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This paper deals with ergativity. The main problem that will be discussed throughout the paper, namely the lack of a precise definition of the term, will be presented in chapter [2]. The starting point of the discussion will be a traditional definition of ergativity, which will be modified based on the further observations made while the discussion advances and taking into account some terminological problems that arise around the description of the linguistic data that will be investigated. Chapters [3] and [4] provide a typological overview of ergativity across the languages of the world and add linguistic evidence that will be used to advance the formulation of a precise definition of ergativity. Chapter [5] finally argues that the term 'ergativity' has been used to describe linguistic phenomena that are not in any way linked to what is understood as ergativity in this paper.

The discussion deals with linguistic data from languages from all of the six continents, giving a total of 19 languages, 18 of them belonging to 13 different language families, one being an isolated language. For languages that risk to be unknown to the reader, the name of the language family, the area the language is spoken in and, whenever available, the number of speakers will be mentioned.

No particular linguistic theory or model is defended in this paper. It will be tried to describe the linguistic data and the theoretical problems that are dealt with using a terminology that any linguist might be able to agree with.
[1.1] Abbreviations and glossing

The glossing of the linguistic data in this paper follows the Leipzig Glossing Rules (Comrie, Haspelmath & Bickel 2008) for interlinear morpheme-by-morpheme glossing. Glosses will be kept as simple as possible, in order to concentrate on the linguistic features that are relevant to the subject of this paper. For instance, complicated tense or aspect systems that some languages in this paper exhibit will be ignored and the concerned morphemes will simply be glossed as tense or aspect morphemes. The following abbreviations will be used in the glosses.

<table>
<thead>
<tr>
<th></th>
<th>first person</th>
<th>INST</th>
<th>instrumental</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>second person</td>
<td>INT</td>
<td>interrogation particle</td>
</tr>
<tr>
<td>3</td>
<td>third person</td>
<td>M</td>
<td>masculine</td>
</tr>
<tr>
<td>ABS</td>
<td>absolutive</td>
<td>NEG</td>
<td>negation</td>
</tr>
<tr>
<td>ACC</td>
<td>accusative</td>
<td>NOM</td>
<td>nominative</td>
</tr>
<tr>
<td>ACT</td>
<td>actor</td>
<td>OBL</td>
<td>oblique case marker</td>
</tr>
<tr>
<td>AGT</td>
<td>agent</td>
<td>PART</td>
<td>particle</td>
</tr>
<tr>
<td>AP</td>
<td>antipassive</td>
<td>PAST</td>
<td>past tense</td>
</tr>
<tr>
<td>ASP</td>
<td>aspect</td>
<td>PL</td>
<td>plural</td>
</tr>
<tr>
<td>AUX</td>
<td>auxiliary</td>
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<td>present tense</td>
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<tr>
<td>COP</td>
<td>copula</td>
<td>REL</td>
<td>relativizer</td>
</tr>
<tr>
<td>ERG</td>
<td>ergative</td>
<td>SG</td>
<td>singular</td>
</tr>
<tr>
<td>EV</td>
<td>evidential</td>
<td>TNS</td>
<td>tense</td>
</tr>
<tr>
<td>F</td>
<td>feminine</td>
<td>TSCM</td>
<td>temporal subordinate</td>
</tr>
<tr>
<td>FOC</td>
<td>focus</td>
<td>REL</td>
<td>relativizer</td>
</tr>
<tr>
<td>GEN</td>
<td>genitive</td>
<td>UND</td>
<td>undergoer</td>
</tr>
</tbody>
</table>

[1.2] A note on footnotes

Little use of footnotes will be made in this paper. It would seem that anything that is important enough to be mentioned should be integrated into the text. Nevertheless, linguistic data will be repeated in footnotes when reference is made to examples that have appeared much earlier in the text, in order to save the reader from having to refer back.
Defining ergativity

Few linguists who have dealt with ergativity have achieved, or even tried, to formulate a precise definition of the term. Kibrik (1985:269) claims that “any attempt to render the term 'ergativity' more precise leads to a reduction in the number of languages admitted as ergative”. Nevertheless it would seem that exactly this should be a desirable result of any precise definition; drawing a clear line around the defined concept and thereby limiting the number of phenomena the term can be applied to.

In reading through the vast linguistic literature on the subject, one finds that the term 'ergativity' has been applied to a large number of phenomena in a wide range of typologically very diverse languages. The concept originally refers to a certain system of nominal case-marking (Comrie 1978:329), but has been extended to verb agreement (Comrie 1978:338, Dixon 1994:42), constituent order (Dixon 1994:49) and many more areas of linguistic research. Linguists have used the term to refer to phenomena that have little or nothing in common with its original meaning related to case-marking (see also chapter [5]) and have linked it to languages like English (Comrie 1978:391f) and German (Grewendorf 1989), which are not usually considered as rich data sources for studies in ergativity. One could get the impression that the term has been used pretty abundantly due to the lack of a precise definition. The main goal of this paper will be to take a step towards a precise definition of ergativity by providing an overview of the different linguistic phenomena that have been referred to as ergative and by discussing them on theoretical and terminological grounds.

[2.1] Starting point: Traditional definition of ergativity

To begin with, it will be useful to take a closer look at a first attempt that has been made to define ergativity and at the theoretical problems that have arisen around the subject. Comrie (1978:329) explains that the term ergativity has traditionally been used “to refer to a system of nominal case-marking where the subject of an intransitive verb has the same morphological marker as a direct object, and a different morphological marker
from the subject of a transitive verb”. He illustrates this situation by bringing forward the following pair of sentences (Comrie 1978:329) from Tongan, an Austronesian language spoken by about 130,000 speakers in Tonga, Niue, New Zealand, Australia and the USA (Glück 2010:717).

(1) Na'e tāmate'i 'e Tēvita 'a Kōlaiate.
PAST kill ERG David ABS Goliath 'David killed Goliath.'

(2) Na'e lea 'a Tolu.
PAST speak ABS Tolu 'Tolu spoke.'

In sentence (1), 'e Tēvita is what Comrie refers to as “subject of a transitive verb” in the above cited definition, tāmate'i being the transitive verb and 'a Kōlaiate being what Comrie calls “direct object”. In (2), there is an intransitive verb, namely lea, and 'a Tolu, the element that Comrie refers to as “subject of an intransitive verb”. Note that 'a Kōlaiate and 'a Tolu are preceded by the same marker, namely 'a, which Comrie calls “absolute”, and a different marker from 'e Tēvita, which is preceded by the marker 'e, referred to as “ergative” by Comrie. This situation is what the above cited definition tries to capture in claiming that “the subject of an intransitive verb has the same morphological marker as a direct object, and a different morphological marker from the subject of a transitive verb”.

[2.2] Terminological problems

The Tongan examples in (1) and (2) and the traditional definition of ergativity quoted above are useful for providing a first insight into the concept of ergativity, but they lead to a number of questions that have to be asked before proceeding. Contrast the Tongan marking system to that of the following pair of sentences from Latin (Dixon 1994:9).

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In sentences (3) and (4), *dominus*, the subject of the transitive verb *audit*, is marked the same way as *servus*, the subject of the intransitive verb *venit*, and differently from *servum*, which is the direct object of *audit*. *Dominus* and *servus* are marked with the nominative case marker *-us* while *servum* carries the accusative case marker *-um*. This case-marking system, where subjects are marked with nominative case and direct objects with accusative case, is normally referred to as “nominative-accusative” (Dixon 1994:9) and should be so well-known that it does not require further explanation at this point.

One question that might arise when comparing the Tongan and Latin examples is to which extent the use of the terms “case-marking” and “morphological marker” is justified for describing the Tongan sentences in (1) and (2). It can be easily agreed upon that *-us* and *-um* in (3) and (4) are morphological markers that mark the case of the nominals *dominus*, *servum* and *servus*. The situation in (1) and (2) is slightly different, though. Here, we are dealing with prepositions, namely ‘e and ‘a, that mark the nominals Tēvita, Kōlaiate and Tolu. To refer to these elements as “morphological markers” and to call the process they are engaged in “case-marking” seems somewhat inappropriate, given the differences that can be observed between the marking of nominals in the Tongan and Latin examples. It would seem that the marking with prepositions is a syntactic mechanism, rather than a morphological one and that it should be distinguished from case-marking.

Another nominal marking system that illustrates a similar problem with the terminology of the cited definition of ergativity can be observed in the following pair of sentences (Guillaume 2010:99) from Cavineña, a language from the Tacanan language family spoken by approximately 1.200 speakers in Bolivia (Guillaume 2010:97). Note
that the occurrence of the element *tu* in (5) and (6) is due to the cross-referencing system of Cavineña, which is realized by bound pronouns that always stand in second position in the clause (Guillaume 2010:99). This cross-referencing system is irrelevant to the current discussion and can thus be ignored.

(5) \( Iba-ra \ tu \ iye-chine \ takure. \)
    Jaguar-ERG 3.SG kill-PAST chicken
    'The jaguar killed the chicken.'

(6) \( Tuke \ tupuju \ tu \ iba \ tsajaja-chine. \)
    him behind 3.SG jaguar run-PAST
    'The jaguar ran behind him.'

In sentence (5), *ibara*, which would be referred to as "subject of a transitive verb" in terms of the above quoted definition of ergativity, is marked with the ergative case marker -ra, while *takure* in (5) and *iba* in (6), which would respectively be "direct object" and "subject of an intransitive verb", do not receive any morphological marker. The definition cited from Comrie can thus not be applied to (5) and (6), because *takure* and *iba* do not have any morphological markers. Nevertheless, there is a clear parallel to the Tongan sentences in (1) and (2) in that the element that would be referred to as "subject of a transitive verb" receives different marking from the two remaining elements, which are treated the same way, either by receiving a common marker or by receiving no marking at all.

These first observations have shown that, even when describing case-marking as in the Cavineña examples, the above quoted definition would require new wording and that it cannot be used to describe the Tongan sentences in a satisfying way. It has been demonstrated that the terms "case-marking" and "morphological marker", which are

<table>
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<th>Na' e</th>
<th>tāmāte'i</th>
<th>'e</th>
<th>Tēvita</th>
<th>'a</th>
<th>Kōlaiate.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PAST</td>
<td>kill</td>
<td>ERG</td>
<td>David</td>
<td>ABS</td>
<td>Goliath</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>'David killed Goliath.'</td>
</tr>
<tr>
<td>2</td>
<td>PAST</td>
<td>speak</td>
<td>ABS</td>
<td>Tolu</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>'Tolu spoke.'</td>
</tr>
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</table>
applied in the definition are not suitable for precisely describing the ergative patterns observed so far. In the following, it will be argued that the use of the terms “subject of an intransitive verb”, “subject of a transitive verb” and “direct object” will also have to be questioned.

[2.3] From subjects and objects to S, A and O

The attentive reader might have realized that, up to this point, the terms “subject of an intransitive verb”, “subject of a transitive verb” and “direct object” have been avoided and have only been used as quotations, except for describing the examples from Latin. The reasons for this rather uneconomic way of referring to certain elements in the Tongan and Cavineña sentences will be explained in the following and a solution will be proposed.

Comrie (1978:330) points out that referring to 'e Tēvita and 'a Tolu as subjects and to 'a Kōlaiate as direct object presupposes that the first two can be grouped together as opposed to the latter, despite the identical marking of 'a Tolu and 'a Kōlaiate and the different marking of 'e Tēvita. The question whether this grouping together is justified or not would go far beyond the scope of this paper, but nonetheless there would seem to be need for a terminology that can be used to refer to the elements in question without making any presuppositions that might have to be revised at some later point.

