Syntactically ergative languages like Dyirbal challenge generative syntactic theories. They treat the direct object as the highest argument in the clause, instead of the (transitive) subject. Previously formulated theories overestimate (Marantz 1984, Murasugi 1992) or deny (Bobaljik 1993) the phenomenon. I will show that a theory on feature checking, taken from Koster (1999, 2000), predicts two different types of syntactic ergativity when extended to ergative case patterns. Apart from Dyirbal, syntactically ergative constructions in languages like Balinese can now be accounted for. Finally, the proposal makes an interesting prediction on the status of morphologically ergative languages.

1. Introduction

In ergative languages, intransitive subjects (S) and direct objects (O) are treated alike and differently from transitive subjects (A). In most cases, A receives a morphologically marked case (ergative) and the verb agrees with S or O, which are in the unmarked case (absolutive). This so-called ‘morphological ergativity’ is found in about 25% of the world’s languages (Dixon 1994) and is exemplified in (1) by Tsez/Dido (Northeast Caucasian, example taken from Polinsky & Potsdam 2001):

(1)a. ziya  b-i'k'i-s
cow.iii.abs iii-go-pst.evid
‘The cow left.’

b. eniy-ā ziya  b-išer-si
mother-erg cow.iii.abs iii-feed-pst.evid
‘Mother fed the cow.’

1 In the literature on ergativity, the labels S, A and O, with A being a mnemonic for ‘actor’ or ‘agent’, are commonly used when referring to the core grammatical roles. In this paper, I will follow this tradition, even when dealing with word order. For example, an SVO-language has SV or AVO word order.
Far less common and much more debated is a phenomenon called ‘syntactic ergativity’. It amounts to treating S and O alike and differently from A in clause combining. For example, the second conjunct of a coordination typically contains an elided S or O, but an overt A. Only a few remote and endangered languages seem to display syntactically ergative behaviour, Dyirbal being their most celebrated example (Dixon 1972, example taken from Dixon 1994):

(2)a. nguma banaga-n’u
father.ABS return-NONFUT
‘Father (S) returned.’
b. nguma yabu-ngu bura-n
father.ABS mother-ERG see-NONFUT
‘Mother (A) saw father (O).’
c. nguma yabu-ngu bura-n banaga-n’u
father.ABS mother-ERG see-NONFUT return-NONFUT
‘Mother (A) saw father (O) and he (S) returned.’
d. nguma banaga-n’u yabu-ngu bura-n
father.ABS return-NONFUT mother-ERG see-NONFUT
‘Father (S) returned and mother (A) saw him (O).’

In syntactically accusative languages like English, S or A can be omitted in conjunction reduction, necessarily coreferent with another S or A:

(3) a. Father (S) returned.
    b. Father (A) saw mother (O).
    c. Father (A) saw mother (O) and (he (S)) returned.
    d. Father (S) returned and (he (A)) saw mother (O).

If one assumes that only the structurally highest argument of the second conjunct can be phonologically empty, the syntax of languages like Dyirbal must be fundamentally different from the syntax of languages like English. It suggests that in English, S and A end up in a structurally higher position than O, whereas in Dyirbal, S and O are higher than A. Various researchers have been addressing this problem since the seventies. Marantz (1984) for example argues that in a deep ergative language like Dyirbal, theta-roles are reversed: the internal role is assigned to the specifier of V, whereas the external role is assigned to its complement. In other words: O is base-generated as the specifier of the verb and A starts out in the complement position:

(4) Marantz (1984)
    \[ O \ [ V \ A ] \]

It is not difficult to see that this account runs into problems if binding asymmetries are to be explained in terms of c-command. Although the syntax of Dyirbal is one of the most deeply ergative in the world, there are no
reflexives in A-function bound by an antecedent in O-function. This seems to be true cross-linguistically (Dixon 1994).

