.3.2.3; 4.1;<br>4.2.1; 5.1; 6 |
| Welsh (Indo-European)            | 4.2.1   |
| Western branch (North Caucasian) | 1.2.3; 4.1; 4.2; 4.2.1; 4.3; 4.4;<br>5.1; 6       |
| Wichita (Caddoan)                | 3.4   |
| Yalarnnga (Australian)           | 1.2.3; 1.2.5; 6                                   |
| Yidin <sup>y</sup> (Australian)  | 1.3.2   |
| Yucatecan branch (Mayan)         | 5.2.3   |
| Zulu (Niger-Congo)               | 2.3   |

Below, the complete linguistic lineage as proposed by Ethnologue (15<sup>th</sup> edition) is provided for each of these languages. The order of appearance is determined by language family, rather than alphabetically. Language families are in italics. Numbers in brackets refer to the number of languages a family or branch contains. The second column lists the appropriate SIL International three-letter codes. At present, this information is electronically available at:

[http://www.ethnologue.com/family\\_index.asp](http://www.ethnologue.com/family_index.asp)

| <b>Language name</b>      | <b>SIL code</b> | <b>Linguistic lineage</b>   |
|---------------------------|-----------------|---|
| <i>Afro-Asiatic (375)</i> |                 |   |
| Somali                    | som             | (Cushitic (47), East (34), Somali (6))                                      |
| Arabic                    | arb             | (Arabic, Standard)<br>(Semitic (77), Central (57), South (38), Arabic (35)) |

| <b>Language name</b>    | <b>SIL code</b> | <b>Linguistic lineage</b>   |
|-------------------------|-----------------|---|
| Hebrew                  | heb             | (Semitic (77), Central (57), South (38), Canaanite (3))                                     |
| Amharic                 | amh             | (Semitic (77), South (20), Ethiopian (14), South (11), Transversal (6), Amharic-Argobba(2)) |
| <i>Altaic (66)</i>      |                 |   |
| Sakha                   | sah             | (Yakut)<br>(Turkic (40), Northern (8))  |
| Turkish                 | tur             | (Turkic (40), South (12), Turkish (4))  |
| <i>Australian (263)</i> |                 |   |
| Ngandi                  | nid             | (Gunwingguan (24), Enindhilyagwa (3))   |
| Nunggubuyu              | nuy             | (Gunwingguan (24), Enindhilyagwa (3))   |
| Mayali                  | gup             | (Gunwinggu)<br>(Gunwingguan (24), Gunwinggic (2))   |
| Ngalakan                | nig             | (Gunwingguan (24), Rembargic (2))   |
| Rembarrnga              | rmb             | (Rembarunga)<br>(Gunwingguan (24), Rembargic (2))   |
| Bandjalang              | bdy             | (Pama-Nyungan (178), Bandjalangic (1))  |
| Dyirbal                 | dbl             | (Pama-Nyungan (178), Dyirbalic (3))   |
| Warrgamay               | wgy             | (Pama-Nyungan (178), Dyirbalic (3))   |
| Kalkatungu              | ktg             | (Kalkutung)<br>(Pama-Nyungan (178), Galgadungic (2))  |
| Yalarnnga               | ylr             | (Pama-Nyungan (178), Galgadungic (2))   |
| Wangkurama              | nbx             | (Ngura)<br>(Pama-Nyungan (178), Karnic (11), Ngura (1))                                     |
| Jiwarli                 | mem             | (Mangala)<br>(Pama-Nyungan (178), South-West (52), Mangala (1))                             |
| Warlpiri                | wbp             | (Pama-Nyungan (178), South-West (52), Ngarga (2))   |
| Djaru                   | ddj             | (Jarua)<br>(Pama-Nyungan (178), South-West (52), Ngumbin (5))                               |