Comrie (1978:330f) introduces the labels S, A and P to avoid the above described problem. In his terms, S refers to the single argument of an intransitive verb, A to the element that would be the subject of a transitive verb in an English translation, and P to the element that would be the direct object in the English equivalent. This terminology surely eliminates part of the problem in that it no longer presupposes that the arguments of intransitive and transitive verbs that are referred to as subjects and direct objects in English can also be called subjects and direct objects in other languages. Nevertheless it is not going to be applied in this paper, as it would seem desirable to use terms that can be defined independently from any given language and that are not reminiscent of categories that can be attested in English.
Dixon (1994:6f) proposes a terminology that at first sight seems similar to Comrie's in that he too uses three labels, S and A, like Comrie, and O instead of Comrie's P. The major difference between Dixon's and Comrie's labels is what they stand for, though. Dixon claims that all languages work in terms of three so-called “primitive relations”, namely “intransitive subject”, “transitive subject” and “transitive object”, which he labels S, A and O, respectively. The fact that this terminology, unlike Comrie's, is not dependent on the English translations of the linguistic data observed, as it posits three universal primitive relations, is certainly an advantage. Nevertheless, again, presuppositions are made in that defining S as “intransitive subject” along with A as “transitive subject” and as opposed to O as “transitive object” suggests a grouping together of S and A as some type of basic subjects. Dixon's labels are clearly reminiscent of the traditional categories subject and direct object known from English and other European languages that might not be applicable to every language. Furthermore, the question arises whether it is necessary and possible to claim for the existence of the three primitive relations Dixon argues for and thereby positing an abstract level of structure.

Dixon (1994:7) claims that the single argument of an intransitive verb “will always be mapped onto the S basic relation”. It would seem that it is unnecessary to claim for the existence of a basic or primitive relation S if the element in question can, in any case, simply be referred to as single argument of an intransitive verb. Additionally, the definition of S as “intransitive subject” presupposes basic subject qualities for all single arguments of intransitive verbs, a claim that can at least be questioned and therefore should not be made without further evidence, even if it is supported by Comrie (1978:330) who defends the position that “generally in [...] single-argument sentences it is clear that the one argument is the subject”. Queixalós and Gildea (2010:6) add to the critique of Dixon's category S that it “can receive 'split' grammatical treatment”, meaning that even within one language not all S are always treated the same way grammatically. This situation is illustrated by the following pair of sentences (Van Valin 1985:365f) from Lakota, a language from the Siouan language group spoken by approximately 20.000 speakers in the USA (Ingham 2003:1f).
(7)  
\[
\text{ya-\d\text{-}ú} \\
\text{2.SG.ACT-come} \\
\text{'You are coming.'}
\]

(8)  
\[
\text{ni-háske} \\
\text{2.SG.UND-be.tall} \\
\text{'You are tall.'}
\]

Note that the second person pronominal prefix takes different forms in (7) and (8), namely \text{ya-} and \text{ni-}. Van Valin (1985:366) explains that the single arguments of intransitive verbs in Lakota appear as “actor” or “undergoer” pronominal affixes, depending on whether the verb describes an action or a state. Actor and undergoer are so-called semantic macro-roles that group together agent-like thematic relations and patient-like thematic relations, respectively (see Van Valin 2001:30ff for a detailed discussion). Non-uniform grammatical treatment of single arguments of intransitive verbs can also be observed in German, as the following pair of sentences demonstrates.

(9)  
\[
\text{Er} \\
\text{3.SG.NOM} \\
\text{ist} \\
\text{be.3.SG} \\
\text{alt.} \\
\text{old} \\
\text{He is old.'}
\]

(10)  
\[
\text{Ihm} \\
\text{3.SG.DAT} \\
\text{ist} \\
\text{be.3.SG} \\
\text{kalt.} \\
\text{cold} \\
\text{He is cold.'}
\]

In (9), the single argument of the intransitive verb appears as a nominative pronoun, in (10) it is realized as a dative pronoun. These and other kinds of “split grammatical treatment” of what Dixon defines as S are, according to Queixalós and Gildea (2010:6), the main argument against its theoretical importance and its status as primitive unit.

It has been shown that there are several arguments against the necessity and possibility of arguing for the existence of a primitive relation S. Similar arguments can be brought forward to question the justification of Dixon's two remaining primitive relations, A and O. According to Dixon (1994:8), the one of the two arguments of a
transitive verb that is “most likely to be relevant to the success of the activity” will appear as A, the other being identified as O. In other words, Dixon defines A and O on a semantic basis and calls A the primitive relation of the more “agent-like” argument of a transitive verb, and O the primitive relation of the more “patient-like” argument (Manning 1996:3). Again, the question arises whether it is necessary to posit these rather abstract primitive relations, or as Queixalós and Gildea (2010:6) put it, to introduce an “intermediate level of structure”, instead of referring directly to the elements in question. Furthermore, the problem of split grammatical treatment that has been observed for S arguments can equally be attested for A and O arguments, as Queixalós and Gildea (2010:6) point out (see also the Manipuri sentences (18) and (19) in section [2.5] for an instance of non-uniform grammatical treatment of Dixon's primitive relation A).

Despite the discussed problems, Dixon's labels S, A and O have been adopted by several linguists dealing with argument structure and grammatical relations. Manning (1996:3ff) uses them in a slightly modified way by referring to S as “single actant of intransitive verbs” and to A and O as the more “agent-like” and “patient-like” arguments of transitive verbs, but names no reasons for this modification. Van Valin (2001:36ff) adopts Dixon's S, A and O without further discussion and Queixalós and Gildea (2010:6ff), although discussing and criticizing them at length, use S, A and O as a matter of convenience and due to a lack of alternatives.

In this paper, the labels S, A and O will be used to refer directly to the arguments of intransitive and transitive verbs and without positing any primitive relations or making presuppositions about subjecthood. Among the above mentioned terminologies, it is Manning's that serves best for this purpose, and will therefore be adopted. In the following, S stands for the single argument of an intransitive verb, A for the more agent-like argument of a transitive verb, and O for the more patient-like argument of a transitive verb.
Reformulating the traditional definition of ergativity

Based on the problems that have been discussed so far and on the solutions that have been proposed, the traditional notion of ergativity that has been described by Comrie can now be reformulated as follows. Ergativity is a pattern of argument marking where the single arguments of intransitive verbs (S) receive the same treatment as the more patient-like arguments of transitive verbs (O) and a different treatment from the more agent-like arguments of transitive verbs (A). This wording is satisfying for describing the Tongan\(^2\) and Cavineña\(^3\) examples from sections [2.1] and [2.2], but as has already been pointed out, ergative patterns have been observed in many more areas of linguistic research. These occurrences of ergativity will be described and discussed in the following chapters and the definition of ergativity will be adapted, based on the further observations.

\(^1\)Cavineña

\(^2\)Tongan

(1) Na'e tāmate'i 'e Tēvita 'a Kōlaiate.
    PAST kill ERG David ABS Goliath
    'David killed Goliath.'

(2) Na'e lea 'a Tolu.
    PAST speak ABS Tolu
    'Tolu spoke.'

(5) Iba-ra tu iye-chine takure.
    Jaguar-ERG 3.SG kill-PAST chicken
    'The jaguar killed the chicken.'

(6) Tuke tupuju tu iba tsajaja-chine.
    him behind 3.SG jaguar run-PAST
    'The jaguar ran behind him.'
From argument marking to argument coding

The central aspect of the linguistic data discussed in this paper so far has been the marking of the arguments S, A and O. In the Tongan sentences in (1) and (2), S, A and O are marked with prepositions, the same preposition being used for S and O and a different preposition marking A. In the Latin examples in (3) and (4) and in the Cavineña sentences in (5) and (6), marking is realized by case markers. The organization of argument marking in the Cavineña sentences is parallel to that of the Tongan examples, in that S receives the same treatment as O and a different treatment from A. This marking pattern is called ergative-absolute and can be opposed to the nominative-accusative pattern that has been observed in the Latin examples, where S receives the same marking as A and a different marking from O.

In the following, it will be argued that the nominative-accusative and ergative-absolute patterns observed in the Tongan, Latin and Cavineña examples above are in fact not patterns of argument marking, but rather patterns of argument coding. Argument coding will be understood as a means of indicating whether the arguments of intransitive and transitive verbs are S, A or O arguments. Furthermore, it will be demonstrated that argument coding, and thereby also ergativity, presupposes uniform treatment of each of the arguments S, A and O.

4  (1) Na'e  tāmate'i  'e  Tēvita  'a  Kōlaiate.
PAST  kill  ERG  David  ABS  Goliath
'David killed Goliath.'

(2) Na'e  lea  'a  Tolu.
PAST  speak  ABS  Tolu
'Tolu spoke.'

5  (3) Domin-us  serv-um  audit.
master-NOM  slave-ACC  hear
'The master hears the slave.'

(4) Serv-us  venit.
slave-NOM  come
'The slave comes.'

6  (5) Iba-ra  tu  iye-chine  takure.
Jaguar-ERG  3.SG  kill-PAST  chicken
'The jaguar killed the chicken.'

(6) Tuke  tupuju  tu  iba  tsajaja-chine.
him  behind  3.SG  jaguar  run-PAST
'The jaguar ran behind him.'
Martinet (1979:39ff) defends the position that the occurrence of marking patterns as the ones observed above might be due to the necessity of marking the nature of the arguments of verbs. When there are two arguments, as is the case with transitive verbs, it might be useful to indicate which one of the two is the A argument and which one the O argument, in order to exclude ambiguity. One or both of the two arguments A and O will receive some kind of special treatment in order to distinguish it from its counterpart (Martinet 1979:40f). In those cases where this results in the situation that A arguments receive special treatment and O arguments are treated the same way as S arguments, the marking pattern is ergative-absolute, and a nominative-accusative marking pattern can be observed when O arguments receive special treatment and S and A are treated alike. Martinet (1979:42) claims that both situations are “equally likely and equally justified”.

Comrie (1978:331ff) points out that there are five logically possible systems of grouping together or dividing S, A and O in terms of argument marking. Two of the five possibilities have already been discussed, namely that where S and O are grouped together as opposed to A, the ergative-absolute pattern, and that where S and A are grouped together as opposed to O, the nominative-accusative pattern.

Another logically possible argument marking pattern Comrie (1978:332f) argues for is that one where S, A and O all receive different treatment. Comrie (1978:333) states that this tripartite marking pattern is only rarely attested. This might be due to the fact that although Martinet's premise of distinguishing A and O arguments is fulfilled, it would seem uneconomic to mark S arguments in a third way, as there is no danger of ambiguity for single arguments of intransitive verbs (Dixon 1994:40). Martinet (1979:41f) agrees with the claim that it might be unnecessary to mark S arguments in a special way and hints at the redundancy of tripartite marking systems.

The fourth pattern of argument marking that would seem possible is one where A and O are grouped together as opposed to S. Nevertheless, Comrie (1978:334) states that this organization of arguments cannot be attested in any language. This would be in agreement with Martinet's claims discussed above, as it would seem problematic not to distinguish A and O arguments by any means of
argument marking and uneconomic to mark S arguments in a special way. The problem of ambiguity between A and O arguments might also occur in the remaining possible marking pattern Comrie (1978:331f) argues for, namely that one where S, A and O all receive the same treatment, which he claims can be observed in the following pair of sentences (Comrie 1978:331) from English.

(11)  *Came John.
(12)  *Kissed John Mary.
(13)  Mary kissed John.

In comparing (11) and (13), it becomes clear that the S argument of the intransitive verb came has to stand in the pre-verbal position. Moving it to the post-verbal position, as in (13), produces an ungrammatical sentence. Sentence (14) is also ungrammatical, as there is no argument in the pre-verbal position of the transitive verb kissed. The sentence in (15) is grammatical, but it has a different meaning from (12), because in
each case, the argument in the pre-verbal position is understood as A argument, the one in the post-verbal position as O. Argument coding in English is thus realized by means of constituent order, S and A arguments standing in the pre-verbal position, O arguments in the post-verbal position. The pattern of this argument coding strategy is parallel to that of the argument marking strategy observed in Latin, in that S and A receive the same treatment and a different treatment from O. Argument coding in English can thus be said to follow a nominative-accusative pattern.

