

5 *Morphosyntactic evidence for the position of Chamorro in the Austronesian language family*

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1 Introduction¹

The Chamorro language is an Austronesian language spoken in the Marianas Islands. Its position within the Austronesian language family has been a continuing topic of discussion for more than a hundred years. The difficulty in determining its position has apparently resulted from linguistic contact with a variety of other languages, both Oceanic as well as Western Austronesian, ranging from chance settlement from drifting sailors, to established trade networks with other island groups, possibly exchange of wives, and probably also through invasion by other Austronesian-speaking groups and eventually in historic times, through colonisation under Spanish, German, Japanese and American governments. Other factors, such as natural disasters (the Marianas is not infrequently devastated by typhoons) and introduced diseases, are known to have at various times severely reduced population levels in the Marianas, and this again would have probably hastened change in the language. Hertha Costenoble, a native speaker of Chamorro, who studied linguistics under Dempwolff, proposed three different strata discernible in the multiple Chamorro reflexes of reconstructed Austronesian sounds, resulting in many doublets, i.e. pairs of words with slightly different pronunciation and with the same or similar meanings, one of which may have been directly inherited, while the other was borrowed from another Austronesian language which had undergone different sound changes from the inherited vocabulary (Costenoble 1940).

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In addition to the lexical doublets discussed by Costenoble, the language also exhibits a number of pairs of syntactic structures, one of which must have been inherited and the other probably borrowed, just as in English there are two possessive constructions, one of which (the 'apostrophe -s' form) is inherited, and the other (the 'of' construction) is borrowed. These will be discussed later in the paper.

This paper first gives an overview of various claims that have been made about the position of Chamorro vis-à-vis other Austronesian languages. It will then discuss, in the context of these claims, various problems which inevitably arise when attempting to do morphosyntactic comparison. These problems are theoretical as well as practical, although solutions to the latter often depend upon solutions to the former.²

The first more general theoretical problem is that of comparability between analyses. It is simply not possible to properly compare the grammars of two languages that have been written using different theories. One may well be able to recognise that a given form, or its cognate occurs across a set of languages, but if that form has a syntactic function, then a common theory of the syntax of those languages is necessary to determine whether they have an equivalent function or not. Even with a common theory, determining their equivalence can still be problematic. As will be seen below, there are as many analyses of Chamorro pronouns as there have been linguists who have described them. And I shall propose yet another.

A second theoretical problem is the problem that all comparativists face, that of the inherent circularity of the comparative method. Subgrouping hypotheses are based on the accumulation of shared innovations in the phonology, lexicon, morphology and syntax of sets of languages. Yet it is not possible to distinguish an innovation from a retention without a subgrouping hypothesis.

² Abbreviations used in this paper are as follows:

Austronesian subgroup names:

CEMP	Central-Eastern Malayo-Polynesian
NMP	Nuclear Malayo-Polynesian
PAn	Proto Austronesian
PEF	Proto Extra-Formosan
PMP	Proto Malayo-Polynesian
PNMP	Proto Nuclear Malayo-Polynesian
PPh	Proto Philippines
WMP	Western Malayo-Polynesian

Language names:

Chm	Chamorro
Ilk	Ilokano
Ivt	Ivatan
Pal	Palauan
Tag	Tagalog

Lexicase case forms:

Acc	Accusative
Erg	Ergative
Gen	Genitive
Lcv	Locative
Nom	Nominative
Obl	Oblique

Lexicase case relations:

PAT	Patient
AGT	Agent
COR	Correspondent
MNS	Means
LOC	Locus

Lexicase features:

actr	actor
dfnt	definite
plrl	plural
prdc	predicate
prnn	pronoun
sttv	stative
trns	transitive

Pronoun abbreviations:

1SG	first person singular
2SG	second person singular
3SG	third person singular
1PL.INC	first person inclusive plural
1PL.EXC	first person exclusive plural
2PL	second person plural
3PL	third person plural

Other abbreviations:

Det	Determiner
LIG	Ligature

Practical problems include establishing criteria for determining whether the absence of a grammatical form in a language is the result of loss (and therefore an innovation), or whether it had not yet been innovated at the time the ancestral speakers of that language separated from the group of languages in which the form is found. Another practical problem, somewhat related, is determining which of two comparable forms represents the innovation and which the retention, or whether one or the other is the result of language contact. Examples of each problem occur in the discussion below.

2 Earlier views on the relationship of Chamorro to other Austronesian languages

Costenoble's (1940) claim that Chamorro exhibits three different strata of lexical items in the language was based on his understanding of the phonology of Proto Austronesian as it had been reconstructed at the time (primarily by Otto Dempwolff), and he did not have the benefit of data from any of the Formosan languages. However, his statements of the reflexes are generally well supported, although views of the PAN sound system have undergone considerable change since that time (see Blust 1997 for an overview). Zobel summarises the subgrouping implications of the phonological innovations that have taken place in Chamorro, and notes that 'the sound changes are either found in many other WMP languages (...merger of *e and *u...), or are unique (...merger of *D [Blust's *d] and *k, *j and *q...)' (Zobel 2002:406), implying that it is not possible to claim anything about the subgrouping of Chamorro based on phonological evidence alone.

Although Costenoble recognised that the presence of various linguistic strata implied language contact, it was probably Topping (1973:3) who first proposed a possible genetic relationship for Chamorro by appealing to morphosyntactic evidence, but noting also the possibility that the evidence could be the result of language contact. He claimed that

Chamorro is a Philippine type language, and its closest linguistic relatives are probably Ilokano and Tagalog. This opinion is based on the many similarities in the grammatical structures of the languages...It is quite possible that these similarities in the grammatical devices were borrowed from Filipinos with whom the Chamorro traded. However, this is very unlikely.

Starosta and Pagotto (1991) compared the syntactic features of Chamorro with those of a Philippine language (Tagalog), a Formosan language (Tsou) and a Micronesian language (Marshallese), in an attempt to discover whether or not there was any morphosyntactic evidence for subgrouping Chamorro with these languages, but concluded that each of the features examined was probably inherited from PAN and therefore provided no evidence for subgrouping. There were no exclusively shared innovations in the morphology or syntax to support a subgrouping argument. Subsequently, Starosta (1995) claimed that Chamorro shares a set of morphosyntactic innovations with a subgroup of languages (named F3) which includes all Austronesian languages except Rukai, Tsou, and Saaroa in Formosa, placing the Chamorro split from other Austronesian languages at a very early stage, considerably prior to that which resulted in the Austronesian settlement of the Philippines, Indonesia and Oceania.

Zobel (2002) in a wide-ranging paper attempts to provide evidence from verb morphology and morphosyntax to claim that Chamorro shares a number of innovations which he reconstructs for the parent language of a set of Malayo-Polynesian languages which exclude

the Philippines, North Sulawesi, and Northeast and Interior Borneo.³ This new subgroup he labels NUCLEAR MALAYO-POLYNESIAN. He considers Chamorro and Palauan to be 'early offshoots from PNMP' (Zobel 2002:431). He furthermore speculates that Pre-Chamorro and Pre-Palauan speakers probably sailed from Sulawesi, although he believes that NMP languages could have been spoken in the Southern Philippines and this area could also be considered to be a possible departure point for the first migrants to the Marianas and to Palau. Zobel makes a good case for his theory, but the question that must be asked is whether the evidence that he adduces is evidence for a genetic relationship, or whether it is evidence for contact. This problem will be addressed later in the paper (§4.5), but first it is necessary to examine his claims about the nature of Chamorro itself.

3 Is Chamorro an ergative language or not?

Zobel (2002) claims that Chamorro is not a language with a 'focus' system, as described by Topping (1973). Instead, following Cooreman (1987), he describes it as a split-ergative system with the split being conditioned by whether the verb is realis or irrealis. He states, 'in realis there is ergative pronoun marking, while in irrealis there is nominative marking.' (Zobel 2002:410). In order to determine the validity of this claim, it is necessary to take a close look at the Chamorro pronominal system. The system, as described by Topping (1973) is shown in Table 1.

Table 1: Chamorro pronouns (Topping 1973)

	A	B	C	D
1SG	<i>hu</i>	<i>yo'</i>	<i>-hu</i>	<i>guahu</i>
2SG	<i>un</i>	<i>hao</i>	<i>-mu</i>	<i>hagu</i>
3SG	<i>ha</i>	<i>gue'</i>	<i>-ña</i>	<i>guiya</i>
1PL.INC	<i>ta</i>	<i>hit</i>	<i>-ta</i>	<i>hita</i>
1PL.EXC	<i>in</i>	<i>ham</i>	<i>-(n)mami</i>	<i>hami</i>
2PL	<i>en</i>	<i>hamyo</i>	<i>-(n)miyu</i>	<i>hamyo</i>
3PL	<i>ma</i>	<i>siha</i>	<i>-(n)ñiha</i>	<i>siha</i>

According to Topping (1973:106–111, 262), the functions of these pronouns are as follows:

- A. Subject markers which always precede the verb. They are required in transitive sentences, even if there is a full noun phrase present. They are also required if the verb is intransitive and marked for future tense.

³ Specifically, Zobel (2002:430–431) claims that the NMP [Nuclear Malayo-Polynesian] subgroup includes the languages of CEMP [Central-Eastern Malayo-Polynesian] group, Chamorro and Palauan, and most WMP [Western Malayo-Polynesian] of Malaysia and Indonesian. Not included in the NMP group are the following WMP languages: the languages of the Philippines, the three Northern Sulawesi groups (Gorontalo-Mongondic, Minahasan, Sangiric), the Sama-Bajau languages, Malagasy, and all languages of Borneo with the exception of the Malayic and Tamanic groups.

