

The ergativity parameter

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1. Introduction

Within the field of syntactic typology, which seeks to describe and classify the range of grammatical phenomena extant in the world's languages, one of the most important problems is whether or not a given language is ergative. Within a generative approach, a further problem is accounting for the existence of ergative languages by the definition of what may be termed an 'ergativity parameter'.

This question is further complicated by the fact that ergative languages in themselves do not represent a uniform pattern. Rather, the term 'ergative languages' might more aptly be replaced by a wording such as 'languages which display certain ergative characteristics'. In fact, as has been noted by Dixon 1994, most languages which have received the label 'ergative' in the literature display both ergative and accusative characteristics. Thus, the case-marking system may be ergative, while the agreement system is accusative, or both may be ergative, while interclausal coreference properties pattern accusatively, or, each of these phenomena may vary depending on other factors (the phenomenon known as split ergativity, cf section 2.3).

For this reason it makes little sense to define a parameter which simultaneously causes an ergative and excludes an accusative alignment. Rather, a parameter for ergativity should be concerned with accounting for the fact that a given language may display a certain amount of ergative behaviour, regardless of whether this behaviour pervades the entire grammar of the language or is restricted to a single subdomain (be it a single grammatical phenomenon, or a single construction).

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In the present paper, an attempt is made to focus on the most salient symptom of ergative alignment, that of ergative case marking. It is proposed that the fact underlying all languages with (some form of) ergative alignment is that such a language possesses a structural case which is reserved for Agents. It is further proposed that the presence or absence of this case in a given language may be derived from a single parameter, which we shall term the 'Ergativity Parameter'. The nature of this parameter will be discussed in detail in section 5. Briefly, however, it is my claim that this parameter is actually a parameterized version of Burzio's (1986) Generalization.

2. Basic facts

Among the various types of language which have hitherto received the label ergative, there exists a wide variety of alignment types. These will be dealt with in turn.

2.1 Syntactic vs morphological ergativity

The phenomenon of syntactic ergativity was first noted by Dixon 1972 in his seminal work on the Dyirbal language spoken in Australia. Dixon noted that Dyirbal displays ergative characteristics on a different level than that hitherto supposed for other ergative languages. Thus, in Dyirbal, the pivot for interclausal coreference given one transitive clause and one intransitive clause is always the Patient.

- 1 numa yabu-ngu bura-n banaga-n'yu
 father-ABS mother-ERG see-NONFUT return-NONFUT
 'Mother saw father and he (*she) returned.' (Dixon 1994:12)

This implies that the absolutive Patient not only displays the unmarked case, but also serves syntactically as the subject of the clause. This can be contrasted with data from Basque, where interclausal coreference in the same context always makes reference to the Agent.

- 2 Seme-a eskolan utzi eta klasera joan zen.
 son-(ABS) at school leave and to class go 3sA-PRET
 'X left his/her son at school and (X/*the son) went to class.'
 (Ortiz de Urbina 1989:23)

Thus, Dyirbal is termed syntactically ergative, whereas Basque is assumed to combine ergative morphology with accusative syntax. Of the ergative languages in the world, the vast majority are morphologically ergative. Other

than in Dyirbal, syntactic ergativity can be found in the ergative constructions in Austronesian split-ergative languages (cf section 2.3).

2.2 Active vs ergative alignment

Another important distinction within ergative language is the relevance of contextual transitivity to the case-marking of the arguments. Thus, two possibilities crystallize. One possibility is that an Agent is marked with ergative case if and only if the Patient of the verb is referential (i.e. that the clause in itself is used transitively). This type is illustrated by Yup'ik (Eskimo-Aleut).

- 3 a. John-am ner-aa.
 John-ERG eat-3sA-3sE
 'John ate *(it).' (Bobaljik 1993)
- b. John ner-uq.
 John-(ABS) eat-3sA
 'John ate *(it).' (ibid.)

Another possibility is that the Agent of a transitive verb is always realized in ergative case, regardless of whether the clause contains a referential Patient. In the latter type, it is simply the class of verb, rather than the transitivity of the context, which determines the case of the Agent. The latter type of languages often possess agentive verbs which are, in fact, intransitive, but which behave like transitive verbs with regard to the case-marking of the Agent. This is illustrated by data from Basque (4a,b) and Georgian (4c).

