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**ARE CARIBAN LANGUAGES MOVING
AWAY FROM OR TOWARDS ERGATIVE SYSTEMS?**

Desmond C. Derbyshire

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1 Introduction

The purpose of this paper is to weigh the evidence that will help us to determine whether Amazonian languages have moved historically from earlier ergative-absolutive systems to nominative-accusative or mixed systems, or whether the change has been in the other direction. The main focus is on languages of the Cariban family, but I will refer to other Amazonian language families which suggest that a single pattern of historical development applies throughout the Amazon area.

This is a current issue in Amazonian linguistics. Hypotheses representing both possible directions of change have been proposed, specifically for Cariban languages. I first tentatively suggested (Derbyshire 1981) that the change in Cariban was from an earlier ergative system towards an accusative or mixed system. That paper was primarily about historical word order change, based on a study of three languages that currently reflect different

stages in their dominant patterns: the earlier stage SOV, surviving today in Surinam Carib, an intermediate stage SOV/OVS found in Macushi, and the latest stage OVS in Hixkaryana. I linked the drift in Hixkaryana from SOV to OVS with an accompanying loss of ergative case marking in main clauses (in Hixkaryana subordinate clauses the case marker regularly occurs, and so does the older SOV pattern). But at that time of writing I was careful to add that I did not have the evidence to judge whether ergative case marking was a part of early Carib syntax.

In Derbyshire 1987, I made a much stronger statement that the direction of historical change has been from an ergative to an accusative (or mixed) system. This was partly because by then more facts were available on some Cariban languages, but also because a similar hypothesis was being proposed for other Amazonian language families, in particular for the Tupí and Ge families (Harrison 1986). Since then, two other papers have strongly supported this view of the direction of change, one for the Tupí family (Jensen 1990) and the other for Cariban (Franchetto 1990). I shall return in sects. 3.3.5 and 3.3.6 to a more detailed discussion of the evidence offered by these scholars.

The main challenge to that view has come from two linguists at the University of Oregon, both working in the Cariban language Panare, spoken in Venezuela. T. Payne (1990) first tentatively suggested that Panare might be at an intermediate stage of change from nominative-accusative to ergative. That suggestion has been more fully developed for Panare, and applied more generally to the Cariban family, by Gildea (1990). I will present Gildea's hypothesis in sect. 2.3 and discuss it further in sect. 3.2.

In the general literature much has been said on how ergative systems have developed – mainly from earlier nominalizations and/or passive constructions. (See, for example, Comrie 1978). Estival & Myhill (1988:445) make the strong claim that all ergative constructions have developed from passives.

Not as much, however, has been said on change in the other direction – from ergative to nonergative systems. Estival & Myhill, in the work just cited, include the possibility for historical change from ergative to accusative; it is the final stage in their 4-stage cycle of change: from (1) passive to (2) morphologically ergative to (3) deep ergative to (4) nominative-accusative, from which the cycle may later start all over again. The only historically documented example, according to them, of the full development from passive to ergative and then

accusative is found in Indo-Iranian languages (cf. Anderson 1977).

Comrie (1978) also cites examples of change from ergative to accusative systems. He suggests this may happen in two ways. First, antipassives in an earlier ergative system can be the source of a new nominative-accusative system, and he cites Georgian as an example. This is not the source of change I will be proposing for Cariban languages, which lack any type of standard antipassive construction. The second way Comrie suggests is the development, within the older ergative system, of nominalizations in which the S and A assume the genitive case (i.e., the GENITIVE-NOMINATIVE strategy), instead of the expected S and O (GENITIVE-ABSOLUTIVE strategy) one might expect in the ergative system. He cites the Mayan languages Chol and Jacaltec as examples of this mechanism of change to a partial nominative-accusative system. Nominalizations are an important part of my argument for assuming that the direction of change is from ergative to accusative systems in Cariban, but for a quite different reason from that which Comrie suggests: in Cariban languages, the pivot for the genitive case in nominalizations continues to be S and O (not S and A) even after the main clause syntax has changed to an accusative pattern. As I shall argue in sect. 3.3.2, it seems reasonable to suppose that this genitive-absolutive strategy, found consistently in Cariban languages, is a relic of an earlier more widespread ergative-absolutive patterning.

Recent work on Australian languages indicates that in the Ngayarda and Tangkic subgroups there is evidence of a change from earlier ergative to accusative systems (Dixon 1981; Dench 1982; Evans 1985; Blake 1987). It has been claimed that in some of these languages the source for the development was the generalizing of the antipassive construction, one of the two mechanisms of change suggested by Comrie. Dench (op. cit.) suggests that it was the generalizing of a productive intransitive semantic antipassive construction that led to the change, with the dative case marker in the intransitive clause being reanalyzed as an accusative marker; as the new accusative pattern was becoming the dominant transitive clause, the less productive older transitive clause, i.e., the ergative construction, was being reanalysed as a passive. Blake (op. cit.) has attributed the change to accusative systems in these languages to the need to resolve the conflict between (1) the semantically-based case-marking that is the same for S and O and (2) the pragmatic pressure to identify S and A as the topic. As he points out, however, this in itself

would not justify an earlier ergative hypothesis. An additional factor must be present (p. 186):

The question must be resolved by a consideration of the actual marking to see if it is irregular and fossilized or regular, productive and therefore 'new looking'.

He proceeds to show that this factor is present in the nominative-accusative Ngayarda languages. He notes that what appears to be a passive agentive marker on the nominal (the instrumental suffix *-lu*) is likely to be a survivor from a once-dominant ergative system, indicating that it is the nominative-accusative system that represents the innovation. This is similar to an argument I will use for postulating the same direction of change in Cariban, except that the fossilized form in Cariban is an agentive marker in nominalizations rather than a passive marker.

In this paper, then, I will be arguing for a direction of change in Cariban languages from systems that are purely ergative in both nominal case marking and verb agreement patterns (and which are probably of considerable antiquity) to mixed systems where in main clauses the core nominals are not marked at all and the verb agreement patterns are a mixture of nominative and absolutive, based on an agentivity-person hierarchy. Subordinate clauses take the form of nominalizations that retain characteristics of the older pure ergative system.