| <b>Language name</b>       | <b>SIL code</b> | <b>Linguistic lineage</b>  |
|----------------------------|-----------------|--|
| Ngiyambaa                  | wyb             | (Wangaaybuwan-Ngiyambaa)<br>(Pama-Nyungan (178), Wiradhuric (3))   |
| Yidin <sup>y</sup>         | yii             | (Pama-Nyungan (178), Yidinic (2))  |
| <i>Austronesian (1268)</i> |                 |  |
| Balinese                   | ban             | (Bali)<br>(Malayo-Polynesian (1248), Bali-Sasak (3))   |
| Kambera                    | xbr             | (Malayo-Polynesian (1248), Central-Eastern (708),<br>Central Malayo-Polynesian (168), Bima-Sumba (27))   |
| Niue                       | niu             | (Malayo-Polynesian (1248), Central-Eastern (708),<br>Eastern Malayo-Polynesian (539), Oceanic (498),<br>Central-Eastern Oceanic (234), Remote Oceanic (199),<br>Central Pacific (45), East Fijian-Polynesian (42),<br>Polynesian (38), Tongic (2)) |
| Tongan                     | ton             | (Malayo-Polynesian (1248), Central-Eastern (708),<br>Eastern Malayo-Polynesian (539), Oceanic (498),<br>Central-Eastern Oceanic (234), Remote Oceanic (199),<br>Central Pacific (45), East Fijian-Polynesian (42),<br>Polynesian (38), Tongic (2)) |
| Indonesian                 | ind             | (Malayo-Polynesian (1248), Malayic (70), Malayan (46),<br>Local Malay (36))  |
| Tagalog                    | tgl             | (Malayo-Polynesian (1248), Meso Philippine (61),<br>Central Philippine (47), Tagalog (2))  |
| Kapampangan                | pam             | (Pampangan)<br>(Malayo-Polynesian (1248), Northern Philippine (72),<br>Bashiic-Central Luzon-Northern Mindoro (16), Central<br>Luzon (10), Pampangan (1))  |
| Palauan                    | pau             | (Malayo-Polynesian (1248), Palauan (1))  |
| Muna                       | mnb             | (Malayo-Polynesian (1248), Sulawesi (114), Muna-<br>Buton (12), Munan (6), Munc (5), Western (4))  |
| Tukang Besi                | khc/<br>bhg     | (Tukang Besi North/South)<br>(Malayo-Polynesian (1248), Sulawesi (114), Muna-<br>Buton (12), Tukangbesi-Bonerate(3))   |
| Selayarese                 | sly             | (Selayar)<br>(Malayo-Polynesian (1248), Sulawesi (114), South<br>Sulawesi (31), Makassar (5))  |

| Language name                  | SIL code | Linguistic lineage   |
|--------------------------------|----------|--|
| Nias                           | nia      | (Malayo-Polynesian (1248), Sumatra (12), Northern (3))   |
| <i>Basque (3)</i>              |          |  |
| Basque                         | eus      |  |
| <i>Chibchan (22)</i>           |          |  |
| Guatuso                        | gut      | (Maléku Jaíka)<br>(Rama (2))   |
| <i>Caddoan (5)</i>             |          |  |
| Wichita                        | wic      | (Northern (4), Wichita (1))  |
| <i>Chukotko-Kamchatkan (5)</i> |          |  |
| Alutor                         | alr      | (Northern (4), Koryak-Alyutor (3))   |
| Chukchi                        | ckt      | (Chukot)<br>(Northern (4), Chukot (1))   |
| <i>Eskimo-Aleut (11)</i>       |          |  |
|                                |          | (Eskimo (10), <i>Inuit</i> (5))  |
| <i>Indo-European (449)</i>     |          |  |
| Welsh                          | cym      | (Celtic (7), Brythonic (3))  |
| Norwegian                      | nno      | (Germanic (53), North (11), West Scandinavian (5))   |
| Icelandic                      | isl      | (Germanic (53), North (11), West Scandinavian (5))   |
| English                        | eng      | (Germanic (53), West (41), English (5))  |
| German                         | deu      | (Germanic (53), West (41), High German (20), German (18), Middle German (9), East Middle German (3)) |
| Dutch                          | nld      | (Germanic (53), West (41), Low Saxon-Low Franconian (15), Low Franconian (4))                        |
| Greek                          | ell      | (Greek (6), Attic (5))   |
| Hindi                          | hin      | (Indo-Iranian (308), Indo-Aryan (219), Central zone (76), Western Hindi (12), Hindustani (4))        |
| Urdu                           | urd      | (Indo-Iranian (308), Indo-Aryan (219), Central zone (76), Western Hindi (12), Hindustani (4))        |