Murasugi (1992) offers an alternative analysis. She assumes that base-generation of O and A is the same in all languages, with O being the complement and A the specifier of V. This enables all languages to have the same kind of reflexive binding. Movement in order to check case and phi-features, however, is different in ergative languages. Accusative and ergative case are checked in a transitivity projection (TrP), whereas nominative and absolutive case are checked in the structurally higher tense projection (TP):

(5) Murasugi (1992)

\[
\begin{array}{c}
\text{Spec} [ \text{T} ] \\
\text{Spec} [ \text{Tr} ] \\
\text{Spec} [ \text{VP} ]
\end{array}
\]

\[
\begin{array}{c}
\text{NOM} \\
\text{ACC} \\
\text{ABS} \\
\text{ERG}
\end{array}
\]

The advantage of a system like this is that the morphologically marked cases are grouped together in the Tr-head and that the unmarked cases can be considered as one class, possibly representing absence of case. A major disadvantage is that all languages with ergative case marking are predicted to be syntactically ergative as well, because O always moves to the highest projection in those languages. This clearly is much too strong a prediction, as most morphologically ergative languages are syntactically accusative. Note that if binding conditions apply to all A-positions, situations where O binds A are still not ruled out.

Bobaljik (1993) assumes that both accusative and absolutive case are checked in Agr2P, whereas nominative and ergative case are checked in the higher Agr1P. This analysis prevents O from ever being higher than A, so it excludes the possibility of syntactic ergativity:

(6) Bobaljik (1993)

\[
\begin{array}{c}
\text{Spec} [ \text{Agr}1 ] \\
\text{Spec} [ \text{Agr2} ] \\
\text{Spec} [ \text{VP} ]
\end{array}
\]

\[
\begin{array}{c}
\text{NOM} \\
\text{ACC} \\
\text{ERG} \\
\text{ABS}
\end{array}
\]

In this paper, I will develop a theory of feature checking which predicts the existence of syntactic ergativity without ignoring the morphologically ergative languages that are syntactically accusative. The theory is largely based on work by Koster (1999, 2000), originally developed as an explanation for word order differences between English on the one hand and Dutch and German on the other hand. I will first show that this theory allows for three types of languages, which differ in the way they check case and phi-features. Extending this

---

2 I consider nominative and absolutive DP’s to be caseless, and therefore these case labels will be omitted in the glosses of the examples in the remainder of this paper.

3 Languages like Georgian and Chukchi seem to have reflexive/reciprocal elements in the ergative case. However, they are not entirely anaphoric, but refer to a (set of) property(ies) of the antecedent, which is in the absolutive (Baker 1996, Amiridze 2002).
analysis to languages with ergative case marking, we will see that each type has an ‘ergative’ variant, resulting in six language types. Evidence from Balinese, a language which does not show any sign of case and agreement but which seems to use syntactically ergative constructions alongside syntactically accusative constructions will support this typological inventory.

2. Collective versus individual feature checking: a typology

2.1. Three types of accusative languages

A wh-feature can percolate to higher nodes, resulting in pied-piping: movement of a more inclusive category. In (7a), a DP has been moved, whereas in (7b) the moved category is a PP containing the DP:

(7)a. [Wh, did you dream [of [ti]]] last night?

 b. [Of [whom]], did you dream ti last night?

This can be explained by percolation of the wh-feature: in (7b) it percolates to the PP-node, whereas in (7a) it does not. Koster assumes that case and phi-features of subjects and objects are able to percolate as well. Whereas this seems to be an optional process in the case of wh-features in English, the object features in this language obligatorily percolate to VP, causing the entire VP to move to a functional projection where accusative case is checked, say AccP:

(8) English

\[ [TP \ [T \ [t_1 [VO]], [Acc \ t_i]]]] \]

In languages like Dutch and German, object features do not percolate to the VP-node. This enables the object to move individually, just like the subject:

(9) Dutch, German

\[ [TP \ [T \ [o, [Acc \ [t_k [V \ t_i]]]]]] \]

The difference between movement of the entire VP and movement of the object only is supposed to account for some fundamental differences in word order between the two types of languages: VO (English) versus OV (Dutch/German) word order, absence or presence of leftward scrambling and the possibility of most or hardly any adverb at all to appear to the right of the verb:

(10)a. that John read the book

 b. dat Jan het boek las ti

\[4\text{ The issue whether phi-features of the object are checked as well will be left open. The proposal that I will develop in this paper does not depend on it.}\]
The syntax of ergativity

\[ (11) \]
\begin{align*}
\text{a.} & \quad \text{that John the book probably read t} & \text{no scrambling} \\
\text{b.} & \quad \text{dat Jan het boek waarschijnlijk t las t} & \text{scrambling}
\end{align*}

\[ (12) \]
\begin{align*}
\text{a.} & \quad \text{that he (*yesterday) [saw John] (yesterday) \quad \text{postverbal adverb}} \\
\text{b.} & \quad \text{dat hij (gisteren) [Jan zag] (?gisteren) \quad \text{no postverbal adverb}} \\
\text{c.} & \quad \text{that he (*everywhere) [saw John] (everywhere) \quad \text{postverbal adverb}} \\
\text{d.} & \quad \text{dat hij (overal) [Jan zag] (?overal)} \\
\text{e.} & \quad \text{that he (*very hard) [worked] (very hard)} \\
\text{f.} & \quad \text{dat hij (erg hard) [werkte] (?erg hard)} \\
\text{g.} & \quad \text{that he probably [saw John] (*probably)} \\
\text{h.} & \quad \text{dat hij waarschijnlijk [Jan zag] (*waarschijnlijk)}
\end{align*}

This suggests that VP in English is a constituent which moves itself over a temporal, spatial or manner adverb. In Dutch and German this is impossible, the adverb invariably precedes VP. Instead, the object moves out of VP. Modal adverbs precede VP in English as well. This is not a problem for Koster’s theory, as we may assume that modal adverbs attach at a higher level, above AccP. Presumably this has to do with the natural wide scope of this type of adverb.

Koster is unclear about the movement of A: it is simply stipulated that this happens individually in both English and Dutch/German. One might be tempted to assume that morphology plays a role here: English does not show any overt case marking on nouns, but the agreement features on the verb are visible to a certain extent. The problem with this assumption is that there is a case distinction in the pronominal system. Also, although morphological case is represented in the determiner system of German, accounting for individual movement of the object, in Dutch there are no such case distinctions whereas the object in this language moves individually as well. Moreover, Icelandic, which has ‘English’ word order, has very rich case morphology (Koster, p.c.). Note, that it is not clear at all why movement of A out of VP would be visible on the verb itself anyway. Moving A along with V over T is not so different from that. Although it is unclear why VP does not move to Spec, TP in English, I will assume for the moment that Koster’s analysis is right and predict that there is a third category of languages where all movement is collective movement. In section 5 I will show that there are indeed candidates for the syntactic structure proposed in (16).\(^5\)

\[ (16) \]
\[ \text{TP} \quad \\
\text{VP} \quad [\text{[A[V,O]]}, \text{[T[t.Acc,t]]]} \quad \text{AccP} \]

To summarize: Koster’s idea that case and phi-features obligatorily percolate up to VP in languages with strict word order predicts three different systems, all of which are entirely accusative:

\(^5\) The fourth logical possibility, which would arise when the object moves individually, followed by movement of the VP to Spec, TP will not be discussed in this paper.
In the next subsection I will show that extending this system to languages with ergative case marking predicts two different types of syntactically ergative languages, which are actually found in the real world.

2.2. Three types of ergative languages

An ergative counterpart of Dutch and German may look like (18), where A moves to Spec, ErgP in order to check its case feature and O moves to Spec, TP where its phi-features are checked:6

(18) Dyirbal, Wargamay, Yidin

\[
\begin{array}{c}
\text{TP} \quad \text{ErgP} \\
\text{VP}
\end{array}
\]

These movements are similar to the movements assumed by Murasugi (1992), although different projections are involved. A is base-generated higher than O, but O ends up in a higher position than A after movement. Syntactically ergative behaviour of Pama-Nyungan languages like Dyirbal, Wargamay (Dixon 1981) and Yidin (Dixon 1977) can be explained by (18).

An ergative counterpart of English and Icelandic would have the structure in (19): VP moves entirely to Spec, ErgP in order to check the case feature of A. O moves individually to Spec, TP as in (18). In the next section, I will argue that Balinese can be assumed to be of this type, although it is a language without morphological ergativity.

