A NOTE ON ERGATIVITY, S', AND S'' IN KARITIANA

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1 Introduction

Ergativity has long been an important topic in linguistic research, from both a typological (Comrie 1978, Dixon 1979, Plank 1979) as well as a theoretical perspective (Levin 1983, Marantz 1984). The purpose of the present study is to contribute to the discussion of this phenomenon via a study of a fragment of the grammar of Karitiana, an Amazon language, focusing especially on its ergative-absolutive marking of affirmative particles and personal pronouns. The special features of the Karitiana (henceforth K) system are: (1) only absolutive marking need be stated by rule, ergative case being a default mechanism, and (2) K's ergative marking offers interesting evidence in favor of the distinction between topicalization and WH-movement, along the lines first proposed by Chomsky (1977).

The discussion is organized as follows: first, we outline K's basic phrase structure. Next, the ergativity facts are presented, along with the original analysis of these facts suggested in Landin (1980), according to which an apparently enigmatic asymmetry exists between WH-movement and topicalization. This is followed by an alternative account in which the facts fall out quite naturally as a consequence of the distinction between S' and S''.

2 Word order and absolutive marking

2.1 Karitiana phrase structure

According to Landin (1980), the basic word order in K is Subject-Verb-Direct Object:
These data are interpreted in the work cited in support of the S-V-0 order as basic, since they are unambiguous. As we see below, however, the interpretation of these sentences is in fact guaranteed by the affirmative particle rather than word order, thus removing the force of this argument. Noun phrase structure presents a somewhat clearer picture, however, the constituent order clearly being genitive (possessor) - head (possessed):

(3) yjja nāka -y -j yj pikkōm pisyp
   we affirmative -eat -tense our monkey meat
   GENITIVE HEAD
   'We will eat our monkey meat.'

(4) opok nā -tot -∅ i o
   Indian affirmative -remove -tense 3 head
   (erg) GENITIVE HEAD
   'The Indian removed his head.'

In adpositional phrases, the head again is phrase final:

(5) owa na -ate -tysot pikkōm i
   child affirmative -pull -aspect monkey 3
   (erg)
   sypojo-sok
tail -on
   NP POSTPOSITION
   'The child pulled the monkey by the tail.'

(6) nāka -tat -o ga -p
    affirmative -go -tense field -to
    (erg) NP POSTPOSITION
    'He went to the field.'

2.2 Affirmative particles

As is seen in the above examples, K sentences manifest particles which Landin (1980) refers to as affirmative
particles. According to Landin, the distribution of these particles is as follows: na- is found following transitive subjects, while ta- follows intransitive subjects and transitive objects; -ka- is added to either form when preceding verb roots with initial stress.

(7) a. iso nāka -y -t saryt kerep Ohey fire affirmative eat -tense hearsay long ago name "The fire ate Ohey long ago."

b. *iso {nā-} -y -t saryt kerep Ohey
{ta(ka)-}

(8) a. y taka -tar -i affirmative -go -tense
(abs)
'I will go.'

b. *y {ta-} -tar -i
{nā(ka)-}

(9) a. ūn nā -oky -j sojja I affirmative -kill -tense pig (erg)
'I will kill a pig.'

b. *ūn {nāka-} -oky -j sojja
{ta(ka)-}

(10) a. y ta -oty -j I affirmative -bathe -tense (abs)
'I will bathe.'

b. *y {taka-} -oty -j
{nā(ka)-}

We consider an alternative analysis of these facts in Sect. 4 below. However, we first need to consider ergative marking in K's pronominal system.

2.3 Pronouns

K's pronomSystem is summarized in Table 1 (from Landin 1980:11):
TABLE 1
Pronominal System of Karitiana

<table>
<thead>
<tr>
<th></th>
<th>1S</th>
<th>2S</th>
<th>3S+P</th>
<th>1P INCL</th>
<th>1P EXCL</th>
<th>2P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subj. + Intr. Pre-vb</td>
<td>y</td>
<td>a</td>
<td>ø</td>
<td>yj</td>
<td>aj</td>
<td></td>
</tr>
<tr>
<td>Obj. + Tr. =Absolutive</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Obj. + Tr. Post-vb</td>
<td>ān</td>
<td>i</td>
<td>yjja</td>
<td>yta</td>
<td>ajja</td>
<td>yj</td>
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<td>Subj. + Tr. Pre-vb</td>
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<tr>
<td>Subj. + Tr. Post-vb</td>
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<td>ø</td>
</tr>
</tbody>
</table>

