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ERGATIVITY AND TRANSITIVITY IN PAUMARI

Desmond C. Derbyshire

0. Introduction
1. The Coexisting Case-Marking Systems
 - 1.1 The Ergative System
 - 1.2 The Accusative System
 - 1.3 Superiority of the Ergative Analysis Over a Passive Analysis
2. Some Implications for a Theory of Transitivity
 - 2.1 Concept of "Degree of Transitivity" and How It Should Be Measured
 - 2.2 Claim Concerning the Function of Case-Marking
 - 2.3 Discourse Grounding Strategies as an Explanation for Transitivity Phenomena
3. Summary and Conclusions

0. Introduction

Paumarĩ,¹ a Brazilian language belonging to the Arawakan family, has a split case-marking system of a type which, so far as I am aware, has not been previously reported. The ergative system occurs in clauses having the basic word order pattern, or in clauses where a significant part of the basic pattern is preserved. The nominative-accusative system occurs in clauses where other word orders are used. For the purpose of this paper, by "basic word order" I mean the pragmatically least marked and statistically most frequent order.

Dixon (1979, 79-80) explains all split case systems in semantic terms, and discusses three basic types of conditioning factor: the semantic content of verbs, the semantic content of NP's, and tense/aspect choice. He goes so far as to explain the "grammatically conditioned split" that has been reported for some languages, i.e. where the morphological marking differs between main and subordinate clauses, as being primarily conditioned by the semantics of the subordinate clause. In Paumarĩ, however, there does not seem to be any way of explaining the phenomenon except in terms of a grammatically conditioned split, this being strictly along the lines of word order patterns, although it seems more appropriate to describe it as two coexisting systems rather than a single, split system. The semantic distinctions that have been proposed to account for split systems are not relevant, since the same range of semantic phenomena occurs in both the ergative and accusative systems.

In this paper I first describe the dual case-marking system in Paumarĩ (s.1), and then discuss some implications it has for a theory of transitivity such as that proposed by Hopper and Thompson (1980) (s.2). In the course of this discussion, I draw attention to a likely functional explanation for the existence of the two systems and for the word order patterns with which they correlate.

1. The Coexisting Case-Marking Systems

1.1 The Ergative System

There is morphosyntactic ergative marking in clauses with unmarked word orders. Unmarked orders are: intransitive VS, and transitive SVO (Chapman, 1979, 5):

- (1) asara-ha ada isai
cry- THEME,m(S) DEM,m child

'The child cried.'

- (2) Dono-a bi-ko'diraha-'a- ha ada isai hoariha
Dono-ERG 3sg-pinch- COMPL-THEME,m(0) DEM,m child other

'Dono pinched the other boy.'

The ergative markings are: the clitic -a is postposed to the transitive subject nominal (but not to pronouns or demonstratives), and never occurs with intransitive S; the postverbal position of intransitive S and transitive O contrasts with the preverbal position of transitive S; the verbal 'theme' suffix agrees in gender and number with intransitive S and transitive O; the verb prefix bi- '3sg' marks only transitive subject; and the demonstrative occurs only with intransitive S and transitive O, never with transitive S in the basic word order pattern.

Both S and O nominals can be omitted, leaving only verb person/number/gender markers, including the prefix bi- '3sg.' If the O only is omitted and S precedes V, the ergative marker -a is retained:

- (3) mina'di vani- a bi- noba- 'iana-hi
electric eel CONTR-ERG 3sg-shock-again-THEME,f(0)

'An electric eel shocked her again.'

If the S is omitted, the prefix bi- still occurs to signal third person transitive subject. In this case, the subject nominal may be added for clarification in a right-dislocated position, but only when the object nominal is also omitted (Chapman, p.c.)²:

- (4) bi- oga- ki, 'ovari Parajairo-a
3sg-know-NONTHEME, S-focus PRO Parajairo-ERG

'He knew it, that one Parajairo (knew).'

The orders *VSO and *VOS do not occur. OSV occurs only with the O in a left-dislocated position, and the subject nominal then also has the ergative marker -a:

- (5) 'akadi-prato, jara radahaki-a bi- na- roiroi-mai-
 our- plates, non-Paumarf passing- ERG 3sg-CAUS-row- side by side-
 -ribani-vini ...
 -line- DEP, trans ...
 'Our plates, a passing Brazilian having stood them up side by side
 in a line...'

Thus, the ergative system is used: (i) when the S nominal occurs immediately preceding the verb, i.e. SV(0) and O, SV; (ii) when the S nominal is omitted and the O, if it occurs, is postverbal, i.e. V(0); and (iii) when the S nominal is right-dislocated and the O is omitted, i.e. V(-o), S.