| <b>Language name</b>  | <b>SIL code</b> | <b>Linguistic lineage</b>  |
|-----------------------|-----------------|--|
| Assamese              | asm             | (Indo-Iranian (308), Indo-Aryan (219), Eastern zone (42), Bengali-Assamese (16))   |
| Bengali               | ben             | (Indo-Iranian (308), Indo-Aryan (219), Eastern zone (42), Bengali-Assamese (16))   |
| Nepali                | nep             | (Indo-Iranian (308), Indo-Aryan (219), Northern zone (21), Eastern Pahari (2))   |
| Kurmanji              | kmr             | (Kurdish, Northern)<br>(Indo-Iranian (308), Iranian (87), Western (72), Northwestern (54), Kurdish (4))  |
| Sorani                | ckb             | (Kurdish, Central)<br>(Indo-Iranian (308), Iranian (87), Western (72), Northwestern (54), Kurdish (4))   |
| Persian               | pes             | (Farsi, Western)<br>(Indo-Iranian (308), Iranian (87), Western (72), Southwestern (18), Persian (10))  |
| Latin                 | lat             | (Italic (48), Latino-Faliscan (1))   |
| Italian               | ita             | (Italic (48), Romance (47), Italo-Western (38), Italo-Dalmatian (6))   |
| Spanish               | spa             | (Italic (48), Romance (47), Italo-Western (38), Western (32), Gallo-Iberian (30), Ibero-Romance (16), West Iberian (9), Castilian (4))           |
| Portuguese            | por             | (Italic (48), Romance (47), Italo-Western (38), Western (32), Gallo-Iberian (30), Ibero-Romance (16), West Iberian (9), Portuguese-Galician (3)) |
| Ukrainian             | ukr             | (Slavic (19), East (4))  |
| <i>Iroquoian (11)</i> |                 |  |
| Mohawk                | moh             | (Northern Iroquoian (9), Five Nations (5), Mohawk-Oneida (2))  |
| Cayuga                | cay             | (Northern Iroquoian (9), Five Nations (5), Seneca-Onondaga (3), Seneca-Cayuga (2))   |
| <i>Japanese (12)</i>  |                 |  |
| Japanese              | jpn             |  |

| Language name                | SIL code | Linguistic lineage  |
|------------------------------|----------|---|
| <i>Kartvelian (5)</i>        |          |   |
| Georgian                     | kat      | (Georgian (2))  |
| <i>Language Isolate (40)</i> |          |   |
| Ainu                         | ain      | (Japan)   |
| Burushaski                   | bsk      | (Pakistan)  |
| Kwaza                        | -        | (Brazil)  |
| <i>Maku (6)</i>              |          |   |
| Nadëb                        | mbj      |   |
| <i>Mayan (69)</i>            |          |   |
| Chontal                      | chf      | (Chontal, Tabasco)<br>(Cholan-Tzeltalan (12), Cholan (4), Chol-Chontal (3))                         |
| Ch'ol                        | cti/ctu  | (Chol, Tila/Tumbalá)<br>(Cholan-Tzeltalan (12), Cholan (4), Chol-Chontal (3))                       |
| Ch'orti'                     | caa      | (Cholan-Tzeltalan (12), Cholan (4), Chorti (1))   |
| Tzeltal                      | tzh      | (Tzeltal, Oxchuc)<br>(Cholan-Tzeltalan (12), Tzeltalan (8))   |
| Tojolab'al                   | toj      | (Tojolabal)<br>(Kanjobalan-Chujean (8), Chujean (3))  |
| Aguagatec                    | agu      | (Awakateko)<br>(Quichean-Mamean (40), Greater Mamean (11), Ixilan (4))                              |
| Mam                          | mam      | (Mam, Northern)<br>(Quichean-Mamean (40), Greater Mamean (11), Mam (7))                             |
| Quiché                       | various  | <i>(Quiche-Achi sub-branch (8))</i><br>(Quichean-Mamean (40), Greater Quichean (29), Quichean (20)) |