Note that this strategy of argument coding does not involve argument marking. The coding of the arguments is not realized by prepositions, as in the Tongan examples in (1) and (2), or by morphological markers, as in the Latin and Cavineña examples in (3)-(6), but by means of constituent order. The question arises whether the definition of ergativity formulated in section [2.4], where ergativity is a pattern of argument marking, has to be modified to ergativity being a pattern of argument coding. This would be the case if languages could be attested that apply argument coding strategies that go beyond nominal marking and that show ergative-absolute patterns, thus identical treatment of S and O arguments and a different treatment of A arguments. Nevertheless, there is another argument for claiming that ergativity is a pattern of argument coding, rather than of argument marking, which will be presented in the following.

<table>
<thead>
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<th>(1)</th>
<th>Na'e tāmate'i 'e Tēvita 'a Kōlaiate.</th>
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<td></td>
<td>PAST kill ERG David ABS Goliath</td>
</tr>
<tr>
<td></td>
<td>'David killed Goliath.'</td>
</tr>
</tbody>
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<thead>
<tr>
<th>(2)</th>
<th>Na'e lea ʻa Tolu.</th>
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<tbody>
<tr>
<td></td>
<td>PAST speak ABS Tolu</td>
</tr>
<tr>
<td></td>
<td>'Tolu spoke.'</td>
</tr>
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<tr>
<th>(3)</th>
<th>Domin-us serv-um audit.</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>master-NOM slave-ACC hear</td>
</tr>
<tr>
<td></td>
<td>'The master hears the slave.'</td>
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<tr>
<th>(4)</th>
<th>Serv-us venit.</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>slave-NOM come</td>
</tr>
<tr>
<td></td>
<td>'The slave comes.'</td>
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<tr>
<th>(5)</th>
<th>Iba-ra tu iye-chine takure.</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Jaguar-ERG 3.SG kill-PAST chicken</td>
</tr>
<tr>
<td></td>
<td>'The jaguar killed the chicken.'</td>
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<tr>
<th>(6)</th>
<th>Tuke tupuju tu iba tsajaja-chine.</th>
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<tr>
<td></td>
<td>him behind 3.SG jaguar run-PAST</td>
</tr>
<tr>
<td></td>
<td>'The jaguar ran behind him.'</td>
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</tbody>
</table>
The discussion of the five logically possible argument marking patterns pointed out by Comrie has shown that two of them, namely those that make no distinction between A and O arguments, are unlikely, due to the necessity of distinguishing A and O arguments argued for by Martinet, and do not seem to have been attested in any language. This leaves three likely and attested systems, namely the nominative-accusative, the ergative-absolute and the tripartite system, the latter being seemingly rare and of little relevance to the discussion in this paper.

One very important observation that has to be pointed out about the nominative-accusative marking pattern and the ergative-absolute marking pattern is that both presuppose uniform treatment of each of the arguments S, A and O. If any of the three arguments in question receives what has been referred to as split argument marking above, it is impossible to group it together with any of the two remaining arguments. If, for instance, S arguments receive non-uniform treatment, it is impossible to claim that S arguments receive the same treatment as A or O arguments, since not even all S arguments receive the same treatment. The marking strategy observed in the Lakota sentences in (7) and (8)

9 (7) ya-ʔú 2.SG.ACT-come
'You are coming.' 

8 ni-háske 2.SG.UND-be.tall
'You are tall.'
Dixon (1994:23) points out that there are two different kinds of strategy by which languages mark S, A and O arguments. One he calls the “direct alternative”, which he claims is semantically based, the other he refers to as “prototypical alternative”. The following sentences (Dixon 1994:29) from Manipuri, a Tibeto-Burman language spoken by approximately 1,180,000 speakers in India (Chelliah 2001:466), illustrate the direct marking strategy for the S arguments in (16) and (17) and the A arguments in (18) and (19).

(16) əy-nə celii.
1.SG-AGT run
'I ran.'

(17) əy sawwi.
1.SG get.angry
'I got angry.'

(18) əy-nə ma-bu phuy.
1.SG-AGT 3.SG-UND beat
'I beat him.'

(19) ma əy-bu uy.
3.SG 1.SG-UND see
'He saw me.'

In (16) and (17), the S arguments of celii and sawwi receive different marking. The situation is similar to that observed in the Lakota sentences in (7) and (8), in that the marking of S depends on the semantics of the verb. In Manipuri, the “controller of an action” (Dixon 1994:29), or in other words, the agent, is marked with -nə. This is the case for the S argument in (16), but not for that in (17). This strategy is paralleled by the marking of the A arguments in (18) and (19). The A argument of phuy in (18) is in control of the action and is thus marked with -nə, the A argument of uy in (19) is not in control of the action and thus receives no marking with -nə. Note that marking in Manipuri does not indicate whether an argument is S, A or O, but the marking of each of the arguments depends on the semantics of the situation described. The argument marking strategy applied in Manipuri is thus no means of argument coding in the sense
of the term as it is applied in this paper, namely that argument coding indicates whether an argument is an S, A or O argument, which presupposes uniform treatment for each of the arguments. One might get the impression, in looking at (16)-(19), that argument coding in Manipuri happens by means of constituent order, as demonstrated for English in (11)-(15)\(^{10}\), but as Chelliah (2001:468) points out, there is no obligatory constituent order in Manipuri. The fact that A stands in first position and O in second position in both (18) and (19) is thus pure coincidence.

Dixon's definition of prototypical marking is different from that presented in this paper. According to Dixon (1994:23), prototypical marking depends on prototypical meanings of verbs. Each verb is supposed to have a prototypical meaning and the marking of arguments happens on the basis of this prototypical meaning, no matter whether the verb is used with its prototypical meaning or with a non-prototypical one. Dixon illustrates this with the following pair of English sentences (Dixon 1994:23).

\begin{align*}
(20) & \quad \textit{He hit me.} \\
(21) & \quad \textit{The falling branch hit me.}
\end{align*}

According to Dixon (1994:23), the situation described in (20) reflects the prototypical meaning of the verb \textit{hit}, with the agent \textit{he} marked as Dixon's primitive relation A, or “\textit{transitive subject}”. In (21), Dixon claims the verb \textit{hit} to be used in a non-prototypical meaning, there being no agent involved. Nevertheless, he argues, there must be a “\textit{transitive subject}” stated with every transitive verb, so it is the element \textit{the falling branch} that is marked in this function, although it is no agent (Dixon 1994:23).

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\(^{10}\) (11) \textit{John came.} \\
(12) \textit{John kissed Mary.} \\
(13) *\textit{Came John.} \\
(14) *\textit{Kissed John Mary.} \\
(15) \textit{Mary kissed John.}
This point of view is not shared in this paper, as it seems to be problematic in more than one way. Firstly, it is based on Dixon's primitive relations, which have already been explained to be unconvincing. Secondly, it would seem uneconomic from a theoretical point of view to take into account the prototypical meaning of every verb in every language. The approach described in this paper of defining prototypical marking as a system where S, A and O each receive uniform treatment and thereby as an instance of argument coding, since prototypical marking characterizes arguments in terms of whether they are S, A or O arguments, seems like a suitable generalization of what Dixon tries to explain by taking into account the prototypical meaning of every verb in every language. Nevertheless, both approaches, as well Dixon's as the one undertaken in this paper, lead to one very important conclusion. Dixon (1994:23) claims that “labels such as nominative, accusative, absolutive and ergative are only properly applicable” to languages with prototypical argument marking. This is in agreement with the observations made in this section, namely that the nominative-accusative pattern and the ergative-absolute pattern presuppose uniform treatment of each of the arguments S, A and O and therefore can only be stated in languages with prototypical argument marking, which is an instance of argument coding.

The definition of ergativity formulated in section [2.4], where ergativity is a pattern of argument marking, can thus be expanded to argument coding before even finding evidence of languages that show ergative-absolute patterns in argument coding strategies other than argument marking, as it has been shown that ergative patterns in argument marking can be only be observed when argument marking is applied as a means of argument coding. Ergativity can thus now be defined as a pattern of argument coding where the single arguments of intransitive verbs (S) receive the same treatment as the more patient-like arguments of transitive verbs (O) and a different treatment from the more agent-like arguments of transitive verbs (A).

As has been demonstrated for English in this section, argument coding is not limited to argument marking and it can thus be expected that ergative-absolute patterns can be attested in argument coding strategies other than argument marking. An overview of ergative patterns in different argument coding strategies will be provided in the following chapter.
This chapter provides an overview of ergativity in argument coding. This type of ergativity, which, as will be discussed at a later point in this paper (see chapter [4]), is not the only type of ergativity, is often referred to as “morphological ergativity” (Comrie 1978:337, Dixon 1994:39, Van Valin 2001:73). This term does not seem appropriate, given the observations of ergative patterns made in this paper so far and also those to follow. Argument coding strategies like the one attested for Tongan, where coding is realized by marking the arguments in question with prepositions, have already been argued to be better described as syntactic mechanisms rather than morphological ones. Dixon (1994:39), alternatively, proposes the term “intra-clausal ergativity”. This wording is without doubt better suited for describing the type of ergativity discussed in this chapter, but it would seem to lack preciseness, as it would also cover other types of ergativity that can be observed clause-internally that do not involve argument coding, supposing that such types of ergativity exist (see section [4.3] for evidence). In this paper, the term 'ergativity in argument coding' is considered as most appropriate.

As Bechert (1979:45) points out, argument coding strategies that show ergative-absolute patterns include argument marking, verb-agreement and constituent order. The ergative-absolute patterns observed in this paper so far, namely those attested for Tongan and Cavineña, are instances of argument marking and indeed this strategy of argument coding seems to be the most wide-spread one, taking into account the impression one gets from the linguistic data that is available. In the following, some more examples of ergative-absolute patterns in argument marking will be presented, before passing on to the other two strategies of argument coding, namely verb-agreement and constituent order.
[3.1] Argument marking

Consider the following sentences (Fleck 2010:36) from Matis, a Panoan language spoken by about 300 speakers in Brazil (Fleck 2010:29ff).

(22) Tumi děndu-n pēdka-a-şh.
    Tumi electric.eel-ERG shock-PAST-3
    'An electric eel shocked Tumi.'

(23) Děndu-n Tumi pēdka-a-şh.
    electric.eel-ERG Tumi shock-PAST-3
    'The/an electric eel shocked Tumi.'

(24) Tumi tunke-a-şh.
    Tumi fall-PAST-3
    'Tumi fell.'

In sentence (22), the transitive verb pēdkaașh occurs with the A argument Tumi and the O argument děndun. Argument coding is realized by case marking, in that the A argument is marked with the ergative case marker -n, the O argument receiving no marking. In (24), Tumi occurs as S argument of the intransitive verb tunkeașh and, as in (22), receives no case-marking. Argument coding in Matis thus follows an ergative-absolute pattern, in that A arguments are marked with ergative case, S and O arguments receiving no case marking.

Sentence (23) has been brought forward to demonstrate that constituent order in Matis plays no role in argument coding, as the positions of the A and O arguments are interchangeable without reversing the meaning of the sentence or producing an ungrammatical sentence, other than in the English examples in (12), (14) and (15). As Fleck (2010:36) points out, animacy and discourse factors play a role for Matis constituent order. In this particular case, fronting of the A

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11 (12) John kissed Mary.
    (14) *Kissed John Mary.
    (15) Mary kissed John.
argument, as can be observed in sentence (23), adds the possibility of a definite reading to the non-definite one in (22). This is a discourse factor, in that the definite reading suggests that the element in question has already been mentioned at an earlier point in the discourse.

