

Fore Case Marking

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1. Introduction

Fore is a non-Austronesian language belonging to the Goroka, or East-Central, family of the Trans New Guinea phylum in New Guinea. It is spoken by approximately 20,000 people in the area around and to the south of Okapa in the Eastern Highlands province of Papua New Guinea, and has been described in a series of publications by Scott (1973, 1978, 1980, 1986), which are the source for all the material concerning Fore in this study, and whose careful work in the language forms the basis of the reanalysis we will present. Verbal clauses in Fore utilise both subject and object indexing on the verb,¹ and so for most person/number combinations there is no ambiguity in the interpretation of a verbal utterance.

Examples of single-word utterances in which the verbal morphology carries all the information necessary to present an unambiguous interpretation are given in (1) and (2). In these clauses we can see that the verbal morphology alone is sufficient to carry all information about the person and number of the arguments, and to indicate subject and object grammatical functions:

1) *naga:ne.*

na-ka-a:N-e

1sg.obj-see-2sg.subj-indic

'You see me.'

* 'I see you.'

2) *kagauwe.*

ka-ka-u-e

2sg.obj-see-1sg.subj-indic

'I see you.'

* 'You see me.'²

¹ Here and elsewhere in the article we shall ignore the emphatic and imperative subject forms, and stay away from the complexities of switch reference marking, coordination and tense-suppletive anticipatory subject marking on the verb. The interested reader is referred to Scott (1978: 59-62,121-136). All data and judgements are taken from Scott's works.

² The sentences in (1) and (2) have been presented with a four-line gloss, including the morphemes in their underlying forms, since they illustrate verbal morphology or nominal morphology that is only manifested by morphophonemic changes on following words.

In clauses involving only third person arguments, there is often a question of the identity of the actants, and one or more NPs are usually added to the verb to decrease the ambiguity of the clause with more referential information. In these more referential clauses the Oblique case³ is sometimes added to a single NP to indicate that it is the object of the verb, if it is potentially the agent of the verb, but not the subject of the clause ('oblique marking may never occur on noun phrases used either as the subject of a transitive or as subject of an intransitive', Scott 1986: 171). Compare the interpretations of (3) and (4). In these examples *Aegaya* is potentially the agent, and thus subject, of the clause, as is the case in (3). To indicate that this potential agent is not in fact the subject of the clause, the oblique case is used, as in (4).

3) *aegayá: ágaye.*

aegayá: 'a-ka-y-e

Aegaya 3SG.OBJ-see-3SG.SUBJ-INDIC

'Aegaya sees him.'

* 'He sees Aegaya.'

4) *aegayá: nkágaye.*

aegayá: '-N a-ka-y-e

Aegaya-OBL 3SG.OBJ-see-3SG.SUBJ-INDIC

'He sees Aegaya.'

* 'Aegaya sees him.'

(Notice how the oblique case, syntactically part of the preceding nominal, is realised phonologically through its effects on the beginning of the following word. Although interesting, it is not strictly relevant here, but worth keeping in mind to avoid confusion later. More details can be found in Scott 1978)

According to Scott, the Oblique case is not used when there is no question of the grammatical status of the single argument in the clause, either through inanimacy of the expressed nominal, inability of that nominal to manipulate oblique arguments (such as instrumentals) present in the clause, or when one of the pronominal affixes on the verb is not third person, and so necessarily encodes the grammatical function of an argument other than the NP present. Some of these are illustrated below:

5) *naninta: máeye.*

naninta: máe-y-e

food get-3SG.SUBJ-INDIC

'He gets food.'

³ Scott's term; a more extensive discussion of the functional and formal identity of this morpheme will be presented in section 3. In Scott's (1978: 104 onwards) account of the grammar, it is the case that appears on all non-nominative arguments, and may be augmented with additional local (locative, allative, ablative) or syntactic (instrumental, referential) case markers. When it appears without any of these, Scott interprets it as indicating the genitive case (within an NP) or the accusative case (clausally). An alternative account is given in section 3.

* 'Food gets him.'

nanintá:-N *máe-y-e*

6) *wé ma ntágaramáo kasó'tása yaga: aeguyúwe.*

wé má:'N *yagara*:'-ma-ó *kasó*'N-*tása* *yaga*: a-*egu*'-u-e
 hey that man-DLN-VOC club-INSTR pig 3SG.OBJ-hit-1SG.SUBJ-INDIC
 'Hey, man, I killed the pig with a club.'⁴

yaga:-N a-*eg-u-e*

7) *naninta: máe'kibene.*

naninta: máe-'*kubu-a*:'N-e
 food get-FUT-2SG.SUBJ-INDIC
 'You will get food.'⁵

naninta:-N *máe*-'*kubu-a*:'N-e

(The sentences so far have been presented with a four-line gloss, including the morphemes in their underlying forms, since they illustrate verbal morphology or nominal morphology that is only manifested by morphophonemic changes on following words. For most of the following examples in this paper, since we are not concerned with the intricacies of Fore verbal morphology, but rather clause-level syntactic strategies, only the Fore, the glosses, and the translation will be given unless necessary. The interested reader is referred to Scott (1978), in which in most cases the morpheme-by-morpheme equivalents are given)

Sentences (5) – (7) show that the use of the Oblique case is less frequent in Fore, but one with definite syntactic consequences. An alternative analysis of the function of the Oblique case marking in these sentences will be taken up later in sections 2.1, 2.3 and 2.4.

When TWO NPs are present in a sentence, and both refer to arguments in the third person (most usual in narratives), the question of interpretation is crucial. From the

⁴ Scott glosses the *-ma* in this example as an occurrence of the 'delineator'. If this is the case, then it is presumably associated with the emphatic use of the delineator, not the case marking function. See Scott 1978.

⁵ The Fore sentences so far have been presented with a four-line gloss. However, elsewhere in this paper, since we are not concerned with the intricacies of Fore's complex verbal morphology but rather clause-level syntactic strategies, only the Fore, the glosses, and the translation will be given unless otherwise necessary. The interested reader is referred to Scott (1978), in which in most cases the morpheme-by-morpheme equivalents are given.

following two sentences we can clearly see that word order plays a role in distinguishing grammatical functions in Fore:

8) *mási áragá ágaye.*

boy girl 3SG.OBJ-see-3SG.SUBJ-INDIC

'The boy sees the girl.'

* 'The girl sees the boy.'

9) *aragá mási ágaye.*

girl boy 3SG.OBJ-see-3SG.SUBJ-INDIC

'The girl sees the boy.'

* 'The boy sees the girl.'

Without a doubt the sentences in (8) and (9) show us that there is a preference for SOV word order in Fore clauses. Interestingly, however, we also find sentences in which these preferences for SOV word order are not observed, and the second nominal in a sequence is interpreted as the subject:

10) *yaga: wá aegúye.*

pig man 3SG.OBJ-hit-3SG.SUBJ-INDIC

'The man kills the pig.'

* 'The pig attacks the man.'

