The history and transitivity of western Austronesian voice and voice-marking

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1 Introduction

One of the purposes of the present book is to publish analysed data from western Austronesian languages which will facilitate the reconstruction of the history of voice marking and grammatical relations in the Austronesian language family.[1] This is an area in which reconstruction has not progressed very far since Wolff's landmark reconstruction of Proto Austronesian (PAn) voice, mood and aspect morphemes (Wolff 1973). Arguably the most important development since then was presented in a 1981 paper by Starosta, Pawley and Reid (henceforth SPR), showing how some of this morphology had perhaps developed from nominalising morphemes which are still reflected in many present-day Austronesian languages.[2] Ross (1995a) summarises these and other contributions and examines evidence from the languages of Taiwan to produce a revised reconstruction of PAn verbal morphology which is not very different from Wolff's original version.[3]

The subgrouping hypothesis that has gained widest acceptance among Austronesianists is one whose highest nodes are as shown in Figure 1.

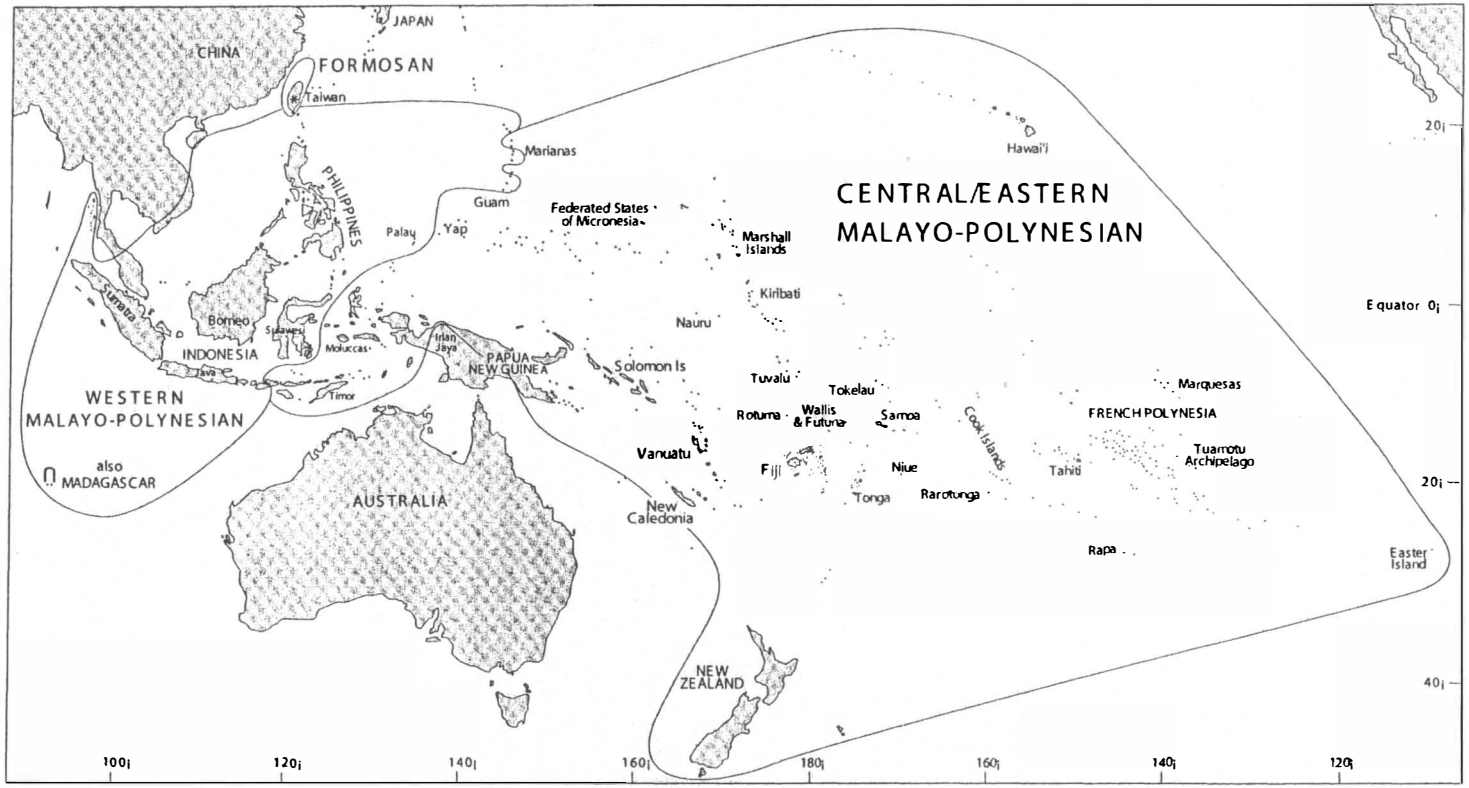
The italicised labels *Formosan subgroups* and *Western Malayo-Polynesian subgroups* in Figure 1 refer to sets of languages which each contain more than one subgroup but which do not themselves form a single subgroup. That is, there was — as far as we can tell — no "Proto Formosan": the only ancestor which all Formosan languages have in common is PAn. And there was — again, as far as we can tell — no "Proto Western Malayo-Polynesian": the common ancestor of the western Malayo-Polynesian languages, which occupy the large area

1 We adopt the convention of writing *western Austronesian* with lower-case *w-* because the languages thus labelled do not form a genealogical subgroup, despite their similarities.

2 This paper was never published in its entirety: an abbreviated version appeared as Starosta, Pawley and Reid (1982).

3 I am grateful to Wayan Arka, Robert Blust, John Bowden, Nikolaus Himmelmann and Andrew Pawley for their comments on earlier drafts of this essay, although, of course, the responsibility for its contents is mine.

Fay Wouk and Malcolm Ross, eds, *The history and typology of western Austronesian voice systems*, 17-62.
Canberra: Pacific Linguistics, 2002.



Map 1: The Austronesian family and major Austronesian language groups

shown in Map 1, is Proto Malayo-Polynesian (PMP).[4] Subgrouping among western Malayo-Polynesian languages in particular is controversial. The reasons for this are of two kinds. One is simply that much of the research which would be needed to determine well-founded subgroups has not been done. The other is that contact over millennia between neighbouring languages, together with the use of Malay as a lingua franca among speakers of many western Malayo-Polynesian languages, has altered much of the evidence that might otherwise have been used to determine subgroups.

Under the hypothesis represented in Figure 1, the Formosan languages represent a number of primary Austronesian subgroups (Blust 1999b:53-55), but all Austronesian languages outside Taiwan belong to a single subgroup, dubbed Malayo-Polynesian by Blust (1977).[5] Since the reconstruction of a proto language should be based on evidence from more than one primary subgroup, this gives the Formosan languages considerable significance in the reconstruction of PAn. Section 3 is thus a potted version of Ross' (1995a) Formosan-based reconstruction of PAn verbal morphology with some revisions and additions, including an alternative explanation of the data (§3.2.2).

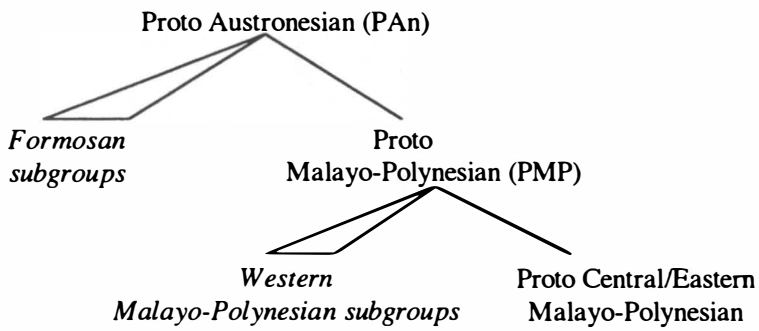


Figure 1: The uppermost nodes of the Austronesian genealogical tree (after Blust 1977)

Recently, Starosta (1995) has revised his view of the PAn system of grammatical relations, proposing that certain Formosan languages separated from the rest of the early Austronesian family before a system like that reconstructed by Wolff (1973), SPR and Ross (1995a) came into being.[6] If Starosta is correct, then this means that a system of the kind reconstructed by Wolff, SPR and Ross arose not in PAn but in an interstage language a node or two below it in the Austronesian genealogical tree. This interstage would come between PAn and PMP in the tree in Figure 1 and would still be the ancestor of all Austronesian languages except perhaps four or five of those in Taiwan — as well as the ancestor of all the languages considered in this book. The conventional alternative to Starosta's revised

4 See Pawley and Ross (1993) and Ross (1995b) for summary reviews of Austronesian subgrouping. Blust (1999:68) also stresses that there is no Western Malayo-Polynesian subgroup of Austronesian. One largish subgroup within western Malayo-Polynesian has recently received stronger support, however: this is Malayo-Chamic (Thurgood 1999).