1.2 The Accusative System

The only other possible orders involving S and O nominals are SOV and OVS, and these occur quite frequently, although neither is as common as SV0. In both, of course, the O nominal is immediately preverbal, and it is always marked by the clitic *-ra*. There is no morphological marking of S, and the verb prefix *bi-* '3sg' does not occur to agree with S. The verbal 'theme' suffix usually agrees in gender and number with S, but in the SOV pattern it can agree sometimes with O, under conditions which are still not clear to Chapman (p.c.). As seen in (6), intransitive S may also occur in the preverbal position, for the purpose of highlighting that constituent (cf. the explanation given in s.3 for the fronting of the O):

- (6) Morosi va- a- kaira-ha- 'a- ha
 Morosi 3pl-VBLZR-guava-distance-COMPL-THEME,m(S)
 'Morosi (and companions) went to get guavas.'
- (7) bano pa'isi 'o-sa'a- ra anani-hi
 piranha small my-finger-OBJ bite- THEME,f (O)
 'A small piranha bit my finger.'
- (8) 'o-kavamoni-na ho-ra ni- 'oma- ki
 I- be sick- DEP, intrans me-OBJ CAUS-lie down-NONTHEME
 'My being sick is causing me to lie down.'

- (9) i'oa- ra na- hado- ha ada kodi-abi'i
tambaqui-OBJ CAUS-knife-THEME,m(S) DEM,m my- father

'My father cut the tambaqui fish.'

- (10) ho-ra ka- ihamahi-ha ada isai
me-OBJ TRANSTVZR- angry- THEME,m(S) DEM,m child

'The child was angry with me.'

The demonstrative, if any, occurs with S; it never occurs with an O which is marked by -ra.

In the case of ditransitive clauses, what is semantically the indirect object or beneficiary is promoted to direct object and marked with -ra, while the initial direct object is demoted and marked with the clitic -a (this clitic also marks time, location, and instrument phrases, as well as the ergative and demoted direct object noun phrases). The preferred order in such ditransitive clauses is S O-ra V O-a (11). The indirect object/beneficiary can occur as an oblique constituent in the basic word order pattern (12), but this is less common than the construction shown in (11):

- (11) Maria ho-ra ko- soko-hi- vini hi- ki
Mary me-OBJ DITRANSTVZR-wash-DITRANSTVZR-DEP,trans AUX-NONTHEME

kodi-makari- a
my- clothes-DEMOTED OBJ

'Mary washed my clothes for me.'

- (12) Maria-a bi- soko-hi ida makari kodi-moni
Mary- ERG 3sg-wash-THEME,f(0) DEM,f clothes me- for

'Mary washed the clothes for me.'

Under the Relational Grammar framework, (12) would represent the initial grammatical relations, corresponding most closely to the semantic functions. The changes in (11) would then be expressed as follows: assuming that -ra always marks a final 2, i.e. direct object, there is a 3-2 or BEN-2 advancement, and the initial 2 is placed in chômeage, this being marked by the clitic -a.

When there is no S nominal, the order O-a O-ra V (14) sometimes occurs, although O-ra V O-a (13) is more frequent, but O-ra is always in the immediately preverbal position:

- (13) ho-ra no'a-vini hi- ki abaisana-a
me-OBJ give-DEP,trans AUX-NONTHEME fish- DEMOTED OBJ

'He gave me fish.'

- (14) vanami-a ho-ra kathiri-vini . . .
paddle-DEMOTED OBJ me-OBJ refuse- DEP,trans . . .

'He refusing (to give) me a paddle. . .'

Ditransitive clauses occasionally have both objects following the verb, when the order is V O O-a. This is the basic (ergative) pattern, in which the direct object occurs without the clitic.

- (15) bi- no'a-'i- ki ada isai ihai- a
3sg-give-COMPL-NONTHEME DEM,m child medicine-DEMOTED OBJ

'She gave the child medicine.'

The direct object may also, like the subject, occur in a right-dislocated position, and it is then also marked by -ra:

- (16) vi 'bai-maina-'a- ha, siri amabokhoni-ra
3pl-eat-next- COMPL-THHEME,m(S), turtle elbow- OBJ

'They ate next, turtle elbow.'

It was noted above that *VSO does not occur. In fact, there is one construction that Chapman regards as VSO, involving the very idiosyncratic verb gahina 'receive,' which she calls "a kind of defective ditransitive" (1978, fn. 8); it has only one surface object, and this O has the -a clitic which marks 'demoted object'; S is unmarked:

- (17) gahina- hi ida 'aaso adaki- a
receive-THHEME,f(S) DEM,f aunt potatoes-DEMOTED OBJ

'Aunt received potatoes.' (or, 'Aunt was given potatoes.' - see below,)

There are good reasons, consistent with a multi-level theory such as Relational Grammar, for regarding sentence (17) as intransitive, the constituents being: V-S-2Chô. The primary meaning of gahina is 'be given' (native speakers always translate it into Portuguese as 'foi dado', according to Mary Odmark (p.c.), who has also worked in the language). Under the R.G. framework, the construction can be explained as follows. In the initial stratum the P-arc occurs with a 1-arc (UNspecified), a 2-arc (adaki), and a 3-arc (ida 'aaso), equivalent to: '(Someone) gave potatoes to Aunt.' In the next stratum, the 3-arc has advanced to 2, the initial 2-arc has become a 2Chô, and the 1-arc remains as it was, equivalent to: '(Someone) gave Aunt potatoes'. In the next (and final) stratum, the initial 3 has advanced to 1, the initial 1 has become a 1Chô, and the initial 2 remains a 2Chô, equivalent to: 'Aunt was given potatoes.'