Estival & Myhill (1988) state categorically that there are no passive constructions which have been shown to have developed directly from ergative constructions. T. Payne (1990) uses this as an argument for not accepting an earlier ergative system for Panare, but this crucially depends on his analysis of certain Panare constructions as passives. I will argue that these constructions are, in fact, nominalizations that reflect earlier ergativity.

In sect. 2 I will present synchronic data and relevant descriptive facts from three Cariban languages that Gildea (1990) regards as representative of three different case-marking and verb-agreement systems. This will be followed in sect. 3 by a comparison and evaluation of the two hypotheses concerning the direction of change, based on the facts from those three languages. Finally, in sect. 4 I will offer evidence from work in one other Cariban language and in some non-Cariban languages which suggests that the change from ergative to accusative/mixed systems may be generally characteristic of Amazonian languages, or at least of a

possible major group of language families that may prove to be genetically related.

2 Data from three Cariban languages

I will now present the case-marking and agreement systems of the three Cariban languages selected by Gildea: Macushi, Hixkaryana and Panare. Gildea chose these as representing three different kinds of systems: *ergative* (Macushi), *nominative* (Hixkaryana), and *mixed* (Panare). I will show that this tripartite division is misleading. Macushi is certainly ergative, but Hixkaryana is far from being a nominative language. It is, like Panare, a mixed language type. This is also probably the case with the other languages he lists as nominative (Surinam Carib, Waiwai and Tiriyo). No Cariban language that I have studied has anything like a pure nominative-accusative system. In contrast, Macushi is one of the most purely and comprehensively ergative systems I have seen reported anywhere in the world. I will begin this presentation and discussion of the data with Macushi.¹

2.1 Macushi (from Abbott 1991:83-84)

(1) a. Intransitive with S nominal

u-yonpa- kon João ko'mamî-'pî miarî
 1-relative-COLL John remain- PAST there
 'Our relative John stayed there.'

b. Intransitive with S verbal prefix

aa-ko'mamî-'pî asakî'ne wei kaisarî
 2- remain- PAST two day up:to
 'You stayed two days.'

c. Transitive with A and O nominals

more- yamî yenupa-'pî to' yenupa-nen- ya
 child-COLL teach-PAST 3COLL teach- S:NOMLZR-ERG
 'Their teacher taught the children.'

d. Same, with fronted A nominal

warayo'-ya tî- nmu eporî-'pî
 man- ERG 3:REFL-son find- PAST
 'The man found his son.'

¹ I will be using S, A, and O in the way these symbols have become fairly standard: S for intransitive subject, A for transitive subject, and O for transitive direct object.

e. Transitive with A free pronoun (Hodsdon 1976)

mírírí ye'nen tuna ekaranmapo-'pí uurí-ya
 that because water ask:for- PAST I- ERG
 'That's why I asked for water.'

f. Transitive with O nominal, A verbal suffix

míkkírí eporí-'pí- i-ya
 3PRO find- PAST-3-ERG
 'He found him.'

g. Transitive with O verbal prefix, A verbal suffix

i-koneka-'pí- u-ya
 3-make- PAST-1-ERG
 'I made it.'

h. Same, with roles of A and O referents reversed

u-koneka-'pí- i-ya
 1-make- PAST-3-ERG
 'He made me.'

i. Subordinate clause, intransitive verb

aw-enna'po-'pí- kon epu'tí-'pí- i-ya
 2- return- PAST-COLL know- PAST-3-ERG
 'He knew you all returned.'

j. Subordinate clause, transitive verb

míí pe nai, moro' poka- sa'- Ø-ya ye'nen
 proud:one DENOM 2:be fish arrow-CMPL-2-ERG because
 'You are proud, because you arrowed fish.'

The strongly ergative system of Macushi is seen in the following characteristics:

- Intransitive subject (S) and transitive object (O) nominals are not marked for case and occur immediately before the verb (1a,c,d).

- Transitive subject (A) is marked by the suffix -ya 'ERG', whatever its position and whatever the form of the nominal, including pronouns (1c,d,e). The normal position for the A nominal is postverbal, but it can be fronted to precede the OV sequence (1d).

- When the nominals are not overtly expressed, and only then, the S and O are expressed by person-marking prefixes on the verb, and the A by a person-marking suffix (1b,f,g,h).

- When the A is a person-marking suffix, it also is immediately followed by the ergative suffix *-ya* (lf,g,h).

- The ergative system occurs also in finite subordinate clauses (li,j). Many Macushi subordinate clauses are finite and there are fewer nominalization processes than in Hixkaryana (see also sect. 3.3.3).

- There is a single set of person-marking affixes that occur as both prefixes and suffixes (cf. *u-* and *-u* '1' in (lg,h); and *-i* and *i-* '3' in (lf,g)). The only major exception is first person inclusive, which is irregular in all its forms: S is *-n/-nî*, the only suffixal S; O is *u(y)-*; and A is *-o* and is the only A form that is not followed by *-ya* 'ERG'.

In summary, the almost rigid ergativity of Macushi is expressed by case marking, verb agreement, word order and affix ordering, with case marking of both nouns and pronouns, all of which occur in both main and subordinate clauses and with all tense-aspect-modal categories.

2.2 Hixkaryana

(2) a. Intransitive with S nominal

n- omoh-txowî toto komo
3S-come-IP:COLL person COLL
'The people have come.'

b. Transitive with A and O nominals

biryekomo y- ari- ye Waraka
boy 3A3O-take-DP Waraka
'Waraka took the boy.'

c. Transitive with O nominal and A prefix only

biryekomo w- ari- ye biryekomo y- ari- ye
boy 1A3O-take-DP boy 3A3O-take-DP
'I took the boy.' 'He took the boy.'

d. Intransitive with S verbal prefix only

k- amryek-no ay-amryek- no n-amryek-no
1S-hunt- IP 2- hunt- IP 3-hunt- IP
'I hunted.' 'You hunted.' 'He hunted.'

e. Transitive with A and O prefixes, A-oriented

w- a- no m- a- no n- a- no
1A3O-take-IP 2A3O-take-IP 3A3O-take-IP
'I took him.' 'You took him.' 'She took him.'

f. Transitive with A and O prefixes, O-oriented

r- a- no ay- a- no k- a- no
 3A1O-take-IP 3A2O-take-IP 3A,1+2O-take-IP
 'She took me.' 'She took you.' 'She took us.'