Note that both verbs in (22)-(24), as well the transitive verb pëdkaa$h as the intransitive verb tunke$a$h, carry the third person marker -$h, indicating that tunke$a$h in (24) agrees with the S element Tumi and that pëdkaa$h in (22) and (23) agrees with either the A or the O argument. Unfortunately, with the data available in (22) and (23), it cannot be said which of the two arguments the verb agrees with, as both arguments are third person arguments in both of the sentences (22) and (23).

Another language that shows ergative-absolute patterns in argument coding realized by case marking is Dyirbal, a Pama-Nyungan language spoken by about 30 speakers in Australia (Dixon 1972:37). The language has played a major role in the discussion of ergativity (Glück 2010:76), as it shows ergative patterns that go well beyond argument coding (see also section [4.1]). Consider the following sentences from Dyirbal (Dixon 1994:10).

(25) ŋuma banaga-n’u.
father return-PAST
'Father returned.'

(26) yabu banaga-n’u.
mother return-PAST
'Mother returned.'

(27) ŋuma yabu-ngu bura-n.
father mother-ERG see-PAST
'Mother saw father.'

(28) yabu ŋuma-ngu bura-n.
mother father-ERG see-PAST
'Father saw mother.'
The intransitive verb *banagan’yu* stands with the S argument *ŋuma* in (25) and with the S argument *yabu* in (26). Both S arguments are unmarked. In (27), *ŋuma* appears as O argument of the transitive verb *buran* and is also unmarked, the A argument *yabuŋgu* being marked with the ergative case marker -ŋgu. In (28), *yabu* is unmarked and *ŋum wounded *ŋumaŋgu* is marked with the ergative case marker, which makes *yabu* the O argument and *ŋum wounded *ŋumaŋgu* the A argument and thereby reversing the sense of the sentence with respect to (27). As Dixon (1994:10) points out, Dyirbal has completely free constituent order, meaning that the elements in (25)-(28) could stand in any possible order without any influence on the meaning of the sentence. Furthermore, it can be observed that the verbs *banagan’yu* and *buran* carry no verb agreement morphology whatsoever. Dixon (1994:10) states that verbs in Dyirbal do not agree with any of the arguments S, A or O. Argument coding is thus realized by argument marking only and verb agreement plays no role in Dyirbal. Samples from languages that show ergative-absolute patterns in verb agreement will be provided in the following.

[3.2] Verb agreement

Verbs in Avar, a language from the Nakh-Daghestanian language family spoken by about 766,000 speakers in Azerbaijan and Russia (Crystal 2010:466), agree with S and O arguments, but not with A arguments, and thus follow an ergative-absolute pattern in verb agreement, in that S and O arguments are treated alike and differently from A arguments. This can be illustrated by the following sentences (Comrie 1978:338) from Avar.

(29) *Vas* v-ekerula.
    boy SG.M-run
    'The boy runs.'

(30) *Jas* j-ekerula.
    girl SG.F-run
    'The girl runs.'
In (29) and (30), the S arguments vas and jas occur with the same intransitive verb. The verb agrees with the S argument in terms of number and gender, which is realized with the prefix v- for singular masculine arguments and the prefix j- for singular feminine arguments. The verb thus appears in the form vekerula in (29), where the S argument is feminine, and as jekerula in (30), where the S argument is masculine. In (31), the transitive verb jec:ula agrees with the feminine S argument jas and not with the masculine A argument vasas:, as it also carries the feminine prefix j-. Note that the A argument in (31) additionally carries the ergative case marker -as:, the S and O arguments in (29)-(30) being unmarked. This shows that argument coding in Avar is realized by a combination of argument marking and verb agreement and that both follow an ergative-absolute pattern, in that S and O are treated alike and differently from A in both argument marking and verb agreement.

Comrie (1978:339) points out that there are also languages that have ergative-absolute verb agreement without additional argument marking. An instance of this can be observed in the following sentences (Dixon 1994:43) from Abaza, a Western Caucasian language spoken by approximately 38.000 speakers (Glück 2010:1). In these examples, the arguments are coded and realized by verb agreement only and without overt appearance of noun phrases. The verb affixes, which represent person, number and gender of the arguments, show an ergative-absolute pattern.

(32)  d-θád
     3.SG-go
     'He/she has gone.'

(33)  h-θád
     1.PL-go
     'We have gone.'

(34)  h-l-bád
     1.PL-3.SG.F-see
     'She saw us.'
Sentences (32) and (33) include the intransitive verb root -θád. In (32), it is marked with the third person singular prefix d-, in (33) with the first person plural prefix h-. Both d- and h- code S arguments. In (34)-(36), d- and h- code the O arguments of the transitive verb bád. S and O arguments are thus coded by the same verb agreement prefixes. In (34) and (35) it can be observed that third person singular arguments are additionally agreed with in terms of gender when they appear as A arguments. In (34), where the A argument is feminine, it is coded with the affix -l-, and in (35), where it is masculine, the affix is -y-. Note furthermore that the first person plural affix for the A argument in (36) is identical to the first person plural affix for S arguments in (32) and (33). Nevertheless, as Dixon (1994:43) points out, the affixes can be distinguished due to their fixed order, where O prefixes precede A affixes. It can thus be said that the ergative-absolute pattern of verb agreement in Abaza is manifested by a combination of form and order of the affixes. The order of linguistic elements also plays a role in languages that code arguments by means of constituent order, instances of which will be presented in the following.

[3.3] Constituent order

Dixon (1994:50) states that languages that code arguments by means of constituent order only and that at the same time show an ergative-absolute pattern in constituent order are unknown. Nevertheless, languages that have ergative-absolute patterns in constituent order and that code arguments by combining constituent order with one or more additional argument coding strategies, similar to the situation observed in the Avar
sentences in (29)-(31), where argument coding is realized by a combination of verb agreement and argument marking, do exist. This situation can be observed in the following sentences (Dixon 1994:51) from Päri, a Western Nilotic language spoken by at least 300,000 speakers in Southern Sudan (Glück 2010:459).

(37) ̀ubùr  á-túuk'.
     Ubur     PAST-play
     'Ubur played.'

(38) jòobi  á-kèel ̀ubùr-ri.
     buffalo  PAST-shoot  Ubur-ERG
     'Ubur shot the buffalo.'

(39) ̀ubùr  jòobi  á-kèel-é.
     Ubur   buffalo  PAST-shoot-3.SG
     'It's Ubur who shot the buffalo.'

In sentence (37), the intransitive verb átúuk' occurs with the S argument ̀ubùr. The S argument is unmarked and stands in pre-verbal position. In (38), it is the O argument jòobi of the transitive verb á-kèel that is unmarked and stands in pre-verbal position. The A argument ̀ubùrri carries the ergative case marker -ri and stands in post-verbal position. Päri thus shows an ergative-absolute pattern in argument marking, in that S and O arguments receive no marking and A arguments are marked with ergative case. There is, as Dixon (1994:51) points out, and as is illustrated in sentence (39), the possibility of fronting the A argument of a transitive verb in order to focalize it. In this case, the A argument is no longer marked with ergative case, but is now agreed with by the verb. The O argument has to remain in pre-verbal position. Constituent order thus shows an ergative-absolute pattern, with S and O arguments always standing in pre-verbal position, A arguments being able to take different positions, with further pragmatic and morphological consequences.
Another language that shows an ergative-absolute pattern in constituent order is Trumai, a language isolate from Brazil, which Queixalós and Gildea (2010:20) claim to be “one of the most consistently ergative languages ever described”. Similar to Dyirbal, it exhibits ergative-absolute patterns that go well beyond argument coding, which will be discussed in a later chapter (see chapter [4]). The ergative-absolute constituent order of Trumai can be observed in the following sentences (Guirardello-Damian 2010:206ff).

(40) \( \text{ine \ achikida.} \)
    \( \text{3.SG \ jump} \)
    'He jumps.'

(41) \( \text{ine-k \ atlat \ mapa.} \)
    \( \text{3.SG-ERG \ pan \ break} \)
    'He broke the pan.'

(42) \( \text{ine-k \ kain \ atlat \ mapa.} \)
    \( \text{3.SG-ERG \ FOC.TNS \ pan \ break} \)
    'It's him who broke the pan.'

(43) \( \text{atlat \ kain \ ine-k \ mapa \ ke.} \)
    \( \text{pan \ FOC.TNS \ 3.SG-ERG \ break \ PART} \)
    'It's the pan he broke.'

Sentences (40) and (41) illustrate the ergative-absolute argument coding pattern of Trumai. In (40), \textit{ine}, the S argument of the intransitive verb \textit{achikida}, is unmarked and stands in pre-verbal position. In (40), \textit{inek} occurs as A argument of the transitive verb \textit{mapa} and carries the ergative case marker \textit{-k}. The O argument \textit{atlat} is unmarked and stands in pre-verbal position, just like the S argument in (40). S and O arguments are thus treated alike with respect to argument marking and constituent order, and differently from A arguments. Sentences (42) and (43) have been brought forward to demonstrate that constituent order does indeed play a role in Trumai argument coding. Focalization in Trumai can be realized by means of fronting of the element in question and additionally marking with the focus particle \textit{kain}, which is also marked for tense. In (42), where the A argument \textit{inek} is fronted and marked with the particle \textit{kain}, the obligatory constituent order, where S and O arguments stand in pre-verbal position, is
not changed. In (43), though, additional morphology, namely the particle *ke*, is required on the transitive verb *mapa*, since the S argument *atlat*, which is fronted and marked with *kain*, no longer stands in its obligatory pre-verbal position. Argument coding in Trumai is thus realized by means of a combination of case marking and constituent order and follows an ergative-absolute pattern in both strategies, in that S and O arguments are treated alike and differently from A arguments.

[3.4] Different patterns in combined argument coding strategies

It has been illustrated that there is a number of languages that realize argument coding by combining one or more of the three argument coding strategies discussed in this paper, which are argument marking, verb agreement and constituent order. This has been observed for Avar, where argument coding is realized by a combination of argument marking and verb agreement. In Päri, all three strategies, namely argument marking, verb agreement and constituent order, play a role in argument coding. In Trumai, constituent order and argument marking are combined to realize argument coding. All the languages with combined argument coding strategies presented in this paper so far have in common that they exhibit ergative-absolute patterns in all argument coding strategies they apply. Nevertheless, there are languages that realize argument coding by means of a combination of two or more strategies that show different organization patterns. Consider the following sentences (Comrie 1978:34) from Warlpiri, a Pama-Nyungan language spoken by at least 1.000 speakers in Australia (Glück 2010:76), where argument marking follows an ergative-absolute pattern and verb-agreement shows a nominative-accusative pattern.

(44) ŋatʰu ka-na puɭami.
1.SG PRES-1.SG shout
'I shout.'

(45) ŋatʰu-ɭu lu ka-na-ŋku nũuntu nẽn'i.
1.SG-ERG PRES-1.SG-2.SG 2.SG see
'I see you.'
In (44), ɲatʸu appears as S argument of the intransitive verb puɭami and is unmarked. In (46), the same element occurs as O argument of the transitive verb nʌnvi and is also unmarked, just like nʊntu, which is the O argument of the same transitive verb nʌnvi in (45). In (45) and (46), both elements appear as A arguments and are marked with the ergative case marker -luɭu, giving ɲatʸuɭuɭu and nʊntuɭuɭu, respectively. Argument marking thus clearly follows an ergative-absolute pattern, in that A arguments receive ergative case-marking, S and O arguments remaining unmarked. Verb agreement does not happen on the main verb in (44)-(46), but on an auxiliary that is marked for tense and agrees with the S argument of intransitive verbs and with both the A and O arguments of transitive verbs. In (44), where ɲatʸu appears as S argument, it is agreed with by the affix -na, which directly follows the tense morpheme ka- in the auxiliary kana. In (45), where ɲatʸu appears as A argument, it is agreed with by the same affix, which stands in the same position within the auxiliary, namely directly following the tense morpheme and preceding the verb agreement affix -ŋku which agrees with the O argument nʊntu. Finally, in (46), where ɲatʸu appears as O argument, the affix on the auxiliary that agrees with ɲatʸu is -رعا, and is thus different from the one in (44) and (45). Here the agreement affix does not directly follow the tense morpheme, but is preceded by the affix -nпа, which agrees with the A argument nʊntuɭuɭu. Verb agreement thus clearly follows a nominative-accusative pattern in Warlpiri, in that the agreement affixes that code S and A arguments differ from the ones that code O arguments in form as well as in position within the auxiliary. It can thus be stated that it is not necessary for languages that combine two or more argument coding strategies to exhibit the same organization patterns in both or all strategies they combine.
Different patterns within one argument coding strategy

The preceding discussion of the Warlpiri sentences has shown that there are languages that exhibit different organization patterns in different argument coding strategies they apply. In the following, it will be demonstrated that there are also languages that show different organization patterns within one argument coding strategy, and that the respective patterns depend on factors like nominal paradigms or the tense of the verb. A term that is often applied to describe this situation is “split ergativity” (Comrie 1978:350, Kibrik 1985:275, Queixalós & Gildea 2010:8), but this term does not seem appropriate, as it is in fact not ergativity that is split, but rather the argument coding strategy as a whole.