In the surface form, the 1Chô does not appear, the 2Chô is marked by -a, and the final 1 (*ida 'aaso*) is not morphologically marked and it follows the verb, which is the normal pattern for an intransitive sentence. Other possible R.G. analyses of the *gahina* construction (e.g. involving unaccusative or anti-passive) appear to be completely unmotivated in the language.

1.3 Superiority of the Ergative Analysis Over a Passive Analysis

The only alternative analysis to that outlined in 1.1 and 1.2 would be to regard OVS as the basic pattern and the NP-a V NP sentence as a passive construction. This would mean a basic order that was not the most common order, but one point in favor would be that both the transitive and intransitive subjects would then be in the same postverbal position in the basic word order patterns. In the passive sentence also, the postverbal NP would be the subject, and the preverbal NP, which is marked by the clitic -a, would be an agentive phrase. Example (2) would then be glossed as 'The other boy was pinched by Dono.'

There are a number of reasons for rejecting this analysis, among them: the language has another regular passive construction; the prefix *bi-* '3sg' would have to be reinterpreted as some kind of passive marker, but it is more natural to regard it as part of the transitive person paradigm; and the word order NP-a V NP is by far the most common, which makes it an unlikely candidate for a passive sentence. While none of these reasons would necessarily exclude the possibility of a passive analysis, the combination of them makes it extremely suspect, especially in the context of Arawakan languages, for which there is no record, so far as I know, either of OVS basic order or of a passive construction with this set of characteristics.

There is, however, an even stronger argument against such an analysis. It is generally accepted that passive involves a valence change, and that a passive sentence is intransitive. Dependent clauses in Paumarí show that the construction NP-a V NP is transitive. This can be seen in ex.(5), where the verb suffix -*vini* signals that it is a transitive dependent clause. Intransitive dependent clauses have a different suffix, -*ni*(fem)/-*na*(masc) (and these are the forms that occur in the regular passive construction referred to above). Whenever the dependent suffix is called for in the NP-a V NP construction, it is always -*vini* that occurs. This is the crucial factor in rejecting the passive analysis and in affirming the ergative case-marking system.³

2. Some Implications for a Theory of Transitivity

Hopper & Thompson (1980) have proposed a theory of transitivity whose main elements are: 1) the ranking of clauses on a transitivity scale, which is based on ten parameters signalling high or low transitivity; 2) the correlation of these parameters with certain morphosyntactic devices which are found to occur across languages; and 3) a functional explanation for this transitivity phenomenon in terms of the discourse strategies of foregrounding and backgrounding.

In general, the case-marking systems and other facts of Paumari appear to support the transitivity hypothesis of H & T, but they raise questions in three areas, which I discuss in the following subsections: the concept of "degree of transitivity" and how this should be measured (2.1); the claim that the general function of case-marking is not to distinguish syntactic categories but to index them and, specifically, to index them as carriers of high transitivity (2.2); and the adequacy of discourse grounding strategies to account for the phenomena (2.3).

2.1 Concept of "Degree of Transitivity" and How It Should Be Measured

There are, according to H & T, ten semantic parameters by which transitivity is measured (in the parentheses that follow, the first-named item reflects high transitivity, the second low transitivity): participants (2 or more, 1), kinesis (action, non-action), aspect (telic, atelic), punctuality (punctual, non-punctual), volitionality (volitional, non-volitional), affirmation (affirmative, negative), mode (realis, irrealis), degree of agency (high, low), affectedness of object (totally affected, not affected), individuation of object (highly individuated, non-individuated). The degree of transitivity of a clause as a whole appears to be measured simply by counting the number of the parameters in which the clause shows high transitivity:

"the more features a clause has in the 'high column . . . the more Transitive it is - the closer it is to the cardinal Transitivity" (253).

While the features involved in the parameters are semantic, considerable attention is given to the morphosyntactic devices, illustrated from a wide range of languages, which signal them:

"the Transitivity features can be manifested either morpho-syntactically or semantically" (255).

"languages universally possess morphosyntactic structures which reflect the degree of Transitivity of a clause" (280)..