g. Subordinate clause, nominalized intransitive verb

hawana komo y-omoki-txhe, n- as- ahxento-txowi omeroro
 visitor COLL 3-come- after 3S-REFL-feast- IP:COLL all
 'After the coming of the visitors, everybody feasted.'

h. Subordinate clause, nominalized transitive verb

Waraka wya biryekomo y-ari- txhe, n- ekho- txowni
 Waraka by boy 3-take-after 3S-be:sad-DP:COLL
 'After the taking of the boy by W, they were all sad.'

i. Nominalizations:

Intransitive	Transitive
oy-omoki-txhe 2- come- after 'after your coming'	ro-wya ay-ari- txhe 1- by 2- take-after 'after my taking you'
r-omoki-txhe 1-come- after 'after my coming'	o-wya r-ari- txhe 2-by 1-take-after 'after your taking me'
k- omoki-txhe- nye 1+2-come- after-COLL 'after our coming'	i-wya-nye k- ari- txhe- nye 3-by- COLL 1+2-take-after-COLL 'after they took us all'
Ø-omoki-txhe 3-come- after 'after his coming'	ro-wya Ø-ari- txhe 1- by 3-take-after 'after my taking him'
i-to-txhe 3-go-after 'after his going'	ro-wya i-koroka-txhe 1- by 3-wash- after 'after my washing him'

Hixkaryana has a mixed system, the main characteristics being:

- The basic word order pattern has both intransitive and transitive subject nominals following the verb (2a,b), though they can be fronted for special pragmatic effects (Derbyshire 1986). The object (O) nominal, if it occurs, is almost always immediately preceding the verb (2b,c), as in Macushi.

- There is no case marking in main clauses (2a,b).

- Person markers in the verb are always prefixes and occur whether or not there are S, A or O nominals in the clause (2a-f).

- Transitive verb person markers show a split between A-oriented and O-oriented forms, based on the hierarchy: 1/2 > 3. When 3 is the A and any other person(s) the O, the O-oriented forms are used (2f). Even when two third persons are involved, if the verb is preceded by an O nominal, then the 3 O-oriented form occurs (2c, *biryekomo yariye*). Otherwise the A-oriented forms occur (2e).

- First person verb prefixes show distinct forms for S (*kamryekno* in 2d), A (*wano* in 2e), and O (*rano* in 2f).

- Second person intransitive verb prefixes take one of two forms, depending on the verb. These are the same as the two transitive forms: either the O-oriented *o-* or *a-* prefix (vowel harmony determines which of these), or the A-oriented *m(i)-*. This appears to be an active-nonactive type of split, but there is no obvious semantic basis for it: most basic (nonderived) intransitive verbs take the *o-/a-* form, but verbs of action/motion vary, taking either one or the other form: *m-omokno* 'you came'; *mi-tono* 'you went'; *ay-amryekno* 'you hunted/went hunting' (2d); *o-horohno* 'you stopped (came to a halt)'. All derived, reflexive-detransitivized verbs take the *m(i)-* form.

- Third person prefixes have the same form (*n-*) for both intransitive (2d) and transitive (2e) verbs, except (as noted above) when the transitive clause has a nominal object immediately preceding the verb (2c; here the form is *y-*, which occurs with stem-initial vowels; with stem-initial consonants there is a null prefix).

- All subordinate clauses have nominalized, nonfinite verb forms (2g-i). There are many types of nominalization, marked as such by their suffixes (the *-txhe* suffix in these examples expresses action that is prior to the action of the main clause verb). The possessor prefixes that co-occur are the same forms that occur with simple possessed nouns (e.g., 'my house', 'my sister', 'my eye', etc.). These are the same as the O-oriented verb prefixes already described, except for third person when there is no preceding possessor nominal; the form is then *i-* (before consonants) and *Ø-* (before vowels), as in the last two pairs of examples under (2i). Virtually all nominalizations are ergatively organized, with the underlying S or O being expressed in the possessor form. This will always include a prefix on the head nominalized verb, whether or not there is also a preceding possessor nominal (compare (2g) and (2h), where

there are possessor nominals, with the (2i) forms, where there are no possessor nominals). The underlying A of the nominalized transitive verb is expressed by a *wya* phrase, as in (2h) and the examples in the second column of (2i). This postposition *wya* is cognate with Macushi *-ya* 'ERG'; in Hixkaryana it also functions as the indirect object marker.

Hixkaryana thus differs from Macushi in a number of ways. First, in main clauses, H has: (i) a different basic word order, with S lining up with A post-verbally; (ii) no case marking of A; and (iii) different patterns of person marking on the verb – all are prefixes, and there are two paradigm sets, one A-oriented and the other O-oriented. Second, in subordinate clauses, H has only nonfinite, nominalized forms of the verb. It is in the subordinate clauses, however, that ergatively-organized patterning occurs, and it is clearly related to the much fuller ergative system in Macushi, with a cognate form for the ergative marker.

2.3 Panare (from Gildea 1990, following his analysis)

(3) a. Nominative system: intransitive with S nominal

n-as- ama- ika-yaj kën
 3-DTR-throw:out-NEG-PPERF1 ANIM:INV
 'S/he stayed.'

b. NOM system: transitive with A and O nominals

Toman y- áma- yaj kën
 Thomas 3A/30-knock:down-PPERF1 ANIM:INV
 'S/he knocked down Thomas.'

c. NOM system: transitive with A nominal only

n-petyúm-yaj kën
 3-hit- PPERF1 ANIM:INV
 'S/he hit him/her.'

d. Ergative/passive system: intransitive

y-os- awantë-jpë y-it- ijkëmi-sa'
 3-DTR-kill- PERF:INFER 3-DTR-tire- PERF:VIS
 'He died worn out.'

e. ERG/PASS system: transitive

ejke manko, y-ikitë-jpe ty-uya
 NEG:EXIST mango 3-cut- PERF:INFER 3- DAT
 'There is no mango he cut it/it has been cut by him.'

f. Main clause passive construction

naro y-ikiti-sa' kěj (tëëna úya)
 parrot 3-cut- PERF:VIS ANIM:PROX (Teena DAT)
 'The parrot is cut (by Teena).'