We can see that in addition to the preference for word order to determine grammatical function assignment to the arguments of a clause, there is an additional parameter of 'animacy': as Scott (1978:114) puts it,

...when noun phrases are unmarked for case, the phrase which is highest in animacy will be interpreted as Subject...if two items are of equal ranking, the word order given previously will determine their functions.

The animacy hierarchy he refers to is the familiar one proposed by Silverstein (1976); the version cited by Scott is

Human > Animate > Inanimate

(in fact Scott further includes the class 'Potential Agent' as outranking Human on this scale, defining it as 'any proper noun representing an animate being, any personal pronoun, any inalienably-possessed kin term, or any term to which the delinator has been added.' (emphasis ours). This category clearly overlaps with the Human and Animate categories, and is moreover provably not related to this

hierarchy, and so is not included here. The caveat concerning the 'delineator' will be taken up shortly)

We can thus explain the interpretation of (10) as being the result of 'man' outranking 'pig' on the animacy hierarchy. Only in the case of two equally-ranked NPs is word order relevant (as seen in (8) and (9) earlier). The question must then arise, how do we express clauses of the sort 'The pig attacks the man'? In order to do so, in the absence of a voice system, the case-like 'delineator' (Scott's term) is used. This morpheme has the form *-ma* after human nouns, and *-wama* elsewhere. Compare (10) above with (11):

- 11) *wa yága:-wama aegúye.*
 man pig-dln 3sg.obj-hit-3sg.subj-indic
 'The pig attacks the man.'
 * 'The man kills the pig.'

In (11) we would predict, based on both the word order displayed and the relative animacy of the two arguments, that the interpretation should be 'The man kills the pig', yet this is not the case, and the only morphosyntactic change is the use of the delineator to 'case-mark' the NP that is assigned the SUBJECT function. Thus in (11) we can see that the use of *-wama* is more important than either word order or relative animacy to the assignment of grammatical functions. Notice, however, that the Oblique case is not used to disambiguate the grammatical functions in these examples, although it has already been seen to unambiguously mark the object of a transitive sentence, in (3) and (4).

If the verbal morphology in a preceding clause unambiguously indicates the status of the following NP(s), of course, a sentence may be interpreted correctly without the use of the delineator, as in (12), which uses the switch reference morphology (the fact that the following clause takes a different referent is shown by the use of the verb with a conjunctive form and anticipatory subject marking at the end which does not employ the 'same-subject' indicating set of temporal affixes; see Scott 1978 for more details of this aspect of the grammar):

- 12) *wa kána:gína yaga:(-wama) aegúye.*
wá kana-a: '-ki-na yaga:(-wama) a-egu '-y-e
 man come-3SG.SUBJ-CONJ-3SG.SUBJ pig(-DLN) 3SG.OBJ-hit-3SG.SUBJ-INDIC
 'The man came and the pig attacks him.'

The delineator may appear when the animacy is equally ranked but the word order is not the canonical SOV as in (13), or when the relative animacy of the two participants would disambiguate a sentence as in (14), or even when the word order would lead us to

assume a correct assignment of grammatical functions without the delineator as in (15), though this is unusual.

13) *mási aragá-ma áegúye.*
 boy girl-DLN 3SG.OBJ-hit-3SG.SUBJ-INDIC
 'The girl hit the boy.'

14) *yaga: wá-má aegúye.*
 pig man-DLN 3SG.OBJ-hit-3SG.SUBJ-INDIC
 'The man kills the pig.'

15) *aragá-ma mási áegúye.*
 girl-DLN boy 3SG.OBJ-hit-3SG.SUBJ-INDIC
 'The girl hit the boy.'

Even inanimate objects, not normally acceptable as As in Fore, can be interpreted as the subject if suffixed with the delineator, as seen in (16):

16) *ása:wáma naegúye.*
ása: 'wama na-egu' y-e
 stick-DLN 1SG.OBJ-hit-3SG.SUBJ-INDIC
 'A stick injures me.'
 * 'I hit a stick.'

Scott (1978:100-103) argues that the use of the delineator does not absolutely mark an NP as the subject of its clause; as mentioned earlier, it may co-occur with case markers, crucially including the Oblique case marker already described. When this happens, the NP is doubly marked with both the delineator and the Oblique case which, and must be interpreted as the object, not the subject, of the clause. Compare (17) which has an ambiguous reading, with (18) which despite having the delineator added, is still interpreted as object because of the presence of the Oblique case:

17) *yaga: aegúye.*
 pig 3sg.obj-hit-3sg.subj-indic
 'The pig attacks him.'
 or 'He kills the pig.'

18) *yaga:wama nkaegüye.*

yaga:-wama-N a-egu'-y-e

pig-DLN-OBL 3SG.OBJ-hit-3SG.SUBJ-INDIC

'He kills the pig.'

* 'The pig attacks him.'

From the sentences presented in (11) - (18) we would assume that the assignment of grammatical functions in Fore transitive clauses (in which verbal morphology does not serve to differentiate, as mentioned in section 1) follows the set of principles outlined below:

- If the NP appears in Oblique case, then it is the object, otherwise
- if the NP appears with the Delineator it is the subject, otherwise
- if the NP outranks another NP in terms of animacy it is the subject, otherwise
- if the NP is immediately preverbal it is OBJECT, if clause-initial, it is subject

Indeed, this model is almost the same as that proposed by Foley (1986: 173), who discusses "[the] dominance of morphology over syntax as the basic organising parameter of the grammar" (1986: 171). Foley's set of ranked principles for determining grammatical function assignment in Fore starts with the differentiation shown by verbal morphology (discussed at the beginning of this section), and is as follows (1986: 173):

- (1) verbal morphology; if that fails, then (2)
- (2) nominal case marking; if that fails, then (3)
- (3) animacy differences; if that fails, then (4)
- (4) interpretation convention; first potential actor is actor, if everything else is equal.

We shall return to a discussion of sentences of the sort represented by (4) and (18) in the next section, where we present an alternative analysis for these data to that suggested by Scott, based on counts of actual occurrence in texts.

2. Problems with the functional account, and a corpus-based description of Fore case-marking

The functional account that can be deduced from Scott's analysis would seem to account for the data, but it falls down on several points. These are to do with morphological interpretation, and combinatorial predictions:

- it is not felicitous to the naturally-occurring language data as represented by the texts available in Scott 1973 and 1978 (totally 544 verbal clauses with 284 NPs, a large and representative sample of Fore narrative);

- it explicitly allows for morphological combinations (namely, the delineator plus the Oblique case) that are NOT attested in the naturally-occurring data;
- it makes assertions about the pragmatic status of the delineator morpheme that are not borne out by the texts;
- it fails to predict a case-marking construction that occurs in the texts.

Addressing these points one by one, the following facts (outlined in sections 2.1 – 2.4) emerge.