It is not entirely clear how the degree of transitivity is to be measured, whether by counting the number of morphosyntactic signals, or the number of semantic features, or a combination of both. The results

may differ significantly, according to which method is used, as is seen by attempting to measure the transitivity of 'ergative' clauses, as against 'accusative' clauses in Paumarí.

Two of the morphosyntactic devices discussed by H & T are: ergative markers, which signal, among other things, high agency; and object markers, which signal that the O is highly individuated. Taken alone, these markers would indicate an equal degree of transitivity in the respective clauses in which they occur in Paumarí. The matter is not quite so simple, however, since in the ergative constructions there are other markers of high transitivity which do not occur in the accusative constructions: the prefix *bi-* '3sg.', which can be construed as signalling the same high degree of agency and volitionality as the case marker *-a* 'ERG'; and the two markers of highly individuated object: the demonstrative, which can only occur with O in the ergative construction; and the gender/number agreement of the verbal 'theme' suffix with the O. There is occasionally gender agreement with the O, under some still undefined conditions, when the object marker is used in SOV clauses (see 1.2), but otherwise the nonergative clauses that have the object marker do not contain any additional morphosyntactic signals of higher transitivity. Thus, a mere count of morphosyntactic devices shows the ergative clauses to be more transitive than the accusative clauses: four against one (or, at the most, two). If semantic features are considered, the result is essentially the same: the ergative system has two such features signalled in the morphosyntax (high agency, individuated object), whereas the accusative system has only one (individuated object). These results, in favor of the ergative system having more indicators of high transitivity, are not surprising, in view of the statement by H & T concerning the "rather typical situation in ergative languages: the canonical ergative clause signals one, several, or all of the high-Transitivity features" (268). This statement occurs when dealing with the contrast between ergative and antipassive clauses, but it is true in a more general way.

If, however, we ignore the morphosyntax and the finer semantic distinctions, and stick to H & T's more broadly defined semantic parameters, all the indications are that there is an equal degree of transitivity in ergative and accusative clauses in Paumarí. In both types of clause there are always two or more participants involved, and there is also individuation of the object, signalled in the ergative construction by use of the demonstrative with the object nominal, and in the accusative construction by the object marker *-ra*. With regard to three other parameters (kinesis, volitionality, and agency), both systems follow identical patterns in quite striking ways. In the case of kinesis, either system can be used to express both action (high transitivity) and non-action (low):

- (18) action: koko- a bi- saka- ha ada i'oa
 (ERG) uncle-ERG 3sg-strike-THEME,m(0) DEM,m tambaqui
 'Uncle harpooned the tambaqui fish.'
- (19) action: i'oa- ra na- hado- ha ada kodi-abi'i
 (ACC) tambaqui-OBJ CAUS-knife-THEME,m(S) DEM,m tambaqui
 'My father cut the tambaqui.'
- (20) non-action: isai- a bi- fini-ki ada jomahi
 (ERG) child-ERG 3sg-fear-NONTHEME DEM,m dog
 'The child fears the dog.'
- (21) non-action: ho-ra ka- ihamahi-ha ada isai
 (ACC) me-OBJ TRANSTVZR-angry- THEME,m(S) DEM,m child
 'The child was angry with me.'
- Either system can also be used to express both high or low agency and volitionality:
- (22) high: jomahi-a bi- na- o- fini-ha ada isai
 (ERG) dog- ERG 3sg-CAUS-INTRANSTVZR-fear-THEME,m(0) DEM,m child
 'The dog frightened the boy.'
- (23) high: bano pa'isi 'o-sa'a- ra anani-hi
 (ACC) piranha small my-finger-OBJ bite- THEME,f(0)
 'A small piranha bit my finger.'
- (24) low: isai- a bi- fini-ki ada jomahi
 (ERG) child-ERG 3sg-fear-NONTHEME DEM,m dog
 'The child fears the dog.'
- (25) low: hida- vani mani siho ka- nadarani pamoari-ra
 (ACC) DEM,f-CONTR EQUATIVE fire CLASS-coals Paumarí-OBJ
 ka- ka- barava-ki
 CLASS-VBLZR-fever- NONTHEME
 'It is this firecoal that causes a Paumarí to have fever.'

The aspect parameter follows the same pattern. There is only one aspect marker, the verbal suffix -'i/'a (the particular form used depends on the suffix which follows). Chapman (1979.26) describes this as marking "completive aspect in dialogue" and "important primary information in monologue," and it is clearly an indicator of high transitivity by the H & T criteria. What is significant here is that it is used

(or not used) in both ergative and accusative constructions (cf. exs. 2 and 16; in most of the examples selected for this paper the aspect suffix does not occur, but there are other examples in the sources where it occurs in both systems).