These are all the Panare examples given by Gildea in support of his hypothesis, which is that Panare is still basically a nominative-accusative system, with passive constructions that are close to becoming an ergative system. The characteristics he regards as relevant are:

1. In what he describes as the nominative system in Panare, the S and A nominals follow the verb and neither they nor the O nominal are marked for case (3a-c). The O nominal normally occurs immediately before the verb (3b). The person markers in the verb are always prefixes and occur whether or not there are S, A or O nominals in the clause (3a-c). The third person prefix in the transitive verb varies according to whether there is a preceding O nominal (3b,c). All of this is exactly what is found in Hixkaryana and the third person prefixes (*n-* and *y-*) are identical in form and function in the two languages.

2. Gildea then describes what he says could be either an ergative system or a passive construction in a nominative system (3d,e). The same set of verb agreement prefixes agrees with the subject of intransitive (3d) and the object of transitive (3e). In both examples, however, the form of the prefix is *y-* '3', which T. Payne (1990) shows as part of the transitive object-marking set. If, as Gildea finally concludes (see next paragraph), these are passive constructions, one would expect the intransitive *n-* '3' prefix (as in (3a)). The A pronominal in (3e) is case marked with the dative postposition *uya*, which is cognate to the Macushi *-ya* 'ERG' and Hixkaryana *wya*. This is parallel to what occurs in Hixkaryana nominalized subordinate clauses, but Gildea is arguing that (3d) and (3e) are part of the finite main clause system in Panare. I shall return to this in sect. 3.3.1.

3. Gildea finally argues for a passive analysis (as against an ergative analysis) for the constructions in (3d), (3e) and (3f). The aspectual verb suffix *-sa'* 'PERF' and the auxiliary *kěj* 'ANIM:PROX' are, he claims, the morphological elements that signal it as passive. He does not, however, explain why the subject in (3f) occurs clause initial, when the normal position for all subjects is following the verb. Nor does he give any explanation for the intransitive main verb in (3d): *yosawantëjpë* 'he died'. Is this also some kind of passive, even though it is formed from an intransitive

verb? And why the *y-* '3' prefix, when the third person intransitive prefix is *n-* (3a), and *y-*, according to T. Payne (1990), is part of the transitive object-marking set?

4. According to Gildea, the passive construction has come about through reanalysis of a nominalized construction. He tacitly accepts nominalization as the synchronic analysis for this type of construction in other Carib languages. And the aspectual suffix *-sa'*, which he claims is a passive marker in (3f), seems to be a nominalizing suffix in *yítíjkēmísa'* in (3d) (= 'the one who was worn out'). I will discuss these *-sa'* constructions more fully in sect. 3.2.2.

3 Discussion of alternative hypotheses

3.1 The alternatives defined

First, I will state more clearly what the two alternatives are with regard to the direction of diachronic change in the Cariban case-marking and verb-agreement systems.

Hypothesis 1 (Gildea, T. Payne):

The historically earlier system was nominative-accusative. (The languages that currently still reflect that stage are Hixkaryana, Waiwai, Surinam Carib, Tiriyo). The change has been to mixed systems via nominalization and passive constructions. (The languages now at this mixed stage are Panare, Apalaí, Carina, Yukpa). The final stage is a fully ergative system. (Languages that have reached that stage are Macushi, Pemong, Kuikuro, Akawaio, Arekuna).

Hypothesis 2 (Derbyshire, Franchetto):

The historically earlier system was ergative-absolutive in main and subordinate clauses (Macushi, Pemong, Kuikuro). The change has been toward: (1) in main clauses, loss of nominal case marking and introduction of a partial nominative pattern of verb agreement that is mixed with elements from the earlier ergative-absolutive system, and (2) in subordinate clauses, nominalized constructions organized on the earlier ergative-absolutive basis (Hixkaryana, Panare, Waiwai, Surinam Carib).

3.2 Evidence offered in support of Hypothesis 1

Gildea offers two main types of evidence: application of general methodological principles (3.2.1), and a specific construction in Panare (3.2.2).

3.2.1 General principles. Gildea follows certain fairly well-established principles relating to morphological diachronic change: independent words tend to suffer phonological and syntactic loss over a period of time and become attached to other words, first as clitics and later as rigidly bound affixal forms. Thus, free pronouns become agreement affixes, auxiliaries become tense-aspect affixes, etc. Following these principles, he proposes four parameters for determining the likely relative ages of different morphological systems in the languages of a family such as Cariban:

(1) Size: affixes in an older system should be phonologically smaller than affixes in a newer system.

(2) Degree of binding: forms will be more rigidly bound to their heads in an older system and more likely to appear as clitics and auxiliaries in a newer system.

(3) Irregularity: the older system will have more morphological irregularity than a newer system.

(4) Etymological transparency: in older systems it will be more difficult to track down the source of the bound forms.

These principles may be sound ones, but Gildea's application of them to Cariban languages is highly questionable.

One major problem in applying any such principles in the Cariban family is the lack of solid comparative work and the consequent lack of reliable reconstructed phonological and lexical forms. Gildea's attempt to argue for the nominative system being the older one on the basis of these four criteria is weak. For example, he gives no evidence in support of the statement that "suffixes associated with the nominative system are frequently very small in phonetic content". The fact is that Hixkaryana, which Gildea says is the most nominative language of them all, has many suffixes that show more phonetic content than those in Macushi, which is the most ergative of the languages. Similarly, the degree to which forms are bound to their heads is much the same in all the languages which he discusses. In a footnote Gildea acknowledges that his statements are "a quick pass over

gross characteristics" and promises a more detailed reconstruction at some future time. In the present state of Cariban comparative studies, these general principles cannot tell us much about the direction of change in Cariban languages.

3.2.2 Specific claims. The more specific type of evidence Gildea adduces is the *-sa'* suffix and the constructions in which it occurs. What makes this suffix particularly relevant is that Gildea uses it as a key part of his argument for a passive construction in Panare (3f) and it is also the main focus of T. Payne's (1990) paper. Payne argues that *-sa'* has three distinct functions in Panare: (1) nominalization, (2) perfect aspect, and (3) passive. I will offer counter-arguments here in support of my claim that Panare *-sa'* has a single function that is similar to the use of its cognate form in Hixkaryana: it is a past perfective aspect nominalizer that occurs with ergatively-organized nominalizations. First, I will present the Macushi and Hixkaryana constructions.