2.1 Case-marking in the corpus: combinations involving both the delineator and the Oblique cases on one nominal

As can be seen in the figures provided in the appendix, Scott's account of Fore case marking is not completely representative of the facts that emerge from a detailed examination of the texts. Specifically and most importantly, Scott states that 'this agentive marker [is] able to occur on both subject and object of a transitive clause' (Scott 1978: 102). From our examination of the texts, we can state that sentences of the sort seen in (18) do not occur; in fact, not only does the combination delineator +Oblique case never occur, but NPs bearing the OBJ grammatical relation never appear with the delineator, the use of which is restricted to subjects. In fact, in the case of transitive subjects we find a total of 43% of all subjects appearing with the delineator, even in cases where there is no potential for confusion in the assignment of grammatical functions to the arguments.

It appears that the delineator is actually an optional nominative case: it only appears on subjects, mainly transitive ones, and never (in actual discourse) on objects or obliques. We would not want to analyse it synchronically as an 'extended ergative' case, since it appears on very non-agentive arguments in intransitive clauses as well as more agentive ones (see examples (22) and (23) in section 2.2), thus not fitting the mould associated with a typical unergative-unaccusative split (see, amongst others, Merlan 1985, Mithun 1991, Bittner and Hale 1996) (the ergative analysis does, however, appear to be a reasonable diachronic account – see section 4 for a discussion of the possible historical origins of the Fore nominative case marking). Indeed, Scott himself states that "I analyse Fore as a pure nominative-accusative type language." (Scott 1978: 102). The fact that the use of the delineator on an object was accepted by some of Scott's consultants, as evidenced by his quoted example (166b) (equivalent to (18) in section 1, but with the verb *ka-* 'see') is explained by the notes that Scott himself adds (Scott 1978: 102):

Occurrence of the delineator on the object in the second example of (166) indicates the agentive possibility of the item to which it is attached. The example could thus have been glossed: *'He sees the pig (doing something)'*. This possibility is

also seen in the contrastive examples given in (167), where these examples could alternatively be respectively glossed: 'He goes to (the place) where those people are'; and 'He goes to those people (where they are)'.

The sentences that Scott refers to as (167) are given below as (19) and (20):

19) *pi 'kiná'ti waye.*

pi'-N *kináQ-ti* *wa-y-e*
 that-GEN⁶ being-ALL go-3SG.SUBJ-INDIC
 'He goes to those people.'

20) *pi 'kiná'mi'ti waye.*

pi'-N *kináQ-mi-ti* *wa-y-e*
 that-GEN being-DLN-ALL go-3SG.SUBJ-INDIC
 'He goes to those people.'

Again we can see that the addition of the delineator on an apparent non-subject is really the realisation of the case of the NP in a potential, and inferred, subordinate clause, just as the delineator in (18) marks the realisation of case in a potential, and inferred sentential complement, not an object-controlled verbal complement, as is attested elsewhere in the language as part of the function of the extensive switch-reference morphology. A schematic representation of (20) is given below in (21), easily extendible to account for (18) as well:

21) Subordinate clause:		[those people	-DLN	(are there)]	
Matrix clause:	(He)	[those people		-ALL]	he goes
Final form:	Ø	those people	-DLN	Ø	-ALL he goes

By this we mean to model the origins of the multiple case marking found in some Fore sentences as having a biclausal source. The delineator comes from an emphatic use of an intransitive subject, which is used as the goal of the matrix clause, which is the source of the allative marking, resulting in case stacking.

This model is supported by Scott's own remarks on the environments in which the delineator is obligatory: 'where a relative clause takes the place of a noun phrase' (Scott 1986: 172). He gives the following examples:

⁶ Scott does not recognise the genitive here as a separate morpheme, but it can be shown to be a morphological addition to the clausal (adverbial) use of demonstratives, which appear without the genitive. Note also the final -N in example (20), also a genitive.

- 22) a. [NP [RC *na:má kiyí*] *ntagara*] *kánaya*.
 house 3SG:built-GEN man 3SG:came
 ‘The man who built the house came.
- b. [NP [RC *na:má kiyí*]]-*ma kánaya*.
 house 3SG:built-ERG 3SG:came
 ‘The one who built the house came.

(Scott 1986 glosses the delineator as an ergative marker; while not agreeing with this characterisation of the case, we shall keep the glossing conventions of the source in this example. We do, however, add the -GEN gloss to (22)a, since it is clear (from the mutation at the beginning of ‘man’) that this occurs here, showing the use of the genitive on not only attributive demonstratives and possessives, but also on relative clauses)

Our conclusion is therefore that the occurrences (all clearly elicited, not textual) of combinations of the delineator and the Oblique case together are the result of biclausal structures, and do not represent a real monoclausal combination. Similar data concerning multiple case marking have been examined in Dench and Evans (1988), who treat the phenomenon in a manner identical to that proposed here. Further discussion of this phenomenon can also be found in Plank (1995). Given this, we must conclude that there is no ordering of the delineator and the Oblique case in terms of their role in disambiguating grammatical functions. What then are the functions of these two cases, more precisely defined?

2.2 Case-marking: a purely semantic account of the delineator?

Based on the preceding discussion, we might conclude that the determination of delineator marking is simply a matter of agency, either inherent or ascribed. We would like to argue, however, that the delineator is neither used according to the verbal semantics nor the ‘world-view’ associated with the given verb, but is rather a combination of a universal application of the animacy hierarchy, a real, overt nominative case, and a degree of prominence.

Scott (1986: 172) notes that the delineator (which he then calls an ergative case marker), may be used with subjects of certain intransitive verbs. -*ma* is used on occasion with verbs in which the subject may be considered to have some sort of control over the action (e.g. ‘come’, ‘laugh’)...Limits and probabilities of such usage have yet to be determined.

Arguing against the notion that the delineator simply marks animacy, agency, or is an agentive case in a split-intransitive system, the following sentences (all taken from

texts) illustrate that very non-agentive, inanimate subjects may be marked with the delineator. Firstly, we have sentences (23) and (24), showing the use of the delineator on the intransitive subject of a non-agentive verb:⁷

- 23) *Atama mintogana, pigo pipisa iganta-ma*
 he:put:it:and was:there:and alright from:there possum.yam-DLN
itantiya, iye.
 grew:up so.they.say (D:85-86)

'He put it there, and then from that spot a possum yam grew up, so they say'

- 24) *kima, kima, kimagina, abaenarakanta-ma anosantiye, iye.*
 it:grew:and grew:and grew:and enormous.one-DLN it:grew:big so.they.say
 'It grew and grew and grew, and an enormous one (possum yam) grew up big, so they say' (D:90-91)

The use of the delineator in these sentences does not have an agentive basis. Rather than marking agency in the above examples, it is marking the subject as nominative. The verbs that occur in (23) and (24) are ambitransitive, that is, they may occur in either transitive or intransitive sentences, and since the *iganta* and *abaenarakanta* arguments are both overt and non-agentive, there is no object prefixing on the verb. The use of the delineator is thus to make its function as subject, rather than object, explicit. Because they are both very low-animacy arguments, the sentences could be misinterpreted and the NP taken to be the object of a transitive clause, not the case in the above examples (the objective interpretation would be 'He grew a possum yam', 'He grew it big'). In these two sentences we can clearly see that the function of the delineator is not semantic, but rather syntactic.