Thus, for the six parameters where the evidence in the sources is clear, it points to the same degree of transitivity in both ergative and accusative clauses. This identity of patterning with respect to the basic semantic categories is not surprising where two systems coexist in complementary distribution and their different spheres of operation are grammatically conditioned, in this case by the word order patterns which govern their use. As we have seen, however, it differs from the result obtained when a comparison is made on the basis of the number of the morphosyntactic categories, which shows ergative clauses to have higher transitivity than accusative clauses.

If the degree of transitivity is to be measured simply in terms of the basic parameters, another factor needs to be taken into account. H & T give equal weight to each parameter, and simply add up the number of features which show high transitivity. But the list of parameters, under which each supposedly distinct feature receives the same weighting, includes some pairs that are so intrinsically bound together semantically that the presence of one in a particular construction almost inevitably entails the presence of the other. This appears to be recognized by H & T themselves in a number of cases, for example with respect to the following pairs:

agency and volitionality - these can, for some purposes, be dealt with together (286)

total affectedness of O and telic aspect (i.e. semantic perfectivity) - "Since total affectedness of O follows from the semantic perfectivity of the verb . . ." (287, cf. 262)

kinesis and volitionality - both are related to the "degree of directed physical activity in the event to which the verb refers" (264)

telicity and punctuality - "there is a strong correlation between, e.g., punctual actions and perfective predicates" (271)

The parameters cited above divide into two groups of three closely interdependent features: (1) agency, kinesis, and volitionality; and (2) telicity, punctuality, and total affectedness of O. If a clause has one of the features of either group, it is very likely to have all three features of that group. According to H & T's method of measuring transitivity, the clause will be credited with three features, but it would seem more reasonable to consider all three as a single unit in relation to other, more independent parameters. There should be at least some differential weighting given to the parameters to reflect different degrees of independence among the features, otherwise the results in some cases seem certain to be skewed.

In view of the insights which the H & T hypothesis provides (see, for example, Hopper & Thompson, eds., 1982), it would seem worthwhile that the method of measuring the degree of transitivity should be more carefully considered and be made more explicit. This requires further experimentation with data that cover all aspects of transitivity in selected languages. H & T show many interesting morphosyntactic-semantic correlations in a large number of languages, but they do not provide a study of the total transitivity system of any one language, nor do Hopper & Thompson, eds. (1982) take us any further in that particular direction. The ultimate goal of such research would be to provide a solid basis on which to formulate more complete and satisfying judgments about the functional motivation for the phenomena (see 2.3).

2.2 Claim Concerning the Function of Case-Marking

In their discussion of one of the transitivity parameters, individuation of object, H & T suggest that the morphosyntactic markings that signal highly individuated objects (i.e. those which are animate/definite/referential) are

"better interpreted functionally as signals of the high Transitivity of the clause as a whole - rather than as devices for distinguishing O's from A's, as has been suggested by Comrie 1977a Ms." (259, with further discussion on 290-292).

In Paumari, the object marker -ra always seems to signal definite, i.e. more highly individuated, objects. It cannot, however, be treated as a phenomenon that is distinct from the ergative marker -a in the overall transitivity system. Both markers, with respect to the semantic parameters, signal an equally high degree of transitivity. If this were the only, or primary, function, there would not be any need for two markers. The fact that two such markers occur in complementary distribution can surely best be explained in terms of a distinguishing function: they distinguish two systems, ergative and accusative, and within each system, they distinguish two NP's in the transitive clause, subject and object.

Another factor which seems to support this as the primary function is that -ra is not the only marker of definite objects. In SVO clauses, where S is marked for the ergative case, O is marked as definite by the presence of a demonstrative. The occurrence of another marker of definite objects weakens any hypothesis that the primary function of the case-marker is to signal highly individuated objects and high transitivity in the clause. (In all the examples I have seen in Chapman (1978, 1979, and p.c.), all objects, whether marked by -ra or by cooccurrence with a demonstrative, are clearly definite; indefinite and nonreferential objects seem always to require the use of the 'demoted object' marker -a, or some form of noun incorporation into a verbal construction, usually by means of one or more of a set of derivational affixes -

see especially Chapman 1978).

One other factor that supports the view that the Paumari case-markers function primarily to distinguish S and O is their obligatory occurrence in right-dislocated constructions. An NP that occurs in this "afterthought" or "clarification" position could refer to either the subject or object of the main clause, with obvious potential confusability in some cases.

The evidence from Paumari^f seems clearly to favor the hypothesis that the primary function of case-marking systems is to distinguish the NP's in a clause (Comrie 1977; 1978.384; Dixon 1979.69), as against the view of H & T that the indexing function is of equal or primary importance (291).

2.3 Discourse Grounding Strategies as an Explanation for the Transitivity Phenomena

An important purpose of the H & T hypothesis is to provide a functional explanation for the grammatical and semantic prominence of transitivity across languages, and they do so in terms of discourse structure. I draw attention here to what I consider two shortcomings in their discussion and the conclusions they arrive at: (1) their arguments are circular and in any case lead only to a statement of weak generalizations rather than any satisfying explanation; and (2) they restrict their explanation to a single area of discourse, the foregrounding/backgrounding distinction, and this is not sufficient to account for some aspects of the phenomena they are seeking to explain.