5 It is usually assumed that Malayo-Polynesian is a primary subgroup of Austronesian. However, Reid (1982) suggests that PMP may subgroup with one or more Formosan languages, and this is at least circumstantially likely.

6 There is an important difference in methodology between Starosta's reconstruction and the others mentioned here, since, as Blust (1999:62-67) points out, Starosta compares and reconstructs morphosyntactic types but not forms.

hypothesis is that the PAn system was indeed as reconstructed by Wolff, SPR and Ross, and that the Formosan languages which display other systems have undergone substantial innovations. This analytic disagreement arises largely because PAn is at the top of the tree. That is, we must reconstruct it entirely on the basis of its daughter-languages, whose primary subgrouping we are uncertain about. If we were debating the reconstruction of PMP instead, we could also draw on data from external witnesses (i.e. Formosan languages) for evidence about the kind of system that PMP inherited. We lack this corroborating external evidence when we reconstruct the language at the top of the tree.

Of the languages whose verbal morphology and grammatical relations are described in this book, Seediq is a Formosan language, and the others are western Malayo-Polynesian. Because of this bias, §4 offers a sketch of probable changes which had occurred in Proto Malayo-Polynesian and of subsequent developments among western Malayo-Polynesian languages. No account is taken here of the contributions in this book, as this is the task of the discussion notes by Wolff and Ross.

2 Transitivity and ergativity

2.1 Morphosyntax

The terminology employed here follows that used by Himmelmann in his introductory contribution to this book (henceforth 'Himmelmann' without further specification). PAn was a Philippine-type language in Himmelmann's terminology. Note, though, that "Philippine-type languages" include not only Philippine languages but also some of the languages of northern and central Borneo, northern Sulawesi and Madagascar, as well as most of the Formosan languages. In a Philippine-type voice system, the semantic role of the syntactic pivot (the Philippinists' 'topic') is marked by verbal affixes. The (made up) examples in (1) illustrate the major affixes for the four voices in Paiwan, a Formosan language (see Map 4). The four examples contain respectively the suffix *-ən* 'patient voice', the suffix *-an* 'location voice', the prefix *si-* 'circumstantial voice'[7] and the infix *‹əm›* 'actor voice'. In each case the syntactic pivot introduced by the specific phrase marker *a* assumes the role indicated by the verbal affix:

(1) Paiwan[8]

a. *təkəl-ən a vaua*
drink-PV SPEC wine
'the wine will be drunk' ('s/he/they will drink the wine')

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7 The circumstantial voice is commonly known in the literature as the 'instrumental voice', but its uses are usually wider. Keenan (1976:256) writes with regard to Malagasy: 'subjects of circumstantial sentences can express the instrument, benefactee, location, time, purpose, manner...of that action.' A common feature of its uses is that the syntactic pivot refers to something that is moved or is the goal of movement but is not affected by the event.

8 Abbreviations used in interlinear glosses: 1,2,3 first, second, third person; 1EP first person plural exclusive; 1IP first person plural inclusive; AT atemporal; AV actor voice; CJ conjunction; CV circumstantial voice; D disjunctive pronoun; GEN genitive (phrase marker or pronoun); IMPF imperfective; INVOL involuntary; IRR irrealis; LIG ligature; LOC location (phrase marker); LV location voice; NEG negative auxiliary; NPIV non-pivot (=neither pivot nor agent); P plural (phrase marker or pronoun); PAn Proto Austronesian; PERS personal (phrase marker); PF perfective; PIV pivot; PMP Proto Malayo-Polynesian; PN personal (phrase marker); PV patient voice; R reduplication; RECIP reciprocal; S singular pronoun; SPEC specific (phrase marker); UV undergoer voice.

b. *təkəl-an a kakəsan*
drink-LV SPEC kitchen
'the kitchen will be drunk in' ('s/he/they will drink it/them in the kitchen')

c. *si-təkəl a kupu*
CV-drink SPEC cup
'the cup will be drunk with' ('s/he/they will drink it/them from a cup')

d. *t‹əm›kəl a qała*
‹AV›drink SPEC stranger
'the stranger will drink (something)'

It is appropriate to refer to the patient, location and circumstantial voices collectively as 'undergoer voices', as they have certain features in common (see below).

The voice-marked verb forms in (1) are worthy of comment. First, the fact that two voices are marked by suffixes, one by a prefix, and one by an infix is unusual crosslinguistically. I return to this in §3.2.1. Second, although 'drink' happens to have four voice forms in Paiwan, in Philippine-type languages generally neither the morphological shape nor even the occurrence of a particular voice form of a given verb is completely predictable. This means that voice forms must be listed in the lexicon, i.e. they are derived, not inflected, forms,[9] and are more similar to the applicative verb-forms of, for example, Oceanic Austronesian languages than to the fully productive, largely predictable passive of a language like English. Recognising this, Starosta (1986) proposes the term 'recentralisation' instead of 'voice' in Philippine-type languages. The main reason we retain 'voice' here is that it is already well entrenched and is a decidedly better term that the Philippinists' 'focus' (see Himmelmann).

Starosta's account is important in another respect. The effect of applicative verb-forms is generally to allow a referent with a semantic role other than patient (e.g. location, instrument, beneficiary) to become the undergoer. This is the effect of *-an* and *si-* in (1b–c). We might therefore regard the patient voice in (1a) as the basic undergoer voice and (1b–c) as undergoer voice applicatives. I have decided against this analysis here because there is no morphological evidence that the patient voice with *-ən* in (1a) is more basic than those with *-an* and *si-*, and there is therefore no pressing argument for moving away from more conventional terminology.

A crucial feature of Philippine-type voice systems is that some of them seem to entail no reduction in valency (see Himmelmann). However, this is a matter of controversy to which I return below (§2.3). The Paiwan sentences in (2) each contain two noun phrases, one the syntactic pivot introduced by *a*, the other either the agent, marked with the genitive phrase marker *nua* or the patient, marked with the non-pivot phrase marker *tua*:

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9 For a succinct statement of the claim that 'voice' affixes in Philippine languages are derivational, not inflectional, see Reid (1992:67-68). For similar views, see Starosta (1986) and Himmelmann (1991). De Guzman (1997) argues the opposing case, but her survey (318-322) suggests rather that voice forms are derived, but form a larger part of the language and show more regularities than derived forms in many languages.

(2) Paiwan

a. *təkəl-ən nua qała a vaua*
drink-PV GEN stranger SPEC wine
'the wine will be drunk by a/the stranger'
('a/the stranger will drink the wine')

b. *təkəl-an nua qała a kakəsan*
drink-LV GEN stranger SPEC kitchen
'the kitchen will be drunk in by a/the stranger'
('a/the stranger will drink it/them in the kitchen')

c. *təkəl-an a kakəsan tua vaua*
drink-LV SPEC kitchen NPIV wine
'the kitchen will have wine drunk in it'
('someone will drink wine in the kitchen')

d. *t‹əm›kəl a qała tua vaua*
‹AV›drink SPEC stranger NPIV wine
'the stranger will drink wine'

The most-cited Philippine-type language is Tagalog (see Map 4). The phrase markers of Paiwan and Tagalog are shown in (3).