- B. Subject and Object pronouns which always follow the verb. They are subject pronouns if they occur in an intransitive sentence, or in a transitive sentence with a non-specific object. They are object pronouns if they occur as a specific object in a transitive sentence.
- C. Possessive pronouns. They are bound morphemes, or enclitics. The disyllabic forms also require an ‘excrescent’ consonant *n* before they are joined to a vowel-final stem. Some auxiliary verbs, such as *ilek* ‘say’, *ga’o* ‘prefer’, and *ya* ‘want’, always require this set of pronouns as subject. They also occur attached to verbs following certain question words.
- D. Emphatic pronouns. Usually these are emphasised subjects, but may occur in other contexts as well.

Zobel’s (2002) analysis of the pronouns (see Table 2) is somewhat different from that of Topping. He labels set A ‘agentive’, set B ‘absolutive’, set C ‘possessive, and A [agent] in certain nominalizations’. He also notes that there is another pronoun set, the forms of which are very similar to those of the agentive set A but which he labels ‘nominative’ since (as Topping had noted) they occur as the subject of irrealis (Topping’s ‘future’) intransitive sentences. It is on the basis of this analysis that Zobel claims that Chamorro is a split-ergative language, with the split conditioned by mood distinction.

Table 2: Chamorro pronouns (Zobel 2002)

	A1	A2	B	C	D
	Agentive	Nominative ⁴	Absolutive	Possessive	Free
1SG	<i>hu</i>	<i>(bai) hu</i>	<i>yo’</i>	<i>-hu</i>	<i>guahu</i>
2SG	<i>un</i>	<i>un</i>	<i>hao</i>	<i>-mu</i>	<i>hagu</i>
3SG	<i>ha</i>	<i>u</i>	<i>gue’</i>	<i>-ña</i>	<i>guiya</i>
1PL.INC	<i>ta</i>	<i>(u) ta</i>	<i>hit</i>	<i>-ta</i>	<i>hita</i>
1PL.EXC	<i>in</i>	<i>(bai) in</i>	<i>ham</i>	<i>-mami</i>	<i>hami</i>
2PL	<i>en</i>	<i>en</i>	<i>hamyo</i>	<i>-miyu</i>	<i>hamyo</i>
3PL	<i>ma</i>	<i>uha/u/uma</i>	<i>siha</i>	<i>-ñiha</i>	<i>siha</i>

3.1 A re-analysis of the Chamorro pronoun system

Working without the benefit of any constraining theory allows one to multiply entities indefinitely, in this case pronouns sets and subsets, and to assign functions to them on the basis of translation equivalents (as in the case of Topping), or of apparent typological equivalents (as in the case of Zobel). The analysis that I provide in the following sections will be couched within Lexicase Dependency Grammar, a highly constrained theory originally proposed by Starosta and developed by him and his students at the University of Hawai’i and elsewhere.

I shall claim here that Chamorro is a pure ergative language, and that the pronominal system of Chamorro is much simpler than that shown by either Topping or Zobel. I shall claim that there is only one case-marked set of pronouns in Chamorro, that which in most

⁴ It should be noted that both *bai* and *u* are future or irrealis markers which occur either optionally or obligatorily in combination with the pronominal forms. They are not themselves pronouns.

typological studies of ergative languages is called Absolute, but which I shall call, following Starosta, Blake and others, Nominative. It is probable that these forms are enclitics. The free pronouns (Topping's 'emphatic pronouns') are not themselves case-marked but receive case depending on the sentential context in which they occur.

3.1.1 *Possessor agreement markers*

I shall begin by discussing the so-called 'possessive set'. These forms are clearly reflexes of the Proto Extra-Formosan enclitic Genitive set. In many languages, such as the northern languages of the Philippines (Reid 2001), some of these pronouns have lost their enclitic status and have been incorporated into their former head word as agreement markers. Once this takes place, the forms lose their syntactic independence and no longer carry case-marking. It is very clear from Topping's description that all of the 'possessive pronouns' are now possessor agreement markers, phonologically and syntactically incorporated into their former head words. Topping considers them enclitics, although he also frequently refers to them as suffixes (Topping 1973:42), and usually writes them as hyphenated forms. But consider the following evidence, both phonological as well as syntactic, that strongly suggests they are no longer enclitics and therefore no longer pronouns.⁵ Starosta and Pagotto (1991) briefly noted some of the evidence outlined below and came to a similar conclusion that these are 'derivational affixes, rather than pronouns as such' (Starosta & Pagotto 1991:332).

3.1.1.1 *The phonological evidence*

There are three kinds of phonological evidence that may be considered. First, each of the forms is treated as an integral part of the word for the placement of primary stress. Most non-Spanish Chamorro words are stressed on the penultimate syllable. The addition of the possessive pronominal forms results in the movement of stress, one syllable to the right in the case of the single syllable forms, two syllables to the right in the case of the disyllabic forms, as in (1).

- (1) Chamorro (Topping 1973:42)
- | | | |
|----|----------------|----------------|
| a. | /háссо/ | 'think' |
| b. | /hináссо/ | 'thought' |
| c. | /hinassómu/ | 'your thought' |
| d. | /hinassonmámi/ | 'our thought' |

Secondly, assimilative processes which are unique to the first person singular pronominal form suggest that this form, at least, is an integral part of the word. In most environments the first person singular form is *-hu*, a regular reflex of the reconstructed form **-ku*. There are several variant pronunciations, depending on the phonological shape of the form to which it is attached. According to Topping (1973:110), it is *-su* if the stem has a final *s*, and *-tu* if the stem has a final *t*. These assimilative processes are not found elsewhere in the language. If the stem has a medial consonant cluster, the form is *-ku*, a unique condition in the language blocking the operation of the sound change, **k* to *h*, as in (2).

⁵ See Zwicky (1977, 1985) and Zwicky and Pullum (1983) for criteria for distinguishing clitics from full words, and affixes from clitics.

- (2) Chamorro (Topping 1973:110)
- a. /lássas/ ‘skin’ /lassássu/ ‘my skin’
 - b. /páchot/ ‘mouth’ /pachóttu/ ‘my mouth’
 - c. /lépblo/ ‘book’ /lepblóku/ ‘my book’

Thirdly, the rule for the formation of continuative aspect applies not just to the basic form, but to the full word with the pronominal form attached. Continuative aspect is marked by reduplication of the syllable that carries primary stress. When the word happens to have a disyllabic pronominal form attached to it, it is the first syllable of the pronominal form that is reduplicated, since that is the part of the word that carries primary stress, as in (3).

- (3) Chamorro (Topping 1973:259)
- a. *Hafa bidanñiha?* ‘What did they do?’
 - b. *Hafa bidanñiñiha?* ‘What are/were they doing?’

3.1.1.2 *The syntactic evidence*

One of the characteristics of agreement markers is that they usually appear even when the full noun phrase with which they agree actually occurs in the sentence. In Chamorro there are two sets of possessive constructions (see §4.1 below), one of which requires what Topping (1973:223) refers to as the ‘Full Possessive Form’. In this construction, a third person singular or plural possessive noun phrase must co-occur with an appropriate possessor agreement marker on the head noun, respectively either *ña* or *ñiha*. For example:

- (4) Chamorro (Topping 1973:223)
- a. *i gima’ña si Rosa* ‘Rosa’s house’
 - b. *i malago’ñiha i taotao* ‘the people’s wish’

Taken together, the phonological and syntactic evidence strongly suggests that Topping and Zobel’s possessive pronouns are not separate words, but are possessive agreement markers, integral parts of their former head nouns.

3.1.2 *Actor-agreement markers*

In this section I shall discuss Topping’s set A ‘subject’ pronouns. Although each of the forms in this set are written as separate words, their status as separate words is questionable. Nothing may intervene between them and the verb which follows them, implying that they are at least proclitics. That they may actually be part of the verb as agreement markers is suggested by two pieces of evidence.

3.1.2.1 *Ambiguity between ma ‘3PL’ and ma- ‘passive marker’*

Topping notes (1973:258) that the third person plural form in this set is homophonous with, and probably originated from what he refers to as ‘the passive marker *ma-*’. He cites (5a,b) as cases of such ambiguity.

- (5) Chamorro (Topping 1973:258)
- a. *Malalalatde i patgon.* 'The child is being scolded,' or:
'They are scolding the child.'
- b. *Masangan na maolek iya Guam.* 'It is said that Guam is good,' or:
'They say that Guam is good.'

It is to disambiguate such sentences in the writing system, he says, that the 'pronoun *ma*' is written as a separate word, while the 'passive marker *ma-*' is written as a prefix, as in (6).

- (6) Chamorro
- a. *Malalalatde i patgon.* 'The child is being scolded.'
- b. *Ma lalalatde i patgon.* 'They are scolding the child.'

3.1.2.2 *Co-occurrence with a lexical noun*

It was noted above that one of the characteristics of agreement markers is that they usually appear even when the full noun phrase with which they agree actually occurs in the sentence. Topping notes (1973:203) that in those constructions which require his set A pronouns, the third person forms are obligatory, even though a lexical noun is present, as in (7a,b). He therefore chooses to refer to at least the third person forms as 'subject markers' rather than as subject pronouns. For example:

- (7) Chamorro (Topping 1973:203)
- a. *Ha li'e' i guaka.* 'He saw the cow.'
- b. *I patgon ha li'e' i guaka.* 'The child saw the cow.'