- 4 a. Ni-k taberna-n egunero edaten dut.
 I-ERG tavern-LOC daily drink-IPF 3sA-1sE-AUX
 'I drink every day in the tavern.'
- b. *Ni taberna-n egunero edaten naiz.
 I-(ABS) tavern-LOC daily drink-IPF 1sA-AUX
 intended reading: 'I drink every day in the tavern.'
 possible reading: 'They drink *me* every day in the tavern.'
 (uttered by a personified bottle of wine!)
- c. ninom daamtknara
 Nino-ERG yawned-AOR
 'Nino yawned.' (Harris 1981:40)

An important consequence of the existence of active alignment systems is that the analysis of ergativity as being inherently connected with transitivity is considerably weakened on the descriptive level, and even more so on a theoretical level. An analysis (such as Bobaljik 1993) which only admits of the possibility of ERG case marking if the default case ABS is assigned to another

argument faces severe problems with examples like 4c above (cf however Laka 1993 for a possible solution). A simpler analysis of the facts in Basque is presented in Holmer 1999b.

2.3 Split ergativity

One of the major problems with any analysis which treats ergative and accusative systems as mirror images of each other is the fact that a great number of languages of the type traditionally labelled 'ergative' are in fact split ergative languages. Split ergativity is a system where an ergative and an accusative alignment alternate within a given language, depending on one of several possible factors.

In Seediq, the focus pattern known as Actor Focus (which is equivalent to active voice in an accusative language, cf Holmer 1999a) displays an accusative pattern (5).

- 5 a. Q-m-n-ita -ku qedin su ka yaku.
 -AF-PRET-see -1s.n wife 2s.g. NOM 1.SG.NOM
 'I saw your wife.'
- b. Wada -ku takur ka yaku.
 PRET -1s.n. (AF)-fall NOM 1.SG.NOM
 'I fell.'

On the other hand, the other focus types (illustrated here by Patient Focus) display an ergative pattern (6).

- 6 Wada -mu bbe-un ka laqi.
 PRET -1s.g. beat-PF NOM child
 'I beat the child.'

Seediq is thus a split ergative language where the split is conditioned by focus (i.e. what in practice is more or less the same phenomenon as voice).

In Georgian, on the other hand, the existing three-way split between an accusative system, an ergative system and an inverted system is conditioned by the tense / aspect series of the verb. Thus, imperfective aspect series I has an accusative pattern (7a), perfective aspect series II has an ergative pattern (7b), and evidential mood series III has an inverted pattern (7c).

- 7 a. Glex-i tesavs simind-s.
 peasant-NOM sow-I corn-DAT
 'The peasant is sowing corn.' (Harris 1981:1)
- b. Glex-ma datesa simind-i.
 peasant-ERG sow-II corn-NOM
 'The peasant sowed corn.' (ibid.)

- c. Glex-s dautesavs simind-i.
 peasant-DAT sow-III corn-NOM
 'The peasant has sown corn.' (ibid.)

Thus, ergative and accusative systems can exist side by side within one language. This either implies that the setting of the ergativity parameter may vary within a given language (an unprecedented assumption), or that the ergativity parameter must be flexible enough to allow for an accusative alignment in certain circumstances. In this paper we shall explore the consequences of the second possibility.

2.4 A wide definition of ergativity

The above data has illustrated some of the variety which exists among languages traditionally termed ergative. Data from languages with an active alignment show that it is not the transitivity of the clause which is necessarily responsible for the ergative case-marking of the subject. Split ergative languages show that ergativity and accusativity can coexist in the same language, with the implication that an ergativity parameter is not simply a case of binary choice between ergativity and accusativity.

There is one feature, however, which recurs in the languages we have touched upon so far, regardless of whether they are ergative, split ergative or active – the common feature which seems to encompass the widest range of languages which have been considered ergative in the literature is the existence of *ergative case*.

This may seem to be a truism. However, we may define it as follows. In every language which is ergative, in the widest meaning of the word, there exists a structural case X which is restricted in distribution to Agents. An Agent may bear other cases (such as in split ergative systems, or with intransitive agentive verbs in languages which do not have an active alignment), but a non-Agent may not bear case X. This case X is termed ergative case in the languages in which it occurs². Another important point to note is that the Agent in such a construction must be an argument rather than an adjunct, so it does not hold for the Agent in a by-phrase in an English passive³.

²In actual fact, a deeper analysis of some accusative (or *extended ergative*) systems, particularly that of the Kartvelian language Megrelian, shows that a structurally identical case may develop into a case which can be realized on any subject. This point is discussed in detail in Holmer & Vamling (in preparation), where it is argued that the Megrelian system derives from the presence of extra structure when compared with the closely related split ergative language Georgian.