(3)

	SPEC	GEN	NPIV	LOC
Paiwan	*a*	*nua*	*tua*	*tua*
Tagalog	*ang*	*ng* [naŋ]	*ng* [naŋ]	*sa*

It is common in the literature to refer to a marker with the functions of Paiwan *a* and Tagalog *ang* as the marker of the syntactic pivot (or whatever the corresponding term is in each writer's terminology), but Himmelmann (forthcoming a) points out for Tagalog that this is not strictly accurate. *Ang* also occurs in predicate noun phrases, and marks the noun phrase as specific. The same is true of phrase markers in other Philippine-type languages which correspond to *ang*, and so these markers are glossed here as specific.

2.2 Functions and 'discourse ergativity'

Despite the controversy about transitivity, however, it is clear that in many Philippine-type languages there is an important distinction between the undergoer voices and the actor voice. The undergoer voices are the unmarked choice in a number of respects, the actor voice the marked choice.[10] (This leads to the curious situation that in a language like Paiwan with patient, location and circumstantial voices, there are in this sense three 'unmarked' choices and one marked). In many Philippine-type languages there is a general requirement that the syntactic pivot have a specific referent, and the actor voice is reserved for independent transitive clauses where the undergoer referent is not specific,[11] and for subordinate clauses where the syntax requires an actor pivot. For example, in a relative clause the (deleted) noun

10 I owe much of the correlation of the sources referred to in this paragraph and its footnotes to S. Huang (2000).

11 Patient specificity has been noted as a major determinant of voice in Seediq (Holmer, this volume), Tsou (S. Huang 2000), Yami (Ho 1993), Kapampangan (Mirikitani 1972), Tagalog (Wouk 1986), Cebuano (Bell 1988) and Karao (Brainard 1994).

phrase coreferential with the head noun is the pivot, and the actor voice is used if this is the agent. The undergoer voices are the default choice for foregrounded (= story-line) events in discourse (where the active voice is the default in European languages), and the actor voice tends to be reserved for marked functions. These observations are related to one made by Cooreman, Fox and Givón (1988) about topicality, where 'topicality' refers to the discourse continuity of a referent. Across languages, agents are more topical in discourse than undergoers, and this is as true of Philippine-type languages as of others, but it is undergoer topicality that affects Philippine-type voice selection: the higher the topicality of the undergoer referent, the greater the probability that it will be selected as syntactic pivot.[12] However, these observations cannot be taken as definitive, as there has not yet been enough research on the uses of the different voice forms in the discourse of Philippine-type languages for us to be certain how widely these generalisations hold.[13]

The effects of default undergoer pivot choice can be seen in (4), drawn from a Paiwan text.[14] In English, the action sequence is best translated with a sequence of active verbs ('loosened...saw...crushed...ate'), but in Paiwan the normal choice is a sequence of undergoer voice verbs (in bold). The passage is semi-literally translatable into English as "That monkey, the stones were loosened (by him), the water became muddy, the crabs were seen (by him), and (they) were crushed (by him) and (they) were eaten (by him).' The semi-literal translation reads poorly because a major function of the English passive is to suppress the actor, a function not shared by the Paiwan patient voice.

(4) Paiwan

a	*zu'*	*a*	*ti*	*sa*	*ɖaiɖail*	***cəkałən***	*a*	*zu'*	*a*	*qaciłai,*
a	zua	a	ti	sa	ɖaiɖail	cəkał-ən	a	zua	a	qaciłai
SPEC	that	LIG	PN	RESPECT	monkey	loosen-PV	SPEC	that	LIG	stone

małimək	*a*	*załum,*	***pacunan***	*a*	*zu'*	*a*	*gaŋ,*	***qucəqucən***
ma-łimək	a	załum	pacun-an	a	zua	a	gaŋ	R-quc-ən
PASSIVE-mud	SPEC	water	see-PV	SPEC	that	LIG	crab	DUR-crush-PV

sa	***kani***	*aya.*
sa	kan-i	aya
and.then	eat-PV.AT	thus

'That Mr Monkey, he loosened some stones, the water became muddy, he saw the crabs, and crushed and ate them.'

In natural discourse, verbs in Philippine-type languages often have no noun phrase accompanying them, like the last two verbs in (4), or only one, like the other verbs in the example. Verbal clauses which have two full noun phrases like the constructed examples in (2) are rare.

Observations such as those summarised above have led to a labelling of Tagalog and various other western Austronesian languages as 'discourse-ergative'. This is a rather confusing use of the term 'ergative', as Cumming and Wouk (1987) show in a critique of 'discourse ergativity' in Austronesian languages. If 'ergativity' refers to a system in which

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12 This has been shown for Tsou (S. Huang 2000), Chamorro (Cooreman 1983, 1987; Cooreman et al. 1984, 1988), Tagalog (Cooreman et al. 1984, 1988) and Cebuano (Payne 1994).

13 The undergoer specificity criterion evidently does not apply to Ilocano (Baker 1991). The foreground/background distinction does not apply to Tsou (S. Huang 2000) or to Cebuano (Bell 1988).

14 The text is from Egli (1990:326-343); the interlinear glosses and free translation are mine.

the single argument of an intransitive verb (the S) and the non-actor (undergoer or O) argument of a transitive verb are treated in the same way, but differently from the actor (the A), then 'morphological ergativity' refers to a system in which S and O are marked by the same morphology, which is different from the marking of A, and 'syntactic ergativity' to a system in which S and O are subject to the same syntactic processes (see below) (Dixon 1979). In the corresponding 'accusative' systems it is S and A that are treated in the same manner. 'Discourse ergativity' ought then to refer to some system which treats S and O in the same way with regard to some discourse process, in contrast to a discourse-accusative system. What it in fact seems to refer to in Cooreman, Fox and Givón's (1984) usage is a preference for foregrounded transitive clauses whose syntactic pivot is O rather than A.

Note that it makes no difference to the discourse ergativity of Tagalog whether the actor voice is transitive or not. Since discourse ergativity is a preference for foregrounded transitive clauses whose syntactic pivot is O, a discourse-ergative language must allow such clauses. It does not matter whether it also allows transitive clauses with an A pivot. The one exclusion is that a discourse-ergative language cannot be syntactically accusative.[15]

2.3 Syntactic ergativity and the transitivity of the actor voice

Philippine-type languages have long been sources of puzzlement and controversy among syntacticians, and some of these issues are touched upon by Himmelmann. A significant feature of Philippine-type languages for linguists is that they force us to deconstruct the categories that we use in morphosyntactic analysis. One question which has been raised again and again in more recent literature is: Are some or all Philippine-type languages syntactically ergative? The hypothesis put forward by those who answer in the affirmative (e.g. De Guzman 1988; Gibson & Starosta 1987; Starosta 1988, 1999) can be simply stated:

> *The ergative hypothesis*: Undergoer-voice clauses are transitive, actor-voice are intransitive.

The converse claim, that Philippine-type languages are syntactically accusative, with intransitive undergoer-voice clauses and transitive actor-voice clauses (e.g. Bell 1976), has faded from discussion, and there seems to be a consensus that undergoer-voice clauses like (2a–c) are transitive. A third claim, still on the table, is implicit in Kroeger's (1993:40-48) work:

> *The symmetrical-voice hypothesis*: Both undergoer-voice and actor-voice clauses are transitive.

Although the symmetrical-voice hypothesis seems to hold for a number of Indonesian-type languages (§4.2), it is less clear that it is true of Philippine-type languages. The difference between the two hypotheses boils down to a single question: are actor-voice clauses in some or all Philippine-type languages transitive or intransitive?