Macushi has exactly the same form as Panare *-sa'*. It has a single basic function: to express completive-perfective aspect. The examples in (4) illustrate this function, in both main (4a,b) and subordinate (4c) clauses. Another example of its occurrence in a subordinate clause is found in (1j). It also substitutes for *-pî* as a past tense marker in all these examples. All the other examples in (1) have the *-pî* 'PAST' suffix in the verb forms, but the two suffixes never co-occur in the same clause. Abbott (1991) does not consider *-sa'* to be a nominalizer, but some subordinate clause constructions in which it occurs could possibly be analyzed as nominalizations.

(4) Macushi *-sa'* constructions

a. Intransitive main verb

aa-ko'man-pî'- sa'
 3- remain-ITER-CMPL
 'He has remained (repeatedly).'

b. Transitive main verb

yei ya'tî-yonpa-sa- i'-ya
 tree cut- CONAT-CMPL-3- ERG
 'He tried to cut the tree.'

c. Transitive subordinate clause

t- ekkari aretí'ka-sa'- tíu- ya yai aw-enna'po-'pí
 3:REFL-food finish- CPL-3:REFL-ERG at 3- return- PAST
 'When he finished his food, he returned.'

Hixkaryana has the cognate form *-saho*, always associated with past perfective action, but occurring only as a nominalizer, never in main clauses as part of the finite verb (5a-c). Like most other nominalizations in Hixkaryana, this type is ergatively organized: the underlying S or O is the pivot of the nominalized past state or action. Thus, in (5a) it is the S of the intransitive verb that is the pivot: 'the one who danced'; in (5b and c) it is the O of the transitive verbs that is the pivot: 'the one (someone) took away' and 'the one (someone) ate'. When the verb is transitive, the underlying A subject is never overtly expressed, either as a *wya* phrase or in any other way. These nominalizations are not possessed forms and the prefix (*i-*, *Ø-*, *t-* in these examples) is not a person marker; it is a generalized prefix (GP) that has several different functions and six different forms, each form occurring with a different sub-set of stems (see Derbyshire 1985:192-4, 232, for a more complete description of *-saho* and the forms and functions of the prefix). The *-saho* nominalizations function syntactically as predicate nominals (5a) or relative clauses, with or without a head noun phrase (there is a head noun in (5b), *romuru*). The function in (5c) is similar to predicate nominal, but when the overt copula occurs (*naha*), if the predicate complement is a noun it has to be denominalized (by the postposition *me*).

(5) Hixkaryana *-sah(o)* constructions

- a. *i-* manho-saho moki
 GP-dance-NOMLZR that:one
 'That one (was) the one who danced.'
- b. *n-*omok-no harha romuru, *Ø-*a- saho
 3-come-IP back my:son GP-take-NOMLZR
 'My son who was taken away has returned.'
- c. *t-* ono-sah me naha kyokyo tho
 GP-eat-NOMLZR DENOM it:is parrot DEVL D
 'The parrot is the one that has been eaten.'

(6) Panare *-sa'* constructions

a. Nominalization, intransitive verb (T. Payne, 430)

těna upa-sa' karoma-ñe paka
 water dry-NOMLZR drink- NONPAST cow
 'The cows drink dry (i.e. stagnant) water.'

b. Nominalization, transitive verb (T. Payne, 430)

tosen-pëkë pu'ma-sa' t- u'- se e'ñapa i'yakae-úya
 big- part kill -NOMLZR IRR-give-HAB people family- DAT
 'Part of the large killed (thing) the people give to
 the relatives.' (nominalization on PATIENT of 'kill')

c. Perfect aspect, intransitive verb (T. Payne, 430)

wu-ch- irema-sa' yu
 1- DTR-feed- PERF 1S
 'I have eaten.'

d. Passive, formed from transitive verb (T. Payne, 442)

ay- a'të- sa' amën mäk- úya
 2S- chase-PASS 2S:PRO 3VIS-DAT
 'You are chased by him/it.'

e. Passive, formed from transitive verb (T. Payne, 440)

y-an- sa' y-úya mankowa Kandelária-po pake
 3-get-PASS 1-DAT poison Candelaria-at before
 'I got the poison in Candelaria.'

f. Passive, co-occurring with auxiliary (Gildea 1990)

naro y-ikiti-sa' kěj (tëëna úya)
 parrot 3-cut- PERF AUX:ANIM:PROX Teena DAT
 'The parrot is cut (by Teena).'

The Panare examples (6a-e) are from T. Payne (1990); (6f), repeated from (3f), is from Gildea (1990). Payne's five examples illustrate the three functions which he attributes to *-sa'*: nominalization (6a,b), perfect aspect (6c), and passive (6d,e). The two nominalizations are similar to the Hixkaryana (5b) type of nominalization, which I describe above as having a relative clause function; in (6a) the S (těna 'water (is dry)') is the pivot on which the nominalization is formed, and in (6b) it is the O (tosenpëkë '(... killed) the large thing') that is the pivot. Perfect aspect also seems to be a component in these nominalizations (as in Hixkaryana), so that it has this in common with the second function of *-sa'* that Payne goes on to describe (6c). This, and all other examples of the perfect aspect function that Payne gives, are of intransitive verbs. (6c) looks very

much like the Hixkaryana predicate nominal syntactic function of the *-saho* nominalization (5a), which would suggest that (6c) could mean: 'I (am) one who has eaten'. (One difference from Hixkaryana is that in the Panare construction there is a person-marking prefix *wu-* '1', which belongs to the intransitive paradigm.) All the examples Payne gives for the passive *-sa'* construction are transitive verbs (including 6d,e shown here, and also 6f, supplied by Gildea). The person-marking prefixes in these passive *-sa'* constructions (*ay-* '2S' and *y-* '3') belong to the transitive object paradigm set. (Panare has distinct intransitive and transitive prefix sets, like Hixkaryana, and unlike Macushi.) Once again, perfect aspect is a component of these "passive function" examples, just as it is of the "nominalization" and "perfect aspect" functions that Payne distinguishes. And again, nominalization, as in Hixkaryana, would appear to be a viable alternative analysis: 'You (are) the one who was chased by him/it' (6d), and 'The poison (is) the thing that was gotten by me...' (6e). Payne's reasons for regarding the (6c-e) constructions as finite main clauses rather than nominalizations are not convincing, as I will seek to show below and in sect. 3.3.1.