(19) Balinese

\[
\begin{array}{c}
\text{TP} \quad \text{ErgP} \\
\text{VP}
\end{array}
\]

Finally, the theory predicts that there are also ergative languages in which VP is moved all the way through. This would result in (20), the counterpart of (16):

(20) ?

\[
\begin{array}{c}
\text{TP} \quad \text{VP} \quad \text{ErgP}
\end{array}
\]

---

6 I assume that O bears a case feature in morphologically accusative systems, whereas A does not carry such a feature. In these languages, the features of O are automatically checked earlier than the features of A, because checking of a case feature in TP is impossible. In morphologically ergative languages, only A has a case feature. This explains why in those languages, the A features are checked first, irrespective of percolation.
In this type of language, A is always structurally higher than O, although case and agreement show an ergative pattern. It follows that clause combining will always be accusative. Clearly, this is the result we would like to obtain for morphologically ergative languages: their syntax is entirely accusative. In section 5, I will argue that there are reasons to believe that this is true.

3. Hybrid syntax: the case of Balinese

Despite the fact that Balinese, a language from the Western Malayo-Polynesian family, lacks any sign of an overt case/agreement system, various authors have convincingly shown that this language has constructions which are syntactically ergative (Artawa & Blake 1997, Artawa 1998, Wechsler & Arka 1998):

(21) ia opak tiang lantas [ ] ngeling coordination
   3SG scold I then N-cry
   ‘I scolded her/him, then (s)he cried.’

(22) a. tiang edot teka control
    I want come
    ‘I want to come.’

   b. tiang edot [periksa dokter]
      I want examine doctor
      ‘I want to be examined by a doctor.’

(23) a. ngenah ia mobog raising
      seem 3 lie
      ‘It seems that (s)he is lying.’

   b. ia ngenah mobog
      ‘(S)he seems to be lying.’

(24) a. ngenah sajan [kapelihan-ne engkebang ci]
      seem much mistake-3POSS hide 2

   b. kapelihan-ne ngenah sajan [engkebang ci]
      mistake-3POSS seem much hide 2

   c.?* ci ngenah sajan [kapelihan-ne engkebang]
      2 seem much mistake-3POSS hide
      ‘It is very apparent that you are hiding his/her wrongdoing.’

If O is the highest element in the first conjunct, an omitted S has the same reference as this O-argument (21). O can be controlled (22) or raised to the matrix predicate (23, 24). This behaviour is actually triggered by the verb form. Balinese verbs can be in their base form, as in the previous sentences, or they can carry a nasal prefix. Bare verbs trigger OVA-order (25a), but nasalized verbs surface in AVO-sentences (25b):

(25a) Nyoman lempag tiang
      Nyoman hit 1
      ‘I hit Nyoman.’
This principle predicts that if the verb in the first conjunct of coordination or in an embedded sentence bears a nasal prefix, A will be the highest argument in the corresponding clause, so syntactically accusative behaviour is expected. This is illustrated in the following sentences:

(26) tiang ngopak ia lantas ngeling coordination
     I N-scold 3Sg then N-cry
     ‘I scolded her/him and then cried.’
(27) tiang edot [meriksa dokter] control
     I want N-examine doctor
     ‘I want to examine a doctor.’
(28) a. ngenah sajan [ci ngengkehbang kapelihan-ne ] raising
     seem much 2 N-hide mistake-3POSS
b. ?* kapelihan-ne ngenah sajan [ci ngengkehbang] mistake-3POSS seem much 2 N-hide
c. ci ngenah sajan [ngengkehbang kapelihan-ne]
     2 seem much N-hide mistake-3POSS
     ‘It is very apparent that you are hiding his/her wrongdoing.’

We can conclude from this that Balinese syntax is actually hybrid: it treats S and O as one category in clause combining when a bare verb is involved, but it chooses to treat S and A alike with nasalized verbs. Depending on the verb form, Balinese is syntactically ergative like Dyirbal or syntactically accusative like English.

The question is whether checking of features is individual or partly individual and partly collective. Remember from (20) that entirely collective checking is impossible because that would rule out syntactic ergativity. Balinese word order suggests that feature checking is of the English type. The verb and the argument immediately following it behave like a unit which can be preceded or followed by the other argument:

(29)a. lempag tiang Nyoman (cf. 25a)
     hit I Nyoman
b. NglempagNyoman tiang (cf. 25b)
     N-hit Nyoman I
     ‘I hit Nyoman.’