The problem with this question is that it presupposes a crosslinguistically valid definition of 'transitive' and 'intransitive'. Dryer (1997), writing about grammatical relations, suggests

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15 If we label a language with both O- and A-pivot transitives as 'symmetrical', then the entailments are: a discourse-ergative language is syntactically ergative or symmetrical; a discourse-accusative language syntactically accusative or symmetrical; a syntactically ergative language cannot be discourse-accusative; a syntactically accusative language cannot be discourse-ergative; a symmetrical language may be discourse-ergative or discourse-accusative.

that grammatical relations are like phonemes: it makes no sense to define them crosslinguistically. There are, he suggests, language-particular grammatical relations, as varied as those found in Dyirbal, Acehnese, Cree and Cebuano. There may be similarities between the grammatical relations of these languages and common explanations for these similarities, but crosslinguistic labels like 'subject' belong to the metalanguages of various theories and lack empirical substance (cf. Dryer 1999).

Of Dryer's four examples, Cebuano is a Philippine-type language similar in structure to Tagalog, and he points back to Schachter's (1976, 1977) famous deconstruction of the Tagalog subject into the pivot and the actor. The pivot has reference-related functions which include being (i) referential; (ii) uniquely capable of relativisation; (iii) modified by a floating quantifier or a depictive predicate; (iv) the controller of raising; and (v) the controllee in a raising construction (Schachter 1976; Kroeger 1993).The actor has role-related functions.[16] It is (i) the antecedent of reflexives; (ii) the controllee in equi constructions; and (iii) the imperative addressee.[17]

In a language like English, the pivot and the actor of a transitive clause coincide as the subject: such a language is syntactically accusative. In other languages they remain separate, and the pivot coincides instead with the undergoer:[18] such a language is syntactically ergative. This formulation is due to Manning (1996:16-20 and *passim*). His crucial insight is that role-related functions are carried by the actor — and sometimes also by the undergoer — regardless of whether the language is syntactically accusative or syntactically ergative, and so these functions can be discounted in making the accusative/ergative distinction.[19] Dyirbal and Tagalog, according to Manning, are syntactically ergative by this criterion, and Tagalog is thus made to look more ordinary than it has looked from earlier perspectives. (I will modify this assessment below.)

In a syntactically accusative language, there is typically a passive: it is intransitive, and the pivot coincides with the undergoer. In a syntactically ergative language, there is typically an antipassive: it is intransitive, and the pivot coincides with the actor. This takes us back to the debate about the transitivity of the actor voice in Philippine-type languages. If the actor voice in, say, Tagalog is intransitive, then it is an antipassive, and the language is

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16 Not all languages have a syntactic pivot in this sense. In so-called 'split-S' languages like Acehnese (Austronesian), grammatical relations are based on actor and undergoer (Durie 1987). In Yimas (Papuan) privileged arguments differ from construction to construction (Foley 1993). In neither case is there an single pivot.

Actor and undergoer (Foley & Van Valin 1984) are quasi-semantic relations, in the sense that they are 'macro-roles': an actor is sometimes an agent, sometimes a force, sometimes an experiencer, and so on, and an undergoer is variously a patient, a theme, a beneficiary etc. They are semantic abstractions which receive *grammatical* expression in various ways in various languages.

17 For examples, see Schachter (1976, 1977), Kroeger (1993) and Manning (1996). Schachter (1984) describes a similar distribution of functions in Toba Batak.

18 For these reasons Kroeger's (1993) Lexical–Functional-Grammar-motivated use of 'subject' for the Tagalog pivot may sit uncomfortably with some linguists. Differences between Tagalog and English subjects are not limited to the fact that the English subject has role-related properties as well as reference-related. Unlike a Tagalog pivot, an English subject is not the only relation that can be relativised, nor is it the only controller of equi deletion and raising. These differences serve to underline Dryer's claim that a grammatical relation like 'subject' is not universal.

19 This represents a refinement of Dixon's (1979, 1994) account of syntactic ergativity, in which role- and reference-related functions are not distinguished. Manning's observations apply, incidentally, to only a subset of the world's languages: they do not apply to languages which lack a pivot.

syntactically ergative. But if it is transitive, like the undergoer voices, then there is no transitive/intransitive voice contrast and Tagalog has a symmetrical voice system.

But here a further deconstruction is needed. What does it mean to say that a clause is transitive? Unfortunately, in the last twenty years, 'transitive' has come to be used in at least two different senses, one semantic, the other morphosyntactic. We will see below that the semantic transitivity of the actor voice in Tagalog is ambiguous, or, more accurately, that its intransitive interpretation apparently depends on pragmatic inference. Morphosyntactic transitivity, as conventionally defined, depends on being able to determine whether a clause has a minimum of two core arguments. Tagalog, however, forces us to deconstruct the notion of 'core' into criteria which match in many languages — but not in Tagalog. I will deal with semantic and morphosyntactic transitivity separately in the next two sections.

2.3.1 Semantic transitivity

'Semantic transitivity' (perhaps one should call it 'functional transitivity') derives from the work of Hopper and Thompson (1980) and consists of features of the clause which include agentivity, perfective aspect, and individuation of the undergoer. 'Individuation' includes, among other things, specificity, and it is often pointed out that the undergoer of an actor-voice clause in a Philippine-type language is non-specific. We can begin to get a handle on this by looking at the (apparently elicited) Tagalog sentences in (5).

(5) Tagalog (Schachter 1976:494-495)

a. *Mag-alis ang babae* ***ng*** *bigas sa sako para sa bata.*
AV-take.out SPEC woman **NPIV** rice LOC sack for LOC child
'The woman will take some rice out of a/the sack for a/the child.'

b. *A-alis-in ng babae ang bigas sa sako para sa bata.*
DUR-take.out-PV GEN woman SPEC rice LOC sack for LOC child
'A/the woman will take the rice out of a/the sack for a/the child.'

c. *A-alis-an ng babae* ***ng*** *bigas ang sako para sa bata.*
DUR-take.out-LV GEN woman **NPIV** rice SPEC sack for LOC child
'A/the woman will take some rice out of the sack for a/the child.'

d. *Ipag-alis ng babae* ***ng*** *bigas sa sako ang bata.*
take.out-CV GEN woman **NPIV** rice LOC sack SPEC child
'A/the woman will take some rice out of a/the sack for the child.'

(6) Tagalog (De Guzman 2000:227)
*Nag-tanong ang bata sa/*ng kapitbahay*
PF.AV-ask SPEC child LOC/*NPIV neighbour
'The child asked the neighbour.'

As the free translations indicate, *ng bigas* 'some rice' is interpreted in (5a), (5c) and (5d) as non-specific. Hence some scholars consider the actor voice in (5a) not to be transitive. Though rare, a definite patient in an actor voice clause may be expressed with *sa* LOC, as in (6). However, in (7a) and (8), where the actor voice verb occurs in a relative clause, the *ng*-phrase (henceforth '*ng*-patient') may have either a non-specific or a specific

interpretation.[20] To guarantee a definite interpretation in (7), *sa* LOC may be used instead of *ng*, but this option is not available with the trivalent verb in (8). When the patient is a personal noun phrase, it is always specific and always preceded by *kay* PERS.LOC (examples from Schachter and Otanes 1972:382-383).

(7) Tagalog

a. *Siya ang naka-kita* ***ng*** *aksidente.*
NOM:3S SPEC PF.INVOL.AV-see **NPIV** accident
'He's the one who saw a/the accident.'

b. *Siya ang naka-kita* ***sa*** *aksidente.*
NOM:3S SPEC PF.INVOL.AV-see **LOC** accident
'He's the one who saw the accident.'

c. *Siya ang naka-kita* ***kay*** *Jose.*
NOM:3S SPEC PF.INVOL.AV-see **PERS.LOC** Jose
'He's the one who saw Jose.'

(8) Tagalog

Siya ang nag-bigay ***ng*** *premyo kay Ben.*
NOM:3S SPEC PF.AV-give **NPIV** prize PERS.LOC Ben
'He's the one who gave a/the prize to Ben.'