³Examples of criteria to determine whether a given element is an argument or an adjunct are optionality (an argument is not optional in the same way as an adjunct) and accessibility for syntactic processes (such as control, reflexive binding etc).

3. What is ergative case?

Given that ergative case is a case reserved for Agents (in the same way as accusative case is reserved for patients), it remains to explain how ergative Case is assigned. Evidently, it is natural to suppose that ergative case can only be assigned to Agents because the position to which it is assigned is only open to Agents (in analogy with accusative case assignment to the complement position within V'). Therefore the question remains: which position in the clause is only open to Agents?

The solution is offered by Baker's (1988) Universality of Theta Assignment Hypothesis (henceforth UTAH), which states that a given theta role is always assigned by the verb to a position with the same structural relation to the verb. Assuming a strict interpretation, whereby UTAH holds not only within a given language but also cross-linguistically, and whereby the implication is bidirectional in such a way that it only allows a position to which a theta role is normally assigned to be occupied by an element bearing that theta role, it follows that SpecVP (to which the theta role of Agent is normally assigned) would be a thematic position open only to Agents – in any language.

Thus, the simplest account of a structural case open only to Agents involves case-marking in situ of SpecVP and the argument located there. If SpecVP is a thematic position, it is not open for a non-Agent to raise through (it would not even be projected with a verb lacking an Agent), and this prevents this case from being assigned to any argument other than an Agent.

The next question concerns the assignment of Case to SpecVP. In various treatments of the case system in Austronesian languages or other languages with some kind of ergative alignment (cf. Guilfoyle, Hung & Travis 1992, Holmer 1996a, Bittner & Hale 1996 and Chang 1997) it has been suggested that Case may be assigned to SpecVP by Exceptional Case Marking from the head governing VP. The majority view is that this head is I°, although Chang 1997 refers to this head as Voice° instead.

In the present paper, it will be assumed that ergative Case is the Case assigned by ECM from I° to SpecVP, as illustrated in Figure 1.

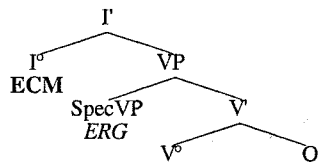


Figure 1. Assignment of ERG

One important question follows: what parameter is it that allows I° to assign Case in some languages, but not in others? This parameter, if it can be identified, can plausibly be considered to be the 'Ergativity Parameter'.

The simplest solution simply would be to state that the possibility of Case-marking by ECM from I° is, in itself, the required parameter. This is the approach initially proposed by Guilfoyle, Hung & Travis 1992, and followed by Holmer 1996a and Bittner & Hale 1996. However, such a solution does not link this existence of ergative case marking with any other feature of the syntax, nor does it have the general application expected of a parameter. Therefore, if it were possible to link this to some other characteristic of an ergative language, such a solution would be more desirable.

4. Burzio's Generalization

One of the most important mechanisms for the analysis of case-marking in an accusative language is Burzio's Generalization (Burzio 1986). This states, in somewhat simplified wording, that the ability of a verb to assign object case to its complement is directly dependent on whether or not it assigns a theta-role to its Agent. The purpose of this rule is to ensure that a single argument of the verb, if it is base-generated as a Patient (i.e. in complement position to the verb), must be realized in nominative case rather than accusative case. In short, it ensures that the case realized on the Patient *he/him* in (8) is different: accusative when there is an Agent present (as in 8a) and nominative when there is no Agent present (as in 8b).

- 8 a. You killed *him*.
b. *He* died.

These facts are typical of accusative languages. However, it is a defining characteristic of ergativity that the facts in (8) do not occur in an ergative language (or in an ergative pattern within a split ergative language). This is illustrated in (9) with data from Basque.

- 9 a. Zu-k *hura* hil zenuen.
2s-ERG 3s-(ABS) die/kill 2sE-3sA-PRET
'You killed him.'
b. *Hura* hil zen.
3s-(ABS) die/kill 3sA-PRET
'He died.'

In (9), we see that the Patient in both clauses receives the same overt Case-marking, despite the fact that the verb in (9b) does not assign a theta-role to

any Agent. In fact, an ergative construction necessarily displays the type of pattern which Burzio's Generalization was designed to prevent. Thus, it seems clear that Burzio's Generalization does not hold in an ergative language.