Furthermore, there are environments in which the delineator must occur; Scott (1978: 103) states that "[t]he delineator ... must occur on inanimates when used as a transitive subject." An example of this is shown in (16), repeated below as (25):

- 25) *ása:-wáma na-egú-y-e.*
 stick-DLN 1SG.OBJ-hit-3SG.SUBJ-INDIC
 'A stick injures me.'
 * *ása: 'naegúye*

⁷ These sentences are not given with tone marked, since they are taken from Scott (1973), which does not mark tone. Other sentences presented here without tone marked have also been drawn from Scott (1973) in which tone was not marked on the Fore examples.

Given this, we would conclude that a sentence with an low-animate agent and an Obliquely marked object, of the form

26) * Low-animate_{SUBJ} High-Animacy-OBLIQUE CASE_{OBJ} Verb

would be ungrammatical, since there is no delineator (that is, Nominative case) on the subject. If this is the case, and we have no counter-examples, the Oblique case is failing in its putative role as accusative case marker, since it fails to disambiguate, and thus render grammatical, this hypothetical sentence. On these grounds the functional account presented at the end of section 1 also collapses, since there are environments in which both the delineator and the Oblique would appear to be compulsory (see section 2.4), yet this is not predicted by that account.

With transitive sentences involving animate subjects, we also have examples of the delineator used when word order or animacy alone would allow for the correct interpretation. One such sentence is (27), in which two non-human (but animate) NPs occur, in SOV order. This alone should give the correct interpretation of grammatical functions, but the delineator still appears on the first NP. We ascribe this to the fact that the agent in this clause, *púsi* 'cat', is low in animacy (in absolute terms, compared to pronouns, humans, and other higher animate referents; we are not referring to its relative animacy with respect to 'mouse'), and so requires specification for its grammatical function: just as the use of the delineator is obligatory on inanimate subjects, it is preferred on low-animate subjects.

- 27) *mé* *púsi-wáma úmu páma...*
 down.there cat-DLN rat it:shot:and
 '... the cat had killed a rat...' (1978, Text: M)

Another point worth noting which follows from this example shows that speculation that the delineator is used only when the desired semantics do not conform to the prototypically expected semantics would be wrong. In (27) we see that the two actants, *cat* and *rat* are of equal animacy in the Fore scale (non-human animates). If it were purely an issue of marking the subject with the delineator if it does not conform to a prototypical subject for such a verb such as a world-view might lead one to expect, then *cat* would not need to be marked in (27) (unless it had some prescribed pragmatics, which are not evident in the text). Instead, this example shows that when animacy of both argument NPs is equal, the subject must be case-marked with the delineator, and that 'verbal semantics' or issues involving cultural-specific world-views are not relevant here. Moreover, it shows that case-marking is preferred on lower-animate arguments.

Compare with the absence of the delineator on a very high-animacy subject in (28):

- 28) *Nâe-bâ anintaená puri'tegi, ...*
 I-FOC preparing.greens I:did:and:I
 '...while I collected some green vegetables...' (1978, Text: J)

We can therefore infer a hierarchy of markedness in which the lower an argument appears on the animacy hierarchy, the more likely it is to appear with the delineator. This is shown in table 1.

Table 1: The Animacy Hierarchy And The Use Of The Delineator

	Animacy Hierarchy	Occurrence with DLN?
High Animacy	Human	highly marked
	Animate	(sometimes) preferred
Low Animacy	Inanimate	obligatory

It is interesting to note that this table shows an inverse relationship to the hierarchy seen in Table 2 (in section 3 below) in the naturalness of low-animacy arguments occurring with delineators, and the matching of animacy and grammatical function.

From the evidence presented here we can state that the delineator is actually a nominative case marker, the use of which is predictable from the animacy of the subject: it is rarely used with very high-animate subjects, and is obligatory with inanimate ones. It unambiguously marks the argument on which it appears as being the subject of the clause, a typical use of the nominative case. It may appear on either transitive or intransitive subjects, in the latter case on the subjects of either unergative or unaccusative verbs. A final use of the delineator, to indicate a change in discourse prominence, is exemplified in section 2.4.

2.3 Case-marking: an alternative account of the 'oblique' objects

Crucial to this (re-)analysis of Fore is the status of the Oblique case when marking the object of the verb (Scott 1978: 107). We argue that the use of this case on an object is not to mark the 'accusative' case, but rather is to mark a decrease in transitivity, in the sense of Hopper and Thompson (1980). We have independent attestations of obliquely-marked objects appearing in Fore, as seen in (29) – (31), all taken from the texts in Scott 1973. In all of these cases, the semantic object of the verb is marked with (Oblique and) Locative case (*-taQ* 'at, on'), and in all cases there is some feature of 'reduced transitivity': in the first case, it is a reflexive action, in which the dog burns its own foot; in the second case, the action of shooting is ineffectual, and so does not affect the object

in the manner desired. The third case, shown by (31), we can attribute to the repetition: the shooting becomes a non-telic event, and so the target is marked with the locative (the *-ma* on *aogi* 'good' is a verbal ending, not the delineator; this ending is frequent in the texts cited here).

- 29) *karanto-ma a-gisa-ra a'wamagina, kauguyegi, ...*
 dog:DIM-DLN 3SG.POSS-foot-LOC it:burned:and it:barked:and
 'and a little dog burnt its foot in the fire, and it yelped, ...' (A:20-21)
- 30) *Patagi, to ka yagara-ma pataipa, uwa kampagina*
 he:shot:it another one man-DLN shot:it:and to:no:effect they:did:not
a-u-pi-pa kampa aogima pawe, iye.
 SG.POSS-skin-LOC-FOC did:not goodshoot:it so.they.say (C:75-78)

'He shot it, and another man shot it, to no effect, they did not shoot it well in its skin, they say.'

- 31) *ka'waina-ba ku a-gaba-ra pagina,*
 one.person-FOC one 3SG.POSS-armpit-LOC shot:it:and
ka'waina ka a-gaba-ra pa, ...
 one.person one 3SG.POSS-armpit-LOC shot:it:and (C:82-83)

'One of them shot it in the armpit, one shot it in the armpit, ...'

Scott notes (1978: 109) that:

It is considered unacceptable to use Locative case marking on Potential Agents, although they may be marked for any of the other oblique cases...the primary Allative marker is used where a Locative would otherwise have been expected.

We argue that the reason the Locative case is not used to mark the locational relation with high-animacy actants is that it is already in use to mark the object in a low-transitivity event when it appears on these arguments. There is only one example of an oblique case appearing on an object in a text, which is discussed in section 2.4 below.