Furthermore, the postverbal argument cannot be separated from the verb by an adverb.\(^7\)

---

\(^7\) The data in (30) are taken from Artawa (1998). Wechsler & Arka (1998) contains two examples of an adverb separating the verb and the argument it follows. This could be because V moves out of VP to adjoin to T, after VP has moved to Spec, ErgP. Note that this movement is
The syntax of ergativity

(30)  a.   baju-ne   ene beli tiang ibi
      shirt-DEF this buy I    yesterday
b.    ibi bajune ene beli tiang
0.   bajune ene ibi beli tiang
   *  bajune ene ibi ibi tiang
      ‘I bought this shirt yesterday.’

This indicates that the postverbal argument is not individually moved in order to check its case feature. Rather, the VP can be assumed to be moved for that purpose, like the English VP. In order to account for (29), an additional assumption must be that movement of VP over the preverbal argument is possible in Balinese.

4. Dyirbal syntax

Turning to the syntax of Dyirbal, we will see that there is evidence that this language is more like Dutch and German. Both O and A precede the verb in most sentences, indicating that both of them have been moved. Adverbials typically occur between the arguments and the verb, so scrambling seems to be possible and VP does not have to move over the adverb. Although any word order seems to be possible in Dyirbal, the ordering described above is the preferred one according to Dixon (1972: p. 291).

A striking fact of Dyirbal is that the syntactic behaviour of pronouns is similar to the behaviour of nouns, although their forms show a morphologically accusative pattern:

(31)           A               S                      O

‘rainbow’   yaman i-gu   yaman i   yaman i   marked A (erg.)
‘snake’     wadam-bu   wadam   wadam
1sg         ngadja  ngadja  ngayguna   marked O (acc.)
2sg         nginda  nginda  nginuna

(32)a. ngana banaga-n’u
we.all return-NONFUT
   ‘We returned.’
b. n’urra ngana-na bura-n
you.all we.all-ACC see-NONFUT
   ‘You all saw us.’
c. ngana banaga-n’u   n’urra bura-n
we.all return-NONFUT   you.all see-NONFUT
   ‘We returned and you all saw us.’

necessary anyway, because otherwise we would end up with OAV-order in sentences with bare verbs (cf. (19)).
d. n’urra ngana-na bura-n banaga-n’u
   you.all we.all-ACC see-NONFUT return-NONFUT
   ‘You all saw us and we returned.’

This is another indication that morphology does not necessarily determine word order, as we saw in the discussion of Icelandic. It seems to be the case that an accusative pronoun (O) in Dyirbal moves to Spec, TP where phi-features of the object are checked. A nominative pronoun in a transitive sentence (A) moves to Spec, ErgP to check the ergative case feature. Nominative pronouns in intransitive sentences (S) undergo the same movement as objects. An explanation for the mismatch between form and behaviour could be that the accusative paradigm is reminiscent from an earlier stage in which the syntax of Dyirbal, or at least part of it, was accusative. At a later stage, pronouns started to behave like nouns and the syntactic effect of the accusative morphology disappeared. Wargamay, a closely related language, displays similar behaviour.

However, Yidin’, another syntactically ergative language less closely related to Dyirbal and Wargamay, seems to behave differently. In this language, syntactic ergativity is reported in clauses that contain only nouns. When pronouns are involved, the language generates syntactically accusative constructions (Dixon 1977):

(33) ngayu guri:li gala: bugra:lin’u min’a bad’ar
    I wallaby spear.INST spear.GOING.PAST animal leave.PAST
    biri gund’i: n’
    PARTICLE return.PAST
    ‘I went and speared a wallaby with a spear, left the meat and went home.’

We now have two languages which seem to fall within two categories: Balinese in the mixed checking accusative and ergative category, and Yidin’ in the individual checking accusative and ergative category. Dyirbal and Wargamay are of the individual checking ergative type. This means that the inventory in (17) can be elaborated to the scheme in (34):

(34) |     | accusative  | ergative |
     | individual: | Dutch, German | Dyirbal, Wargamay |
     | Yidin’ (nouns) | Yidin’ (pronouns) |
     | mixed: | English, Icelandic | Balinese (N-V) |
     | Balinese (bare V) |
     | collective: | | |

In the next section, I will present evidence for the existence of languages that do collective movement all the way through.
5. Collective movement