The crucial question is, what is the status of *ng*-patient in these examples? The provisional answer is that it is a grammatical relation which encodes the common noun phrase patient of a non-patient voice. On the basis of (5), it is tempting also to say that the *ng*-patient encodes a non-specific patient and that the actor voice is therefore inherently less transitive than the undergoer voices. The evidence of (7) and (8), however, suggests that this is an oversimplification. The relevant facts appear to be these:

a. The pivot, marked with *ang*, must be specific.

b. *Ng* encodes the common noun phrase patient (*ng*-patient) of a non-patient voice, as in (5a), (5c) and (5d).

c. In an independent clause, a specific common noun phrase patient will almost always be the pivot, as in (5b). This means that the *ng*-patient of an independent clause will almost always be interpreted as non-specific, as in (5a), (5c) and (5d).

d. In a relative clause, the relativised noun phrase must be the pivot. If this is the actor, it may block a specific common noun phrase patient from being the pivot, resulting in an actor voice relative clause with a specific *ng*-patient, as in (7a) and (8).

e. To guarantee an interpretation of a specific common noun phrase patient as definite, *ng* NPIV may be replaced by *sa* LOC, as in (7b). But this option is blocked if the verb is trivalent and there is therefore another a LOC-marked core argument, as in (8).

One conclusion can be drawn straight away from these facts: although the *ng*-patient of an independent clause is *interpreted* as non-specific, *ng* does not *encode* non-specificity. Instead, the non-specificity of the *ng*-patient is a pragmatic inference based on the fact that a specific common noun phrase patient would normally be the pivot (c). When it is blocked

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20 'Relative clauses' here also includes the cleft construction and the existential construction (Kroeger 1993:55; Himmelmann forthcoming b).

from being pivot, as in a relative clause, the inference is not necessarily made (d). And, as Himmelmann (forthcoming b) points out, there are rare cases when the *ng*-patient of an independent clause may be specific, e.g. when the *ng*-patient is owned by the actor.

This has a bearing on a claim made by Hopper and Thompson (1980:289) about Tagalog. They write that semantic features of high transitivity (and these include specificity of the undergoer) tend to be collectively grammaticised across languages in transitive clause constructions. The undergoer voices in (5b–d) represent this kind of grammaticisation. They observe in a discussion of Tagalog data, however, that the actor voice is further down their transitivity continuum, as the undergoer is non-specific, i.e. unindividuated. They seem to imply that the actor voice thus represents the grammaticisation of lower transitivity. On the basis of the facts listed above, however, although the actor voice may express lower transitivity in independent clauses, it does not represent its grammaticisation.

Note that this conclusion about the actor voice is not drawn on the basis of a simple opposition between it and the undergoer voices. Although discussion of the status of the actor voice has often been couched in terms of this opposition, the conclusion depends crucially on the status of the *ng*-patient, and this may occur in any non-patient voice, as (5) shows.

2.3.2 Morphosyntactic transitivity

Since a transitive clause is one with a pivot plus at least one more core argument, the issue of the morphosyntactic transitivity of the actor voice boils down to the question, is the *ng*-patient in Tagalog core or oblique? This entails being able to define 'core', however, and it seems that in conventional definitions, there are three conditions for an argument being 'core':

(a) The argument has a morphosyntactic relationship to the verb. This relationship may be marked by coding on the verb (e.g. agreement affixes), by coding on the arguments (e.g. case-marking), or by position in the clause. At the same time, the argument is not oblique: an argument is oblique if an argument with the same structure may also occur as a peripheral argument (one not required by verbal valency), as in *I was working **on the floor***.

(b) The argument is required by the valency of the verb (or, 'subcategorised for by the verb'). This is a necessary, but not a sufficient condition, as verbal valency may also require an oblique argument, as in *I gave the apple **to the man*** or *I put the apple **on the floor***.

(c) The argument has reference-related functions. If the argument is not the pivot, then it will have fewer reference-related functions. This again is a necessary, but not a sufficient condition, as in some languages an oblique argument may also have reference-related functions.

Since the only sufficient condition is (a), this is the one which will ultimately determine whether the *ng*-patient is a core argument. However, it is hard to distinguish between core and oblique arguments in Tagalog. Across languages, an oblique is typically coded by a special structure, usually an adpositional phrase. But Tagalog usually does not use a special structure in peripheral phrases. Instead, a peripheral phrase, like a core argument, is coded only with a phrase marker.

Out of the phrase markers *ng* GEN, *ng* NPIV and *sa* LOC, only *sa* unambiguously introduces an oblique. It introduces phrases required by the valence of the verb, like *sa sako* in (5a,b,d), as well as peripheral adjuncts of time and place (Schachter & Otanes 1972:440-441, 450-452).[21]

The situation with *ng* is less clear, and is compounded by the fact that *ng* has at least two functions. Although I have glossed *ng* as GEN when it marks the agent of a non-actor voice and as NPIV when it marks the patient of a non-patient voice, there is little doubt that these are two functions[22] of the same morpheme (rather than two homophonous morphemes), since both can be replaced by the genitive form of the deictic pronoun (Schachter & Otanes 1972:382-383). Since *ng* GEN marks a core argument, one may infer that *ng* NPIV does so too, otherwise we would have the unlikely scenario of the same morpheme marking both core and oblique arguments.

However, things are not as simple as this. *Ng* also introduces an instrument phrase, as in (9).[23]

(9) Tagalog (Foley & Van Valin 1984:135)

B‹in›ilh-an	*ng*	*lalake*	*ng*	*isda*	*ng*		*pera*	*ang*	*tindahan.*
‹PF›buy-LV	GEN	man	NPIV	fish	INSTRUMENT		money	SPEC	store

'The man bought fish in the store with money.'

The instrument phrase in (9) appears not to be required by verbal valency, so it is hard to argue that this is a core noun phrase, as it doesn't satisfy (b) above. Instead, it is an oblique. One could argue, incidentally, that since agents and instruments are marked in the same way in many languages, this is a 'subfunction' of the agent use.

A morpheme *nang* (homophonous with *ng*) introduces temporal peripheral phrases, contrasting with *sa* in contexts like the one in (10).

(10) Tagalog (Schachter & Otanes 1972:440)

a. *D‹um›ating kami roon sa umaga.*
‹AV›arrive PIV:2EP there LOC morning
'We arrived there in the morning.'

b. *D‹um›ating kami roon nang umaga.*
‹AV›arrive PIV:2EP there ? morning
'We arrived there of a morning.'

The fact that the contrast between *nang* and *sa* here is one of specificity, parallel to the one noted for *ng* NPIV and *sa* in (7a–b), implies that *nang* and *ng* NPIV are in a sense subfunctions of a single function, and that the arguments they mark are obliques.

If the formulation under (a) above is correct, then the only way to unite the functions of *ng* is to infer that it marks obliques (thereby overturning my previous assumption about *ng* GEN). This would mean that Tagalog had a symmetrical voice system in which all voices were morphosyntactically intransitive, i.e. a system that was the converse of the one proposed in the symmetrical-voice hypothesis above whereby all voices are morphosyntactically transitive.

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21 As a peripheral adjunct, *sa* may be preceded by *para*, as in (5a), (5b) and (5c), which marks a beneficiary.

22 For a different view, namely that *ng* always marks attributes, see Naylor (1980).

23 I am grateful to Wayan Arka for discussion of this point.

When we turn to condition (b), we get a different perspective. Crosslinguistically it is not uncommon for a verb to have a valency of three. Three voices of the root *alis* 'take out' in (5) are trivalent: they require an actor, a patient, and a location, marked respectively with *ng* GEN, *ng* NPIV and *sa* LOC when they are not the pivot. This means that in (5a–b) we have a trivalent pattern of *ang, ng, sa* and in (5c) a trivalent pattern of *ang, ng, ng*. These patterns also occur with other trivalent verbs in Tagalog. The voices of the root *bigay* 'give' have an actor, a patient (the thing given), and a location (the recipient) (Schachter 1976:506, 1977:280-281). Those of the root *hiram* 'borrow' also have an actor, a patient (the thing borrowed), and a location (the source) (Schachter 1977:294). Those of causative verbs like *pa-luto* 'cause (someone) to cook' have an actor (the causer), a patient (the thing cooked), and a location (the causee = the cook) (Ramos 1971b:148). The pattern of phrase markers is the same in each case.