The elicited examples that Scott gives in his grammar (such as (4) above) can also be explained in terms of low transitivity: the verb *agauwe*, which is used in most of the examples with oblique case marking, is translated in the dictionary as 'see, look at, view, know, understand' (Scott 1980: 9), and also appears in texts with the meaning 'watch over, guard', showing a wide range of meaning and transitivity: 'look at' and 'guard' are more highly transitive (involving volitionality) than are 'view' and 'see', and certainly more so than 'understand'. The only other examples of the oblique case

functioning as a putative accusative marker on objects cited in Scott 1978 are found with the verb *mu* 'give', marking the recipient (clearly not an adversely affected participant) (1978:107). In the texts we have the one example discussed below in section 2.4, also clearly interpretable as a low-transitivity event. We thus have an alternation in the case marking of the object, with the lower transitivity event corresponding to the marking with oblique case. That an obliquely case-marked argument can be core is shown by (32) (Scott 1978: 107), in which the object prefixes on the verb clearly show the non-oblique status of 'me' (in the example below the oblique case appears as *-Q*, not *-N*; this is the form of the oblique case when it appears with pronouns):⁸

32) *naninta: náe 'namiye.*

naninta: náe '-Q na-mu-y-e

food I-OBL 1SG.OBJ-give-3SG.SUBJ-INDIC

'He gives me food.'

We can readily compare this alternation in case marking to the English use of prepositional objects in similar low-transitivity circumstances, with corresponding loss of morphosyntactic transitivity. For example, *She stabbed the thief* and the corresponding passive *The thief was stabbed by her* are both grammatical, but although *She stabbed at the thief* is acceptable, the passive equivalent *The thief was stabbed at by her* is problematic; not ungrammatical, but less acceptable than the version without a preposition. This shows that it displays less of the morphosyntactic features of canonical transitive clauses when an atelic, non-affecting action is explicitly encoded morphosyntactically, even though it is still a core argument of the verb. Austin (1982) discusses similar alternations in Australian languages, and morphological alternation between a (usually less affected) object marked with a dative(-like) case, and an object (usually more affected) marked in the normal way for objects in the language are found in

⁸ Scott (1978: 29-34) discusses the three possible endings of morphemes in Fore, characterising them (after Bee (1965)) as V, Q and N, standing for Voicing, Glottalisation, and Nasalisation, referring to the effects that they have on following sonorants. The contrast can be seen in the realisation of the initial consonant in *-ántowé* 'DIMINUTIVE-INDICATIVE' when nouns with different endings precede it: *yaga:ntowé* '(It is a) little pig.', no change with a V-class word *yaga*: 'pig'; *ko'ántowé* '(It is a) small netbag.', with preglottalisation, reflecting the preceding class Q word *ko'Q* 'netbag'; and *tunkántowé* '(It is a) tomahawk.', with a preceding class N word, *tú'N* 'axe'. Certain cases are marked in Fore by the use of these endings, with, in (32), the oblique case being marked on the pronoun by its transfer to the Q class (otherwise it is a member of the V class; that is, vowel final). Non-pronouns in oblique or genitive case are transferred to the N class. Further details on the morphophonological changes that are found with different following consonants can be found in Scott (1978).

a wide sample of the world's languages (see, eg., Maori (Bauer et al 1993), or Warlpiri (Simpson 1991), amongst others) in which there is an alternation between less-affected objects appearing in a dative (or other oblique) case, and more affected ones appearing in a more typical object case, which in the case of Fore is to appear without case marking. This is comparable to the English *I shot him* with an affected object and a telic event, and *I shot AT him*, with an object which is not necessarily affected, an event which is not necessarily telic, and an oblique preposition marking the object.

It is worth noting that the objects of highly transitive actions, ones with telic, punctual properties, and totally affected, individuated objects, are not marked with the Oblique case. This can be seen in the following two examples, in which the absence of case has been indicated with -Ø (without implying that we consider there to be a 'zero' case present).

- 33) *asa yaku ka-Ø ainta, mama ka-Ø ainta, potama*
 asa tree one I:felled:and mama one I:felled:and I:did:it:and
A'oge Anerikoge yakupa aobuwaisitanta,...
 A'o:and Aneriko:and fire-FOC I:lit:for:them:and

'I felled one "asa" firewood tree, and one "mama" tree, I did that and lit a fire for A'o and Aneriko, and...'
 (B:3-5)

- 34) *awate-Ø puru'urogana, mopa ka'isa-ba urite,...*
 her:genitals it:tore:out:and down:there part-FOC she:held:and
 'It (a possum) tore out her genitals, and she held (the) part of it [that was remaining -CD & MD] down there, (and fled down that bush path)...'
 (D:76-77)

In this section we have established the need to recognise oblique 'objects', which have alternations with normal direct objects based on the transitivity of the sentence, and shown that the use of the Oblique case alone on objects is not coding an accusative marking, but rather a decrease in perceived transitivity.

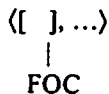
2.4 Case-marking constructions: the Nominative and the Oblique together in the same clause

In the materials available there is only a textual example of an Oblique case on an apparent object, shown in the example presented below. Crucially, the subject in the same clause is marked as nominative with the nominative case. Consider example (36). If the -*N* on *kagi* were (unambiguously) marking the accusative, as suggested by Scott, then the nominative on *aru'anto* would be superfluous: the word order, relative animacy, and accusative case should already make the clause totally unambiguous (as discussed above in section 2.2). Of course, we can account for the nominative in terms of the

discourse context in which it appears, and the prominence that is present in this clause. In the beginning of the section of discourse, a number of different people have been the subject of a number of clauses. In (36c), the subject becomes one of the short people, and the change in prominence is marked by the use of the nominative on the new subject, even though it is a high-animate one. The nominative is again used in (36e), and again it is related to the change in subject: in the preceding clauses, the actor has been 'one small one', but in the clause *to ka aru'antomaba kagi nkakayumagina* (here given as (36e), C:56 in Scott 1972) there is a different actor, 'another small one', and it is this contrast that forces the use of the nominative to mark the subject. We can informally define prominence, and it's role in deciding for or against the use of the nominative case, as follows:

35) Prominence and nominative case

Mark nominative if the argument is the highest-ranked one in the argument structure of the verb with which it occurs, and is contrastively focussed:



This specifies that the argument must be highest, and so correctly predicts that the nominative cannot appear on objects.

In order to illustrate this point explicitly, and to provide the context for the discussion of the oblique case in conjunction with the nominative case in one clause, the section of discourse in which this occurs (from Scott 1973, text C) has been repeated below in its entirety as (36). Here only the glosses relevant to a discussion on case marking are included in detail (as mentioned earlier, the interested reader is referred to Scott 1978 for details of the verbal morphology), and the relevant case marking highlighted:

- 36) a 'He called out to everyone, and they all came, so they say. They came, and made a ground oven feast, and ate. They made arrows, so they say. They kept on making arrows, and when they were finished they did not give arrows to two short people, so they say.' (C:39-48)
- b *Isimuginisi*, "Nanaga pewe" *ugateginisi*,
they:did:not:give:them:any:and why-ref you:do the.two:said:and
'They did not give them any. "Why are you doing this?"', the two said,
and'
- c *ka aru'anto-ma a'mo akaepa'magina, taebomepa*,
one small:one-DLN branch cut:down:and they:heated:it:and

waresaena puwaentiya, iye.
 arrow:type they:completely:made so.they.say

'... one small one cut down a branch, and they heated it and made arrows, they say.'