| <b>Language name</b>        | <b>SIL code</b> | <b>Linguistic lineage</b>   |
|-----------------------------|-----------------|---|
| <i>Niger-Congo (1514)</i>   |                 |   |
| Swahili                     | swh             | (Atlantic-Congo (1418), Volta-Congo (1344), Benue-Congo (961), Bantoid (681), Southern (659), Narrow Bantu (513), Central (337), G (36), Swahili (G.40)(8))             |
| Kinande                     | nmb             | (Nande)<br>(Atlantic-Congo (1418), Volta-Congo (1344), Benue-Congo (961), Bantoid (681), Southern (659), Narrow Bantu (513), Central (337), J (45), Konzo (J.40) (2))   |
| Chicheŵa                    | nya             | (Nyanja)<br>(Atlantic-Congo (1418), Volta-Congo (1344), Benue-Congo (961), Bantoid (681), Southern (659), Narrow Bantu (513), Central (337), N (13), Nyanja (N.30) (1)) |
| Zulu                        | zul             | (Atlantic-Congo (1418), Volta-Congo (1344), Benue-Congo (961), Bantoid (681), Southern (659), Narrow Bantu (513), Central (337), S (26), Nguni (S.40)(4))               |
| <i>North Caucasian (34)</i> |                 |   |
| Avar                        | ava             | (East Caucasian (29), Avar-Andic (9))   |
| Dargi                       | dar             | (Dargwa)<br>(East Caucasian (29), Dargi (1))  |
| Aghul                       | agx             | (East Caucasian (29), Lezgif (9), Nuclear Lezgif (7), East Lezgif(3))   |
| Rutul                       | rut             | (East Caucasian (29), Lezgif (9), Nuclear Lezgif (7), West Lezgif (2))  |
| Udi                         | udi             | (East Caucasian (29), Lezgif (9), Udi (1))  |
| Abkhaz                      | abk             | (West Caucasian (5), Abkhaz-Abazin (2))   |
| Abaza                       | abq             | (West Caucasian (5), Abkhaz-Abazin (2))   |
| Adyghe                      | ady             | (West Caucasian (5), Circassian (2))  |
| Kabardian                   | kbd             | (West Caucasian (5), Circassian (2))  |
| Ubykh                       | uby             | (West Caucasian (5), Ubyx (1))  |
| <i>Penutian (33)</i>        |                 |   |
| Coos                        | csz             | (Oregon Penutian (5), Coast Oregon (3), Coosan (1))   |
| Nez Perce                   | nez             | (Plateau Penutian (6), Sahaptin (5))  |

| Language name                 | SIL code | Linguistic lineage   |
|-------------------------------|----------|--|
| Sahaptin                      | uma      | (Umatilla)<br>(Plateau Penutian (6), Sahaptin (5))   |
| <i>Salishan (27)</i>          |          |  |
| Straits Salish                | str      | (Central Salish (13), Straits (2))   |
| <i>Sino-Tibetan (403)</i>     |          |  |
| Kham                          | kjl      | (Parbate, Western)<br>(Tibeto-Burman (389), Himalayish (145), Mahakiranti (51), Kham-Magar-Chepang-Sunwari (13), Kham (4))         |
| <i>Siouan (17)</i>            |          |  |
| Lakhota                       | lkt      | (Lakota)<br>(Siouan Proper (16), Central (11), Mississippi Valley (10), Dakota (4))  |
| <i>Trans-New Guinea (564)</i> |          |  |
| Tauya                         | tya      | (Madang-Adelbert Range (102), Adelbert Range (44), Brahman (4))  |
| Kewa                          | kew      | (Kewa, West)<br>(Main Section (317), Central and Western (267), East New Guinea Highlands (64), West-Central (14), Angal-Kewa (7)) |
| Miriam                        | ulk      | (Meriam)<br>(Trans-Fly-Bulaka River (38), Trans-Fly (35), Eastern Trans-Fly (4))   |
| <i>Uto-Aztecan (61)</i>       |          |  |
| Cupeño                        | Cup      | (Northern Uto-Aztecan (13), Takic (4), Cupan (3), Cahuilla-Cupeno (2))   |
| Nahuatl                       | nhn      | (Nahuatl, Central)<br>(Southern Uto-Aztecan (48), Aztecan (29), General Aztec (29), Aztec (28))                                    |
| Cora                          | crn      | (Cora, El Nayar)<br>(Southern Uto-Aztecan (48), Sonoran (19), Corachol (3))  |
| Huichol                       | hch      | (Southern Uto-Aztecan (48), Sonoran (19), Corachol (3))  |

| <b>Language name</b> | <b>SIL code</b> | <b>Linguistic lineage</b>  |
|----------------------|-----------------|--|
| Papago               | ood             | (Tohono O'odham)<br>(Southern Uto-Aztecan (48), Sonoran (19), Tepiman (6)) |
| <i>Uralic (39)</i>   |                 |  |
| Finnish              | fin             | (Finnic (11))  |
| Hungarian            | hun             | (Finno-Ugric (1), Ugric (1), Hungarian (1))                                |

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# Samenvatting

Summary (in Dutch)