The following sentences (Comrie 1978:351f) from Georgian, a Kartvelian language spoken by approximately 3.579.000 speakers in Georgia (Crystal 2010:470), illustrate a case where the pattern of argument coding, which is realized by argument marking, depends on the tense of the verb. With verbs in past tense, Georgian argument marking follows an ergative-absolute pattern and with verbs in present tense, the argument marking pattern is nominative-accusative.

(47) Ștudenți mivida.
    student go.PAST
    'The student went.'

(48) Ștuden- ma çerili daçera.
    student-ERG letter write.PAST
    The student wrote the letter.

(49) Ștudenți midis.
    student go.PRES
    'The student goes.'

(50) Ștudenți çeril-s çers.
    student letter-ACC write.PRES
    'The student writes the letter.'
In (47), the intransitive verb *mivida* occurs in its past tense form with its S argument *ștudenți*, which is unmarked. In (48), the transitive verb *daçera*, which is also in past tense, appears with the A argument *ștudențma*, which carries the ergative case marker *-ma*, and with the O argument *çerili*, which is unmarked. The argument marking pattern in (47) and (48) is thus ergative-absolute, in that A arguments are marked with ergative case, S and O arguments being unmarked. In (49) and (50), the same two verbs occur in their present tense forms with the same arguments. This time, *ștudenți*, which is the S argument of the intransitive verb *midis* in (49) and the A argument of the transitive verb *çers* in (50), is unmarked in both cases, while *çerils*, the O argument of *çers*, carries the accusative case marker *-s*. The argument marking pattern in (49) and (50) is thus nominative-accusative, as S and A arguments are treated alike in receiving no marking, O arguments being treated differently in carrying an accusative case marker.

Note that Comrie (1978:351f) glosses the ending *-i* of *ștudenți* and *çerili* as absolutive case in (47) and (48) and as nominative case in (49) and (50). It would seem that this misses a generalization in that the forms of *ștudenți* in (47), (49) and (50) are clearly the same. The decision in this paper has thus been to gloss the forms that end in *-i* as unmarked forms which lose their ending *-i* when marked for case. An alternative would be to gloss *-i* as case marker and label it in a way that captures the generalization mentioned above.
As has been demonstrated in sentences (25)-(28)\textsuperscript{12}, Dyirbal exhibits an ergative-absolute pattern in case marking. Note that the arguments of the verbs *banaganu* and *buran* in (25)-(28) are full noun phrases. The following sentences (Dixon 1994:14) from Dyirbal illustrate that the ergative-absolute coding pattern does not apply to pronominal noun phrases.

\begin{align*}
(51) & \quad \eta ana \quad \text{banaga-n'u.} \\
& \quad 1.\text{PL} \quad \text{return-PAST} \\
& \quad 'We returned.' \\
(52) & \quad n'u rra \quad \text{banaga-n'u.} \\
& \quad 2.\text{PL} \quad \text{return-PAST} \\
& \quad 'You returned.' \\
(53) & \quad n'u rra \quad \eta ana-na \quad \text{bura-n.} \\
& \quad 2.\text{PL} \quad 1.\text{PL-ACC} \quad \text{see-PAST} \\
& \quad 'You saw us.' \\
(54) & \quad \eta ana \quad n'u rra-na \quad \text{bura-n.} \\
& \quad 1.\text{PL} \quad 2.\text{PL-ACC} \quad \text{see-PAST} \\
& \quad 'We saw you.'
\end{align*}

In (51), the first person plural pronoun *\eta ana* is the S argument of the intransitive verb *banaganu* and is not marked for case. In (52), it is the second person plural pronoun *n'u rra* that is the unmarked S argument. In (53) and (54), *\eta ana-n'a* and *n'u rra* appear as O arguments of the transitive verb *buran* and are marked with the accusative case marker -na. The A arguments *n'u rra* and *\eta ana* are unmarked.

\begin{align*}
(25) & \quad \eta um\text{-}a \quad \text{banaga-n'u.} \\
& \quad \text{father} \quad \text{return-PAST} \\
& \quad 'Father returned.' \\
(26) & \quad yabu \quad \text{banaga-n'u.} \\
& \quad \text{mother} \quad \text{return-PAST} \\
& \quad 'Mother returned.' \\
(27) & \quad \eta um\text{-}a \quad yabu\text{-}ngu \quad \text{bura-n.} \\
& \quad \text{father} \quad \text{mother-ERG} \quad \text{see-PAST} \\
& \quad 'Mother saw father.' \\
(28) & \quad yabu \quad \eta um\text{-}a\text{-}ngu \quad \text{bura-n.} \\
& \quad \text{mother} \quad \text{father-ERG} \quad \text{see-PAST} \\
& \quad 'Father saw mother.'
\end{align*}
The argument coding pattern for pronominal noun phrases is thus nominative-accusative, as S and A arguments are treated alike in receiving no marking and O arguments are marked with accusative case. It is an interesting fact that the nominative-accusative marking pattern for pronouns and the ergative-absolute marking pattern for full noun phrases are also applied when one argument of a transitive verb is realized as a pronoun and the other as a full noun phrase (Dixon 1972:59f). If the A argument in (53) were replaced by the A argument from (27) and the O argument in (54) by the O argument from (27), this would thus produce the following pair of sentences.

(55) yabu-ŋgu ŋana-na bura-n.
    mother-ERG 1.PL-ACC see-PAST
    'Mother saw us.'

(56) ŋana ŋuma bura-n.
    1.PL father see-PAST
    'We saw father.'

Recall that in Dyirbal, full noun phrase A arguments receive ergative case marking, while pronominal O arguments are marked for accusative case. Both arguments in (55) are thus marked for case. On the other hand, pronominal A arguments do not receive any case marking, just like full noun phrase O arguments, so that neither of the arguments in (56) is marked for case.

[3.6] Consequences for the definition of ergativity

In section [2.5], ergativity has been defined as a pattern of argument coding where the single arguments of intransitive verbs (S) receive the same treatment as the more patient-like arguments of transitive verbs (O) and a different treatment from the more agent-like arguments of transitive verbs (A). The two preceding sections have revealed cases of languages that combine different argument coding strategies
with some of them showing different patterns in the different strategies they combine, which depend on factors like nominal paradigms or the tense of the verb, and another language that shows different organization patterns within one argument coding strategy. The question arises whether these observations have any consequences for the definition of ergativity formulated above. The definition of ergativity as a pattern of argument coding could be argued not to be able to capture the argument coding of languages that show different patterns in different argument coding strategies or within one argument coding strategy. To be precise, it might be more appropriate to define ergativity as a pattern of argument coding strategies, rather than of argument coding as a whole. Ergativity would thus be a pattern of argument coding strategies where the single arguments of intransitive verbs (S) receive the same treatment as the more patient-like arguments of transitive verbs (O) and a different treatment from the more agent-like arguments of transitive verbs (A). Nevertheless, as has been already hinted at, there are ergative patterns in the behavior of arguments that go beyond argument coding, which will be described in the following chapter and which will make a further modification of the definition of ergativity necessary.

[3.7] From argument coding to the behavior of arguments

In dealing with the argument coding strategies discussed so far in this paper, arguments have generally been said to receive some kind of treatment, either by being marked by a certain case, by being realized in a certain position in the clause or by being agreed with by the verb. Van Valin (1994:40) refers to verb agreement as a “behavioral property”, meaning that the ability to trigger verb agreement is a property that an argument can possess or not possess. It would seem that the difference between treatment and behavior of arguments is merely a question of perspective. When claiming that an argument is treated in a certain way, one could equally claim that it behaves in a certain way. The treatment of arguments with respect to case-marking and constituent order could thus, just as well as verb
agreement, be described as behavioral properties of arguments. Arguments would thus take a certain case instead of receiving it and take a certain position in the clause instead of being realized there.

Bechert (1979:47) claims that ergative-absolute and nominative-accusative patterns can be observed in a number of syntactic processes that he claims are sensitive to the behavioral properties of arguments, which he opposes to the coding properties of arguments. Some of those syntactic processes will be dealt with in the following chapter and it will be illustrated that ergative-absolute patterns that are clearly parallel to those observed in argument coding strategies can indeed be attested. Nevertheless, if ergativity really does go beyond argument coding, it would seem desirable to use a homogeneous terminology for describing the properties of the involved arguments. As has been argued above, the properties of arguments that argument coding is sensitive to can easily be described as behavioral properties, just like the properties Bechert claims some syntactic processes to be sensitive to.

In section [2.5], it was argued that the ergative-absolute and nominative-accusative patterns in argument coding presuppose uniform treatment of each of the arguments S, A and O. This very important premise has to be maintained when transferring the definition of ergativity to the behavioral properties of arguments in general, meaning that ergative-absolute and nominative-accusative patterns can only be observed when each of the arguments S, A and O shows uniform behavior. Furthermore the observation made in the preceding chapter, that ergativity is not a pattern of argument coding in general, but of argument coding strategies, should be taken into account. This means that the behavioral properties of arguments have always to be observed with respect to a certain grammatical process, as they can be different for different processes. In the following, ergativity will thus be understood as a pattern of behavioral properties of arguments concerning certain grammatical processes where the single arguments of intransitive verbs (S) behave in the same way as the more patient-like arguments of transitive verbs (O) and differently from the more agent-like arguments of transitive verbs (A). This definition captures the ergative-absolute patterns observed in this paper so far and is equally suited for describing the ergative-absolute patterns that will be discussed in the following chapter.
This chapter deals with ergative-absolute patterns in the behavior of the arguments S, A and O that go beyond argument marking. Comrie (1978:246) claims that most languages that show ergative-absolute patterns in argument coding do not exhibit ergative-absolute patterns in the behavior of arguments that concern other grammatical processes. Nevertheless, languages of this type do exist. In this chapter, ergative-absolute patterns that go beyond argument coding will be presented for five languages. As Dixon (1994:161) points out, the behavior of the arguments S, A and O in Dyirbal is consistently ergative-absolute, except for the nominative-accusative pattern of coding of pronominal arguments as presented in section [3.5]. An instance of this, namely the omission of certain arguments in coordination constructions, will be discussed in detail in section [4.1]. In Trumai, a language whose ergative-absolute argument coding pattern has already been discussed in section [3.3], the behavior of the arguments S, A and O follows a nominative-accusative pattern concerning a certain type of auxiliary verbs (see section [4.5]), but an ergative-absolute pattern concerning some syntactic processes like relativization (see section [4.2]) or raising from subordinate clauses (see section [4.4]). Examples of ergative-absolute patterns that go beyond argument coding will furthermore be presented for Shipibo-Konibo (section [4.2.]), Katukina-Kanamari (sections [4.1] and [4.3]) and Yidiɲ (section [4.6]).