T. Payne recognizes that the two functions, perfect aspect and passive voice, are very close, but defends the distinction he makes on the grounds that the stative component of perfect aspect is more appropriate to intransitive verbs, whereas passive, which in his view is both stative and eventive, fits better with transitive verbs (p.440-1). In discussing (6d), he notes that the set of prefixes used on the passive verb is the transitive object set. An object marker for a passive subject is somewhat unusual and it forces him to defend a nonpromotional passive analysis, i.e., one in which the agent loses its formal subject properties, while the patient retains formal characteristics of transitive objects (p. 431). He claims that the "passive subject" has prototypical subject characteristics, but he does not say what they are.

Payne argues convincingly against a main clause ergative analysis for these constructions, but he does not satisfactorily show that the passive analysis is to be preferred to an ergatively-organized nominalization analysis. In discussing (6e) on p.441, one reason he gives for preferring the passive is that a nominalization analysis ('the poison is a gotten thing by me') "sounds extraordinarily affected". But this is surely true also of a passive interpretation ('the poison was gotten by me'). His main argument for a main clause passive analysis, however, is the discourse context in which it occurs. (6e) is the second sentence of a short response discourse, being a

descriptive statement relating to a topic ('poison') which has been introduced in the first sentence. In that kind of context nominalization is an appropriate and frequently used construction in Hixkaryana and other Cariban languages. The *-saho* construction is just one of several nominalization strategies in Hixkaryana that function in this way, as a discourse backgrounding device. More information is needed about other Panare nominalizations, and whether they also function like this.

3.3 Evidence offered in support of Hypothesis 2

3.3.1 The Panare *-sa'* construction. I will first attempt to show that the Panare *-sa'* construction should be analyzed as a nominalization in all its uses. Both Gildea and T. Payne actually demonstrate that this is at least a feasible alternative to their hypothesis. Gildea gives an example of what he calls "the historical possessed nominalized verb as a predicate nominal": this is formally identical to the example he gives for the passive construction (my (3f), repeated as (6f)). The question is: What evidence is there that the nominalization has undergone reanalysis to passive? Payne, as we have seen, includes nominalization as one of the functions he proposes for *-sa'*. My claim is that a nominalization analysis is all that is needed to provide the most satisfying explanation for all the data that Gildea and Payne provide. This is not to deny the possibility that passives may eventually develop from these nominalizations in Panare, as has been documented for other languages (e.g. Ute, per Givón 1988).

The nominalization type I propose is the same as that found in Hixkaryana: first, from a semantic perspective, it relates to perfect and/or perfective aspect; and second, formally and syntactically, it is ergatively organized with the pivot of the nominalization being either the underlying intransitive subject or the transitive object. Such a nominalization analysis is to be preferred for the following reasons.

(1) It provides a single coherent explanation for both the intransitive and transitive uses of *-sa'*, instead of the two different functions T. Payne proposes ((6c) vs. (6d,e)), and incorporates both of these into the other function he identifies: nominalization (6a,b).

(2) The fronted nominal in (6f) follows the Panare syntactic pattern of genitive constructions (GEN-N) rather than clause constituent order: the subject of a clause normally follows the verb ((3a-e) and the following

discussion). The same fronted nominal appears in (6a) and (6b), as the genitive modifiers of the nominalized forms.

(3) The predicate nominal construction, in the context of Carib languages (and it is amply illustrated for Panare in T. Payne's work), is a more natural analysis than a passive main clause. This applies particularly to uses such as the discourse backgrounding device described above in relation to (6e). I have noted the similarity of the Panare intransitive construction in (6c) and the Hixkaryana predicate nominal in (5a); this applies equally to the Panare construction in (6d), which is formed from a transitive verb.

(4) In further support of the predicate nominal analysis, what Gildea describes as an auxiliary (*kěj* in (6f)) is more naturally categorized as a third person deictic animate pronoun. Again, this class of pronouns, in this kind of function, is common in Cariban. Gildea acknowledges that *kěj* is historically a deictic pronoun but claims it has been reanalyzed as an auxiliary. He does not give any convincing evidence for this. In fact, the form has all the characteristics of an uninflected pronoun, comparable to first person *yu* (6c) and second person *aměn* (6d). These pronouns frequently occur in Cariban languages as the subject of predicate nominals (with or without an overt copula).

(5) Under this analysis, the *úya* 'DAT' agentive phrases (6d,e,f) are then seen as a normal way of expressing the agent by way of an oblique phrase in this kind of ergatively-organized nominalization, following a genitive-absolutive strategy. Both Gildea and T. Payne note that in Panare the agentive phrase is optional, and often omitted. In Hixkaryana it is obligatorily suppressed with the *-saho* nominalizations, though used frequently with other types of nominalization.

(6) The perfect/perfective characteristic of the *-sa'* nominalization allows for that aspectual meaning to have been historically prior to the nominalizer function. That is the diachronic sequencing that T. Payne (pp. 451-2) also suggests. I noted in sect. 3.2.2 that in Macushi the nominalizing function of *-sa'* is at best only marginally present, whereas the perfective aspect function is the dominant one, in both finite and nonfinite clauses (Abbott 1991). This would seem to be an argument supporting Macushi as manifesting the earliest of the systems, in which *-sa'* had a single, aspectual function, before going on to develop additional functions of nominalizer and passive at later stages in the other languages.

3.3.2 Nominalizations. Further support for the hypothesis that the ergative-absolutive system was the historically earlier system lies in the way nominalizations in general are formed. Languages that have lost the main clause ergative marking (e.g. Hixkaryana, Panare) use nominalization processes that consistently follow the Genitive-Absolutive strategy (where S and O are the pivots). The most straightforward explanation for such a strategy is that it results from an earlier more fully developed ergative-absolutive system. With regard to the opposite possibility, that ergative-absolutive systems have developed from genitive-absolutive nominalizations, Comrie (1978:375-6) says:

I am not aware of any actual instances where ergativity in the verbal system arises from such an ergative nominalization construction.