Wereldwijd maken natuurlijke talen onderscheid tussen twee typen zinnen: intransitieve en transitieve. Het eerste type heeft één werkwoordelijk argument (zoals bijvoorbeeld *ik werk*), het tweede meer dan één (bijvoorbeeld *ik zie jou*). In vrijwel alle talen wordt het argument van de intransitieve zin morfologisch en syntactisch op dezelfde manier behandeld als één van de argumenten van de transitieve zin. In grofweg driekwart van de talen, waaronder het Nederlands en het Engels, is het intransitieve argument, voortaan S genoemd, qua vorm en positie gelijk aan het meest prominente transitieve argument, voortaan A (*ik* in de eerder genoemde voorbeelden). De notie 'subject' is hiermee nauw verweven. Andere transitieve argumenten, aangeduid met de term 'object' (O), hebben een andere vorm en positie (*ik zie jou* en niet *\*ik zie jij*). Een andere verdeling is denkbaar en komt ook daadwerkelijk voor: in de zogenaamde ergatieve talen komen juist het intransitieve subject S en het transitieve object O overeen. Het transitieve subject lijkt in deze talen een aparte categorie te vertegenwoordigen, in elk geval qua vorm (*ik werk* naast *\*mij ziet jou*). Deze vorm of naamval heet ergatief, en leent zijn naam aan het verschijnsel in kwestie. Het feit dat ergativiteit slechts in 25 procent van de talen lijkt voor te komen, wijst erop dat het een gemarkeerd verschijnsel is. Dit blijkt eens te meer uit het feit dat het in veel van die talen niet ongebruikelijk is ergativiteit te beperken tot (bijvoorbeeld) de verleden tijd.

Een goede theorie over menselijke taal houdt idealiter rekening met het feit dat een verschijnsel in beperkte mate voorkomt. Eerdere analyses van ergativiteit deden dit niet of nauwelijks: ze suggereerden doorgaans dat er

sprake moet zijn van een macro-parameter die simpelweg stelt dat talen wel of niet ergatief zijn. Een vertekenende factor is het feit dat ergativiteit in verscheidene gedaanten opdoemt: als een patroon dat zichtbaar wordt in het naamvalsysteem, in de werkwoordelijke inflectie of in beide. In een enkel geval lijkt het er zelfs op dat s en o ook in syntactisch opzicht één categorie vormen, namelijk het subject. Dit proefschrift doet een theoretisch voorstel dat alle waargenomen patronen kan verklaren en tegelijkertijd een antwoord geeft op de vraag waarom ergativiteit een beperkte distributie heeft.

Hoofdstuk 1 vangt aan met een beschrijving van de meest voorkomende ergatieve patronen. Vervolgens geef ik een overzicht van de theoretische behandeling van naamval en congruentie binnen het generatieve kader, gevolgd door de meest invloedrijke voorstellen om ergativiteit binnen ditzelfde kader te verklaren.

In hoofdstuk 2 presenteer ik mijn hoofdhypothese: naamval en congruentie zijn universele mechanismen die nodig zijn voor het syntactisch licenseren van werkwoordelijke argumenten. Daarbij is er slechts sprake van één (structurele) naamval, Accusatief, die als niet-interpreeteerbaar kenmerk wordt gecheckt door het complement van het werkwoord (op het functionele hoofd *v*). Hierbij treedt geen verplaatsing op. Congruentie houdt in dat een naamvalloos argument niet-interpreeteerbare nominale kenmerken checkt op een functioneel hoofd *I*, gewoonlijk door middel van verplaatsing. Ervan uitgaande dat *v* in een intransitieve zin geen naamvalskenmerk heeft en dat het A-argument nooit in de complementpositie van *V* staat, resulteert dit in het accusatieve patroon dat kenmerkend is voor de grote meerderheid van de talen in de wereld.

Twee verschijnselen lijken strijdig te zijn met dit stelsel van aannames: differentiële objectmarkering en objectcongruentie. Het eerste verschijnsel houdt in dat directe objecten binnen één taal soms wel, en soms niet van Accusatief-morfologie zijn voorzien. Dit lijkt erop te duiden dat het Accusatief kenmerk minder universeel is dan de hoofdhypothese beweert. Het is echter niet controversieel om aan te nemen dat in dit soort talen de Accusatief-

morfologie soms hoorbaar is en soms niet. Het feit dat differentiële objectmarkering geconditioneerd wordt door nominale kenmerken als definietheid en bezieldeheid maakt deze oplossing aannemelijk.