The crucial features of this system for our present concerns are the preverbal forms of the first and second person singular forms. Landin (1980) explains their distribution by claiming that ān and ān are the subject forms for transitive verbs while y and a appear as subjects of intransitive verbs or as objects of transitive verbs, as in (11)-(13):

(11) y taka -tar -i
    1 affirmative -go -tense
    (abs) (abs)
    'I will go.'

(12) ān a ta -oky -j
    1 2 affirmative -kill -tense
    (erg) (abs) (abs)
    'I will kill you.'

(13) ān y ta -oky -j
    2 1 affirmative -kill -tense
    (erg) (abs) (abs)
    'You will kill me.'

Having completed our brief overview of the relevant features of K syntax, we turn now to consider an interesting contrast in ergativity marking between topicalized structures and WH-questions. We argue in Sect. 4 that these facts are strongly supportive of the analysis of

3 WH-questions and topics

Landin (1980:15) claims that topicalization in Karitiana is produced by a movement rule, fronting the topicalized constituent, as in (14):

(14) a. y taka -tar -i se -pip
   1 affirmative -go -tense water-into
   (abs) (abs)
   'I will go into the water.' (normal declarative)

   b. se -pip y taka -tar -i
      'Into the water I will go.' (topicalized reading)

A slight difference arises, however, when the topicalized element is the (underlying) direct object, as in (15):

(15) a. yjja na -pyn mora
    1 pl affirmative -kick ball
    'We kick the ball.'

    b. mora yjja ti -pyn
       ball 1 pl topi -kick
       'The ball, we kick (it)'

(15) differs from cases of nonobject topicalization, as in (14), in the appearance of ti "topic" on the verb. Landin (1980) claims that the purpose of ti in these structures is to prevent ambiguity, signalling that the first NP in the clause is to be interpreted as topic. WH-questions are formed in a similar fashion.

(16) mōramōn a ti -pa -tynh
    what 2 topic -weave -aspect
    "What are you weaving?"

According to Landin, (16) may be derived from an underlying structure along the lines of (17). 3

(17)  a ti -pa -tynh mōramōn

Landin goes on to observe that topics and WH-questions might be analyzed as arising from the same rule of "front topic/WH-word, insert ti." However, as he correctly notes, such an analysis is not complete in light of examples such as (18):

...
(18) \[ \text{seppa yn ti -pa -tynh} \]
\[ \text{basket 1 topic -weave -aspect} \]
\[ (\text{erg}) \]
\[ 'A basket, I am weaving.' \]

The problem, of course, is why the pronoun in (17) should be absolutive while the pronoun in (18) is ergative. Both bear the same thematic role, and both follow the item associated with the patient role. It cannot be claimed that interrogatives are inherently absolutive in K due to WH-questions of adjuncts, as in (19):

(19) \[ \text{mòrasòg an i pa -tynh seppa} \]
\[ \text{why 2 3 weave -aspect basket} \]
\[ 'Why are you weaving a basket?' \]

Thus, the fact that the second person pronoun in (16) is marked absolutive cannot be explained solely on the basis of its being in the interrogative mood. Landin (1980:27ff.) concludes his study of ergativity by claiming:

"...In Karitiana it is not the transitivity of the verb which determines the ergativity value of the accompanying pronouns, but rather the number of associated NPs. If a transitive verb has a subject and no object, then the subject pronoun associated with the verb will be absolutive, and not ergative."

The curious and unexplained fact is that a wh-word like mòramòn does not count as an object NP, while a pronoun or even an NP that has been removed by topicalization does count."

In the remainder of our discussion, we show that Landin's conclusion is in fact incorrect, and that the ergativity facts, properly analyzed, fall out as a direct consequence of the S' and S'' nodes proposed in Chomsky (1977, 1981).

4 An alternative analysis

We begin this section with a summary of the main points of the analysis of ergativity in K given above.