Across languages, trivalent verbs usually have three core arguments, as in *I gave the man the apple,* or two core and one oblique, as in *I gave the apple to the man.* I am not aware of languages that have trivalent verbs with one core and two oblique arguments. One may thus infer from the trivalent patterns of Tagalog verbs that *ng* GEN and *ng* NPIV code core arguments and *sa* an oblique argument. This inference is supported by (8), where core *ng* NPIV is blocked by the presence of another LOC-marked argument from replacement by oblique *sa* LOC, as this would result in one core and two oblique arguments, all of them required by the valency of the verb, and this would be a crosslinguistically unusual pattern. However, this evidence is circumstantial, as it is based on a crosslinguistic generalisation which is assumed to have no exceptions, and typology indicates that exceptionless generalisations are rare.[24]

This discussion has an interesting consequence: the circumstantial voice in (5d) appears to have a valency of four. This is crosslinguistically uncommon, and is the consequence of 'promoting' a peripheral argument, the beneficiary, to pivot, without the loss of any of the arguments required by the trivalent voices.

Condition (c) above requires that a core argument have reference-related functions, albeit fewer than the pivot. This is the mainstay of Kroeger's (1993:40-48) claims that arguments introduced by both *ng* GEN and *ng* NPIV are core. I will not repeat the evidence here, but it is clear that *ng* GEN and *ng* NPIV do have a few reference-related functions, although *ng* NPIV has very few.

What are we to make of this? Since (b) and (c) are not sufficient conditions for core status, but (a) is, should we accept the conclusion from (a) that *ng* GEN and *ng* NPIV mark oblique arguments? This would be the result of applying strict logic, but it would make trivalent verbs display a very odd pattern and, more generally, commit us to the position that there are no transitive clauses in Tagalog.

There is an alternative. This is to extend Dryer's (1997) position a little and to say not only (i) that there are no crosslinguistic grammatical relations, only similarities among language-particular grammatical relations, but also (ii) that there are no crosslinguistic categories of core and oblique, only similarities among language-particular encodings of arguments. On this understanding, Tagalog happens to be different from the majority of (non-Philippine) languages in lacking a morphosyntactic distinction between core and oblique arguments other than the pivot. but similar to them in the application of (b) and (c) to certain (morphosyntactically undistinguished) arguments.

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24 In principle, Tagalog might be the exceptional language in which a trivalent verb has one core and two oblique arguments.

2.3.3 Summary

To summarise, the *ng*-patient is a Tagalog-specific grammatical relation which encodes the common noun phrase patient of a non-patient voice. There is no unambiguous way to say that either the *ng*-agent or *ng*-patient is core or oblique, and therefore no unambiguous way of talking about the transitivity of the clauses. All we can say is that the system is morphosyntactically symmetrical.

In an independent clause, the *ng*-patient is interpreted as non-specific, but this is a matter of pragmatic inference, not of grammaticisation.

The antipassive-like character of the actor voice is — it seems — an epiphenomenon rather than something encoded by the grammar. But it is now clear why some linguists have been unhappy describing actor voice clauses as 'transitive': its application to a clause whose patient is interpreted as non-specific seems anomalous. Conversely, others have been worried by the thought of calling an actor voice clause with a core patient 'intransitive' (Gault 1999:399-400). As a result, clauses of this kind have occasionally been dubbed 'semi-transitive'.

2.3.4 The actor voice in Philippine-type languages other than Tagalog

The examples in §2.3.1–2 are from Tagalog. This is fortuitous: Tagalog happens to be the only Philippine-type language with enough finegrained published analysis to make an investigation of the ergativity and transitivity questions remotely worthwhile. My purpose is to show that the analysis of just a single language raises complex issues and that each language should be carefully analysed on its own merits.[25] I do not want to suggest that PAn was similar in detail to Tagalog: on the contrary, the complexities revealed in attempting to analyse Tagalog — and they would be no less for any other Philippine-type language, one suspects — should make us aware of how crude any reconstruction of PAn must be.

In one respect Paiwan is more typical than Tagalog of Philippine-type languages. In Tagalog the actor of a non-actor voice (GEN) and the patient of a non-patient voice (NPIV) are marked in the same way, by *ng* (cf. (3)). In Paiwan NPIV is marked in the same way as LOC, by *tua*, as in (11). The Paiwan patterning of phrase markers seems to be more common across Philippine-type languages than the Tagalog pattern (De Guzman 2000:229).

(11) Paiwan (Egli 1990:287)

Na	*q‹əm›ci*	*a*	*caucau*	*tua*	*vatu*	*tua*	*paŋul.*
PF	‹AV›kill	SPEC	person	NPIV	dog	LOC	cudgel

'The man killed a dog with a cudgel.'

In (11) *tua paŋul* 'NPIV cudgel' is peripheral and therefore oblique. This means that the patient *tua vatu* 'NPIV dog' is also oblique (Paiwan *tua* does not share ambiguity of Tagalog *ng* NPIV), and the clause is intransitive and behaves like an antipassive. That is, Paiwan, and other Philippine-type languages which pattern similarly,[26] is syntactically ergative under Manning's definition.

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25 The practice of using data and analysis from one Philippine-type language to make a point about another one is common but dangerously flawed.

26 Ho (1993) and Huang (1994) respectively present the cases for Yami and Atayal being syntactically ergative. In the literature the actor voice of Formosan languages has sometimes been treated as transitive.

A Paiwan-like pattern need not differ from the Tagalog pattern with regard to semantic transitivity. The languages of the Batan Islands, which include Yami and Ivatan, have a pattern of phrase markers similar to Paiwan, except that GEN, NPIV and LOC are all marked differently. However, Ho (1993:110) analyses *su* NPIV as an oblique. Reid shows that its Ivatan cognate *so* NPIV alternates with *do* LOC (1966:25) and forms peripheral phrases of manner (1966:69-70), so we can be reasonably certain that NPIV and LOC both mark obliques. Ho (1993:94) notes that Yami *su* NPIV is interpreted as non-specific in independent clauses but may be specific in dependent clauses, i.e. it has the same inference pattern as Tagalog (§2.3.1).[27] In how many Philippine-type languages this inference of non-specificity is made, we do not know. It is often claimed of a language that its equivalent of the *ng*-patient is non-specific, but it is almost always unclear whether this is a matter of inference or of grammaticisation, and there is often no mention of what happens in dependent clauses. But it seems likely that the specificity pattern of Tagalog and Yami extends to many Philippine-type languages (and Indonesian-type languages, as Wouk's 1984 analysis of Toba Batak shows).

There is some evidence, incidentally, that PMP (Table 10), and perhaps PAn (Table 2) had different phrase markers for GEN, NPIV and LOC. One can only speculate that, as in Yami, this made no difference to patient specificity patterns.

3 Proto Austronesian verbal morphology

3.1 Reconstruction

The voice system which can be reconstructed for PAn is rather similar to the Paiwan system. It seems likely that its usage was similar to what I have descibed, particularly in §2.3.2, but we cannot be sure of this. The reconstructed voice, mood and aspect morphemes of PAn are set out in Table 1 in schematic form, together with their applications to two PAn roots, **káRaw* 'scratch' and **kaRáC* 'bite'. This reconstruction is based on material from fifteen Formosan languages and various Philippine-type languages of the Philippines and northern Borneo (see Wolff 1973 and Ross 1995a for supporting data). Table 1 differs from the corresponding table in Ross (1995a), however, as it shows the forms for four voices. In Ross (1995a), the circumstantial voice was not reconstructed, as the Formosan data barely justify it. Its reconstruction remains very tentative, for reasons given in in §3.2.1.[28]

The root-and-morpheme combinations in Table 1 are intended only to illustrate the structure of PAn verbal forms: there is no guarantee that these forms all occurred, as verbs in Philippine-type languages often have defective paradigms. These roots represent the two PAn stress types.[29] PAn **káRaw* is a paroxytone root, i.e. a root with penultimate stress, **kaRáC* an oxytone, i.e. a root with final stress. Infixes do not cause stress-shift, but the suffixes were probably all what Zorc (1978: 92) calls "same-accent" suffixes, that is, stress

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For Paiwan this would give *tua* two functions, marking *tua vatu* as an accusative (core) noun phrase and *tua paŋul* as an oblique. This analysis is usually given without justification.