3.1.2.3 *Set A forms as Actor-agreement affixes*

When one examines the pronominal forms that appear in what are probably transitive constructions, it seems clear that Chamorro is an ergative language, the Patient (or 'O') is marked by the same pronominal set that also marks the Actor Patient (or 'S') of intransitive sentences (i.e. Zobel's Absolutive set, Topping's set B), while the Actor Agent ('A') is marked by either an oblique set of pronouns, or by set A forms. A problem arises for Zobel, however, because the set A forms also seem to mark the grammatical subject ('S') of intransitive sentences, when these carry one of the future tense auxiliaries, as in (8a,b).

- (8) Chamorro (Topping 1973:263)
- a. *Para un li'e' i lahi.*
future you see the man
'A' +trns 'O'
'You will see the man.'
- b. *Para un saga giya Yigo.*
future you stay in Yigo
'S' -trns
'You will stay in Yigo.'

It is on the basis of data such as these that Zobel concludes that the set A forms used in transitive sentences are Agentive, while those occurring in intransitive sentences are Nominative, and therefore the language must be split-ergative. Tchekhoff (1991:501) faced a similar problem in her analysis of Tongan, finding that that language had ergative morphology with nominal participants, but had accusative constructions with pronouns. Kikusawa's re-analysis of the Tongan data (1997) within the Lexicase dependency grammar framework, concluded that Tchekhoff's 'nominative pronouns' showed all the characteristics expected of agreement markers, although being written as separate words. They were analysed by her as Actor-agreement markers. She considers them to be part of the verb, not syntactically independent words, and therefore not eligible to carry case. The same analysis should also be considered for the Chamorro set A forms. The forms are not pronouns, they are Actor-agreement markers, leaving Chamorro as a pure ergative language. Starosta and Pagotto (1991:332) recognise that the forms being discussed here are Actor-agreement markers, however they also refer to them as 'clitic pronouns'. They correctly note that the forms are actor markers in transitive realis constructions and in transitive and intransitive irrealis clauses, but fail to recognise that treating them as pronouns in intransitive irrealis clauses would force them to treat Chamorro as a split-ergative language, as Zobel did. Gibson (1990:248) similarly notes that Chamorro has an agreement system, but describes it as an 'ergative agreement system in realis clauses', disregarding the fact that the same set of forms also occurs in intransitive irrealis clauses. Treating the forms as Actor-agreement markers captures a generalisation missed by her.

3.2 Source of Chamorro Actor-agreement markers

In many ergative Austronesian languages (including most Philippine and Formosan languages) the pronominal Agent of a transitive clause is identical in form to the possessor of a noun, and has therefore been described as having a Genitive case form. In Chamorro, however, the forms of the Actor-agreement markers are very different from those which mark possessor on a noun and which reflect PEF reconstructed Genitive pronouns (see Table 3). The two sets only share reflexes of the first person singular, *hu*, and the first person exclusive, *ta*. In addition, the Actor-agreement markers all occur at the beginning of a word (indicated by the opening square bracket '['), while the possessor-agreement markers all occur at the end of a word (indicated by the closing square bracket ']').⁶

⁶ The use of a right square bracket ']' after a form is a lexicase convention to indicate that the phonological sequence that precedes it occurs at the end of a word. A left square bracket '[' marks a form as occurring at the beginning of a word. Although in this paper these forms are given glosses as though they were affixes, strictly speaking in lexicase the forms are considered to be integral parts of the words which they end. Similarly, the agreement features that are given here as glosses are features of the full word, and should not be considered to be uniquely associated with the ending.

Table 3: Chamorro agreement markers

	Actor-agreement	Possessor-agreement
1SG	[<i>hu</i>]	<i>hu</i>]
2SG	[<i>un</i>]	<i>mu</i>]
3SG	[<i>ha</i>]	<i>ña</i>]
1PL.INC	[<i>ta</i>]	<i>ta</i>]
1PL.EXC	[<i>in</i>]	(<i>n</i>) <i>mami</i>]
2PL	[<i>en</i>]	(<i>n</i>) <i>miyu</i>]
3PL	[<i>ma</i>]	(<i>n</i>) <i>ñiha</i>]

Two questions arise: First, how did Actor-agreement markers get to the beginning of the verb, when comparative evidence is clear that as far back as PAn, Genitive pronouns were enclitics, not proclitics? Second, what were the processes by which the forms became so different from the possessive-agreement markers?

3.2.1 *Initial position agreement markers*

Starosta and Pagotto (1991) point out that the most general account of the positioning of pronouns (not just in Austronesian languages) requires that so-called 'auxiliaries' be treated as main verbs. Under this hypothesis, it was not atypical for Genitive and Nominative pronouns to appear as enclitics to an initial, 'auxiliary' main verb and to be followed by a dependent 'main verb'. Starosta, Pawley and Reid (1982) have shown that one of the processes by which Oceanic languages became SVO from an earlier VSO structure was through what was labelled in that paper as 'Aux-axing', i.e. the loss of an auxiliary verb and the resultant stranding of the pronominal clitics that were dependent on that verb. In many languages the pronouns then became phonologically dependent on what followed them, becoming proclitics to that verb. Thus:

$$V=prnn\ V \rightarrow prnn=V$$

This process has occurred independently in a number of languages, especially in contexts in which the function of the original auxiliary verb could be inferred either from context, or simply from the position of the pronoun itself in pre-verb position. In both Inibaloi and Ivatan, for example, loss of an initial verb meaning 'go' resulted in pronoun-initial imperative sentences, see (9) and (10 a, b). Notice the free translations from both sources indicate the meaning 'go' is implied in these sentences.

- (9) Inibaloi (Ballard et al. 1971:24)
Jo di olop jet idaw jo la'd ma Peshis.
 you here fetch and bring you just=to MA Peshis
 'Go fetch him and just bring him to Peshis.'
- (10) Ivatan (Hidalgo & Hidalgo 1971:214, 239)
 a. *Ka machinanaw, mu Marya.*
 you study you Mary
 'You (go and) study, Mary.'

- b. *Marya, mu rutungan u manuk.*
 Mary you cook Nom chicken
 'Mary, you (go and) cook the chicken.'

Similarly, the process has begun in Tagalog, with the imperative meaning 'Let's go, now!' consisting solely of what was earlier a Nominative pronoun, now re-analysed as a verb carrying a set of agreement features for 1PL.INC, followed by an adverb. Compare the following Ilokano and Tagalog constructions (11 and 12), one of which (Ilokano) retains the initial (auxiliary) verb, and the other in which the earlier verb has been lost.

- (11) Ilokano (Reid)
Intayon!
 go.we.now
 'Let's go now!'
- (12) Tagalog (Reid)
Tayo na!
 go.we now
 'Let's go now!'

4 Syntactic doublets in Chamorro

There are at least three sets of parallel constructions, or syntactic doublets, in Chamorro which suggest the possibility that the language has undergone massive change as the result of intensive language contact.

4.1 Possessive constructions

Topping (1973:223) discusses three types of possessive constructions, one of which he labels the 'full possessive form'; another he calls the 'construct form'. The third is a possessive classifier construction. The first requires the presence of possessive-agreement marking⁷ on the possessed noun, either *ñá*] '3SG' or (*n*)*ñiha*] '3PL', with the possessor noun being preceded by a determiner, either *si* for personal nouns, or *i* for common nouns, as in (13a,b). The 'construct form' has neither of the above agreement markers on the possessed noun, nor determiners before the possessor noun. It does however require that a possessed noun ending in a vowel be followed by *n*], which, in effect, is also a general third person agreement marker, as in (13c,d). Topping notes that there is very little difference in meaning between the two constructions, and that they somewhat parallel the difference expressed in English by the translations given. The possessive classifier construction is similar to the full possessive construction. It requires that the possessed head be one of the classifier nouns: *na*' 'edible thing', *ga*' 'non-human animal', *iyó*' 'inanimate thing', or *gimen*' 'drinkable thing'. The classifier noun must carry agreement marking, and the specific object to which it refers immediately follows, but without a determiner, as in (13e,f).

⁷ Topping's 'possessive pronoun'.

(13) Chamorro (Topping 1973:223)

Full possessive

- a. *i gima'ña si Rosa* 'Rosa's house'
 b. *i hagaña i rai* 'the king's daughter'

Construct

- c. *i gima' Rosa* 'the house of Rosa'
 d. *i hagan rai* 'the daughter of the king'

Possessive classifier

- e. *i na'hu mannok* 'my chicken (to eat)'
 f. *i ga'hu mannok* 'my chicken (pet)'

4.1.1 Possible sources of Chamorro possessive constructions

Costenoble (1940) discussed several lexical forms in Chamorro which he believed were evidence of borrowing from some Oceanic language. It is probable that at least the possessive classifier construction and possibly also the forms with the construct *n]* are also the result of contact with an Oceanic language. In discussing these forms, Starosta and Pagotto (1991) note that construct possessive constructions occur in Micronesian languages such as Marshallese, as do possessive classifier type constructions, however at least in Marshallese the word order is the opposite of that in Chamorro. Nevertheless other Oceanic languages have structures which exactly parallel the Chamorro structure, including Fijian, as in (14).