Het probleem van de objectcongruentie is van een andere orde: transitieve werkwoorden die zowel voor het subject als voor het direct object zijn geïnflecteerd lijken erop te wijzen dat congruentie niet persé samenhangt met naamvalloze argumenten. Bovendien suggereren ze dat er sprake kan zijn van meer dan één functionele projectie waar niet-interpreteerbare nominale kenmerken worden gecheckt. Deze kwestie wordt opgelost met behulp van data uit talen als het Amharisch en *Tukang Besi*. In deze talen is er alleen sprake van objectcongruentie wanneer het object specifieke referentie heeft. Dit strookt met het feit dat uit de syntaxis van deze talen blijkt dat objectcongruentie alle kenmerken vertoont van clitic-dubbeling. In een vergelijking met het Spaans stel ik voor om het vermeende objectcongruentiemorfeem te analyseren als het echte *o*-argument, dat gedubbeld wordt door een (pro)nomen in adjunct-positie. Deze benadering vormt de ruggengraat van mijn analyse van ergativiteit, waarop ik met behulp van het *Tukang Besi* een vooruitblik geef.

Hoofdstuk 3 behandelt nonconfigurationele talen zoals het Warlpiri, Mohikaans en Straits Salish. Deze talen hebben met elkaar gemeen dat werkwoordelijke argumenten iedere denkbare positie ten opzichte van het werkwoord en ten opzichte van andere constituenten kunnen innemen, en dat werkwoorden lijken te congrueren met zowel subjecten als objecten. Bovendien ontmoeten we hier, voor het eerst sinds hoofdstuk 1, consequente toepassing van ergativiteit in het naamvalspatroon van het Warlpiri. In navolging van Jelinek (1984) biedt ik een verklaring voor de syntaxis van deze talen op basis van pronominale argumenten (PA's). De strekking van deze verklaring is dat de vermeende congruentiemorfemen in feite de echte subjecten en objecten zijn, die door middel van clitisatie in het werkwoord terechtkomen. Logischerwijze vertonen zij een accusatief patroon.

Zoals bij de gevallen van objectcongruentie in hoofdstuk 2, kunnen de PA's worden gedubbeld door (pro)nomina in adjunct-posities (lexicale argumenten ofwel LA's). Dit verklaart de positionele vrijheid van de vermeende argumenten. Aanvullend syntactisch bewijs voor deze stelling vinden we in de manier waarop de talen in kwestie omgaan met kwantificatie. Het is algemeen bekend dat pronomina alleen een variabele interpretatie onder invloed van een kwantor kunnen krijgen wanneer deze kwantor zich in een argumentspositie bevindt en het pronomen c-commandeert. Aangezien LA's adjuncten zijn die PA's c-commanderen, is het niet waarschijnlijk dat de genoemde talen beschikken over determinatorachtige kwantoren. Dit lijkt inderdaad zo te zijn. Kwantificatie komen voornamelijk tot stand met behulp van indefiniete pronomina die zich in het bereik van een kwantificatieel adverbium bevinden.

LA's zijn altijd gecoïndexeerd met hun respectievelijke PA's en hoeven derhalve niet syntactisch gelicenseerd te worden. In het Mohikaans en het Straits Salish zijn ze dan ook naamvalloos. Het is echter niet onmogelijk om ze toch van naamval te voorzien. Het gaat daarbij altijd om louter semantische naamvallen zoals Locatief en Instrumenteel die niets te maken hebben met syntactische licensering. Afhankelijk van de semantische betekenis wordt zo'n naamval toegepast op het O-adjunct of het A-adjunct. In het eerste geval levert dit een accusatief patroon op, in het tweede een ergatief patroon. Zo bezien kan ergativiteit dus alleen voorkomen als naamvalspatroon op LA's in nonconfigurationele talen. Het idee dat een ergatief patroon hier minimaal twee alternatieven heeft, ondersteunt de empirie: ergativiteit is gemarkeerd. De hoofdhypothese wordt in dit hoofdstuk aangevuld met de Second Pattern Hypothese (SPH), waarvan de naam benadrukt dat ergativiteit slechts als tweede patroon voorkomt naast het accusatieve patroon dat de PA's vertonen.