So there would seem to be no precedent for what Gildea is claiming has happened in Cariban: that the absolutive-type nominalization has been the source of the later passive and ergative developments.

Evans (1985:409) describes the Kayardild (Tangkic, Australian) resultative nominalization as being ergatively organized, that is, based on the Genitive-Absolutive strategy. Kayardild has changed from earlier ergative to accusative morphology. Comparison with other Tangkic languages, which do not have the same resultative construction, suggests that in Kayardild it is an innovation that followed the change to accusativity. Evans sees no need to invoke the language's ergative ancestry to explain the construction, but regards it as just another example of the correlation between ergative-type constructions and perfective or completive aspect that is found in many languages, regardless of whether they have a history of more generally ergative systems. This may be so for Kayardild, in which there is only this one construction that needs to be explained. The Cariban case is quite different. In these languages there are many different types of nominalization that are organized on the Genitive-Absolutive basis.

3.3.3 Subordinate clauses. Closely related to the Genitive-Absolutive nominalization strategy are the facts about Cariban subordinate clauses. In some of the languages (especially Hixkaryana), this type of nominalization is the only way to express clause subordination, including relative clauses, complement clauses, and adverbial clauses. In addition in Hixkaryana, the agentive *-wya* phrase that expresses the underlying subject of a transitive verb nominalization is most naturally explained as being a relic

of the ergative marker in an earlier system (represented today by the cognate form *-ya* in Macushi). One other relevant factor about Hixkaryana subordinate clauses is that the word order is different from that in main clauses: the underlying A and S normally occur before the nonfinite verb, giving SV and AOV orders (Derbyshire 1981; 1985:41). Thus, subordinate clauses in Hixkaryana retain strong vestiges of what I have postulated to be the historically earlier patterns of word order and case marking in main clauses. In contrast to Hixkaryana, Macushi has both finite and nonfinite forms of subordinate clauses (Abbott 1991) and nominalization processes are less developed. Panare appears also to have both finite and nonfinite subordinate clauses but it is moving more towards the Hixkaryana type, via what Gildea (1989) calls "less finite relative clauses". This latter development in Panare is significant for this discussion on direction of change: it shows that in at least one area of the language, Panare is moving towards Hixkaryana and not away from it (as Gildea is claiming with regard to the history of the case-marking systems – see Hypothesis 1). As we have seen, in what I consider to be nonfinite subordinate clauses, Panare uses the genitive-absolutive strategy and, optionally, an agentive phrase for the underlying transitive subject. Thus, both Hixkaryana and Panare subordination strategies support the existence of an earlier ergative system. This assumes that subordinate clauses are more conservative, and that diachronically it is generally in the main clause syntax that innovations arise (Givón 1979.99, 259; Mallinson and Blake 1981.334).

3.3.4 Hixkaryana transitive prefixes. Further support is found in the O-oriented transitive verb person-marking prefix set in Hixkaryana (2f). This could be a reflection of an earlier absolutive set, which agreed with both S and O nominals. There is still one intransitive prefix that would give further support to this: the second person *o-/a-* prefix, which is identical with the transitive O-oriented form (cf. (2d) *ayamryekno* with (2f) *ayano*). There is one language in the family, De'kwana, in which a more complete set of such absolutive markers is retained in the transitive and intransitive paradigms (first person, first person inclusive, and second person forms) (Hall 1988). In Hixkaryana, the same set of O-oriented prefixes is used to mark the possessor in possessed nouns, including the nominalizations.

3.3.5 Summary. In conclusion, there is considerable evidence from these three languages – Hixkaryana, Macushi, and Panare – to support the hypothesis of an earlier ergative-absolutive system of case marking for Cariban languages. The strength of the evidence lies in the

combination of the factors we have examined. It might be possible to produce counter-arguments for any single factor, but it is difficult to argue against the cumulative effect of all of them: (1) the reasons for preferring a basically nominalizing function for Panare *-sa'*; (2) the prevalence of the genitive-absolutive strategy for nominalizations in all these languages; (3) the subordinate clause patterning of word order and case marking that reflects earlier systems, in Hixkaryana and Panare; and (4) the O-oriented transitive person markers in Hixkaryana (and De'kwana) that support the hypothesis of an earlier more complete absolutive person-marking system in Cariban.

A more general consideration is that there is nothing in these languages synchronically to suggest a three-way division of systems such as Gildea proposes: nominative-accusative, mixed, and ergative-absolutive. Hixkaryana does not have a nominative-accusative system. It is a mixed system, just like Panare (and Apalai, Galibí, Waiwai Franchetto 1990), De'kwana (Hall 1988), and no doubt many others. Hixkaryana and Panare are, in fact, remarkably similar in most areas of morphosyntax. The languages that are most consistent in their case marking are Macushi (and closely related languages such as Pemong) and Kuikuro (see sect. 4.1), and these all have an almost rigidly ergative-absolutive system. This surely must be regarded as the historically earlier system, in the absence of any strong evidence to the contrary.

There will, however, still be some lingering doubt until more serious comparative work has been done for Cariban, and we have more reliable information about Proto-Cariban reconstructed forms, especially those relating to the person-marking affixes, the nominal case-markers, and the sources of the nominalizers found in today's languages.

4 Evidence from other Cariban languages and other Amazonian language families

So far we have been considering only three Cariban languages, with occasional reference to one or two others. In this section I summarize facts that have been reported about other Amazonian languages that seem to point to ergative-absolutive systems having once been dominant in the area. I begin with another Carib language, Kuikuro, which is spoken in central Brazil, far south of the Amazon river (4.1). I then move on to present some facts on non-Cariban languages of Amazonia (4.2).

4.1 Kuikuro (Carib)

As noted in sect. 3.1 (Hypothesis 1), Gildea lists five Cariban languages as being predominantly ergative. Four of these (Macushi, Pemong, Akawaio and Arekuna) belong to the Northern Carib group (Durbin 1977), and are spoken by people who live far north of the Amazon, in Guyana, Venezuela, and the state of Roraima in the extreme north of Brazil. The other, Kuikuro, is from the Southern Group, spoken by people located on the Upper Xingu river of Central Brazil and geographically far removed from the other four. Durbin (1977) posited the split between the Northern and Southern groups as being the earliest split from Proto-Carib, perhaps as long as 4,500 years ago.