(14) Fijian (Kikusawa, pers. comm.)

- a. *ke-qu toa* 'my chicken (to eat)'
 b. *no-qu toa* 'my chicken (to sell, etc.)'

Although structures which appear to be similar to the construct forms of Oceanic languages are found in some Philippine languages, such as Bontok and other Central Cordilleran languages, they are probably only coincidentally similar. They are only parallel with respect to personal noun possessors (15a,b). Common noun possessors require a determiner between the possessed noun and the possessor, as in (15c,d). Note that *?ábuŋ* 'house' is a consonant final noun, while *?ásu* 'dog' is vowel final and therefore requires *n]* before Genitive noun phrases.

(15) Bontok (Reid)

- a. *nan ?ábuŋ Rosa* 'the house of Rosa'
 b. *nan ?ásun Rosa* 'the dog of Rosa'
 c. *nan ?ábuŋ nan laláki* 'the house of the man'
 d. *nan ?ásun nan laláki* 'the dog of the man'

It can be shown (Reid 1998) that the *n]* in the Central Cordilleran languages is the result of a local innovation. It is a reflex of PEF **ni* 'genitive determiner', a reflex of which can be seen in the Chamorro possessive-agreement markers *ña*] < **niya* '3SG', and *ñiha*] < **nida* '3PL'. The fact that Chamorro requires a construct *n* before *ñiha*], as well as before other disyllabic possessive-agreement markers, argues for the introduction of the construct *n]* through contact or a local analogical development, rather than for its being an inherited form,

since the [*n̄i*-marked pronouns were already genitively marked. There would have been no syntactic motivation for the additional marking with the construct *n*].

I claim then that it is only the 'full possessive constructions' that are inherited. Such constructions are widespread throughout the family from Saaroa and Atayal in Formosa (Starosta & Pagotto [1991], citing Tsuchida 1976:279 and Egerod 1966:365), in Ivatan (16), Ilokano, and other northern languages of the Philippines, to some of the more conservative Western Fijian dialects in the Pacific (17).

(16) Ivatan (Reid 1966:125)

go qama daaya no tatdo saaya ka makákakteh
 the father their.this Gen three these LIG sibling.PL
 'the father of these three sisters'

(17) Kadavu Fijian (Kikusawa, pers. comm.)

na taci.na ko Mere
 Det sibling.3SG Det Mere
 'Mere's sibling'

4.2 Existential possessive constructions

There are two clearly distinct sets of constructions headed by existential verbs (Topping 1973:80) which can be used to indicate possession. The first requires either the positive existential verb *guaha*, or the negative existential verb *taya'* as the predicate. It is followed by a possessed noun carrying a possessive-agreement marker, see (18a,b). The second requires a different set of existential verbs, either the positive *gai*, or the negative *tai*. The possessed noun without agreement marking follows the existential verb, while the possessor occurs last as a nominatively marked noun phrase, see (18c,d).

(18) Chamorro (Topping 1973:80)

- a. *Guaha salape'hu.* 'I have money.'
- b. *Taya' salape'hu.* 'I have no money.'
- c. *Gai salape'yo'.* 'I have money.'
- d. *Tai salape'yo'.* 'I have no money.'

Both of these constructions are found in Philippine (and Formosan) languages. The former is widespread both in the Cordilleran languages of the north, as well as in the south, and is probably the inherited form, see (19a,b), while the latter is an innovation, found also in the Central Philippine languages such as Tagalog (20a,b). It is probable that in Chamorro also, it is the former constructions that are inherited. The existential verb *guaha* is a regular reflex of PEF **wada* 'there is'. In Central Philippine languages, the reflexes of this verb, such as Tag *walâ*, mean 'there is none'. The existential verbs of (18c,d) are possibly cognate with existential verbs found in Ivatan. Ivt *tayto* (< **ta-i-tu*) 'negative existential' is perhaps cognate with Chm *tai* [tay] and *taya'*. In both languages also, the *y*-glide is probably an incorporated enclitic determiner. Similarly Chm *gai* [gay] (< **a-y* with regular prothetic prevocalic *g*) is perhaps cognate with Ivt *ara* (< **a-da* 'exists-now') 'positive existential', as well as Ivt *ari* (< **a-di* 'exists-there') 'positive existential'. However Ivatan does not use a grammatical structure such as that illustrated in (18c,d).

- (19) Bontok (Reid)
- a. *wadʔay sípiŋku*
 exist money.my
 'I have money.'
- b. *maʔid sípiŋku*
 not.exist money.my
 'I don't have any money.'
- (20) Tagalog (Schachter & Otones 1972:274-275)
- a. *may Bangka ako*
 exist boat Nom.1SG
 'I have a boat.'
- b. *wala ako-ng relós*
 not.exist Nom.1SG-LIG watch
 'I don't have a watch.'

4.3 Transitive constructions

In his grammar, Topping (1973) describes two different types of construction, which although supposedly conveying almost identical information are very different in form. Noting the similarity with Philippine languages, he describes those verbs which carry 'focus' affixation and are followed by noun phrases which are case-marked by determiners, as constituting a 'focus' system. There are three 'non-actor focus' constructions.⁸ They are 'goal focus' (with verb initial [*Cin*]),⁹ 'referential focus' (with verb final *i*), and 'benefactive focus' (with verb final *iyi*). All have identical syntax. They are distinguished only by the forms of the verb. The 'goal focus' type is illustrated in (21a-d). Topping is careful to distinguish these constructions from those in which the verbs do not have 'focus' affixes, but which obligatorily carry initial agentive agreement markers, and whose nominal complements are case-marked only by word order (Agent precedes Patient), as in (21e-g). The former he calls 'focus' constructions. The latter he calls 'transitive' constructions. However in a theory such as Lexicase, which defines any construction which has both an Agent and a Patient complement as transitive, then the 'focus' constructions must also be transitive. For example:

- (21) Chamorro (Topping 1973:245, my analysis)
- 'Goal Focus' Constructions
- a. *Lini'e' i lahi ni palao'an.*
 see the man the woman
 +trns Nom PAT Erg AGT
 Nom Erg
 actr
 'The woman saw the man.'

⁸ Topping also analyses causative constructions as a type of focus.

⁹ Zobel (2002) analyses these constructions as passives, claiming that they are syntactically intransitive. But according to Topping the actor of such verbs is obligatory.

b. *Lini'e' ni lahi i palao'an.*
 see the man the woman
 +trns Erg AGT Nom PAT
 Erg Nom
 actr

'The man saw the woman.'

c. *Lini'e' si Maria as Pedro.*
 see Det Maria Det Pedro
 +trns Nom PAT Erg AGT
 Nom Erg
 actr

'Pedro saw Maria.'

d. *Lini'e' as Maria si Pedro.*
 see Det Maria Det Pedro
 +trns Erg AGT Nom PAT
 Erg Nom
 actr

'Maria saw Pedro.'

'Non-Focus' Constructions

e. *Hali'e' i lahi i palao'an.*
 see Det man Det woman
 +trns +dfnt AGT +dfnt PAT
 ?3SG¹⁰ Erg Nom
 ?actr actr

'The man saw the woman.'

f. *Mali'e' i lalahi i palao'an.*
 see Det men Det woman
 +trns +dfnt AGT +dfnt PAT
 ?3PL Erg Nom
 ?actr actr

'The men saw the woman.'

g. *Hali'e' si Pedro si Maria.*
 see Det Pedro Det Maria
 +trns AGT PAT
 ?3SG Erg Nom
 ?actr actr

'Pedro saw Maria.'

¹⁰ The question mark is a lexicase convention to mark a feature that the head looks for, expects, or implies. In this case it indicates that the head carries third person singular Actor-agreement marking. The use of traditional person and number marking on pronouns and agreement markers in this example and elsewhere in this paper is not a lexicase convention. Here, in order to reduce the number of interlinear lines, they are used as abbreviations for the lexicase formal device of referring to such forms as sets of speaker, addressee, and plural features, with appropriate value specifications.

4.4 Intransitive constructions

Paralleling the double sets of transitive constructions are double sets of intransitive constructions.

4.4.1 'Actor Focus' intransitive constructions

One set of verbs has either an initial [*Cum* (if the Actor is singular) as in (22a), or [*maN*¹¹ (if the Actor is plural) as in (22b), and requires that the actor pronoun come from the Nominative set, as in (22b,c). Antipassive constructions occur in which the notional 'object' is indefinite and is unmarked as in (22d,e). The verb of an antipassive construction usually has initial [*maN*, but with some verbs, such as 'eat', an initial [*Cum*.¹² There is also an intransitive, stative verb, analysed by Topping as an agentless 'passive', with initial [*ma*, as in (22f).

(22) Chamorro (Topping 1973:83, 84, 86, 121, 186, 258 my analysis)

- a. *Gumupu i paluma.*
 flew Det bird
 -trns Nom PAT
 -plrl Nom
 actr
 'The bird flew.'
- b. *Manggupu siha.*
 fly they
 -trns PAT
 +plrl Nom
 actr
 'They are flying.'
- c. *Sumasaga yo' giya Agaña.*
 living I in Agaña
 -trns PAT Lcv LOC
 -plrl Nom Lcv
 actr
 'I live in Agaña.'
- d. *Manli'e' yo palao'an.*
 see I woman
 -trns PAT MNS (?)
 -plrl Nom Obl
 actr
 'I saw a woman.'