H & T recognize the danger of circularity in their argument (280), but the "unitary pragmatic principle" which they propose in order to avoid the danger is itself riddled with circularity of argumentation. The principle basically is that the transitivity features, grammatical and semantic, of a clause can be explained by going beyond the clause to a "higher-level, functional framework," namely the discourse functions of foregrounding and backgrounding. But in order to do this and avoid circularity they need to define the notions of "foregrounded clause" and "backgrounded clause" in terms which are independent of the transitivity features they are seeking to explain. This they signally fail to do. For example, their definition of foregrounded clauses includes the statements that they "are ordered in temporal sequence" (281), and "typically recount sequences of events" (286), and this inevitably requires a good number of clauses involving action, telic/perfective aspect, and punctuality, which signal high transitivity in three of the parameters. Further, they restrict their findings to narrative genre, and it can be expected that most discourses of this kind will involve two or more participants, and that these will figure especially in "the backbone or skeleton of the text" (another part of the definition of a foregrounded clause), so that the association of foregrounding and high transitivity of participants is also inevitable. Thus, the notion of foregrounding is so inextricably interwoven with that of high transitivity features that the definition of the one is virtually the

same as the definition of the other. (Compare Kalmár (1982) for the need, in defining foregrounding, to distinguish sequentiality, which he finds correlates with high transitivity, from foregrounding proper, that is "the most important information," which on the evidence of his Czech folk tale does not necessarily correlate with high transitivity.)

Notwithstanding this close relationship, the statistical evidence furnished by H & T on the basis of three texts shows that not all foregrounded clauses are high on transitivity and not all backgrounded clauses are low on transitivity. Indeed, there is a surprising amount of variation: high transitivity in relation to participants ranges in foregrounded clauses from 57% in one text to 87% in another; and the average correlation between foregrounding and high transitivity for all three texts ranges from 39% for one parameter (total affectedness of 0) to 100% for two parameters (affirmation and mode, both of which are also high on transitivity in backgrounded clauses, 92% and 66% respectively). These statistics show that anything is possible with regard to how a particular parameter will be represented in a given clause: whether the clause is foregrounded or backgrounded in the discourse, the parameter may be either high or low on transitivity. It is impossible to predict which it will be. The recurring expression follows the pattern "x feature tends to occur in a y-grounded clause," the significant words being "tends to occur." The only certain thing that emerges from the discussion is that, taking the set of parameters as a whole, the features signalling high transitivity predominate in foregrounded clauses of a discourse, and those signalling low transitivity predominate in backgrounded clauses. But as we have seen, this is an inevitable consequence of the way in which foregrounded and backgrounded clauses are defined. (See David Payne (to appear) for discussion of problems in defining grounding, and for the suggestion that there are "degrees of grounding"; and compare the discussion of "multiple levels of information" in Jones and Jones (1979)).

The Paumari sources do not include samples of consecutive discourse, so it is not possible to give statistics about the way the two case-marking systems are reflected in the grounding strategies. There is some evidence, however, to show that clauses of both systems may be either foregrounded or backgrounded, without any preference for one system to predominate in one particular 'grounding' strategy. This evidence is found in the use of certain verb suffixes. One pair of suffixes appears in examples I have cited as: -hi(fem)/-ha(masc) 'THEME' and -ki 'NONTHEME'. They are part of a set that is obligatory in main declarative verbs. The glosses reflect discourse distinctions relating, respectively, to primary information (foregrounding) and secondary information (backgrounding). Most of the examples in this paper have the -hi/-ha form, signalling what are presumably foregrounded clauses, and can be seen to co-occur both with the ergative marker -a (exs. 2, 3, 18, 22) and the object marker -ra (exs. 7, 9, 10, 16). The -ki form, signalling backgrounded clauses, is sufficiently represented to show that it also co-occurs with both ergative (4, 20) and object (8, 11, 13, 25) markers. Another suffix, -vini 'DEP, trans.', being a dependent verb marker, is most likely to occur in backgrounded clauses,

and it is also found in both ergative and accusative constructions (cf. 5 and 14).

This leads directly to the second shortcoming in H & T's functional explanation which I referred to at the beginning of this sub-section. The foregrounding/backgrounding distinction does not explain some aspects of the transitivity hypothesis. There are other discourse and pragmatic factors which may be more important than that of grounding in explaining grammatical and semantic phenomena. H & T recognize the existence of other factors (280, fn.; 294-5), but their reliance on grounding as the basic discourse factor may be called into question. Other factors certainly seem to be necessary to explain the existence of two case-marking systems in Paumarí.