This can be interpreted in two possible ways: either

a) Burzio's Generalization is simply a descriptive generalization of facts in accusative languages (which differ from facts in ergative languages). Such facts must then necessarily be accounted for by other principles, since this view would not accord Burzio's Generalization any theoretical status whatsoever.

or

b) Burzio's Generalization is a necessary component of any analysis of accusative languages. It is simply a fact that it is only valid in an accusative language and not in an ergative language.

Clearly the first option would be preferable if possible, since it would account straightforwardly for the fact that Burzio's Generalization only holds in accusative languages. This is also the approach followed in Holmer 1996a, 1996b, 1999a, where alternative suggestions are presented which account for the differences between accusative and ergative languages without reference to Burzio's Generalization.

However, recent work⁴ suggests that there are cases which require recourse to Burzio's Generalization in accusative languages⁵. It follows that we must consider the second option above, namely that Burzio's Generalization is a necessary component of the analysis of accusative, but not ergative, languages. This option implies that languages can be grouped into two major classes, as in Figure 2.

<i>Type I</i>	<i>Type II</i>
accusative	ergative
BG valid	BG not valid

Figure 2. Language classification

It seems to be a remarkable coincidence that the ergativity parameter and the validity of Burzio's Generalization should correspond so exactly with one

⁴Research currently being carried out within the PARATYP project (Riksbankens Jubileumsfond), which is expected to be ready for publication during 2002.

⁵Even Holmer's (1996a) Subject Choice model, which accounts for the behaviour of unaccusative verbs and passive verbs in accusative, ergative and split-ergative systems alike, faces problems when dealing with raising verbs in accusative languages, unless Burzio's Generalization is invoked in just these cases.

another. Rather, an optimal analysis would require that the two phenomena be connected.

5. The ergativity parameter

We have noted that it would be desirable to connect ergativity to Burzio's Generalization in a way that allows us to account for the non-validity of Burzio's Generalization in ergative languages with no further stipulation. To do this, it will be shown to be fruitful to examine more closely the mechanism of Burzio's Generalization.

Basically, Burzio's Generalization states that a verb may only assign object Case to its complement if it assigns a theta-role to its Agent. Expressed in terms of structural relations, this implies that a verb can only assign Case to its complement if it assigns a theta-role to its Specifier (assuming Baker's UTAH, this amounts to the same, since the Agent theta-role is assigned to SpecVP).

Having reformulated Burzio's Generalization in structural terms, we become able to make a direct comparison between the behaviour of VP and the behaviour of IP). As is generally agreed upon by syntacticians who subscribe to the VP-internal Subject Hypothesis, SpecIP is not a theta position. No thematic role may be assigned to SpecIP (if it were, movement from SpecVP to SpecIP would result in a breach of the Theta Criterion).

It follows that we can safely claim that I is incapable (in any language) of assigning a theta-role to SpecIP. The coincidence between ergativity and the non-validity of Burzio's Generalization now boils down to the following:

In a language where Case-marking by the verb of its complement is dependent on theta-assignment by the verb of its Specifier (i.e. where Burzio's Generalization holds), I, which does not assign a theta role to *its* specifier, may not assign Case to SpecVP by ECM (i.e. ergative Case may not exist).

Conversely, in a language where Case-marking by the verb of its complement can take place independently of theta assignment (i.e. where Burzio's Generalization does not hold), I is also capable of assigning case to SpecVP (resulting the existence of ergative case), regardless of the fact that I assigns no theta role to SpecIP.

When viewed in this light, it becomes increasingly clear that the phenomena we wish to connect are, in fact, one and the same. If we view Burzio's Generalization as a parameter, which takes the value (+) in accusative languages, and the value (–) in ergative languages, and if we extend it to refer not only to V but to I as well, it covers the facts straightforwardly.

The new parameter derived from Burzio's Generalization may be phrased as follows:

In a given language, a verbal head X° (either V or I) may assign Case to its Complement (or the Specifier of its Complement):

if and only if (+) / regardless of whether (-)
 X° assigns a theta-role to SpecXP.

One question which arises is how we can formulate a definition of a verbal head which encompasses V° and I° , while excluding C° . Further, it should only hold for the lowest head within a split-INFL, rather than every head (assuming a split on the lines of Mod° , Agr° , Tns° etc). I shall not address this question here, suffice it to mention that data from Mongolian and Arabic⁶ subordinate clauses indicates that case-marking from C° should not be excluded a priori either, since subjects of subordinate clauses in both of these languages can be realized in ACC. It is unclear which parameter is responsible for assignation of Case from C° , and we leave this question for further research.