¹¹ The N refers to an assimilating nasal, which in some environments results also in the deletion of the consonant to which it assimilated.

¹² Topping analysed antipassive constructions as transitive verbs with indirect objects.

e. *Chumocho yo' mansanas.*
 eat I apple
 -trns PAT MNS (?)
 -plrl Nom Obl
 actr
 'I ate an apple.'

f. *Malalalatde i patgon.*
 scold Det child
 -trns Nom PAT
 -plrl Nom
 +sttv actr
 'The child is being scolded.'

To this point, Chamorro looks very much like a Philippine language. The structures pretty much parallel what have been called 'Actor focus' constructions in descriptions of these languages. Upon closer examination, however, there are a considerable number of differences between the above structures and those typically found in Philippine languages. The first is that Philippine languages do not normally use [*maN*] as a marker of plural subjects.¹³ Second, the base form of the antipassive [*maN*] is [*man*] in Chamorro, but [*maŋ*] in Philippine languages. Third, there is no apparent evidence in Chamorro of a reflex of **maR-*, which has reflexes in most Philippine languages.¹⁴ Fourth, each of the sentences (22a-f) can only be realis constructions. Irrealis constructions have quite different structures in Chamorro, as we shall see in §4.4.2 below.¹⁵

4.4.2 'Non-focus' intransitive constructions

Unlike the transitive constructions, the 'non-focus' intransitive set is in complementary distribution with the 'focus' set. The former require the presence of one or more irrealis¹⁶

¹³ Tagalog and some other Central Philippine languages, such as Mamanwa (Miller & Miller 1976:53), however, do use a similar device for the optional marking of plural subjects. Compare: Tag *makakita* 'see' with *mangakakita* 'see (PL)', etc. (Schachter & Otanes 1972:335).

¹⁴ The possibility that PEF **maR-* may be irregularly reflected as Chm *man-*, as it is in Central Cordilleran languages of the Philippines occurred to me. However in the latter languages, PEF **R* is reflected as *l*, so the expected reflex of **maR-* is *mal-*. However in Chamorro **R* became *g*, so the expected reflex would be *mag-*.

¹⁵ Topping does not refer to these constructions as 'actor focus', but as examples of the 'verbalizing affix -*um-*' (Topping 1973:244). His 'actor focus' constructions require that the Nominative NP appear in initial position, using his 'emphatic' pronoun set if the reference is pronominal. He also notes that such constructions can have either a definite, or an indefinite 'object', as follows: *Guiya lumi'e' i palao'an*. 'He is the one who saw the woman.' and *Guiya manli'e' palao'an*. 'He is the one who saw a woman.' His translations suggest that the verb is nominalised. He does note, however, that 'there are good reasons to consider the verbalizing affix -*um-*...[to be] the same as the actor focus affix -*um-*' (Topping 1973:244). Zobel notes that constructions such as these cannot be 'actor focus'. He believes they are transitive constructions, and in sentences such as: *Hayi lumi'e' gue'?* 'Who saw him?', he says 'the object is marked by an Absolutive pronoun' (Zobel 2002:412). However, Zobel's analysis of them as 'active participles' throws little light on their syntactic status. The analysis of such constructions is problematic. I suspect that they may be recent innovations, possibly influenced by the grammar of European languages.

¹⁶ Topping analyses these forms as future tense markers.

adverbs, *para*, *bai*¹⁷ or *u*, while the latter are always realis and are interpreted as either present or past depending on context or the presence of time adverbs. As with 'non-focus' transitive constructions, the verbs do not carry any 'focus' marking, as in (23a,b).

(23) Chamorro (Topping 1973:263)

- a. *Para husaga giya Yigo.*
 will stay at Yigo
 -trns Lcv LOC
 ?1SG Lcv
 ?actr
 'I will stay in Yigo.'
- b. *Para tafañocho gi ega'an.*
 will eat in morning
 -trns Lcv LOC
 ?1PL Lcv
 ?actr
 'We will eat in the morning.'

4.5 Transitive and intransitive constructions: inherited, innovated or borrowed?

Zobel outlines a number of innovations which he claims have either taken place in Chamorro, or are (exclusively) shared by Chamorro with Palauan or one or more of the set of languages that constitute his NMP. Most of these apparent innovations are found in the forms of the constructions discussed in the previous section. This section will briefly examine each of Zobel's claims.

4.5.1 Development of Actor-agreement markers

Zobel (2002) claims that the differentiation of his set A pronouns from the possessive suffixes is an innovation shared by Palauan, and the presence of 'prefixed pronouns' is restricted to a set of languages that 'excludes the Philippines, Northern Sulawesi, and Borneo (except for Malayic and Tamananic)'. As I showed above, however, there are some languages in the Philippines which have independently developed pre-verbal pronoun clitics, and under the identical conditions that Zobel claims for the NMP languages that have them. So the possibility exists that they were independently innovated in Chamorro. However, the forms of the Chamorro Actor-agreement markers are similar in some respects to those that occur in Palauan, as seen from Table 4.

¹⁷ Probably from Spanish *voy* 'I go' (Topping 1973:262). It is often omitted in casual speech, but when it occurs it always follows *para*, and co-occurs only with verbs that carry first person actor agreement.

Table 4: Chamorro agreement markers

	Chamorro Actor-agreement	Palauan Actor-agreement
1SG	[<i>hu</i>	[<i>k</i>
2SG	[<i>un</i>	[? <i>om</i>
3SG	[<i>ha</i>	[<i>l</i>
1PL.INC	[<i>ta</i>	[<i>d</i>
1PL.EXC	[<i>in</i>	[<i>kim</i>
2PL	[<i>en</i>	[? <i>om</i>
3PL	[<i>ma</i>	[<i>l</i>

The nature of the similarity between the forms is perhaps revealing of their origins. Zobel claims that the Chamorro forms are 'related to' the Palauan forms. But this is only obvious of the 1SG forms, both from **ku*, and the 1PL.INC forms, from **ta*. Each of these forms is inherited from PEF. None of the other forms are clearly related. Palauan [*l* '3SG, 3PL'] is a reflex of **na* '3SG', while Chamorro [*ha* '3SG' (and also [*uha* '3PL, irrealis')] is probably from **da* (PEF **d* > Chm *h*), reconstructable as an adverbial clitic with the meaning 'now, already', and with reflexes in a number of Philippine (and Formosan?) languages. The fact that it does not co-occur with the irrealis marker of 3SG (and is optionally absent with 3PL) of intransitive verbs (see Table 5) suggests that it was probably not a pronominal form in Chamorro originally, and that there was no overt marking for either 3SG or 3PL on intransitive verbs, a feature of early Austronesian morphosyntax.

We noted above that the source of Chm [*ma* '3PL'] is the stative verb marker [*ma*. A closer look at the Palauan forms, however, is suggestive of other types of relationship. According to Zobel, the Palauan forms occur only when the verbs which they precede are imperative, so it is not surprising then that the Palauan 2SG and 2PL forms are identical, [*?om*. It is possible that this is a truncated form of an 'auxiliary' verb, such as PEF **?umay* 'go', which did not require the explicit mention of second person pronouns in imperatives. In the northern Philippine language Bontok reflexes of **?umay* 'go' are split between a regular intransitive verb, as in (24a), and a transitive 'auxiliary' verb carrying Actor-agreement marking, as in (24b), occurring in imperatives.¹⁸ A similar situation may have existed in Pre-Palauan.

(24) Bontok (Reid)

- a. *?umeyka!* 'You go!'
 b. *?umeymu ?alá?en!* 'You go get (it)!'

But what about the Chamorro 2SG and 2PL forms? At least the 2SG form [*un* may have the same source as Pal [*?om*. But are these independent innovations, or the result of contact between the two languages, or evidence for some subgrouping relationship? There is some evidence that contact (probably with Palauan) is the explanation for the Chamorro forms. That they are not inherited is clear from the fact that none of the vowel-initial forms underwent the sound change by which a prothetic *g* or *gu* developed in this environment, as on the free pronouns *guahu* from **aku* '1SG' and *guiya* from **iya* '3SG'. The contact must have taken place after that change was no longer operative. The final *n* in each of the

¹⁸ In Ilokano a similar split has occurred between intransitive *mapan* 'to go' and a transitive 'auxiliary' verb *mapan*, as in *Mapanmo alaen!* 'Go get it!' (Carl Rubino pers. comm., my analysis).

consonant final Chamorro forms is probably the result of levelling of the final consonant to an alveolar nasal after their introduction into the language, but the motivation for this change is not apparent. One further speculation related to Chm [un '2SG' is that this form is probably the source of the Chamorro irrealis marker [u, which has spread from [un to mark also verbs with 1PL.INC, 3SG and 3PL agreement markers as irrealis. See Table 5 below.

Table 5: Chamorro Actor-agreement markers
on irrealis intransitive verbs

1SG	[hu
2SG	[un
3SG	[u
1PL.INC	[uta
1PL.EXC	[in
2PL	[en
3PL	[uha/[u/[uma

4.5.2 *Development of [maN as marker of antipassive verbs*

Zobel (2002) claims that the specialisation of [maN as a marker of antipassive verbs is restricted to Chamorro, Palauan and a set of his NMP languages, implying that this is not one of its functions in Philippine languages. However, as I have noted elsewhere (Reid 2000:34), its function as a marker of antipassive is common in Philippine languages, such as Ivatan (Reid 1966:34), compare (25a) and (25b), and Bontok, compare (26a) and (26b).