Zoals eerder opgemerkt kan ergativiteit ook zichtbaar worden in de congruentie van werkwoorden, het onderwerp van hoofdstuk 4. Een goed voorbeeld is het Kurmanji (Koerdisch), een taal waarin het werkwoord in

ergatieve constructies congrueert met s of o, maar niet met A. Ook dit patroon kan worden verklaard door een link te leggen met clitic-dubbeling: het A-argument, dat in dit geval onhoorbaar is, clitiseert en kan worden gedubbeld door een naamvalloos/Ergatief adjunct. Door aan te nemen dat clitisatie door middel van incorporatie het A-argument licenseert zonder gebruik te maken van naamval of congruentie, kunnen we verklaren waarom congruentie beschikbaar is voor het o-argument. Dit dient dan wel naamvalloos te zijn, waarvoor we aan moeten nemen dat v in dit soort constructies geen Accusatief kenmerk heeft.

Een vergelijking met de passief-constructie in niet-ergatieve talen als het Nederlands dringt zich op, waar evenmin sprake is van Accusatief naamval. De *door*-bepaling is vergelijkbaar met het naamvalloze/Ergatieve adjunct, en het o-argument wordt uitsluitend gelicenseerd door middel van congruentie. Op grond van deze vergelijking zouden we moeten concluderen dat in ergatieve talen als het Koerdisch het o-argument als syntactisch subject fungeert, aangezien hetzelfde geldt voor het o-argument van de passieve constructie. Dit is echter niet het geval, en de verklaring hiervoor kan worden gevonden in verschillende adjunctie-posities. De *door*-bepaling in een passief-constructie wordt aangehecht in een projectie die gedomineerd wordt door IP (bijvoorbeeld vP), en daardoor structureel lager is dan het naamvalloze o-argument (na verplaatsing). Het adjunct in de ergatieve constructie wordt echter aangehecht aan IP, en is daarmee structureel hoger dan o. Dit verschil in adjunctie-gedrag wordt gemotiveerd vanuit universele pragmatische tendensen, die duidelijk onderscheid maken tussen actief- en passief-constructies. Hoewel de ergatieve constructie formeel gesproken veel weg heeft van een passief-constructie, fungeert zij als een actief-constructie. Een zeldzaam geval als het Dyrbal, waarin ergativiteit syntactische gevolgen heeft in gevallen van conjunctie-reductie, wordt geanalyseerd als een overgangsfase van passief naar ergatief.

De Ergative as Passive-hypothese (EPH) breidt de hoofdhypothese uit met het idee dat talen op structurele wijze clitic-dubbeling toepassen op het

A-argument. Hoewel tot nu toe werd aangenomen dat dit argument onhoorbaar is, moeten er ook gevallen te vinden zijn waarin sprake is van een volwaardig PA. Dit wordt gedemonstreerd door het Baskisch, Noordwest Kaukasisch en de Maya-talen. In al deze talen zien we naast congruentie met S en O werkwoordelijke inflectie voor het A-argument. Morfologische vergelijking van het S/O-paradigma met het A-paradigma laat bijna altijd zien dat het laatste paradigma de meeste overeenkomsten vertoont met volwaardige pronomina. Dit maakt aannemelijk dat het A-paradigma feitelijk een serie geïncorporeerde pronomina vertegenwoordigt.

Syntactisch bewijs voor de EPH wordt wederom geleverd door het ontbreken van determinator-achtige kwantoren. Sommige talen lijken deze kwantoren in zijn geheel te ontberen, andere sluiten ze uit van de A-functie. Talen met alleen een onhoorbaar PA, of met een onhoorbaar PA voor derde persoon enkelvoud, hebben geen enkele kwantificatiele restrictie. Ditzelfde geldt voor de *door*-bepaling van een passief-constructie, wat wordt verklaard vanuit de gedachte dat een leeg PA niet gespecificeerd hoeft te zijn voor persoon en getal. In dit opzicht is het vergelijkbaar met PRO of *pro*.

Hoofdstuk 5 begint met een overzicht van de tot nu toe behaalde resultaten. Ergatieve patronen komen alleen voor in talen die ofwel al hun argumenten door middel van clitic-dubbeling realiseren (SPH) ofwel alleen hun A-argument als zodanig realiseren (EPH). Dat de meeste talen in het geheel niet ergatief zijn, komt doordat lang niet alle talen over clitic-dubbeling beschikken, en doordat die talen die er wel over beschikken niet persé voor een ergatief patroon hoeven te kiezen. Hiermee is nog niets gezegd over het feit dat ergativiteit vaak beperkt wordt tot de verleden tijd, het perfectief aspect, de derde persoon of een combinatie van deze condities. Dit soort beperkingen, aangeduid als gespleten ergativiteit, is het hoofdthema van dit hoofdstuk.