d *Aibogana, "Pikena wanaga pumarauwe," oategina,*
 So:he:did:that:and "I am a man who does that and I do it."he:said:and
 'So he did that, and said "I am a man who does that and I do it.", and ...'

e *to ka aru'anto-ma-ba kagi nk-akayumagina,*
 otherone small:one-DLN-FOC tree-OBL he:cut.down:and
 'The other small one cut down a tree, and ...'

f *aebumaraomepa, ireraka aebumagina*
 they:both:did:that:and about:arrows they:were:working:and

"Pikena wanaga pumarauwe," oateginisi
 "I am a man who does that and I do it."they:both:said:and

'...they both did that, they were working to do with arrows, and they both said "I am a man who does that and I do it.", and ...'

g *pabigo kana yabu yuga-ra-pa umagini,*
 completely that:sugar:garden-LOC-FOC they:all:were:and

ainkimagini, kabiwaentawe, iye.
 they:encircled:it:and they:watched:over:it so.they.say

'... they were all there at that sugar garden, and they encircled it (the *Kabugagi* bush spirit), and they watched over it, so they say.' (C:49-61)

In contrast to the (36c) and (36d), in which the first small one cuts down a branch, heats it and makes it into *waresa* arrows, we can see that when the second small one chops *at* the tree in (36e) it is not immediately felled, and in the subsequent clauses in (36f) both of the actors join in chopping the tree for the making of arrows. Nowhere is the actual making of arrows, or the completion of the chopping mentioned, tying in with the analysis presented earlier concerning oblique objects and the loss of transitivity. We argue that the oblique case in (36e) is marking indeed the oblique status of the tree, and is not an accusative case marker at all.

3. Grammatical function disambiguation and case marking

As outlined by Scott, the relevant aspects of the hierarchy in Fore are human > animate > inanimate. We hypothesise that this animacy hierarchy (directly) aligns with

another universally well-attested hierarchy: the syntactic functional hierarchy. This means that, given two arguments of a transitive verb, the higher the animacy the more likely it is to be associated (by default) with the higher syntactic function. In Fore, this would mean that given, for example, two participants, one *human* and one *animate (non-human)*, Fore speakers will interpret the *human* to be the subject, and the *animate* to be the object unless expressly marked otherwise. This can be overridden with the use of case markers - the Nominative can be used to unambiguously mark the subject.

The relevant portions of the hierarchies as described for Fore are shown in table 2:

Table 2: Aligning the animacy hierarchy and the functional hierarchy in Fore

	Animacy Hierarchy	Functional Hierarchy
High Animacy	Human	Subject
	Animate	Object
Low Animacy	Inanimate	

The alignment requires that you match these up such that the highest point on the Animacy hierarchy aligns to the highest point in the Functional hierarchy, the less animate argument corresponds to a position lower in the functional hierarchy (ie. match them up one-to-one, without crossing lines).

This is only relevant when the animacy of the two NPs is unequal. It is also only applicable when the input semantics is such that the higher animate NP is the SUBJECT and the lower animate NP is the OBJECT. This is a principle, not a rule, and so if the proposed relations would not be faithful to the input semantics, this is ignored and the next option taken: the nominal is overtly case marked with the nominative case.

4. Summary: model of a functional communication strategy

This paper demonstrates how Fore manipulates competing strategies for grammatical function disambiguation involving the animacy hierarchy and morphological case, together with natural markedness constraints and a requirement to freeze word order if potential ambiguity remains, to produce a coherent system for functional communication. It is interesting to note the different approaches researchers have taken to such data. The final analysis we presented and on which the principles were based is a result of a corpus study of Fore texts. This analysis differs from Scott's in many crucial ways including the function of the cases, but equally crucially in the areas of predicting the probability of a particular strategy being chosen.

Other researchers with extensive experience among the languages of New Guinea have remarked on what we have shown to be the Nominative case in Fore. Durie (1996) discusses the case-marking conundrum in Fore, though the nominative status of the case is not relevant to his discussion.

Foley (1986: 106-108) notes the spread of ergative case marking in languages, especially of the highlands, in New Guinea. In addition to several non-cognate (but functionally very similar) forms, some appear to be cognate with the Fore *-ma*. An apparently cognate morpheme *-me* is found in Enga (Lang 1973) (Engan, or West Central, family, Enga province, Papua New Guinea). In Enga it is obligatorily used to mark all transitive subjects, regardless of animacy, and so has become an ergative case marker (in fact, Foley 1986: 172 also calls the Fore *-ma* an ergative suffix in his discussion of Fore clause structure). In Hua, another language of the Goroka family spoken in an area close to Fore, we also find a cognate morpheme *-(ma)mu'*, but here it functions more exclusively as an (optional) ergative suffix. Interestingly, Haiman (1980: 363) notes that "the functions of the *-mu'* inflection in Hua are varied, but the best single approximation to a definition of this ending is that it is an ergative case ending. Among the more or less undesirable consequences of this position, however, are the fact that the inflection can appear on the subjects of unambiguously intransitive verbs of the form *NP+hu* ("if they have no homophonous transitive counterpart", p. 362) ..." (a verb that consists of an NP plus *hu-* 'do' -CD & MD). The example Haiman gives is *Fu(mu') korihie* 'The pig ran away'. It is worth noting that most of the other verbs listed as belonging to this class are either borrowings, or unaccusative verbs, such as *aksihu* 'sneeze', *are'arefu* 'be red', *ogofu* 'be short', and *sokohu* 'be good' (for a fuller listing, see Haiman 1980, esp. p.118-134).

The variation in usage that we find in this affix and its equivalents in other highlands languages thus includes the following:

Table 3: Differences in use of the 'delineator' in three Highlands languages

Case marking	Low animacy	High animacy	Intransitive	Object?
on:	transitive subject?	transitive subject?	subject?	
Enga	yes	yes	no	no
Hua	(yes)	(yes)	(sometimes) ^a	no
Fore	(yes)	(optional)	(optional)	no

^a Depending on whether there is a transitive use of the same lexical verb; only possible if there is no transitive use. If there is, the use of *-(ma)mu'* would unambiguously mark a transitive subject in Hua.

We can see a cline from purely and obligatory ergative case marking in Enga to an optional nominative case in Hua and Fore. The question of the original meaning is an interesting one to contemplate; does the Fore *-(wa)ma* reflect an original ergative case that has spread in function to cover the intransitive subject, thus becoming nominative, or, conversely, a nominative case that has (in other languages) been reduced in function to mark only transitive subjects, thus becoming an ergative case? These two options are illustrated in figure 1, in which the subscripted 'A' and 'B' show the earlier and later range of use of the case marker in each scenario.