All I have said so far in this paper suggests that the ergative and accusative constructions can be used interchangeably, and that the choice of one over the other is arbitrary, or just a matter of style. Although the greater number of morphosyntactic markers in the ergative construction might imply some extra degree of high transitivity, this does not seem to be significant; the two systems follow identical patterns with respect to both the basic transitivity parameters and the discourse distinction of foregrounding and backgrounding.

Chapman (1979), however, shows that there is a functional explanation for the two systems, and that the speaker's choice of system is determined by discourse and pragmatic factors that go beyond anything discussed by H & T. The ergative system is used in the pragmatically unmarked situation and also, but much less frequently, in certain pragmatically marked contexts. The accusative system is used only in pragmatically marked situations. The pragmatic/discourse factors involved relate to topic and prominence. In the unmarked situation, the subject is the topic but otherwise does not have any special prominence, and is expressed in the S-aV0 construction (with the possibility of deletion of either or both of the S and 0 nominals). The ergative system is also used in two constructions which reflect different pragmatically marked situations: in 0, S-aV, where the 0 is left-dislocated and is given what Chapman calls "informational prominence"; and in V(0),S-a, where S is added in a right-dislocated position for clarification; in both constructions, S is still the topic, but it does not have any degree of prominence. Wherever 0 occurs with the object marker -ra, it is then the topic, but it is always a marked topic, equivalent to the topicalization (by fronting) of the object in English; in the 0-raV(S) construction, the 0 is also marked for informational prominence, and the subject is demoted, that is, it is neither topic nor does it have any degree of prominence; in the S0-raV construction, 0 is topic but it is S that receives the informational prominence. When 0 is right-dislocated, as in V,0-ra, it is still the topic and also serves the pragmatic function of clarification. ("Informational prominence" is the most general kind of emphasis or

prominence in Paumarí; there are other specific types of prominence, such as strong contrast, weak contrast, identificational prominence, selection of one entity from a group, and focus; these are expressed by a combination of fronting and the use and positioning of special pronouns and demonstratives).

Paumari, therefore, shows that the total transitivity phenomena cannot be explained simply in terms of a foregrounding/backgrounding distinction. There are other discourse and pragmatic factors at work in determining which set of transitivity features will be selected in a given context. I suspect this is true in all languages, and this reinforces the need to pursue the further investigations suggested at the end of section 2.1.

4. Summary and Conclusions

I have presented evidence showing that Paumarí has two co-existing case-marking systems, an ergative and an accusative, and that the choice of system is grammatically conditioned. The ergative system is used with the basic word order pattern (SV0), and with certain other word orders, but only when either the S or O nominal occurs in its unmarked position, or the S is right-dislocated (0,SV and V(0),S). The accusative system is used for other word orders, specifically where O is in the preverbal, or in a right-dislocated, position (OVS, SOV, V,0).

Any passive analysis, as an alternative to the morphological ergativity, is seen to be not viable.

Both ergative and accusative systems are used to encode the same semantic phenomena, in contrast with the semantic conditioning shown by Dixon to apply generally to split case-marking systems.

At the same time, underlying the two Paumarí systems, and the word order variants with which they correlate, there is a functional explanation based on discourse-pragmatic factors. These go beyond the simple foregrounding - backgrounding dichotomy, proposed by Hopper and Thompson to explain their transitivity phenomena. The principal explanation of the Paumarí facts is found in the interaction of two pragmatic factors: sentence topic, and NP prominence in the sentence.

Grounding strategies alone are thus shown to be inadequate to explain all transitivity-related phenomena. H & T's 'grounding' definitions are also shown to be inadequate, involving circularity, because they are not sufficiently independent of the transitivity facts they are intended to explain. Some other weaknesses of the H & T hypothesis are highlighted by the Paumarí facts. Greater precision is needed in showing how degree of transitivity is to be measured, especially with regard to the inter-relationships of semantic parameters and morphosyntactic devices. With regard to the semantic parameters, greater care is needed to select those features which are independent of each other. Finally, the function of case-marking systems goes beyond that of simply indexing the transitivity of a clause--of greater significance for a language such as Paumarí is the function of distinguishing the grammatical relations of NP's in the clause.

Footnotes

1

Paumarí is a member of the Arauan sub-branch of the Arawakan family. There are about 400 speakers, who live in semi-nomadic groups on the rivers Purús and Tapauá in the state of Amazonas, Brazil. Data in this paper are taken from Chapman, 1978 and 1979. I am indebted to Shirley Chapman also for the time she has taken to give me additional data and information, although I should add that she is not responsible for the way I have used it all. I have also profited from comments on an earlier draft by Steve Marlett, Tom and Doris Payne, Geoff Pullum, and Rich Rhodes. This paper is the result of research supported by a grant from the Social Science Research Council (U.K.) to University College London for the "Amazon Languages Project." Under the same research project, it is planned to include a fuller description of Paumarí grammar in a Handbook of Amazon Languages (Derbyshire & Pullum, forthcoming). For a few more details of the morphology and syntax of the language, see Derbyshire (1982). A condensed version of the paper was presented to the 1982 Winter Meeting of the Linguistic Society of America in San Diego.