(25) Ivatan (Reid 1966:34)

- a. *Somali qo tao do vahay.*
drop.by Nom man Loc house
-trns Nom Loc
'The man is dropping by the house.'
- b. *Manali qo tao so libro do vahay.*
drop.by Nom man Obl book Loc house
-trns Nom Obl Loc
'The man is dropping by the house for a book.'

(26) Bontok (Reid)

- a. *Sak?en nan ?umála.*
I Det getter
+prdc Nom
'I'll be the one to get (it).' (lit. 'I'll be the getter.')
- b. *Sak?en nan mañála=s nan ?ásu.*
I Det getter =of Det dog
+prdc Nom =Lcv MNS
Lcv
'I'll be the one to get the dog.' (lit. 'I'll be the getter of the dog.')

4.5.3 Cooccurrence of 'actor focus' and 'non-actor focus' verb affixation

Chamorro has verbs that are marked by more than one 'focus' affix. Topping (1973:253) refers to these as 'multiple focus constructions'. Zobel (2002:414) notes that 'the suffix *-i* is not a focus affix since it can combine with all the above-mentioned transitive affixes, giving *maN--i*, *<um₂> -i*, *<in> -i*, and *ma--i*.' He describes it as a 'symmetrisation of the focus system'. He claims it is found in all languages that have developed a verb-initial Actor-agreement system and that have not lost the affixes concerned, as well as in Balinese, Madurese, and Sundanese. Yet it is precisely this type of combination of affixation which is widespread in Western Austronesian, including Philippine languages and Paiwan¹⁹ in Taiwan, and which Zobel himself reconstructs for PMP, with sequences of affixes such as **maN--a*, **<um>-a*, **ka--i*, as well as **ma--an*, **mai-*, etc. The Chamorro forms may be retentions from PEF, they may be independently innovated, or they may be the result of contact.

4.5.4 Loss of tense-aspect involving [Cin

Chamorro does not use a reflex of *[Cin to distinguish tense-aspect. This form still occurs in Chamorro, but according to Zobel (see footnote 8) is a passive verb marker. As noted above in §4.3, according to my analysis it marks a transitive verb with an Ergative Agent and a Nominative Patient; but as Zobel correctly notes, it does not mark either completive aspect, as it did in PEF, nor begun aspect, as it does in Central Philippine languages (Reid 1992). Zobel notes that this innovation, although not found in Palauan is common to 'almost all' of his NMP subgroup. However, it is not an exclusively shared innovation to this subgroup, as Zobel implies. Some Southern Philippine languages, such as Tboli, are like Chamorro in innovating the form as a marker of transitive verbs, regardless of tense or aspect. In (27a,b), the reflex of PEF *[Cin, shown as verb initial [*nC* or [*Cn*, occurs in constructions that are clearly future.

- (27) Tboli (Porter 1977:134)
- a. *Tnaba-hu lemwót kedeng.*
call-I leave later
'I'll call him when I leave later.'
 - b. *Nwit-en mulék kedeng.*
bring-he return later
'He will bring it when he returns later.'

Some Manobo languages, such as Tasaday, have also lost, or are in the process of losing [Cin as a distinguisher of tense, as in (28a-c).

- (28) Tasaday (Reid 1993: sentences 17, 78, 115)
- a. *Kakay Dula, pinahuna ku.*
friend Dula first I
'Friend Dula, I'll be the first (to go).'

¹⁹ Starosta (pers. comm.).

- b. *Uman ka hinali? da? siya du.*
 again you move now it emph
 'Move it over there again!'
- c. *Pinehagtay de aken siya.*
 kill now I it
 'I'll be the one to kill it.'

4.6 Summary

The evidence adduced above suggests that each of the innovations proposed by Zobel for subgrouping Chamorro with his NMP languages, a group that excludes the languages of the Philippines, either has a parallel development in one or more of the Philippine languages, or could be reflexes of PEF forms, or could be the result of intimate contact between Chamorro and one or more of the languages with which it has interacted in the remote past.

In the following section I shall address some of the problems raised by Starosta's proposed subgrouping.

5 Starosta's morphological subgrouping hypothesis for Chamorro

Starosta (1995) proposes that Chamorro is one branch of a subgroup of Austronesian, which is labelled F3, while the other branch F4 comprises all Austronesian languages except Rukai, Tsou, and Saaroa. In other words, Chamorro reflects morphological innovations that are found in the latter three languages, but does not show evidence of morphological innovations that he claims developed in other Austronesian languages at later stages of development of the family. It is precisely the lack of these later innovations that forms the basis of his subgrouping argument, since, if they were present, Chamorro would be subgrouped at a later point in the tree. The developments that he claims are unique to Chamorro are irrelevant for subgrouping purposes, unless of course, they can be shown to also be shared with some other language or languages. And the presence in Chamorro of earlier innovations (at the F1 and F2 levels) are likewise irrelevant for subgrouping purposes, because for Chamorro they are retentions.

For Starosta, a morphological form can only be considered to be lost from a language if a reasonable explanation can be given of the processes by which the form was lost or traces of it can be found lying around as frozen forms in the lexicon. Even if such frozen forms can be found, an alternative explanation of borrowing is also often possible. Without either of these explanations, Starosta is required by his methodology to subgroup the language at a point in the tree prior to the innovation of the form.

Some of the forms that I shall claim had been innovated prior to the initial settlement of the Marianas by Pre-Chamorro speakers, but which do not appear in present-day Chamorro, include reflexes of the transitive verb endings **en*], **an*] and **a*], the transitive verb-initial **[?i*, **[paR* and its intransitive verbal counterpart **[maR*, and the causative verb-initials **[pa(ka)* and **[ka*, all of which were part of the inventory of affixes acknowledged by Starosta to already be present by the time PEF, his F9, began occupying the Philippines. The following sections will discuss each of these forms in turn.

5.1 Transitive verb endings **en]*, **an]* and **a]*

Although I claim that all of these forms have been lost as transitive verb endings, reflexes of the nominal counterparts of the first two both occur in the language, while the latter seems to have been lost without a trace. The reflex of **en]* in Chamorro is *on]* ‘capable of being V-d’ as in (29a-d). (Topping simply defines it as ‘capable of’). This, as Starosta notes, fits fairly well the expected semantics ‘thing to be V-ed’. A few examples apparently mean ‘capable of V-ing’ (the meaning cited by Starosta) as in (29d,e). However, I consider this to be a secondary development in Chamorro, with some forms, such as (29d), able to be interpreted either way. Starosta claims that these are verbs. However there is no proof of this. They occur in the examples as predicates, and could be either descriptive nouns or intransitive (adjectival) verbs. Topping, Ogo and Dungca (1975:159) provide one example which is clearly a noun: *i guasa'on* ‘something capable of being sharpened’.

(29) Chamorro (Topping 1973:181, Topping, Ogo & Dungca 1975:159)

- a. *punu'on* ‘can be killed’
- b. *kannu'on* ‘can be eaten, edible’
- c. *taitayon* ‘can be read, readable’
- d. *guasa'on* ‘can be sharpened, or sharpener’
- e. *falaguyon* ‘capable of running’

The nominal reflex of **an]* occurs in combination with the Chamorro reflex of the ‘distributive’ nominal initial **[paN]*, as Chm *[faN...an]*. The result is a locative noun form, as in (30a-c).

(30) Chamorro (Topping 1973:180)

- a. *fanbinaduyan* ‘place abounding in deer’
- b. *fañochuyan* ‘eating place’
- c. *fano'makan* ‘shower, bathing place’

It also occurs in combination with *[Cin]*, with a range of meanings that Topping characterises as ‘attributive’. They are nominalisations of what in Philippine languages would be completive, surface-affected ‘locative focus’ verbs, as in (31a,b).

(31) Chamorro (Topping 1973:180)

- a. *binesbusan* ‘having a skin rash’ (*busbus* ‘skin rash’)
- b. *minigu'an* ‘having secretion from the eyes’ (*mugu* ‘secretion from eyes’)

Of course, Chamorro is not unique in losing much of its verb-final transitive marking. Tboli, in the Southern Philippines subgroup, has completely lost all its verb suffixing morphology. The only traces in that language of **en]* are the transitive Actor-agreement markers, *em]* ‘2SG’ and *en]* ‘3SG’, which were transferred by an analogical ‘word formation strategy’ to also mark 2SG and 3SG possessor agreement on nouns.

5.2 Transitive verb-initial **[?i* and intransitive verb-initial **[maR*

The first of these two forms seems to have been lost without trace, unless the sequence reconstructed as PEF **[ma?i* is the source of Chm *[mi* ‘have lots of’, as it is in a number of Philippine languages, including Ifugao and Inibaloi. This is perhaps supported by the fact that the Chamorro form always carries primary stress, and has a long vowel. PEF **[maR* would be

reflected as Chm [mak before consonant-initial forms. There are at least two Chamorro words where this initial may be present as a frozen form. They are (32a,b). They cannot be reflexes of *[maka because *k regularly became Chm h between vowels, and either Chm ? or zero at the end of a syllable (Costenoble 1940:32-33).