(20) \[ \text{Ergative Marking (preliminary version):} \]

\[ a. \text{ The affirmative particle is absolutive following an intransitive subject or transitive object; otherwise it is ergative.} \]
b. First and second person singular preverbal pronouns are ergative when both subject and direct object are overtly present; otherwise they are absolutive.

Note that (a) and (b) are quite different. Whereas (a) is stated in terms of a preceding argument, (b) is stated in terms of the total number of overt arguments in the clause, regardless of their position relative to the pronoun. A reasonable move would be to attempt to collapse (20a) and (20b) into a single statement. It seems difficult to improve on (20a), however, in view of sentences such as (21) (from R. Landin 1982:4):

(21) Ohey taka -y saryt kerep Isoason
name absolutive eat hearsay long:ago name
'Isoason ate Ohey long ago.'

In (21), where the order is O-V-S (cf. note 5), no ambiguity arises with regard to the grammatical relation borne by a specific NP, since the presence of the absolutive taka- following Ohey clearly marks Ohey as the direct object (cf. (22)):

(22) Ohey naka -y saryt kerep Isoason
'Ohey ate Isoason long ago.'

On the other hand, we might attempt to restate (20b) as (23):

(23) Ergative Marking (second version):
Mark first and second person singular preverbal pronouns as absolutive when they are intransitive subjects or direct objects or they follow the direct object or intransitive subject; otherwise, mark them ergative.

Note that (23) will account for all the facts, including the appearance of the absolutive a '2 person singular' in (17), as opposed to the ergative an, which is predicted by (20b). This is so if we assume, contrary to Landin (1982), that the WH-word does count as an argument. Then in (17), the pronoun follows the direct object and is absolutive, as predicted by (23). The question remains, however, as to why in (18) the pronoun is ergative, since it immediately follows the direct object. Our suggestion is to limit (20a) and (23) to S' as in (24):
Ergative Marking (final version):

Mark the designated element (= affirmative particle, first and second singular preverbal pronouns) as absolutive when it is the intransitive subject or direct object or is immediately preceded by the direct object or intransitive subject in S'; otherwise mark it ergative.

Immediately explains the contrast between (16)-(18), given that topics are immediately dominated by S'', whereas WH-questions involve a WH-operator in COMP, immediately dominated by S', as in (25) and (26):

Topicalization: [\
S'\text{...} [\text{...} ] [ \text{...} ]] \\
\text{Topic} \quad S'\text{...}]

WH-Questions: [\
S'\text{...} [ [ \text{...} ]\text{WH-operator}\text{...} ]] \\
S'\text{...} \quad \text{COMP}

Therefore, we can understand K's ergative marking system, as stated in (24), to be quite supportive of the structural differences between Topics and WH-questions proposed in most work on the subject in generative theory. This is true in spite of the fact that in current work on phrase structure in generative theory, the status of S'' is unclear. According to recent suggestions of Chomsky (class notes, p.c.), S' is a projection of the COMP node corresponding in X' terms to COMP''. However, it is not clear what S'' would be a projection of in current terms. In a recent paper, Pullum (1985) suggests the following phrase structure rules:

\begin{align*}
S' & \rightarrow (\text{TOP})S \\
S'' & \rightarrow \text{COMP} S'
\end{align*}

This seems unlikely to account for Karitiana ergativity, however, since then wh-words moved to COMP would be predicted to be less closely associated to S than Topic. As the facts above show, however, it is the Topic element which behaves as though it were less affected by sentence internal syntax. A way of capturing these relations in current theoretical terminology would be to assume that Topic and S' (= COMP'') have different underlying sources and that Topic is Chomsky-adjoined to S' in the course of the derivation, as in (29):
(29) a. \[ \text{TOPIC} \quad \alpha \quad \text{COMP}^\prime \]

b. \[ \text{COMP}^\prime \quad [ \alpha \quad \text{Topic} \quad \text{COMP}^\prime \quad \text{COMP}^\prime \quad \text{COMP}^\prime ] \]

Then ergative marking would apply to COMP'' prior to (29b). This is but one of several alternatives that come to mind for capturing Chomsky's (1977) S'/S'' distinction in the present model.

5 On the default affirmative

One question remains unanswered by the account just given, however. Namely, why should a language such as K have a default affirmative marker to begin with? That is, why should nā(ka)- even appear at all in those cases such as (30) where no argument precedes and the sentence is clearly intransitive (cf. (6) above)?