The following illustration shows how this accounts for facts in an ergative language. In Figure 3, we assume the value (-) for the above parameter (giving an ergative language), and illustrate how the behaviour of V° with an unaccusative verb parallels that of I° . ERG may be assigned to SpecVP, and ACC⁷ to [DP, V'] of a verb which assigns no Agent theta-role.

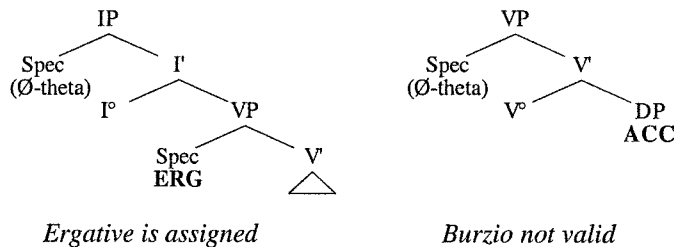


Figure 3. Assignment of case in an ergative language

⁶Maria Persson, p.c.

⁷Absolutive case in Basque is assumed to be structurally equivalent to ACC. The reasons for this are discussed in detail in Holmer 1999b. Note that this does *not* imply that absolutive case in other ergative languages is necessarily structurally equivalent to accusative – in Georgian, it is equated with NOM (cf Holmer & Vamling (in preparation)). For reasons of space, we refer to the aforementioned works.

In Figure 4, we assume the value (+) for the above parameter (giving a language with an accusative alignment), and show how V° and I° behave analogously, ensuring that Burzio holds, and that ERG may not be assigned.

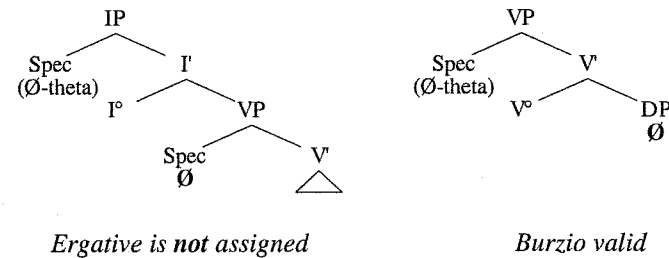


Figure 4. Assignment of case in an accusative language

The above solution implies that phenomena traditionally connected with Burzio's Generalization (i.e. the realization of Patients in NOM Case), which also occurs in ergative languages in a wide variety of constructions (recall that 'ergative' here refers to the entire range of languages displaying ergative case, including a large number of split ergative languages), must be accounted for without reference to Burzio's Generalization. This is solved straightforwardly within the Subject Choice Model (Holmer 1996a,b, 1999a,b).

While a detailed presentation of the Subject Choice Model is outside the scope of this paper, I shall briefly relate the most relevant points below. According to the Subject Choice Model, NP-movement is not primarily forced by Case requirements, but rather by an interaction of the Extended Projection Principle and language-specific subject choice factors, which encourage the selection of one argument of the verb as clause subject (the resulting variation in choice of subject leads to the phenomenon of voice).

One consequence of this is that an argument which is assigned Case in situ may still, it is claimed, be chosen as subject. When this occurs, the resulting chain has the possibility of realizing the Case assigned to the position in which its head is located, even if its foot is located in a Case-position. This approach has various advantages (both economic and functional) when dealing with cross-linguistic studies of voice. However, it also implies that the facts described by Burzio's Generalization can, in most cases, be accounted for as a direct consequence of (rather than a reason for) NP-movement⁸.

⁸It was this fact that led the present author to eliminate, somewhat prematurely, the theoretical status of Burzio's Generalization in Holmer 1996a, 1996b.

It follows that a language which does not obey Burzio's Generalization may still appear to do so in various contexts, such as the accusative section of a split ergative language. This is because the nominative Case-marking of a Patient subject in a split ergative language need not be due to the prevention of object Case marking in a given construction, but instead a consequence of EPP-driven NP-movement from complement position to subject position⁹. Thus, the present work is a direct extension of the ideas first developed in the Subject Choice Model.

6. Conclusion

In this paper I have shown how a parameterization of Burzio's Generalization, coupled with an extension of its scope from just V° to both V° and I°, can account straightforwardly for the fact that BG holds in accusative but not in ergative languages. My claim is that BG in itself (where valid) prevents the assignation of Case from I° to SpecVP, by virtue of I° not being a theta-assigning position. This suggestion defines one of the most central characteristics of ergativity, namely the existence of a structural ergative case.

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⁹The reader is referred to the aforementioned works for more evidence in support of the Subject Choice Model.