- (32) Chamorro (Topping, Ogo & Dungca 1975:131)
- a. *makmata* 'to waken' (*mata* 'eye')
 - b. *maknganiti* 'devil, satan' (also: *manganiti, aniti* 'devil, satan')

A further possibility is that some of the Chamorro forms with initial [ma are actually reflexes of *[maR, but with irregular loss of the reflex of *g. One of the functions of PEF *[maR was to create an intransitive verb from a noun. In Chamorro, with many forms, [ma serves this purpose, as in (33a-b).

- (33) Chamorro (Topping 1973:226)
- a. *macho'cho* 'to work' (*cho'cho* 'work, job, employment')
 - b. *mata'chung* 'to sit' (*ta'chung* 'seat')

The reflex of the nominal counterpart of PEF *[maR in Chamorro, *[paR, should be [fak. This form does not occur, but I suspect that Chm [fa' 'pretend to, change' (with a final glottal stop) had its origins here, since according to Costenoble (1940) final voiceless stops became glottal stops in some dialects. This was a narrowing of the verbalising function that is illustrated above in (33), and may have also been influenced by a causative [fa which is now lost. See (34a,b).

- (34) Chamorro (Topping 1973:176)
- a. *Hu fa'bentana i petta.* 'I changed the door into a window.'
(lit. 'I windowed the door.')
 - b. *Ha fa'bunita gue' i palao'an.* 'The woman pretended to be pretty.'
(lit. 'The woman prettied herself.')

5.3 Causative verb-initials *[pa(ka) and *[ka

There are a number of words in Chamorro that have a frozen [fa' initial, the meanings of which, according to Topping, are unpredictable. The meanings of some, however, suggest that at some earlier point the affix may have been a causative, as in (35a-c). If this is correct, then it would appear that the reflex of PEF *[paka was Chm [fa', and that it fell together with the reflex of PEF *[paR.

- (35) Chamorro (Topping 1973:177)
- a. *fa'aila* 'tell on'
 - b. *fa'na'gue* 'teach'
 - c. *fa'nu'i* 'show'

Although there are two distinct initial [há markers in Chamorro which could be reflexes of *[ka, neither has a causative sense. Neither do the (borrowed) [ka initial forms have a causative meaning.

Chamorro causatives are now formed with initial [na', as in (36a). This form occurs on the left edge of verbs which, in some cases, carry the marking of earlier derivation, such as [ma, as in (36b), supporting the hypothesis that these verbs are the result of the fusion of the

Chamorro verb *na'i* 'to give', with a following verb, a commonly found grammaticisation producing causatives in languages around the world.

(36) Chamorro (Topping 1973:247)

- a. *na'gasgas* 'made clean'
- b. *na'malangu* 'made sick'

5.4 Summary

I have attempted to show in the above sections that Zobel's subgrouping hypothesis for Chamorro is probably flawed because the innovations that he cites are frequently not shared exclusively with the subgroup to which he claims Chamorro belongs. In addition there is evidence that some of the changes that have taken place in Chamorro could well be the result of contact, or of parallel innovation. There are problems with Starosta's subgrouping hypothesis because he considers the absence of some morphosyntactic features in Chamorro to be evidence for a very early split from the other Austronesian languages of Formosa, prior to the development of those features. I have attempted to show that there is evidence in Chamorro that these features were present in Pre-Chamorro but have been lost in the modern language. In the following section I shall try to justify another subgrouping hypothesis that brings into consideration some facts about the language that have not so far been considered.

6 Another hypothesis regarding position of Chamorro in Austronesian

I shall claim in this section that Chamorro is probably a first-order branch of Proto Extra-Formosan. In other words, the first Austronesians to settle the Marianas probably sailed from somewhere in the (northern) Philippines, prior to the differentiation of Philippine languages into the various subgroups that are attested today. Chamorro is clearly not a Philippine language, that is, it does not immediately subgroup with any of the branches of Austronesian in the country. This we know, not from morphosyntax, but from the phonology. All Philippine languages have collapsed the reflexes of **d* and **z* (Zorc 1987), whereas Chamorro has kept them distinct, **d* is reflected as Chm *h*, while **z* is reflected as Chm *ch* [ts].²⁰ There is also lexical evidence that Chamorro does not immediately subgroup with the Philippines. Chamorro, for example, reflects PEF **siwa* 'nine' as Chm *sigua* 'nine', while all Philippine languages reflect one or another of two innovations, either **siyam* or **siyaw*. Several pieces of morphosyntactic evidence suggest that Chamorro reflects innovations that took place in Proto Extra-Formosan, probably after the initial settlement of the Philippines, but prior to the dispersal of Philippine languages.

²⁰ However, Blust (pers. comm.) states:

[the distinction is maintained in] Pamona of central Sulawesi..., where **d* > r, but **z* > j, Proto Bungku-Tolaki of southeast Sulawesi..., where **d* > r, but **z* > s, and Muna, of Muna and Buton islands in extreme SE Sulawesi, where **d* > r, but **z* > s. I'm sure there are other languages in Sulawesi which preserve the distinction... I might add that it is not altogether clear that Inati in Panay [Central Philippines] has merged these phonemes. Since Proto Philippines preserved the PMP distinction between alveolar and palatal nasals, there is a clear implication derived from general typological studies that the PPh phonological system would have included a palatal obstruent.

6.1 Nominative marking

I have claimed elsewhere (Reid 1978, 1979) that the parent language of the Philippine group had a set of Nominative determiners of the form **i* 'common noun', and **si* 'personal noun'. The common noun determiner does not occur as a Nominative marker in Formosan languages, where it must be reconstructed as a non-Nominative determiner, as well as a formal marker of definite predicate nouns, and of topic phrases. It is its latter function of marking definite NPs that probably motivated its spread to also mark Nominative NPs since these are always necessarily also definite. In the Philippines there is no language that maintains a reflex of **i* as its sole marker of Nominative common noun phrases, but there is clear evidence from the forms of free Nominative pronouns and demonstratives which often have an initial [i, that this was its function at earlier stages of the family.

In Chamorro, Nominative definite common noun phrases are marked by *i*, as in (21a), repeated below as (37). This is not the only function that *i* has, it retains also the earlier general function of marking definite common noun phrases, as in the 'non-focus' construction (21e) repeated below as (37b).

(37) Chamorro (Topping 1973:245, my analysis)

- a. *Lini'e' ni lahi i palao'an.*
 see Det man Det woman
 +trns Erg AGT Nom PAT
 Erg Nom
 actr

'The man saw the woman.'

- b. *Hali'e' i lahi i palao'an.*
 see Det man Det woman
 +trns +dfnt AGT +dfnt PAT
 ?3SG Erg Nom
 ?actr actr

'The man saw the woman.'

Although the generalisation of the function of **i* to include common noun Nominative NPs is a feature that was apparently an innovation in PEF, and appears to be inherited in Chamorro, it is possible that it could be an independent innovation in this language. The fact that this form did not acquire a prothetic *g* in Chamorro (see below), implies that it was probably an enclitic, as it is in Inibaloi, Pangasinan and other Philippine languages that have retained the form.

Most Chamorro personal noun phrases are marked by *si*. Only ergative personal nouns are distinguished, being marked by *as*.

6.2 Genitive marking

Chamorro possessive constructions are outlined in §4.1. Only the construct form, which I claim is probably a borrowed form, maintains a relic of the initial alveolar nasal of PEF **(n)i* 'genitive determiner', that is the construct *n]* itself. Genitive noun phrases in Chamorro that occur in constructions that I claim are probably inherited are marked either by *i*, if a common noun, or by *si* if a personal noun, as in (13a,b) repeated below as (38a,b).

- (38) Chamorro (Topping 1973:223)
- a. *i gima'ña si Rosa* 'Rosa's house'
 - b. *i hagaña i rai* 'the king's daughter'

In PEF, actors of transitive constructions were also genitively marked. However in Chamorro as discussed above a distinct set of agreement markers developed from what were originally genitive clitic pronouns, while full noun phrases in such constructions are marked by *ni*. Topping states that this form has developed from the sequence Chm *nu i*, and is often pronounced as such. It is probable that the *ni* pronunciation is the result of influence from speakers of Philippine language in which genitive common nouns are so marked.

The Chamorro ergative noun phrase marker *nu i*, is of interest because it suggests that Pre-Chamorro acquired at some early stage (or inherited from PEF) a set of *u*-grade determiners, and that *nu* was the genitive common noun marker from this set, as it is in several Formosan languages, such as Tsou, Saisiyat, Paiwan, and Amis, and Philippine languages such as Yami, Ivatan, Itbayat, Casiguran Dumagat, Umiray Dumagat, and Ilongot, as well as in Murut in Borneo (Reid 1978:54).

6.3 Topic marking

The evidence that Chamorro possibly had a series of *u*-grade determiners becomes important when considering the source of the prothetic *g* and *gu* on otherwise vowel-initial forms in Chamorro. I shall argue in this section that Pre-Chamorro developed from a language that probably had **ʔu* as a topic marker, and that this form became a proclitic [*w* on certain nouns.

It has long been recognised (Costenoble 1940:39, 54) that the Chamorro labio-velar, represented in written Chamorro as *gu*, is the regular reflex in inherited words of **w* before vowels, both initially and medially, for example, Chm *gualu* < PEF **walu* 'eight', Chm *ʔasagua* < PEF **qasawa* 'spouse', Chm *sigua* < PEF **siwa* 'nine', Chm *pugua* < PEF **buwaq* 'fruit', etc. But [*gu* also appears as a prothetic element on a number of nouns that are not reconstructable with an initial **[w*, such as Chm *guihan* < PEF **ʔikan* 'fish', Chm *gui'eng* < PEF **ʔijung* 'nose', Chm *guafi* < PEF **ʔapuy* 'fire', and so on.