The type of ergativity dealt with in this chapter is often referred to as “syntactic ergativity” (Comrie 1978:336, Van Valin 2001:73, Queixalós and Gildea 2010:20). The term seems equally problematic as “morphological ergativity”, which has already been argued to be inappropriate in chapter [3]. Dixon (1994:143) introduces the alternative wording “inter-clausal ergativity”, parallel to his “intra-clausal ergativity”, which has been shown to lack preciseness in chapter [3]. In section [4.3], an instance of an ergative-absolute pattern that influences a syntactic process within the clause, namely question formation in Katukina-Kanamari, will be discussed. The distinction between intra-clausal and inter-clausal ergativity is thus just as inappropriate as the distinction between morphological and syntactic...
ergativity. The observations made in this paper show that ergativity is a pattern of the behavior of arguments concerning any type of grammatical process, be it morphological, syntactic, intra-clausal or inter-clausal.

[4.1] Coordination

In this section, an instance of syntactic behavior of S, A and O arguments, namely that of omission of either of the arguments in coordinated sentences, will be demonstrated for English and Dyirbal and the behavioral patterns of the arguments in both languages will be compared. Consider the following English sentences.

(57) Father returned.
(58) Father laughed.
(59) Father returned and father laughed.
(60) Father returned and laughed.

Sentences (57) and (58) contain two different intransitive verbs with the same S argument, father. Both sentences can be coordinated with and, as illustrated in (59). When the verbs of both coordinated sentences, as is the case in (59), share an identical S argument, it is possible, and more natural, to omit the S argument of the verb in the second clause, which is illustrated in (60).

The same kind of coordination construction can be attested in Dyirbal, with the slight difference that there is no coordination particle like English and in Dyirbal, as Dixon (1994:162) points out. Coordination in Dyirbal is thus realized by simply juxtaposing the coordinated sentences. This is illustrated by the following sentences (Dixon 1994:160f), which are the Dyirbal translations of the English sentences in (57), (58) and (60).
Sentences (61) and (62), like their English equivalents, contain two different intransitive verbs that share the same S argument, namely ŋuma. In (63), the two sentences are coordinated by juxtaposition with the S argument of the second verb being omitted. In Dyirbal, this kind of omission of arguments in coordinated sentences is not limited to intransitive verbs and S arguments. The following sentences (Dixon 1994:161ff) illustrate the situation where two transitive verbs are coordinated, the common O argument appearing with the first verb only.

(61) ŋuma banaga-nŋu.
father return-PAST
'Father returned.'

(62) ŋuma miyanda-nŋu.
father laugh-PAST
'Father laughed.'

(63) ŋuma banaga-nŋu miyanda-nŋu
father return-PAST laugh-PAST
'Father returned and laughed.'

(64) ŋuma yabu-ŋgu bura-n.
father mother-ERG see-PAST
'Mother saw father.'

(65) ŋuma jaja-ŋgu ŋamba-n.
father child-ERG hear-PAST
'The child heard father.'

(66) ŋuma yabu-ŋgu bura-n jaja-ŋgu ŋamba-n.
father mother-ERG see-PAST child-ERG hear-PAST
'Mother saw father and the child heard him.'
Sentences (64) and (65) contain two different transitive verbs which share the same O argument, namely *ŋuma. In (66), the two sentences are coordinated, with the O argument of the second verb being omitted. The English translation of (66) shows that in English the O argument of the second verb cannot be omitted, but has to be realized by a pronoun. The following English sentence, where the O argument of the second verb is omitted, just like in the Dyirbal example in (66), is thus ungrammatical.

(67) *Mother saw father and the child heard.

There is, nevertheless, a way of coordinating the English translations of (64) and (65). Both transitive verbs can be passivized, which turns them into intransitive verbs and their O arguments into S arguments, the former A arguments being realized in a prepositional phrase. This is illustrated in the following sentences.

(68) Father was seen by mother.
(69) Father was heard by the child.
(70) Father was seen by mother and heard by the child.

Sentence (68) is the passivized version of the English translation of (64), sentence (69) is the passivized version of the English translation of (65). In (70), both verbs, which are now passivized and thus intransitive, are coordinated with *and and the S argument of the second verb is omitted. The construction is thus parallel to that observed in (60)\textsuperscript{13}.

\begin{flushright}
\textsuperscript{13} (60) Father returned and laughed.
\end{flushright}
The preceding examples from English and Dyirbal have shown that in both languages, the second S argument can be omitted when two verbs that share the same S argument are coordinated. Furthermore, the same can be said about O arguments in Dyirbal, but not in English. In the following, it will be investigated whether the second A argument can be omitted in the same fashion, when two verbs that share the same A argument are coordinated in English and Dyirbal. Consider the following English sentences.

(71) Father saw mother.
(72) Father heard the child.
(73) Father saw mother and heard the child.

Sentences (71) and (72) contain two different transitive verbs that share the same A argument, namely father. In (73), both verbs are coordinated with and and the second A argument is omitted. English thus allows for the second A argument of two verbs that are coordinated and that share the same A argument to be omitted, just as it does for S arguments, but not for O arguments. Note that this represents a nominative-accusative pattern in an instance of syntactic behavior, in that S and A arguments behave the same way and differently from O arguments.

The following sentences (Dixon 1994:161ff) illustrate that Dyirbal, unlike English, does not allow the omission of the second A argument of two coordinated transitive verbs that share the same A argument.

(74) yabuŋuma-ŋgu bura-n.
    mother father-ERG see-PAST
    'Father saw mother.'

(75) jajaŋuma-ŋguŋamba-n.
    child father-ERG hear-PAST
    'Father heard the child.'
Sentence (74) is the Dyirbal translation of (71) and sentence (75) is the Dyirbal translation of (72). Both contain different transitive verbs that share the same A argument. In order to coordinate both verbs, a strategy similar to that demonstrated in (70)\textsuperscript{14} for English has to be applied. This strategy is called antipassivization and it is parallel to passivization in English in that it turns the transitive verbs in question into intransitive verbs. Other than with English passivization though, it is not the O argument, but the A argument of the transitive verb that becomes the S argument of the antipassivized verb. The former O arguments are then marked with an oblique case, which is parallel to the realization in prepositional phrases of the former A arguments in English passivization. In (76), *ŋuma* thus appears as S argument and is no longer marked with ergative case. The verb *buralŋa*-l$\_n$\_y$\_u$ carries the antipassive marker -$lja$- and the former O argument *yabugu* is now marked with the oblique case marker -$gu$. The coordination with the second verb *ŋambalŋa*-l$\_n$\_y$\_u$, which is also marked for antipassive, is realized by means of juxtaposition. The S argument of the second verb is omitted and its former O argument *jajagu* is marked with the oblique case marker -$gu$.

Dyirbal thus does not allow for the second A argument of two coordinated transitive verbs that share the same A argument to be omitted but does so for S and O arguments, as has been demonstrated above. This is an ergative-absolute pattern in an instance of syntactic behavior, in that S and O arguments behave alike and differently from A arguments.

The nominative-accusative pattern in the behavior of S, A and O in English and the ergative-absolute pattern of the behavior of S, A and O in Dyirbal concerning coordination become even clearer when the coordination of intransitive verbs with transitive verbs is taken into account. Consider the following English sentences.

\begin{itemize}
\item (76) *ŋuma buralŋa*-l$\_n$\_y$\_u$ *yabugu* *ŋambalŋa*-l$\_n$\_y$\_u$ *jajagu*. \\

father see-AP-PAST mother-OBL hear-AP-PAST child-OBL \\

'Father saw mother and heard the child.'
\end{itemize}

\textsuperscript{14} (70) *Father was seen by mother and heard by the child.*
In (77), there is an intransitive verb, namely returned, with its S argument father. In (78), father is the A argument of the transitive verb saw and in (79), it is the O argument of the same transitive verb. In (80), the verbs of (77) and (79) are coordinated with and, the intransitive verb preceding the transitive verb. Note that the A argument of saw can be omitted, as it is identical with the S argument of the intransitive verb it is coordinated with. In (81), the transitive verb precedes the intransitive verb and this time the S argument of the intransitive verb can be omitted, as it is identical to the A argument of the transitive verb it is coordinated with. The S argument of an English intransitive verb can thus be omitted when the verb is preceded by a transitive verb it is coordinated with and when the A argument of this verb is identical to the S argument in question, as illustrated in (81). Vice versa, the A argument of an English transitive verb can be omitted when the verb is preceded by an intransitive verb it is coordinated with and when the S argument of this verb is identical to the A argument in question, as can be observed in (80). Sentences (82) and (83) demonstrate that the O argument of an English transitive verb cannot be omitted if it is identical to the S argument of an intransitive verb the transitive verb is coordinated with, and vice versa. Passivization of the transitive verb is required to allow for father to be omitted when coordinating (77) and (79). As passivization turns transitive verbs into intransitive ones, (82) and (83) are instances of coordination of two intransitive verbs with the second S argument being omitted, just like demonstrated for (70).
The following sentences (Dixon 1994:160ff), illustrate that in Dyirbal, the S argument of an intransitive verb can be omitted when the verb is preceded by a transitive verb it is coordinated with and when the O argument of this verb is identical to the S argument in question and that, vice versa, the O argument of a transitive verb can be omitted when the verb is preceded by an intransitive verb it is coordinated with and when the S argument of this verb is identical to the O argument in question. The A argument of a transitive verb in Dyirbal, on the other hand, cannot be omitted if it is identical to the S argument of an intransitive verb the transitive verb is coordinated with, and vice versa.

(84) ŋuma banaga-n'ų.  
father return-PAST  
'Father returned.'

(85) yabu ŋuma-ŋgu bura-n.  
mother father-ERG see-PAST  
'Father saw mother.'

(86) ŋuma yabu-ŋgu bura-n.  
father mother-ERG see-PAST  
'Mother saw father.'

(87) ŋuma banaga-n'ų yabu-ŋgu bura-n.  
father return-PAST mother-ERG see-PAST  
'Father returned and mother saw him.'

(88) ŋuma yabu-ŋgu bura-n banaga-n'ų.  
father mother-ERG see-PAST return-PAST  
'Mother saw father and he returned.'

(89) ŋuma banaga-n'ų bura-lŋa-ŋ'ų yabu-gu.  
father return-PAST see-AP-PAST mother-OBL  
'Father returned and saw mother.'

(90) ŋuma bura-lŋa-n'ų yabu-gu banaga-n'ų  
father see-AP-PAST mother-OBL return-PAST  
'Father saw mother and returned.'
Sentences (84)-(86) are the Dyirbal translations of (77)-(79). In (87) and (88), the verbs of (84), in which ŋuma appears as S argument, and (86), where it occurs as O argument, are coordinated by juxtaposition. In (87), the transitive verb banagan\(Yu\) precedes the intransitive verb buran and the S argument of buran can be omitted, as it is identical to the O argument of banagan\(Yu\). In (88), the intransitive verb buran precedes the transitive verb banagan\(Yu\) and the O argument of banagan\(Yu\) is omitted. In (89) and (90), antipassivization of the transitive verbs is required in order to omit the second occurrence of ŋuma.

It has been pointed out in the preceding chapter that it is important to maintain the premise that ergative-absolute and nominative-accusative patterns can only be observed when each of the arguments S, A and O show uniform behavior. The following sentences (Dixon 1994:144) from Kannada, a Dravidian language spoken by approximately 39,291,000 speakers in India (Crystal 2010:473), illustrate a behavioral pattern where this is not the case.

(91) ko:\(l\)u m\(d\)akege tagi eradu tun\(d\)u a:yitu.
    stick pot hit two piece become
    'The stick hit the pot and the stick broke in two.'