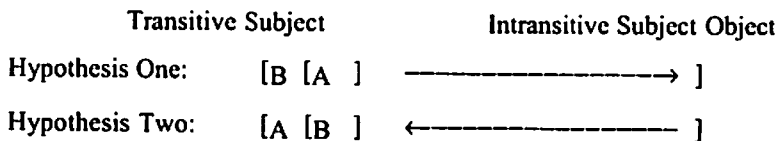


Figure 1: The spread (or collapse) of Case marking in Fore: two alternatives

There is reason to believe, however, that Fore represents the extreme end of historical development for the first case, the spread of an originally ergative case. Cross-linguistically the fact that higher-animate nominals tend to appear with nominative-accusative systems, and lower-animate nominals with ergative-absolutive systems, is widely attested (see Dixon 1994: 83-97 for references). Starting with an original ergative case that appears on lower-animate nominals, we can see that Enga has simply expanded its use to include all transitive subjects regardless of animacy, thus creating a general ergative case. Hua has travelled some way along this pathway, but stops short of making the use of the ergative case obligatory, and importantly includes some intransitive subjects, but only where there can be no doubt that these are functioning intransitively. In Fore we see the most divergent pattern of grammaticalisation. As in Hua, the use of

the case is never obligatory, and is more favoured with lower animate nominals. Furthermore, the original ergative marker has expanded to include intransitive subjects, even (especially?) when these are interpretable as objects of transitive verbs. This is clearly a nominative use synchronically, despite its earlier ergative roots. Indeed, describing the Move dialect of Yagaria (closely related to Hua, also a dialect of Yagaria), Renck (1975: 35) notes that *-ma* (the equivalent of Fore's 'delineator') appears 'as agentive marker in transitive clauses ...[and]... as subject marker in intransitive clauses', indicating that in Yagaria too, the use of the article has developed at least as far as a marker of agentive intransitive subjects as well as transitive ones, and perhaps (though this is purely speculative) has gone as far as Fore in becoming a true emphatic nominative case marker. Although it is beyond the scope of this paper to pursue such a goal, a detailed investigation of the case marking system in all of the (comparatively well-described) languages of the Goroka family would shed valuable light on the actual development and variation in the case markers. This remains as the topic of future study, since the aim of this investigation is to provide a predictive model of case marking in modern Fore, using a corpus-based approach.

The alternative, a nominative case marker becoming restricted in use to ergative in some languages, is less likely. Reasons for this include the rarity of overt nominative case systems cross-linguistically, and the improbability of such a system regrammaticalising to appear only on low-animacy nominals, as well as the attested tendency for morphemes to spread in function, rather than contract (short of total loss).

We have demonstrated that *-(wa)ma* in Fore is definitely marking nominative case on the subject. This challenges two of the views (espoused in Li and Lang 1979) that many Papuan languages possess an ergative case, and that the case marking has little or no syntactic relevance. We have shown that a proper characterisation of the case in Fore is that it is an (emphatic) nominative case, and that it in fact mirrors the divisions made in other areas of the morphology and syntax of Fore, such as verbal agreement and switch reference marking (see Donohue 1997 for details), and so cannot be thought of as an 'irrelevance' at all.

Appendix: Text counts of NPs and marking strategies

Since a large part of the argumentation in this paper has come from the analysis of actual discourse in texts, we shall present the findings from our text counts in this section. This has been divided up, according to text genre (narrative vs. non-narrative), though this was found to have very little bearing on the actual syntactic case marking strategies, but a large effect on the use of otherwise of the discourse-driven pragmatic case marker *-pa*, as is documented below.

Narrative discourse:

We examined seven narrative texts (texts A, B, C, D, K and L from Scott 1972; texts E, F, G and J have been examined separately on the grounds that they represent different speech genres with different rules concerning prominence marking, and text H was excluded for reasons outlined below, and the sole text given in Scott 1978, referred to here simply as 'Text'), containing a total of 333 verbs. The following distribution of nominals was found, organised according to grammatical function and NP marking.

		Transitive Subject	Intransitive Subject	Object	Totals	Oblique	Totals
Unmarked	-∅	4	12	35	51	-	51
delineator	-(wa)ma	5	5	0	10	-	10
Oblique	-N	-	-	1	1	57	58
Focus	-pa	4	16	17	37	-	37
delineator	-ma-pa	1	0	0	1	-	1
+ focus							
focus +	-N-pa	-	-	0	0	4	4
Oblique							
Total		14	33	53	100	61	161

For the purposes of this paper we have ignored the truly oblique phrases, which bear locative, ablative, allative, instrumental or referent case marking in addition to the general Oblique case. Focussing on the core grammatical functions, and reformulating the table in terms of the relative frequency of a marking strategy for a particular grammatical function in percentages, we arrive at the following table:

Percentages

Marking strategies used for different grammatical functions		Transitive Subject	Intransitive Subject	Object	Total (raw numbers)
Unmarked	-∅	29%	36%	66%	50
delineator	-(wa)ma	36%	15%	0%	10
Oblique	-N	-	-	2%	1
Focus	-pa	29%	48%	32%	36
delineator + focus	-ma-pa	7%	0%	0%	1
focus + Oblique	-N-pa	-	-	0%	0
Totals		100%	99%	100%	100

(In this table 0% indicates that there were no occurrences of a theoretically possible combination, whereas a dash - indicates that the combination is not

possible, and so has not been considered in the calculation of percentages; due to rounding, the total may be more or less than 100%.)

It is worth noting that 'objects', the only 'core' NPs that may appear in Oblique case -*N*, which unambiguously distinguishes the grammatical functions in a clause, only appeared in that case 2% of the time (one occurrence in the corpus); the rest of the time the NP appeared either unmarked (64% of cases) or marked for pragmatic focus. Examining the transitive subjects, which can be almost unambiguously identified through the use of the delineator *-(wa)ma*, we find that in fact only 43% of cases used this marker. Equally interesting, if we examine how the marking strategies were distributed across the different core grammatical functions, we arrive at the following table:

Percentages		Transitive	Intransitive	Object	Totals
Where different marking strategies appear (by function)		Subject	Subject		
Unmarked	<i>-∅</i>	8%	24%	69%	101%
delineator	<i>-(wa)ma</i>	50%	50%	0%	100%
Oblique	<i>-N</i>	-	-	100%	100%
Focus	<i>-pa</i>	11%	43%	46%	100%
delineator + focus	<i>-ma-pa</i>	100%	0%	0%	100%
focus + Oblique	<i>-N-pa</i>	-	-	0%	0%
Total (raw numbers)		14	33	53	100

From this we can see that, while the use of the Oblique case is restricted to objects (among the core cases), the delineator occurs on both transitive and intransitive subjects, with approximate equal frequency (and does not occur with the Oblique case in the texts examined, indicating the double marking of an NP in this way to be highly marked). It is clear that *-(wa)ma* is used as an indicator of agency, and is prototypically used to mark either transitive or intransitive subjects, approximating the traditional idea of the delineator case. Although Scott mentions that *-(wa)ma* can occur with Oblique case, the fact that there are no examples of this happening in over 500 verbal clauses of examined texts (counting the 200+ other clauses in the texts of non-narrative genres) indicates that this is at best only marginally grammatical, and in any case certainly an extremely marked strategy, the result of almost mutually exclusive constraints operating. The appearance of the focus marker overwhelmingly on NPs which are objects or intransitive subjects might lead us to assign it something of the status of an absolutive case, but the fact that it can appear on transitive subjects as well, and not too infrequently (table 2 shows us that a total of 36% of transitive subjects occur with the focus marker), coupled

with the well-known preference for objects or intransitive subjects to be the NPs present in real discourse, means that the skewed figures are probably just an artefact of the data set, reflecting the tendency for ellipsis to affect transitive agents first in head-marking languages.