Key to abbreviations: AUX - auxiliary verb, REN - beneficiary, CAUS - causativizer, Chô - chômeur, COMPL - completive aspect, CONTR - contrast, DEM - demonstrative, DEP - dependent, DITRANSTVZR - ditransitivizer, ERG - ergative. f/fem - feminine, INCOMPL - incompletive aspect, intrans - intransitive, INTRANSTVZR - intransitivizer, m/masc - masculine, O/OBJ - object, p.c. - private communication, pl - plural, PRO - pronoun, S - subject, sg - singular, trans - transitive. TRANSTVZR transitivizer, VBLZR - verbalizer.

2

There are two verb-final suffixes which do not have distinct forms for gender: the independent verb suffix -ki 'NONTHEME' (ex. 4), and the dependent verb suffix -vini 'DEP, trans' (ex. 5). For explanation of the theme/nontheme distinction, see s.2.3.

3

A similar phenomenon of grammatically-conditioned coexisting systems may be the best explanation for word order and morphological marking in Teribe, a member of the Chibchan family spoken in Panama. Unmarked word orders in Teribe are intransitive SV and transitive OVS (Koontz, p.c., who adds that OVS is statistically much the most common order). Examples are from Koontz (to appear), with some orthographical modifications requested by Koontz (p.c.) and a change in the glossing to 'ERG' introduced by me and agreed by Koontz:

(1) Juan parkono
Juan work-COMPL

'Juan worked.'

- (2) Shwon kwoshkwar- a Maria-dë
clothes wash-COMPL-she Maria-ERG

'Maria washed clothes.'

The subject marker *dë*, glossed above as 'ERG', occurs only with transitive subject nominals when these follow the verb in the unmarked OVS order. With this word order only, the person of the subject is also signalled by a verb suffix, irrespective of whether there is a subject nominal in the clause. These bound person markers on the verb occur for all persons. Intransitive subject and transitive object both occur in the preverbal position. The only other common word order in transitive clauses is SOV; in this case, there is no subject marker nor verb agreement with S:

- (3) Juan di krono
Juan water fetch-COMPL

'Juan fetched water.'

This is a marked order, with S fronted for topicalization purposes (Koontz Ms., 39, confirmed by p.c.). In her earlier work (Koontz, 1977: 132), Koontz regarded SOV as the unmarked active form, and OVS the marked passive construction, but she has not found this a satisfactory hypothesis (p.c.).

Unlike Paumarí, Teribe does not have an object marker in any of its word patterns, and O always precedes the verb. The Teribe unmarked order is the mirror image of Paumarí in both transitive and intransitive clauses.

References

- Chapman, S. 1978. Paumarí derivational affixes, Ms. S.I.L., Brasília.
- _____. 1979. Prominence in Paumarí, Ms. S.I.L., Brasília.
- Comrie, B. 1977. Subject and direct objects in Uralic languages: A functional explanation of case-marking systems. *Études Finno-Ougriennes* 12.5-17.
- _____. 1978. Ergativity. In W. P. Lehmann, ed., *Syntactic typology*, 329-94. Austin: University of Texas Press.
- Derbyshire, D.C. 1982. Arawakan (Brazil) morphosyntax. In D.C. Derbyshire (ed.), *Work Papers of the Summer Institute of Linguistics, University of North Dakota session*, vol. 26.
- Derbyshire, D.C. and G.K. Pullum, eds., (to appear). *Handbook of Amazon Languages*.

- Dixon, R. M. W. 1979. Ergativity. Lg. 55.59-138.
- Hopper, P.J. and S.A. Thompson. 1980. Transitivity in grammar and discourse. Lg. 56. 251-99.
- _____ (eds.) 1982. Syntax and Semantics 15: Studies in transitivity. New York: Academic Press.
- Jones, L. and L. Jones. 1979. Multiple levels of information in discourse. In Linda Jones, ed., Discourse studies in Meso American Languages, Vol. 1. Dallas: Summer Institute of Linguistics and University of Texas at Arlington.
- Kalmár, I. 1982. Transitivity in a Czech folk tale. In P.J. Hopper and S.A. Thompson (eds).
- Koontz, C. 1977. Features of dialogue within narrative discourse in Teribe. In R. Longacre, ed., Discourse grammar: Studies in indigenous languages of Colombia, Panama, and Ecuador, Part 3. Dallas: Summer Institute of Linguistics and University of Texas at Arlington.
- _____. (to appear). Staging in Teribe discourse.
- Payne, David. (to appear). Activity as the encoding of foregrounding in narrative: a case study of an Asheninca legend.