(92) m\(d\)akege ko:\(l\)u tagi eradu tun\(d\)u a:yitu.
    pot stick hit two piece become
    'The stick hit the pot and the pot broke in two.'
In both (91) and (92), the transitive verb \textit{tagi} is coordinated with the intransitive verb \textit{a:yitu}, the S argument of \textit{a:yitu}, which is \textit{ko:lu} in (91) and \textit{maḍakege} in (92), being omitted in both cases. Note that in both sentences the A argument of \textit{tagi} is \textit{ko:lu} and the O argument \textit{maḍakege}. The omission of the S argument of the second coordinated verb is thus not possible when it is identical to either the A argument, as in English, or the O argument, as in Dyirbal, but rather when it is identical to the argument of the preceding coordinated verb that stands in first position. Kannada is thus a language that shows neither a nominative-accusative nor an ergative-absolute pattern of argument behavior in this particular type of construction.

Another language that exhibits an ergative-absolute pattern in the behavior of arguments with respect to coordination is Katukina-Kanamari, a language from the Katukina language family spoken by approximately 2,000 speakers in Brazil (Queixalós 2010:235), which can be illustrated by the following Katukina-Kanamari sentences (Queixalós 2010:244,258).

\begin{itemize}
\item\textbf{(93)} \textit{Nodia na hoho-nin Owi Hanani.} \newline \textit{Nodia ERG call-ASP Owi Hanani} \newline 'Nodia is calling Owi and Hanani.'
\item\textbf{(94)} \textit{tyuku Nodia Owi.} \newline \textit{die Nodia Owi} \newline 'Nodia and Owi died.'
\item\textbf{(95)} \textit{Nodia Hanani wa-hoho-nin Owi.} \newline \textit{Nodia Hanani AP-call-ASP Owi} \newline 'Nodia and Hanani are calling Owi.'
\end{itemize}

Consider first the English translations of (93)-(95). In English, any of the arguments S, A and O can be coordinated with a second argument of the same type. This type of coordination is thus insensitive to the behavior of arguments in English, or, in other terms, the arguments S, A and O all behave alike in this type of construction. In Katukina-Kanamari, the situation is different. In (93), the O argument \textit{Owi} of the transitive verb \textit{hohonin} can be conjoined with the O argument \textit{Hanani} by simple
juxtaposition. In sentence (94), the S arguments of the intransitive verb *tyuku*, namely *Nodia* and *Owi*, can be coordinated in the same fashion. In (95) though, antipassivization is required in order to conjoin *Nodia* and *Hanani*, which would be the A arguments of the unantipassivized version of *hohonin*. The pattern is thus ergative-absolute, in that coordination of arguments is allowed for S and O arguments, but not for A arguments.

Another syntactic process that is sensitive to the behavior of the arguments S, A and O in some languages is relativization, instances of which will be presented in the following section.

[4.2]  Relativization

Shipibo-Konibo, a Panoan language spoken by approximately 30,000 speakers in Peru (Valenzuela 2010:65f), exhibits three types of relative clauses, which Valenzuela (2010:80) labels “prenominal”, “postnominal” and “internally-headed” relative clauses. The three types of relative clauses in Shipibo-Konibo are illustrated by the following sentences (Valenzuela 2010:80). Note that the occurrence of the evidential marker -*ra* is irrelevant to the current discussion and can thus be ignored.

(96)  *Papa-n rete-ibata jono-ra moa no-n keyo-ke.*
father-ERG kill-PAST peccary-EV already 1-ERG finish-ASP
'We already finished the peccary father killed yesterday.'

(97)  *Jono papa-n rete-ibata-ra moa no-n keyo-ke.*
peccary father-ERG kill-PAST-EV already 1-ERG finish-ASP
'We already finished the peccary father killed yesterday.'

(98)  *Papa-n jono rete-ibata-ra moa no-n keyo-ke.*
Father-ERG peccary kill-PAST-EV already 1-ERG finish-ASP
'We already finished the peccary father killed yesterday.'
In (96), *jono*, which is the O argument of the relative clause *papan reteibata*, is preceded by the relative clause. This is an instance of what Valenzuela calls a “prenominal” relative clause. In (97), the relative clause follows its O argument, giving what Valenzuela refers to as “postnominal” relative clause. In (98), finally, the O argument of the relative clause is included in the relative clause. This is an instance of what Valenzuela labels “internally-headed” relative clauses. The O argument is the head of the relative clause in all three sentences, as it is at the same time an argument of the main clause. As Valenzuela (2010:81) points out, the third type of relative clause, namely that where the head is included in the relative clause, is only possible when the S or the O argument of the relative clause is an argument of the main clause, and not when the A argument is the head of the relative clause. This can be illustrated by the following sentences (Valenzuela 2010:81) from Shipibo-Konibo.

(99) *Mibé ainbo ransa-a-ra e-n onan-yama-ke.*
    'I don't know the woman who danced with you.'

(100) *Joni-n yawa rete-ibata-ra nokon koka iki.*
    'The peccary that the man killed is my uncle.'

(101) *Bake natex-a bawa-n-ra joshin pi-ke.*
    'The parrot that bit the child ate the banana.'

In (99), the element *ainbo*, which is the S argument and the head of the relative clause, is included in the relative clause. The same can be said about the element *yawa* in (100), which is the O argument and the head of the relative clause. Note that the reading suggested in the English translation of (100), although it might seem odd, is in fact what this sentence would be understood as. In (101), where *bawan* is the A argument and the head of the relative clause, relativization cannot be realized by means of an internally-headed relative clause. The head is thus preceded by the relative clause, giving a prenominal relative clause, as in (96).

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Another language that exhibits an ergative-absolute pattern in the behavior of arguments with respect to relativization is Trumai, as can be observed in the following sentences (Guirardello-Damian 2010:218f). The evidential and focus/tense markers in (102)-(104) can again be ignored, as they are irrelevant to the discussed problem.

(102) ha hu'tsa chiin axos-a-tl esa-t' ke.
    1 see FOC.TNS boy-EV-OBL dance-PAST REL
    'I saw the the child that danced.'

(103) ha hu'tsa chiin axos-a-tl ha-its midoxos-t'a ke.
    1 see FOC.TNS boy-EV-OBL 1-ERG call-PAST REL
    'I saw the child that I called.'

(104) ha hu'tsa kain axos-a-tl
    1 see FOC.TNS boy-EV-OBL
    ha aton mud husa-t' chiik.
    1 pet neck tie-PAST REL
    'I saw the child that tied my pet.'

Note first that in the English translations of (102)-(104), it makes no difference whether the head of the relative clause is the S, A or O argument of the relative clause. In Trumai though, the choice of the relativizer depends on whether the head of the relative clause is its S, A or O argument. In (102), where the head of the relative clause is its S argument, the relativizer is ke, just as in (103), where the head of the relative clause is its O argument. In (104), where the head of the relative clause is its A argument, the relativizer chiik has to be applied.
Another interesting fact that sentences (102)-(104) reveal is that the verb *hu'tsa*, other than its English equivalent, seems to be intransitive. It has been observed in sentences (40) and (41)\(^{16}\) that Trumai exhibits an ergative-absolute argument marking pattern, with A arguments taking ergative case, S and O arguments remaining unmarked. The fact that the element *ha* in (102)-(104) is unmarked and that *axos-a-tl* takes an oblique case marker allows the conclusion that the verb is in fact intransitive.

[4.3] Question formation

It has been pointed out at the beginning of this chapter that syntactic processes that go beyond argument coding and that are sensitive to patterns of argument behavior need not be inter-clausal. An instance of this is question formation, which, just like the coordination of S, A and O arguments discussed in section [4.1], follows an ergative-absolute pattern in Katukina-Kanamari, as can be observed in the following sentences (Queixalós 2010:245,258).

(105) hanian tu Nodia na hoho-nin?
who INT Nodia ERG call-ASP
'Who is Nodia calling?'

(106) hanian tu waokdyi-nin?
who INT arrive.here-ASP
'Who is arriving here?'

(107) hanian tan wa-dyuman tahi yu?
who here AP-spread water INT
'Who spread the water here?'

---

16 (40) ine achikida.
3:SG jump
'He jumps.'

(41) ine-k atlat mapa.
3:SG-ERG pan break
'He broke the pan.'
In (105), the question word *hanian* is the O argument of the transitive verb *hohonin*, in (106) it is the S argument of the intransitive verb *waokdyinin*. In (107), antipassivization is required in order to question the A argument of the unantipassivized verb. Katukina-Kanamari thus allows for the question word *hanian* to appear as S or O arguments, but not as A argument, giving an ergative-absolute pattern.

[4.4]  Raising from subordinate clauses

Trumai, which has already been demonstrated to show ergative-absolute patterns concerning relativization in section [4.2.], also follows an ergative-absolute pattern in the behavior of arguments with respect to raising from subordinate clauses. As Guirardello-Damian (2010:206) points out, S and O arguments, if not lexically represented by a noun phrase, can be realized by a verb agreement affix. Sentences (40) and (41) can thus alternatively be expressed as follows (Guirardello-Damian 2010:206f).

(108) \textit{achikida-n.} \\
\textit{jump-3} \\
\textit{'He jumps.'}

(109) \textit{ine-k \hspace{.1cm} mapa-n.} \\
\textit{3.SG-ERG \hspace{.1cm} break-3} \\
\textit{'He broke it.'}

\begin{tabular}{lll}
17 & (40) & \textit{ine \hspace{.1cm} achikida.} \\
\textit{3.SG \hspace{.1cm} jump} \\
\textit{'He jumps.'} \\
\textit{\hspace{.1cm} } & (41) & \textit{ine-k \hspace{.1cm} atlat \hspace{.1cm} mapa.} \\
\textit{3.SG-ERG \hspace{.1cm} pan \hspace{.1cm} break} \\
\textit{He broke the pan.'}
\end{tabular}
In (108), the third person S argument is represented by the affix -n, just like the O argument in (109). When the S or O argument of a subordinate clause is not represented by a noun phrase, it can equally be realized by verb agreement. In this case, it can be observed that the affix is not represented on the verb of the subordinate clause, but on the verb of the main clause, meaning that the argument is in fact raised to the main clause, as can be illustrated by the following Trumai sentences (Guirardello-Damian 2010:220f).

(110)  ha-its  Sula  huma  padi.
       1-ERG  Sula  take.bath  wait
      'I waited for Sula to take a bath.'

(111)  ha-its  huma  padi-n.
       1-ERG  take.bath  wait-3
      'I waited for her to take a bath.'

(112)  ha-its  chiin  Kumaru-k  Sula  tichii  padi.
       1-ERG  FOC.TNS  Kumaru-ERG  Sula  scarify  wait
      'I waited for Kumaru to scarify Sula.'

(113)  ha-its  chiin  Kumaru-k  tichii  padi-n.
       1-ERG  FOC.TNS  Kumaru-ERG  scarify  wait-3
      'I waited for Kumaru to scarify her.'

In (110), the S argument of huma, which is the verb of the subordinate clause, is realized as a noun phrase. In (111), the S argument of huma is lexically absent, but is represented by means of the affix -n, which is not, as one might expect, attached to huma, but to padi, which is the verb of the main clause. The same situation can be observed for the O argument of tichii in (112) and (113), which is realized as a noun phrase in (112) and as an affix on the verb of the main clause in (113).
[4.5]  Different patterns in different syntactic processes

Section [3.4] has revealed cases of languages that show different organization patterns in the behavior of arguments in different argument coding strategies. This section illustrates a case of a language that shows different patterns in different syntactic processes. As has been demonstrated in sections [4.2] and [4.4], Trumai shows ergative-absolute patterns concerning relativization and raising from subordinate clauses. The following sentences (Guirardello-Damian 2010:217f) from Trumai include an auxiliary verb that, along with a series of similar auxiliaries (Guirardello-Damian 2010:217), can modify verbs in terms of the posture of the involved participants.