Ergatieve constructies in talen als het Kurmanji komen alleen voor in zinnen die in de verleden tijd staan. Dit is een typisch Iraans verschijnsel en heeft een historische verklaring. Algemeen wordt aangenomen dat de

ergatieve constructie in deze tak van het Indo-Europees ontstaan is vanuit een passief-constructie die de functie van een werkwoordelijke verleden tijd heeft overgenomen toen deze in onbruik raakte. Een soortgelijke verklaring bestaat voor de Indo-Arische tak, al gaat het daar om perfectief aspect. Voor mijn theorie betekent dit dat de EPH in dit soort talen slechts met bepaalde waarden van I wordt verbonden. Dit is niet onverwacht, aangezien het A-argument volgens de EPH in I incorporeert. Onderzoek naar andere aspecten van het inflectionele domein, zoals het realiseren van lege subjecten, heeft aangetoond dat dit eveneens gerelateerd kan zijn aan bepaalde waarden van I. Dit gegeven is dus niet specifiek voor ergatieve talen en kan probleemloos worden ingepast in de voorgestelde analyse. SPH-talen als het Georgisch laten op hun beurt zien dat ook de keuze voor een naamvalpatroon voor LA's gebonden kan zijn aan bepaalde waarden van I.

Talen met gespleten ergativiteit complementeren het ergatieve patroon normaalgesproken met een accusatief patroon. Bepaalde Maya-talen wekken de indruk dat dit patroon niet identiek is aan het accusatieve patroon in een taal als het Nederlands. Er lijkt veeleer sprake te zijn van een situatie waarin niet alleen A, maar ook het s-argument door middel van een PA wordt gerealiseerd. Dit is een welkome aanvulling op de theorie, want de tot nu toe aangenomen principes voorspellen het bestaan van zo'n patroon.

Tot slot van dit hoofdstuk bespreek ik een patroon waarin ergativiteit beperkt wordt door een nominale hiërarchie. Als voorbeeld kies ik voor het Nez Perce, een taal waarin ergativiteit alleen zichtbaar is bij argumenten in de derde persoon, zowel met betrekking tot naamval als tot congruentie. Een complicerende factor is dat ook de Accusatieve naamval beschikbaar is voor derde personen, resulterend in een uiterst zeldzaam drieledig patroon (Ergatief/naamvalloos/Accusatief). Deze complexe situatie wordt op elegante wijze verklaard door de SPH. Ik beargumenteer dat het ergatieve patroon in de werkwoordscongruentie slechts schijn is. In feite is er sprake van een gangbaar PA-systeem, dat op alle typen argumenten van

toepassing is. Het feit dat de LA-naamvallen voor de eerste en tweede persoon een accusatief en voor de derde persoon een drieledig patroon vertonen, kan worden verklaard vanuit de historische ontwikkeling van de betreffende naamvalsmorfologie. Aanvullend bewijs voor de SPH-status van het Nez Perce wordt verkregen door middel van de geijkte tests voor nonconfigurationaliteit en door middel van het onderzoeken van de manier waarop de taal omgaat met kwantificatie.

In hoofdstuk 6 formuleer ik de conclusie van dit proefschrift. Een macro-parameter voor ergativiteit is ongewenst en overbodig. Ergativiteit kan worden geschaard onder de positieve waarde van een parameter die aangeeft of een taal in staat is één of meerdere argumenten door middel van clitic-dubbeling te realiseren. Alle mogelijke patronen die hieruit voortvloeien worden schematisch opgesomt en voorzien van de voorbeelden die in de voorgaande hoofdstukken de revue zijn gepasseerd. Een klein aantal theoretische opties blijkt niet voor te komen in natuurlijke talen, en het hoofdstuk besluit met een korte beschouwing over de vraag waarom dit het geval zou kunnen zijn.

## Curriculum vitae

Mario van de Visser was born in the town of Goes on the first of November 1975. He spent most of his youth in the village of Wemeldinge, receiving his secondary education at the Buys Ballot College in Goes. After that, he obtained a BA in Primary Education at the Hogeschool Zeeland in Vlissingen. In September 1994, Van de Visser moved to Tilburg in order to study General Linguistics at the University of Tilburg. After receiving his MA-degree (cum laude), he became a PhD-student in June 2001 at the Utrecht Institute of Linguistics (UiL-OTS). During the spring of 2006, while adding the finishing touch to the present book, he worked as a junior instructor at Utrecht University's Dutch department.