Words reconstructable with medial **[...aʔu* sequence are reflected as Chm [...*agu*, for example Chm *hagon* < PEF **daʔun* 'leaf', Chm *chaguʔ* < PEF **zaʔuq*. This change is probably independent of the change from PEF **w* to Chm *gu*. The latter change occurred also in Karaw in the Southern Cordilleran subgroup in the Philippines, while the former occurs also in Northern Kankanay²¹ in the Central Cordilleran subgroup. In Chamorro the change apparently spread to the beginning of words so that in many forms **ʔ* became *g* before any vowel, for example Chm *gugat* < PEF **ʔuRat* 'vein, tendon', Chm *gunom* < PEF **ʔenem* 'six', and Chm *gi* < PEF **ʔi* 'locative preposition'.

As I noted above, the [*gu* reflex occurs on a number of nouns that did not originally have an initial **[w*. We find the same reflex, for example, on otherwise vowel-initial independent pronouns and demonstratives. Note Chm *guahu* '1SG' < Pre-Chm **waku* < PEF **aku*, and Chm *guiya* < Pre-Chm **wiya* < PEF **(s)iya* '3SG'. Similarly, there are a set of 'static locative' forms which have an initial [*gu* where there was no initial **[w*. Compare the locative demonstratives with the demonstrative pronouns: Chm *guini* 'here in this place', but *ini* 'this'

²¹ In Northern Kankanay, **ʔ* became *ɣ*, not only between *a* and *u*. The reflex occurs between any sequence of vowels where a glottal stop would have occurred.

< PEF **ni* 'this'; *guenao* 'there towards you, in that place', but *enao* 'that' < PEF **na* 'that'; and *guihi* 'there, that place', but *ihi* 'that' < PEF **di* 'that'. The locative demonstratives must have all been marked originally with the PEF **ʔi* 'locative preposition', but acquired an initial *[w]: **wini* 'here', **wina* 'there, close to hearer', and **widi* 'there, away from speaker and hearer'.

With evidence that early Chamorro probably had a set of *u*-grade determiners, the source of the initial [gu- in the above forms becomes apparent. The pronominal evidence suggests that they acquired an initial [w in the environment in which they occurred, that is, as fronted, topicalised forms (or perhaps as sentence initial predicate nominals), marked by a topic-marking determiner **ʔu*. This determiner then became attached as a proclitic to locative demonstratives and also to a limited set of commonly occurring nouns which frequently would have occurred in topicalised environments. The languages that today show a reflex of **ʔu* as a topic and/or predicate marker are limited. Amis is one such language, where the same process of [w attachment to some nouns, such as *waco* 'dog' also occurs, as in (39). There is some evidence that it also occurred in the parent of the Batanic languages. Yami *ʔu* marks both topic and predicate common nouns, while in Ivatan the same form marks predicate common nouns.

(39) Amis (Chen 1987)

O nomako kina waco. 'The dog is mine.'

The evidence suggests, then, that Proto Extra-Formosan used **ʔu* as a topic and/or predicate marker, and that Chamorro reflects it in the form of its [gu initial pronouns, demonstratives and other nouns which did not originally have an initial [w.

One small piece of additional evidence for the early split of Pre-Chamorro from Proto Extra-Formosan is the Chamorro pronoun *hagu* '2SG'. This form ultimately derives from PAN **kaSu* > PEF **kahu*. In Philippine languages, this pronoun developed as **kaw* (as in Tag *ikaw* '2SG'). However in Chamorro, the presence of a medial [...g clearly shows that PEF **kahu* developed as Pre-Chm **kaʔu*. A similar development of PAN **S* can be seen in Chm *hugua* < Pre-Chm **duwa* < PEF **duha* < PAN **dewSa* 'two'.

6.4 'Ligature' **na*

Like many other western Austronesian languages, Chamorro has a form commonly referred to in the literature as a 'ligature' that occurs between a head, whether noun or verb, and its modifier. Its actual form class is probably either noun or preposition, but I shall continue to refer to it here as a ligature. In Chamorro the form is *na* as in (40a-c).

(40) Chamorro (Topping 1973:138, 149)

- a. *i díkike' na patgon*
 Det small LIG child
 'the small child'
- b. *ayu na lepblo*
 that LIG book
 'that book'
- c. *Hutungo' na machocho'cho' i lahi.*
 1SG.know LIG working Det man
 'I know that the man is working.'

For the parent language of the Philippines I have reconstructed $*(n)a$ as the ligature, with the full form $*na$ occurring following vowels, and the shorter form $*a$ occurring following consonants. These are the forms that are commonly found in the languages of the Northern Philippines, as well as in a number of Formosan languages, although some languages have generalised one or the other to occur in all environments losing the alternate form, as Chamorro has apparently done. $*(n)a$ must also be reconstructed for Proto Extra-Formosan. The Central Philippine languages, including Pre-Tagalog, and languages to the south of the Philippines underwent an innovation which changed initial $*[n]$ of $*na$ to a velar nasal, resulting in ligature $*\eta a$. In many of these languages the form was again reduced to become final η on Determiners, such as Tag *ang* and *nang*, Malay *yang*, and so on. It is clear that Chamorro did not share in this particular innovation, placing its separation from the rest of the family at a point prior to the development of the innovation.

6.5 Antipassive $*[maN$ and plural $*[maN$

The Chamorro forms of the antipassive $*[maN$ and plural $*[maN$ both end in a nasal which assimilates to the point of articulation of the following consonant, and, under certain conditions, results in the deletion of the following consonant. These processes are commonly found throughout languages of the Philippines and Indonesia, but are not generally found in Formosan languages, although there is evidence they occur in Amis, and there are sporadic occurrences of verbs in other Formosan languages that have been claimed (Blust 1999:68) to be frozen remnants of $[maN$, such as Puyuma *mangayaw* 'to hunt heads', but which could also be borrowings from Amis, or even from some Philippine language. What interests us about the Chamorro forms and what distinguishes them from similar forms in other western Austronesian languages is the fact that the base form of the Chamorro initial is not $[ma\eta$ with final velar nasal, as it is in other languages, but $[man$ with final alveolar nasal. This seems like a trivial point, but when we recognise that there is probably a historical relationship between the plural and antipassive forms, and that the pluraliser in Philippine languages, as for example, Tag *mga* ($/ma\eta a/$), consists of a sequence of *ma* plus ligature *nga*, then the source of the Chamorro forms becomes clear. They are probably both ultimately from a form *ma* plus a ligature *na* with loss of the final vowel. This must have been the Proto Extra-Formosan source of both the antipassive, as well as the plural forms. In Philippine languages, PEF $*ma\ na\ Noun$ 'plural noun' became $*ma\eta\ Noun$, after the velar nasal initial was innovated, as noted in the previous section.

7 Conclusion

In this paper I have tried to show that much of the evidence that Zobel has produced to support his claim that Chamorro is most closely related to a subgroup that excludes the Philippine languages, is suspect because it is not exclusively shared by languages in his Nuclear Malayo-Polynesian subgroup. Furthermore, I have claimed that just as Chamorro shows the effects of extensive contact in at least two separate layers of lexicon, so it also shows the effects of contact in its morphosyntax. Although it is known that there was extensive contact between the Philippines and the Marianas, there is little that one can specifically point to in the morphosyntax that is clear evidence of that contact, and which could not, for example, be the result of contact with some language south of the Philippines, just as the Chamorro terms *babui* 'pig' and *mannok* 'chicken' are clearly borrowings because

they do not exhibit the regular sound changes that characterise inherited vocabulary, but are non-specific as to the language from which they must have come.

It is tempting to see in Chamorro *munga* 'prohibitive negative', as shown (41), a borrowing from a Tagalog structure such as (42) with loss of the original negative verb, *huwag*, and retention of the genitive pronoun *mu* '2SG' and an enclitic 'particle', *nga*, which changes a command to a polite request. However it may not be related at all, and if it were borrowed, then it might also have come from some other Central Philippine language.

- (41) Chamorro (Topping 1973:138,149)
Munga humanao! 'Don't go!'
- (42) Tagalog (Schachter & Otones 1972:405,523)
Huwag mo nga! '(Please) don't (do it)!'

Similarly, it is tempting to see in the Chamorro term *palao'an* 'woman', a clue of a prehistoric time when women were brought from Palau. The term seems to be borrowed; there is no other known etymology for it. If so, then it would not be surprising to find extensive influence on the language from the fact that it would probably have been the language of Palau that children learned at their mother's knee.

Determining the actual subgrouping position of Chamorro is not possible from phonological evidence, and even the morphosyntactic evidence that I have outlined in this paper is not strong, and is perhaps open to other interpretations. However, it seems to point to two facts. The first is that Chamorro is not most closely related to the Formosan languages, because there are probably archaic remnants in Chamorro of innovations that Starosta claimed were innovated at points later than the time when he would have it separating from those languages. The other fact is that Chamorro seems not to have participated in certain innovations that are found universally in the Philippines. I conclude, therefore, that Chamorro is an Extra-Formosan language, but that it is a first-order branch of the family, separating from Proto Extra-Formosan, probably from the Northern Philippines, prior to the actual dispersal of the other branches of the family.

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