Non-narrative discourse:

In the tables given earlier certain texts were excluded on the grounds that as expository, hortatory, geographical descriptive or translated pieces of discourses, and as such represent different speech genres, with different rules concerning prominence marking and potentially a flow-on effect to the morphosyntactic coding of grammatical functions. In order to present the full picture concerning the marking strategies in these genres as well, the textual analysis of four of these texts (E, F, G and J; Text H, the translation of a foreign discourse style (praying), has been excluded as not representing either a native genre or a spontaneous text) is presented below, comprising a total of 211 verbal clauses.

Raw figures		Transitive Subject	Intransitive Subject	Object	Totals	Oblique	Totals
Unmarked delineator	-Ø	2	9	18	29	-	29
Oblique	-(va)ma	1	1	0	2	-	2
Focus delineator + focus	-N	-	-	0	0	38	38
focus + Oblique	-pa	3	(7)	37	40 (47)	-	40 (47)
Oblique	-ma-pa	0	0	0	0	-	0
Total		-	-	0	0	13	13
Total		6	10 (17)	55	71 (78)	51	121 (129)

Firstly, notice the much higher rate of appearance of nominals per clause in these discourse styles: fully 0.61, as opposed to 0.49 in regular narrative discourse. The majority of these are obliques, however; the frequency of core nominals is not significantly affected (0.31 compared with 0.34), but the frequency of oblique nominals changes from 0.18 to 0.24 in the non-narrative texts. The bracketed (7) in the entry for -pa marked intransitive subjects all represent occurrences in one text, text J 'My village', and are all the 'subjects' of existential verbs. Since these verbs are notorious for their irregular behaviour, they have been excluded from the calculation of percentages following. Additional comments on the textual differences will be made on examination

of the relative percentages of strategies used, as in the previous presentation of discourse data.

Relative frequency of different marking strategies for a particular grammatical function:

Percentages		Transitive Subject	Intransitive Subject	Object	Total (raw numbers)
Unmarked	-Ø	33%	90%	34%	29
delineator	-	17%	10%	0%	2
	(wa)ma				
Oblique	-N	-	-	0%	0
Focus	-pa	50%	0%	67%	40
delineator + focus	-ma-pa	0%	0%	0%	0
focus + Oblique	-N-pa	-	-	0%	0
Totals		100%	100%	101%	71

Comparing these figures to those obtained for narrative discourse, we notice that the percentage of transitive subjects marked by the delineator drops sharply, but the small sample size (6) means that this is probably not statistically significant. As with the narrative discourse, the number of occurrences of either the delineator on subjects or the oblique marker on objects is very small. The most significant change, because it represents a sample large enough that we can make valid assertions about it, is the change in the marking strategy on the objects, with double the percentage of them being marked with the focus marker. This represents the fact that the focus marker is used to mark contrast and discourse focus. An example can be seen in the following section of text from lines 34-38 from Text E 'Getting Married' (Scott 1973: 69):

37) *kawae-pa aogimagina kao'ena-pa pumagina nakena-ba*
 your.husband-FOC [look.after].well.and friend-FOC be.and food-FOC
amegana aogi nakena amegana kawae-pa nano.
 give.to.him.andgood food give.to.him.and your.husband-FOC will.eat
 'Look after your husband, be a friend (to him), give him food, give him good food,
 and your husband will eat (it).'

In this discourse fragment the focus marker is used on nearly every clause, every time that the speaker is changing topics. The only clause that does not contain a use of *-pa* is in the second mention of giving food; here the attention is already on 'food', and the clause merely gives more information about that topic. This frequent use of *-pa* is the main morphosyntactic difference between narrative and non-narrative discourse.

Looking at the distribution of the different marking strategies among the core grammatical functions, we arrive at the following table:

Percentages		Transitive Subject	Intransitive Subject	Object	Totals
Unmarked	$-\emptyset$	7%	33%	62%	102%
delineator	$-(wa)ma$	50%	50%	0%	100%
Oblique	$-N$	-	-	0%	0%
Focus	$-pa$	8%	0%	93%	101%
delineator + focus	$-ma-pa$	100%	0%	0%	100%
focus + Oblique	$-N-pa$	-	-	0%	0%
Total (raw numbers)		6	10	55	71

Interestingly we note that there are almost no differences between the figures obtained here and those for narrative discourse. We can thus conclude that the relative frequencies of use of the grammatical marking strategies remain constant across different genres, but that there is a significant change in the frequency of the pragmatic marker $-pa$, from 0.26 per NP in narrative texts to 0.56 per NP in non-narrative text.

Combined discourse figures:

For a combined view of the total amount of textual materials examined, the figures representing the combined texts, a total of 544 verbal clauses with 0.35 core nominals and 0.22 oblique phrases per clause, are presented below, though there is little significant variation in the syntactic case marking strategies here compared to the individual counts presented earlier.

Raw figures		Transitive Subject	Intransitive Subject	Object	Totals	Oblique	Totals
Unmarked	$-\emptyset$	6	21	53	80	-	80
delineator	$-(wa)ma$	6	6	0	12	-	12
Oblique	$-N$	-	-	1	1	95	96
Focus	$-pa$	7	23	54	84	-	84
delineator + focus	$-ma-pa$	1	0	0	1	-	1
focus + Oblique	$-N-pa$	-	-	0	0	17	17
Total		20	50	108	178	112	290

Relative frequency of a marking strategy for a particular grammatical function:

Percentages		Transitive Subject	Intransitive Subject	Object	Total (raw numbers)
Unmarked	<i>-∅</i>	30%	42%	49%	80
delineator	<i>-(wa)ma</i>	30%	12%	0%	12
Oblique	<i>-N</i>	-	-	1%	1
Focus	<i>-pa</i>	35%	46%	50%	84
delineator + focus	<i>-ma-pa</i>	5%	0%	0%	1
focus + Oblique	<i>-N-pa</i>	-	-	0%	0
Totals		100%	100%	100%	178

Frequency of the different marking strategies among the core grammatical functions:

Percentages		Transitive Subject	Intransitive Subject	Object	Totals
Unmarked	<i>-∅</i>	8%	26%	66%	100%
delineator	<i>-(wa)ma</i>	50%	50%	0%	100%
Oblique	<i>-N</i>	-	-	100%	100%
Focus	<i>-pa</i>	8%	27%	64%	99%
delineator + focus	<i>-ma-pa</i>	100%	0%	0%	100%
focus + Oblique	<i>-N-pa</i>	-	-	100%	100%
Total (raw numbers)		20	50	108	178

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