27 Unfortunately, the corresponding information for Paiwan is not available.

28 The data on which the reconstructions in Table 1, including the circumstantial voice forms, are based are drawn from the appendix to Ross (1995a).

29 Blust (1997) has shown that the Budai Rukai data used to reconstruct PAn stress in Ross (1992) do not reflect PAn stress as reconstructed. I retain the reconstruction of PAn stress here, but recognise that the evidence for it is not conclusive.

shifts one syllable to the right, so that after suffix-addition a paroxytone remains a paroxytone, and an oxytone remains an oxytone. On Zorc's Philippine evidence, **-ən*, **-an*, **-a* and **-i* are all same-accent suffixes (Zorc 1977: 64), and Tsou confirms this for **-a* and **-i* (Ross 1992), Thao for **-ən*, **-an* and **-i* (Blust In press). To date no reflexes of **-aw*, **-ay* or **-u* have been found in languages which are criterial for reconstructing stress, and it is simply assumed that the pattern covers all monosyllabic suffixes in the paradigm. Tsou *-[n]éni* and Aklanon *-án*, both reflecting **-áni*, have their own stress, so this is reconstructed for **-áni* and, by analogy, for **-ánay*. The aspect and mood categories used in Table 1 are explained below.

Table 1: Proto Austronesian voice, mood and aspect morphemes

Key:

√	verb root
‹X›	X is infixed, normally after the root-initial consonant
-X	X is suffixed to the root
R	CV- or C*a*- reduplication. C is a consonant identical to the root-initial consonant and V a vowel identical to the first vowel of the root. The latter is sometimes replaced by *-a-*.[30]
(XXX)	XXX is possibly reconstructable only for a post-PAn interstage.

	Actor	Patient	Location	Circumstantial
INDICATIVE				
Neutral	**‹um›√**	**√-ən**	**√-an**	**Si-√**
	**k‹um›áRaw*	**kaRáw-ən*	**kaRáw-an*	**Si-káRaw*
	**k‹um›aRáC*	**kaRaC-án*	**kaRaC-án*	**Si-kaRáC*
Perfective	**‹umin›√**	**‹in›√**	**‹in›√-an**	**Si-‹in›√**
	**k‹um›‹in›áRaw*	**k‹in›áRaw*	**k‹in›aRáw-an*	**Si-k‹in›áRaw*
	**k‹um›‹in›aRáC*	**k‹in›aRáC*	**k‹in›aRaC-án*	**Si-k‹in›aRáC*
Durative	**‹um›R-√**	**R-√-ən**	**R-√-an**	**Si-R-√**
	**k‹um›a-káRaw*	**ka-kaRáw-ən*	**ka-kaRáw-an*	**Si-ka-káRaw*
	**k‹um›a-kaRáC*	**ka-kaRaC-án*	**ka-kaRaC-án*	**Si-ka-kaRáC*
NON-INDICATIVE				
Atemporal	**√**	**√-u, √-a**	**√-i**	**án-i + √, (√-áni)**
	**káRaw*	**kaRáw-u, -a*	**kaRáw-i*	**án-i káRaw (*kaRaw-áni)*
	**kaRáC*	**kaRaC-ú, -á*	**kaRaC-í*	**án-i kaRáC (*kaRaC-áni)*
Projective	**‹um›√-a**	**√-aw**	**√-ay**	**án-ay + √, (√-ánay)**
	**k‹um›aRáw-a*	**kaRáw-aw*	**kaRáw-ay*	**án-ay káRaw (*kaRaw-ánay)*
	**k‹um›aRaC-á*	**kaRaC-áw*	**kaRaC-áy*	**án-ay kaRáC (*kaRaC-ánay)*

30 As Robert Blust (pers. comm.) points out, both **CV-* and **Ca-* reduplication are reconstructable for the PAn durative and the PMP imperfective. I have no explanation for this alternation.

There appear to have been four major formal classes of verb in PAn:[31]

A. Verbs like those in Table 1, which took actor voice infixation of **‹um›* into the root;

B. A small class of verbs whose actor (and sometimes other) voice forms had no affixes;

C. Verbs whose root began with **pa-* and whose actor voice forms began with **ma-*, derived historically from **‹um›* + **pa-*, e.g. actor voice neutral **maCáy* 'die', actor voice atemporal **paCáy* 'die'. Many of these verbs are complex roots formed with the causative prefix **pa-*.

D. Verbs similar to those in (c), but whose root began with **ka-* and whose actor voice forms began with **ma-*, derived historically from **‹um›* + **ka-*. Many of these verbs are complex roots formed with the prefix **ka-*, and Zeitoun and L. Huang (2000) show that these were stative (or perhaps inchoative) verbs.[32]

The Formosan data indicate that intransitive verbs had the same morphology as actor voice transitives and that they belonged to these same four major formal classes.[33] There is very little analysis of intransitives in descriptions of Formosan languages, but it can be inferred that verbs in **‹um›* usually denoted processes with an actor pivot (like 'walk', 'weep', 'sing'), verbs in **ma-* denoted involuntary processes (like 'sleep', 'fall') or temporary states (like 'be afraid', 'be alive', 'be drunk') with an undergoer pivot, and unaffixed verbs were a small class which included both actor-controlled processes and permanent states (like 'be good', 'be big').[34]

The location voice also seems to have served as a beneficiary voice in PAn, as it does in a number of daughter languages. In other words, with semantically appropriate verbs, a human location was interpreted as beneficiary, as in these examples:

(12) Paiwan (Egli 1990:296)

uri	*ku=**su**=pavay-an*	*tua*	*kakudan*
FUTURE	GEN:1S=PIV:2S=give-LV	NPIV	power

'I will give you power'

(13) Seediq (Asai 1953:46)

*skat-an-i=**ku***	*qəhuni*
cut-LV-AT=PIV:1S	tree

'Please cut the tree for me!'

Alongside the circumstantial voice prefix **Si-*, a functionally similar prefix **Sa-* is also reconstructable (Ross 1995a; Blust 1999a). What the division of labour was between **Si-* and **Sa-* is unclear, and **Sa-* is not further discussed here.

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31 The four classes are also supported by L. Huang's (2000) detailed analysis of Mayrinax Atayal verb classes.

32 Zeitoun (2000) provides further evidence for the reconstruction of verbs in **ka-*.

33 The situation with regard to intransitives in Tagalog and other Philippine languages is different. Here, some intransitives carry AV morphology, others PVe, and so on. Tagalog examples in *‹um›* AV are *b‹um›agyo* 'be stormy', *d‹um›ating* 'arrive'. Intransitives in *-in* PV are *antok-in* 'feel sleepy', *langgam-in* 'be infested with ants'. Intransitives in *-an* LV are *kilabut-an* 'feel terrified', *pawis-an* 'sweat'. Intransitives in *i-* CV are *i-kaway* 'wave (a hand)', *i-kasal* 'get married' (Schachter & Otanes 1972:306-310).

34 The reconstruction of a contrast between unaffixed state verbs and state verbs formed with **ma-* is addressed by Evans and Ross (2001).

As in the examples thus far, PAn noun phrases evidently followed the verb, except where one was topicalised to clause-initial position. SPR argue that a genitive-marked agent noun phrase normally followed its verb, 'since otherwise it could be interpreted as Genitive attribute of the noun preceding it.' As in Paiwan, PAn noun phrases were evidently introduced by a phrase marker. Reconstructing these phrase markers is not easy: they were monosyllabic, and conflicting evidence about their forms suggests quite a complex paradigm which has been subject to various simplifications and/or analogical reorganisations in daughter-languages. Their reconstruction is also subject to the top-of-the-tree effect. However, a well enough distributed set of languages shares the three-way distinction made in Paiwan between specific, genitive and non-pivot phrase markers — and agrees on the forms of these markers — for us to reconstruct them for PAn. The data point unambiguously to a Paiwan-style distinction between GEN and NPIV, as in (3). It is less clear whether there was a distinction between NPIV and LOC, although there is some evidence for this distinction in PMP (see Table 10). There is also Formosan evidence of a contrast between common **a/*u* and **ka/*ku*, the former used in topicalised (fronted) noun phrases, the latter elsewhere, but there is no evidence of this contrast in Malayo-Polynesian languages. There is a well reflected distinction between markers of common and personal noun phrases, and a probable contrast among common noun phrase markers between present and absent (or perhaps proximal and distal) referents. The resulting partial system is shown in Table 2.