Franchetto (1990) presents Kuikuro as being close to Macushi in the comprehensiveness of its ergative system and word order patterns. It is not quite so rigidly ergative as Macushi, and Franchetto does in fact use the term "split ergativity" to describe it. But that it is solidly ergative can be seen from this summary of it (p. 407):

... it exhibits ergativity in three distinct morphosyntactic systems: nominal case marking, pronominal clitics and basic constituent order.

In basic declarative clauses, both independent and subordinate, the three systems are strictly ergative, and surface in ways very similar to Macushi (same word order, absolutive prefixes, and the ergative marker with a person-marking proclitic that immediately follows the verb). Even the forms of some of the person markers are the same in the two languages: *u-* '1', *i-* '3'. One striking difference is the form of the ergative marker – *héke* in Kuikuro, compared with Macushi *-ya*. It is only in what Franchetto calls 'interactive moods' (intentional and hortatory moods) that there is split ergativity: with first person subjects other than 'LEXCL', there is a de-ergative marker in the verb that results in a nominative system; with second person and first person exclusive subjects either the nominative or ergative construction can be used; and with third person subjects only the ergative construction occurs.

It seems unlikely that two languages so far removed from one another, and for such a long time, as Kuikuro and Macushi could have independently developed such similar, solidly ergative systems from earlier nominative systems, while most of the other languages in the family have mixed systems.

Franchetto compares Kuikuro with four other Carib languages that she says are in central Brazil, but in fact they are all found north of the Amazon River (Apalai, Galibí, Hixkaryana and Waiwai). All four have the Hixkaryana type of cross-referencing verb agreement system. She then concludes (p. 425) with:

... a hypothesis concerning the diachronic development of ergativity and nominativity in these languages. This hypothesis is that nominativity in Kuikuro is a relatively recent phenomenon, and that the present system of interactive moods represents the beginning of the nominative pattern [that is more] fully developed in the other non-ergative Carib languages. In those languages the older ergative pattern is still found in dependent clauses ... This hypothesis will have to await detailed comparative and historical analysis of many Carib languages in order to be confirmed or rejected.

4.2 Non-Cariban Amazonian languages

Finally, the case for an earlier ergative case-marking system in Cariban is reinforced by the extent to which languages of other families in lowland South America still exhibit ergative-absolutive patterning. Derbyshire (1987) reports on what has been documented about these languages. Here I will briefly summarize the relevant facts pertaining to six language families.

Panoan languages of Peru have nominal ergative case marking systems (Eugene Loos, Gene and Marie Scott, and Margarethe Sparing Chavez, all personal communications). Cavineña (Tacanan), spoken in Bolivia, also has ergative case marking of nominals, and a split system for pronouns based on a person topicality hierarchy (Camp 1985). Sanuma (Yanomaman) has a predominantly ergative nominal case-marking system (Borgman 1990). Languages with split case-marking and/or cross-referencing agreement systems that include ergative-absolutive constructions are: Canela-Kraho, Kaingang, Shokleng, and Xavante (all Ge, Urban 1985), Paumarí (Arauan, Chapman and Derbyshire 1991), and Cinta Larga, Guajajara, Guaraní, and Munduruku (all Tupian, Harrison 1986). Apart from Tupí-Guaraní, little has been said on any of these language families about the direction of historical change in the case-marking and agreement systems. Harrison (1986) has supplied one hypothesis for the Ge and Tupian families of central Brazil: a change from earlier ergative systems to later more nominative systems of cross-referencing.

Jensen (1990) has given us a much more detailed account of the history of the cross-referencing systems of Tupí-Guaraní languages. (There is no nominal case marking in these languages.) Tupí-Guaraní is the largest family in the Tupí stock and has been the subject of some solid historical and comparative work (see, for example, Jensen 1984, Lemle 1971, and Rodrigues 1984/85). This has resulted in a reliable reconstruction of the cross-referencing system of Proto-Tupí-Guaraní (Jensen 1990). Following Jensen, the main features of the protosystem are: in subordinate clauses, an ergative-absolutive system; in main clauses, for intransitive verbs, a split S (active-inactive) system and for transitive verbs, a split system based on a person-agency hierarchy. This earlier patterning was preserved in the (now extinct) language Tupinambá, and is still in essence found in Guajajara (Harrison 1986) and in members of 6 of the 8 subgroups of Tupí-Guaraní proposed by Rodrigues (1984/85). Other languages in the family have deviated from the protosystem, the principal change being the replacement of the strongly absolutive system in subordinate clauses by the split systems of the main clause. One language, Urubú, has also eliminated the split system (based on the person-agency hierarchy) in main clause transitive verbs, having changed to a consistent marking of only the A referent. There have been other changes in these five languages, all in the direction of a move away from a mainly absolutive system to a more nominative-type system. Jensen (forthcoming) proposes that, at a stage prior to Proto-Tupí-Guaraní, the cross-referencing system was entirely ergative-absolutive, and she suggests a pathway for the subsequent changes that took place.

Some Arawakan languages have active-nonactive agreement patterns that might also reflect earlier ergative-absolutive systems (David Payne 1981; Wise 1986).

David Payne (1990) reports a number of grammatical forms that are widespread in South American languages. He suggests that at least some of these can only be reasonably explained in terms of either a remote genetic relationship between the language families or remote language contact among speakers of the ancestors of today's languages. This would also seem to apply to the widespread nature of the ergative phenomena, which is clearly of great antiquity.

I submit that all the evidence presently available to us points to historically earlier ergative-absolutive systems in many of the language families of the Amazon area. A more definitive statement about the course of the development away from ergativity must await the results of more thorough comparative studies.

ABBREVIATIONS

ANIM	animate
AUX	auxiliary
CMPL	completive
COLL	collective
CONAT	conative
DAT	dative
DENOM	denominalizer
DEVLD	devalued
DP	distant past
DTR	detransitivizer
ERG	ergative
GP	generalized prefix
HAB	habitual
INFER	inferred
INV	invisible
IP	immediate past
IRR	irrealis
ITER	iterative
NEG	negative
NOMLZR	nominalizer
PASS	passive
PERF	perfective
PPERF	past perfective
PRO	pronoun
PROX	proximal
REFL	reflexive
S	singular
VIS	visible

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