In many languages, arguments are cross-referenced by clitics or affixes on the verb. These languages are called polysynthetic or pronominal argument (PA) languages (Baker 1990, 1995, 2002, Jelinek 1984, 2001). The main characteristics are free word order and the possibility of dropping DPs. This is commonly explained by the nature of the agreement on the verb: the affixes (or clitics) are pronominal arguments which are in argument positions. Outside the argument structure, the pronominal arguments can but need not be doubled by DPs which are clitic left-dislocated. This means that a verbal complex can function as a complete sentence and that DP’s are only there to establish new referents or to avoid ambiguity. The real arguments are in fixed positions attached to the main predicate. They cannot be separated from the predicate by adverbials. The structures in (16) and (20), repeated below, can account for this phenomenon:

(35) accusative polysynthetic/PA

\[
\text{TP VP AccP}
\]

(36) ergative polysynthetic/PA

\[
\text{TP VP ErgP}
\]

I assume that all case and phi features percolate up to VP in these languages, so they are checked collectively, that is, by movement of VP up to TP. In Jelinek’s approach, the affixes on the verb are base-generated in A and O position. They immediately cliticize to the verb and movement might take place after that. Baker assumes that the actual arguments are empty, but they are licensed by the affixes that attach to the verb. Either way yields a system in which the order of A, V and O is fixed, so it is not important to make a choice between the two analyses here. What is important for my proposal is that adverbs cannot intervene between the verb and its arguments.

Languages of the type represented by (35) include Warlpiri, Mohawk, Navajo, Mapudungun. In these languages, S and A are cross-referenced similarly and different from O, as in (37) (Warlpiri, Blake 1977):

(37)a. ngaju ka-na pula-mi
1SG PRES-1SG shout-NONPAST 'I shout.'
b. njuntu ka-npa pula-mi
2SG PRES-2SG shout-NONPAST 'You shout.'
c. ngaju-ju ka-na-ngku njuntu njia-nji
1SG-ERG PRES-1SG-2SG,ACC 2SG see-NONPAST 'I see you.'
In (37c), \textit{-ngk\textsubscript{i}} is a 2\textsuperscript{nd} person O-clitic, which is different from the 2\textsuperscript{nd} person S-clitic in (37b). The 1\textsuperscript{st} person clitics in (37a) and (37c) are the same (S and A, respectively). Note that although this is an accusative pattern, the free pronouns surface in an ergative pattern. Just like the pronouns for 1\textsuperscript{st} and 2\textsuperscript{nd} person in Dyirbal, case marking on free pronouns and nouns in Warlpiri does not reflect their syntactic behaviour. Clause combining in Warlpiri is accusative, even when each argument is doubled by a DP, so no syntactic ergativity is attested. This is to be expected if all movement is collective movement in this language. Note that argumental clitics/affixes are obligatory, so they cannot be left out in clause combining. At present, I do not have an explanation for the mismatch between form and behaviour of DP’s in languages like Warlpiri.

In languages of the type represented by (36), S and O trigger the same clitics/affixes on the verb and A is cross-referenced differently. Abkhaz (Northwest Caucasian) is a case in point (Kathman 1994):

\begin{itemize}
  \item In A-function, there is a different ergative prefix \textit{(z-)} (35c). The 3\textsuperscript{rd} person ergative A in (38b) is different from a 3\textsuperscript{rd} person O (38c), which in turn is identical to S (38d). Note that there is no case marking on free pronouns and nouns in Abkhaz and that syntactic ergativity has not been attested. Abaza, a close relative of Abkhaz, displays the same behaviour. The same is true for several Mayan languages (Dixon 1994). Languages with ergative cross-referencing and accusative case-marking on (pro)nominals do not seem to exist (Blake 1977, Dixon 1994).
  \item Many polysynthetic languages show a split pattern determined by person features. Lummi (Salish), for example, has accusative cross-referencing of 1\textsuperscript{st} and 2\textsuperscript{nd} person arguments only (Jelinek 2001):
\end{itemize}
The syntax of ergativity

b. ye'-lø'sxw
   go-PAST-2SG
   'You left.'

c. nøpt-ongø-ssxw
   advise-TRANS-1SGACC-2SG
   'You advise me.'