(114)  
\[
\text{ha} \quad \text{waťkan} \quad \text{tsula}. \\
1 \quad \text{cry} \quad \text{be.lying} \\
\text{I cried, while lying.}'
\]

(115)  
\[
\text{ha-its} \quad \text{Tata} \quad \text{midoxos} \quad \text{tsula}. \\
1-\text{ERG} \quad \text{Tata} \quad \text{call} \quad \text{be.lying} \\
\text{I, while lying, am calling Tata.}'
\]

(116)  
\[
\text{ha-its} \quad \text{Tata} \quad \text{midoxos}, \quad \text{tsula-n-es}. \\
1-\text{ERG} \quad \text{Tata} \quad \text{call} \quad \text{be.lying-3-TSCM} \\
\text{I am calling Tata, while she is lying.}'
\]

In (114), the auxiliary verb \textit{tsula} describes the posture of the S argument \textit{ha}. In (115), it is the posture of the A argument \textit{hait}s that is described by \textit{tsula}. In (116), \textit{tsula} cannot be applied as auxiliary verb in order to refer to the posture of the O argument \textit{Tata}, but has to be realized in a temporal subordinate clause. The modification of verbs with posture auxiliaries in Trumai is, as Guirardello-Damian (2010:217) points out, only possible to describe the posture of S and A arguments, but not that of O arguments, which is an instance of a nominative-accusative pattern concerning a certain syntactic process, in a language that shows ergative-absolute patterns concerning other syntactic processes.
As Queixalós and Gildea (2010:20) point out, Katukina-Kanamari, which has been shown to exhibit ergative-absolute patterns concerning coordination and question formation in sections [4.1] and [4.3], shows nominative-accusative patterns in reflexive and applicative constructions and can thus, just like Trumai, be said to show nominative-accusative patterns as well as ergative-absolute patterns concerning different syntactic processes. Another language that shows nominative-accusative as well as ergative-absolute patterns in grammatical processes that go beyond argument coding will be presented in the following section.

[4.6] Different patterns within one syntactic process

It has been demonstrated in section [3.5] that some languages exhibit different organizational patterns within one argument coding strategy, which can depend on factors like nominal paradigms or the tense of the verb. The following sentences (Dixon 1977:389ff) from Yidiɲ, a Pama-Nyungan language spoken in Australia, illustrate that it can also be the case that a language shows different behavioral patterns within one syntactic process, which can be sensitive to similar factors.

(117) bimbi:ŋ guɖuɡuɖu wawa:l biŋi gundi:ŋ
father.ERG rainbow see.PAST PART return.PAST
'Father saw the rainbow and the rainbow returned.'

(118) ɲayu guri:li gala: bagalijŋ
1:SG wallaby spear.INST spear.PAST

miŋa baqalʕi biŋi gundi:ŋ
animal leave.PAST PART return.PAST
'I speared a wallaby with a spear, left the animal and returned.'
Note that the occurrence of the particle *biɾi* in (117) and (118), which, as Dixon (1977:548) points out, has the meaning 'do again, return', is irrelevant to the current discussion and can thus be ignored. In sentence (117), the intransitive verb *gunɖiːɲ* is coordinated with the transitive verb *wawaː:l* and the S argument of *gunɖiːɲ* is omitted, as it is identical to the O argument of *wawaː:l*. The sentence is thus parallel to the Dyirbal sentence observed in (88), and it illustrates that Yidiŋ shows an ergative-absolute behavioral pattern for full noun phrases in this type of construction, just as Dyirbal does. In (118) though, where the A argument of the first coordinated verb *bagaliɲu* is realized as a pronoun, the situation is different. The transitive verb *bagaliɲu* is coordinated with the transitive verb *baɖaːɽ* and the intransitive verb *gunɖiːɲ* and it is the A argument of *baɖaːɽ* and the S argument of *gunɖiːɲ* that are identical to the A argument of *bagaliɲu* and that are omitted. This is possible because Yidiŋ follows a nominative-accusative pattern in this type of construction whenever pronominal arguments are involved (Dixon 1977:389).

[4.7] Reviewing the definition of ergativity

This chapter has provided an overview of ergative-absolute patterns in grammatical processes that go beyond argument coding. At the end of the preceding chapter, ergativity has been defined as a pattern of behavioral properties of arguments concerning certain grammatical processes where the single arguments of intransitive verbs (S) behave in the same way as the more patient-like arguments of transitive verbs (O) and differently from the more agent-like arguments of transitive verbs (A). Taking into account the observations made in this chapter, this definition does not require further modification. In fact, several parallels between the ergative-absolute patterns in argument coding strategies observed in chapter 3 and the ergative-absolute patterns in other grammatical processes observed in this chapter could be established. The main similarity between all ergative-absolute patterns investigated here so far is that they

<table>
<thead>
<tr>
<th>18</th>
<th>(88)</th>
<th>ɲuma</th>
<th>yahu-ŋgu</th>
<th>bura-n</th>
<th>banaga-nmüş</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>father</td>
<td>mother-ERG</td>
<td>see-PAST</td>
<td>return-PAST</td>
</tr>
</tbody>
</table>

'Mother saw father and he returned.'
depend on the behavior of the arguments S, A and O, just as has been formulated in the
definition proposed in this paper. Furthermore, it could be demonstrated that the
different patterns that can be attested in different argument coding strategies within one
language and the different patterns within one argument coding strategy that some
languages exhibit can also be observed beyond argument coding. There are languages
that show different patterns in different grammatical processes other than argument
coding strategies just as well as there are languages that show different patterns within
one grammatical process that is not an argument coding strategy. In the following
chapter, it will be argued that the above mentioned parallels cannot be established
between the ergative-absolute patterns observed in this paper so far and other
phenomena linguists have referred to using the term 'ergativity'.

[5]  **Drawing the line: Other uses of the term 'ergativity'**

As has been pointed out in chapter [2], the term 'ergativity' has been used to describe
linguistic phenomena that have little or nothing in common with its original meaning
related to case-marking and that have just as little in common with the remaining
ergative patterns discussed in this paper. The aim of this paper has been, starting from
the traditional notion of ergativity, which describes a pattern of case-marking, to
formulate a precise definition of the term that is suited for describing the ergative-
absolute patterns that can be observed across languages. The different phenomena from
typologically very different languages discussed in this paper could all be argued to be
based on one common ground; the behavior of the arguments S, A and O concerning
certain grammatical processes.

The term 'ergativity' has in several cases been applied to describe lexical features
of verbs (Dixon 1994:18ff). Comrie (1978:392) proposes the term "lexical ergativity"
to describe English pairs of sentences like the following (Comrie 1978:391).
The verb *broke* appears as a transitive verb in (119) and as an intransitive verb in (120). The S argument in (120) is identical to the O argument in (119), other than in the following pair of sentences (Comrie 1978:392), where the S argument of the intransitive use of *ate* in (122) is identical to the A argument of its transitive use in (121).

(119)  *John broke the window.*
(120)  *The window broke.*

Comrie thus proposes to call the lexical pattern in (119) and (120) ergative-absolute and the one in (121) and (122) nominative-accusative.

In this chapter, it is not going to be discussed whether the use of the term 'ergativity' is justified or not for describing lexical patterns as the one observed in (119) and (120). Linguists should not waste their time fighting battles over the exclusive right to use certain linguistic terms. If any linguist decides to use the term 'ergativity' to refer to phenomena as the ones observed above, he should be free to do so. Nevertheless, it is very important to note that the lexical patterns that can be observed with verbs like *broke*, and that some might wish to describe as ergative-absolute, have absolutely nothing in common with the ergative-absolute patterns observed in this paper so far. In observing the behavior of the arguments S, A and O in (119) and (120) and in comparing them to the behavior of the arguments S, A and O in (121) and (122), one comes to the conclusion that there is no difference whatsoever between the behavior of the arguments in the two pairs of sentences.

It has been demonstrated in section [2.5] that argument coding in English is realized by constituent order. S and A arguments stand in pre-verbal position, O arguments in post-verbal position. This is also the case in sentences (119)-(122). The
omission of arguments of coordinated verbs in English, as illustrated in section [4.1], follows a nominative-accusative pattern. Sentence (119) can be easily coordinated with (121) and (122), giving (123) and (124), respectively.

(123) *John broke the window and ate a pie.
(124) *John broke the window and ate."

Sentence (120) can just as easily be coordinated with sentences containing verbs that have the *window* as S or A arguments, as is illustrated by the following pair of sentences.

(125) *The window made a loud noise and broke.
(126) *The window broke and collapsed."

There are thus no consequences in English for the behavior of the arguments S, A and O that result from so-called 'lexical ergativity', although such consequences could be expected if there were any link between this type of 'ergativity' and the type of ergativity discussed in this paper. In the following it will furthermore be argued that if there were any consequences for the behavior of S, A and O, this would result in patterns that could not in any case be described as ergative-absolute.

Grewendorf (1989:1), who dedicates an entire volume to what he calls "ergativity" in German, labels "ergative verbs" a class of intransitive verbs whose S arguments' behavior, as he claims, is similar to that of O arguments of transitive verbs. An instance of an ergative verb, as he argues, can be observed in the second of the following two sentences (Grewendorf 1989:2).
There is a clear parallel to the English sentences in (119) and (120)\(^\text{19}\), in that the verb occurs as a transitive verb in (127) and as an intransitive verb in (128) and that the S argument of the verb in the first sentence is identical to the O argument of the verb in the second sentence. Grewendorf (1989:5ff) argues that the arguments of so-called ergative verbs behave differently from the arguments of other intransitive verbs with respect to processes like auxiliary selection, passivization, topicalization, reflexivization and others. Without having to discuss these differences in detail, it should be clear that different behavior of the S arguments of different intransitive verbs cannot in any case result in an ergative-absolute pattern. An ergative-absolute pattern presupposes uniform behavior of S arguments, as has been discussed in detail in section [2.5]. Any case of a grammatical process in which the S arguments of different intransitive verbs behave differently, depending on the semantics of the verb, would thus result in a situation similar to that observed in the Lakota sentences (7) and (8)\(^\text{20}\).

There is thus no link whatsoever between what some linguists wish to call 'ergativity' on a lexical level and the ergative-absolute patterns observed in this paper. If this lexical type of 'ergativity' has any consequences at all for the behavior of the arguments S, A and O, this will result in anything but an ergative-absolute behavioral pattern.

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\(^{19}\) (119)  *John broke the window.*
(120)  *The window broke.*

\(^{20}\) (7)  *ya-ʔú*
2.SG.ACT-come
'You are coming.'

(8)  *ni-háske*
2.SG.UND-be.tall
'You are tall.'
Conclusions

It has been shown that it is possible to formulate a definition of the term 'ergativity' that can very precisely describe the linguistic data that has been discussed in this paper. Ergativity is thus a pattern of behavioral properties of arguments concerning certain grammatical processes where the single arguments of intransitive verbs (S) behave in the same way as the more patient-like arguments of transitive verbs (O) and differently from the more agent-like arguments of transitive verbs (A). This definition, along with the further observations made in this paper, is on the one hand able to account for the different ergative-absolute patterns described in chapters [3] and [4], just as well as it is able to draw a clear line around the concept and show that there is no link whatsoever between the type of ergativity it defines and other linguistic phenomena that have been referred to as 'ergativity' and that have been mentioned in chapter [5].

The paper has furthermore provided a typological overview of ergativity that could give way to further discussions on related topics. The fact that there are languages that exhibit as well nominative-accusative as ergative-absolute patterns in different syntactic processes might be interesting for linguistic studies dealing with the question of universality of the notions 'subject' and 'direct object', as these are normally based on a grouping together of either S and A or S and O as privileged arguments with respect to a number of syntactic processes. Furthermore, the question might arise why ergative-absolute patterns that go beyond argument coding are so much less frequent than ergative-absolute patterns in argument coding and why languages that do not show any ergative-absolute patterns in argument coding do not seem to exhibit any other ergative-absolute patterns in the behavior of arguments either. Another observation that might be of interest for further studies is the fact that languages that exhibit ergative-absolute patterns tend to have very small numbers of speakers in general, as the data provided in this paper suggests.
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