(30) \( \emptyset \) nā -oty -j
  3 affirmative -bathe -tense
  (erg)
  '(He) will bathe.'

NppThere is a simple answer to this question which may be seen by comparing (30) with (31):

(31) \( \emptyset \) oty
    he bathe
    'He will not bathe.'

In other words, without the affirmative marker, a sentence is interpreted as negative (tense is also obligatorily absent). As Landin (1980:19) notes, this violates certain proposed universals of negation, in which it is claimed that negative clauses should be morphologically more complex than affirmative clauses (cf. Dahl 1978, Payne 1978).

Due to this state of affairs, however, the affirmative particle is necessary to give the right reading, explaining how the particle nā(ka)- could take on a default marking. Thus, in a sense, absolutive marking is the rule-governed case, with ergative marking following under the "elsewhere" condition of the rule.

6 Conclusion

In this brief note, we have seen that ergative case marking on preverbal pronouns and the affirmative marker is stateable in terms of a single generalization (cf. (24)).
Further, in that this marking only takes into account constituents of $S'$, not considering $S''$ constituents such as Topic, it offers support for the distinction between topicalized and interrogative structures proposed in Chomsky (1977, 1981).
Notes

Karitiana is a member of the Arikem family of the Tupi phylum and is spoken by approximately eighty people near Porto Velho, in the state of Rondonia, Brazil. The orthography used here was developed by David and Rachel Landin. Aside from y, used to represent /i/, and ' for /ʔ/; all other symbols are straightforward.

We would like to thank the Landins for their work on this language, without which the present paper would obviously be nonexistent. Also thanks to Noam Chomsky, Ken Hale, Dave Landin, and Geoff Pullum for comments on earlier versions of this paper.

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1. It is not clear from the data presented, however, whether K even has adpositional elements in the traditional sense. A plausible case could be made that such "postpositions" in K are simply case markers. We will not take up this question here, however, since it has little bearing on the central issue.

2. It is not clear to us whether these morphemes are best analyzed as independent particles, verbal prefixes, or second position clitics. Since this is not crucial for our present purposes, we will represent these as prefixes, as per Landin (1980).

3. We return directly to the problem of why (16) and (17) should be marked absolutive.

4. The affirmative particles ta(ka)- and nā(ka)- are never found in interrogatives or (direct object) topicalized structures.

5. (21) wreaks havoc with the claim that K's basic word order is S-V-O. Note that (21) cannot be analyzed as a topicalized structure, due to the absence of the topic marker, ti-'. Therefore, the argument used by Landin (1980) in favor of S-V-O, namely, the lack of ambiguity in such structures, is vitiated, since it is the ergative or absolutive marking on the following affirmative particle which guarantees correct interpretation of the relevant grammatical relations, not word order. In fact, sentences like (21), very common in R. Landin (1982), make K appear similar to Tupi languages in general in manifesting free word order (cf. Harrison (to appear)).
6. In (24), subject and direct object refer to logical relations and not surface positions. Also, we suppose that if K word order is in fact free at S-level (although pragmatically constrained via discourse considerations) then all structures are generated as seen on the surface, with no movement.

7. Whether or not topicalization involves raising of a null WH-operator from object position in examples such as (18) is irrelevant since our statement in (24) is to be construed as applying to overt arguments only. The same applies for (i) where, according to Landin (1980:9) the affirmative nā- is immediately preceded by a null third person pronoun.

(i) ūn ō nā -oky -j 1
   3 affirmative -kill -tense 3
   (erg) (erg)
   'I will kill him.'

Similarly, in (30) below, where the verb is intransitive, the affirmative is still ergative, offering stronger evidence yet in favor of the characterization of ergative case as a default marking.

8. It is tempting to speculate that pronouns came to be marked ergative by default rather than by their semantic roles as a consequence of the conditions imposed on the rule by the affirmative particle. Thus, whenever the affirmative particle became obligatory, the entire rule (24) was modified to handle it, pronouns being affected due to the application of the rule across the board.
References
Pullum, G. 1985. Assuming some version of the X-bar theory. Mimeographed, Syntax Research Center, University of California at Santa Cruz.