In (39), S and A are cross-referenced similarly and differently from O. Arguments that refer to 3rd persons, however, show an ergative pattern:

(40)a. ye'-lø'-∅
   go-PAST-3
   'He/They left.'

b. nøpt-t-∅
   advise-TRANS-3ERG-3
   'He advises him.'

Languages that have a similar split are Yimas (Papuan) and Nez Perce (Saahaptian). This illustrates that polysynthetic languages can use both (35) and (36) as their base structure. This is not surprising, as the same is possible in languages with individual and mixed checking.

Summarizing, the inventory of languages discussed in this paper is as below:

(41)

<table>
<thead>
<tr>
<th></th>
<th>accusative</th>
<th>ergative</th>
</tr>
</thead>
<tbody>
<tr>
<td>individual</td>
<td>Dutch, German</td>
<td>Dyirbal, Wargamay</td>
</tr>
<tr>
<td></td>
<td>Yidin' (nouns)</td>
<td>Yidin' (pronom)</td>
</tr>
<tr>
<td>mixed</td>
<td>English, Icelandic</td>
<td>Balinese (N-V)</td>
</tr>
<tr>
<td></td>
<td>Balinese (bare V)</td>
<td></td>
</tr>
<tr>
<td>collective</td>
<td>Mohawk, Warlpiri, Navajo</td>
<td>Abkhaz, Abaza, Mayan</td>
</tr>
<tr>
<td></td>
<td>Mapudungun</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lummi (1st, 2nd)</td>
<td>Lummi (3rd)</td>
</tr>
<tr>
<td></td>
<td>Nez Perce</td>
<td>Nez Perce</td>
</tr>
<tr>
<td></td>
<td>Yimas</td>
<td>Yimas</td>
</tr>
</tbody>
</table>

6. Conclusions and perspectives

In this paper, I discussed Koster’s (1999, 2000) analysis of the main differences in word order between English and Dutch/German, which is based on the principle of feature percolation. I have tried to show that instead of two types of languages, a third type is predicted by this theory. This type applies to polysynthetic languages like Warlpiri. Moreover, the system can be extended to ergative languages, rendering a typology of six different categories. Two of these categories can account for syntactic ergativity. This has been illustrated.
for Dyrbal (‘ergative’ German/Dutch) and Balinese (‘ergative’ English). Abkhaz is an example of a morphologically ergative language (‘ergative’ Warlpiri). Each way of feature checking (individual, mixed and collective) may apply to languages that are partly accusative and partly ergative (Yidin’, Balinese and Lunmi).

Several questions remain to be answered. Firstly, my proposal predicts that all (syntactically accusative) morphologically ergative languages are polysynthetic. This has not been proven yet, not even for a language like Abkhaz. Languages like Tsez/Dido (cf. (1)) which agree with only one argument challenge this prediction. Secondly, syntactically ergative languages cannot be polysynthetic according to this typology. Baker (1995) considers Alutor, related to Chulch (Chukotko-Kamchatkan), to be polysynthetic. But Dixon (1994) claims that the language may be syntactically ergative, which would be problematic for the present analysis. As it is not clear whether this is really true, we cannot consider Alutor to be a serious counterexample yet.

Finally, a lot of polysynthetic languages in Australia use a case system in the adjuncts which is different from the system used by the argumental clitics/affixes. They are problematic in the sense that the adjunct cases do not have syntactic effects. An interesting observation is that a combination of an ergative cross-referencing system and accusative case marking in the adjuncts is ruled out. I expect this to be related to the observation that languages with a person split case marking like in Lunmi never have an ergative pattern in 1st and 2nd person arguments opposed to an accusative system in 3rd person arguments. Future research will have to shed more light on this issue.

Acknowledgements

I would like to thank Jan Koster for the course he gave in Nijmegen at the 2002 LOT Summerschool, which inspired me to write this paper, and also for discussing the possibilities of extending the theory to ergative languages. Second, my gratitude goes to Aone van Engelenhoven who gave me an introduction into Indonesian linguistics. Peter Ackema has been very helpful in reading the first draft and providing useful comments and insights.

References


The syntax of ergativity


Kathman, D.J. (1994). The morphosyntax of complex verb agreement. [Diss., the University of Chicago].