Table 2: Some Proto Austronesian phrase markers[35]

	TOPIC	SPEC	GEN	NPIV
common (present)	**a*	**ka*	**na*	**Ca, *sa*
common (absent)	**u*	**ku*	**nu*	**Cu, *su*
personal	—	*(*i, *ti, *si)*	**ni*	—

No marker is reconstructable for non-pivot personal noun phrases, but this is expected: NPIV noun phrases were non-specific, whereas personal noun phrases are always specific and definite. Evidence from Formosan languages implies that a personal noun phrase which occurred as undergoer of an actor voice verb was marked as a locative oblique. The three forms of the specific personal marker reflect formal problems which hamper reconstruction.

Philippine-type languages commonly have cliticised pronouns (see Starosta 1988). The Paiwan clitics *ku=su=* in (12) precede the verb, whilst the Seediq clitic *=ku* in (13) follows it. The PAn clitic pronouns, like their reflexes in a number of Philippine-type languages, were apparently second-position clitics. If the verb was preceded by an auxiliary-like element, the clitics followed that element; if the verb was the first constituent of the clause, the clitics followed the verb. Auxiliary-like elements seem to have occurred very frequently in PAn, with the consequence in some languages that — as auxiliary use has declined and some auxiliaries have disappeared — some clitic pronouns, and especially agent genitives, have remained stranded in front of the verb (see SPR). This has happened in the Formosan languages Paiwan and Puyuma, and also in the Indonesian-type languages described below (§4.2).

35 This table is based on analysis reported in Ross (2001).

The PAn personal pronouns (Table 3) are at least as hard to reconstruct as the phrase markers, but it is clear that there were both free and clitic sets, as Dahl (1973), Blust (1977) and Harvey (1982) observed. It seems that there were two free sets, the members of one containing the politeness morpheme **k-* or **ka-*. The polite morphemes became the default in PMP and those without the politeness morpheme vanished except in certain relic forms.[36]

Only one clitic set is reconstructable (as SPR note), serving both as syntactic pivot and as genitive. If an undergoer-voice verb took both a genitive and a pivot clitic, then these occurred in the order genitive–pivot.[37] We find evidence that as early as PAn there were incipient tendencies to express pronominal pivots and genitives differently. One tendency, reflected in Kavalan, Atayal, Seediq, Pazeh, Saaroa, Rukai, Paiwan and PMP (see Table 11), was to replace the pivot clitic with a free form which over time became a new pivot clitic. Second, two additional ways of expressing the genitive are reflected in daughter-languages. A number of Formosan languages reflect non-third person PAn genitive clitics with initial **=m-*, shown here as GEN2.[38] Of these, only **=mami* 1EP is reflected in Malayo-Polynesian languages. The disappearance of the others was probably due to the rise of a third genitive set, GEN3, whose members had by PMP times also become clitics. They consisted of the genitive personal phrase marker **ni* (Table 2) and the free (non-polite) pronoun.[39]

Table 3: Proto Austronesian personal pronouns[40]

	Free	Free polite	PIV, GEN1	GEN2	GEN3
1S	**[i-]aku*	—	**=ku*	**maku*	**n-aku*
2S	**[i-]Su*	**[i-]ka-Su*	**=Su*	**miSu*	**ni-Su*
3S	**s(i)-ia*	—	**(=ia)*[41]	—	**n(i)-ia*
1EP	**i-ami*	**[i-]k-ami*	**=mi*	**mami*	**n(i)-ami*
1IP	**([i-])ita*	**[i-]k-ita*	**=ta*	**mita*	**n-ita*
2P	**i-amu*	**[i-]k-amu*	**=mu*	**mamu*	**n(i)-amu*
3P	**si-da*	—	**(=da)*	—	**ni-da*

36 The reconstructions in Table 3 are based largely on an examination of Formosan and Philippine data, but they also owe much to Blust (1977) and Harvey (1982). In Blust's (1977) reconstruction, the only PAn free form reconstructed as a pair with and without **k-* or **ka-* was 2S **i-Su* and **i-ka-Su*. Harvey (1982) points out that other pairs with and without **k-* are reconstructable.

37 Among Formosan languages, Kavalan (Li 1978:590) and Paiwan (Egli 1990:156-157, 296-297) have the sequence genitive–pivot. (Egli, p.296, seems to miss the fact that the second clitic marks the pivot, referring to it as 'Obliquus', his term for the non-pivot noun phrase.)

Atayal (Starosta 1988:12) and Seediq (Pecoraro 1979:67-68) generally have the clitic order pivot–genitive, but portmanteau double clitics have the (fossilised) order genitive–pivot, indicating that this was the earlier order.

38 Evidence for these is found in Saisiyat, the Atayal dialects, Thao, Amis, Kanakanavu and Siraya.

39 Blust (1977) reconstructed alternants with **i-* as well as **ni-*, but Harvey (1982) points out that the evidence does not support these.

40 Parentheses ( ) indicate that one cannot be sure whether their contents should be reconstructed. Square brackets [ ] indicate that there are two versions of the reconstruction, one with and one without the contents of the brackets.

41 The main evidence for the reconstruction of PAn third-person clitics is paradigmatic, i.e. they occurred as partials in the free and genitive sets. Both **=ia* and **=da* are reflected in Malayo-Polynesian languages, but the only known Formosan reflex is the Saaroa clitic *-isa*, reflecting **=ia*.

Just as no non-pivot personal noun phrase marker is reconstructable, so too there are no non-pivot personal pronouns. Instead, we find Formosan reflexes of the free pronouns with a location suffix **-an* or **-nan* (noted by SPR) and both Formosan and Malayo-Polynesian reflexes of the free pronouns with a patient suffix **-ən* or **-n*.[42] A possible history of this suffixation is touched on in §3.2.2.

The aspect and mood categories used in Table 1 require some explanation. These categories are divisible on both formal and semantic grounds into two higher-order classes, indicative and non-indicative. The formal division is discussed in §3.2.1. Within the indicative class, "neutral" refers to a finite verb form not marked for tense or aspect. It was apparently used for realis events and states which were neither perfective nor durative. The perfective and durative were the finite forms used respectively for completed events and for events viewed as ongoing at some point of time. Within the non-indicative class, the projective was evidently the finite form used for irrealis events and states, i.e. intention, possibility and exhortation.

Atemporal forms have three basic functions in daughter languages (and often have all three functions in the same language): (a) as imperatives; (b) as verbs subordinate to some auxiliaries; and (c) expressing non-initial sequential events in narrative.

The second use is illustrated in the Atayal examples in (14). As Starosta (SPR, Starosta 1985, 1988) has shown, Formosan (and some extra-Formosan) languages make considerable use of sentence-initial auxiliaries, called "pre-verbs" by some scholars, which carry information on aspect, time, negation, manner, location and so on. As noted above, the auxiliary hosts enclitic pronouns.

(14) Squliq Atayal

a. *Ini?=saku? hŋu? qsia? lukus.*
NEG=PIV:1S AV.AT.soak water clothes
'I have not soaked the clothes in water.' (Egerod 1966: 273)

b. *Ini?=sami kac-i na? mqu?.*
NEG=PIV:1EP bite-LV.AT GEN snake
'We have not been bitten by snakes.' (Egerod 1966:354)

c. *Laxi zŋ-i snon-an=maku? isu?.*
PROHIB forget-LV.AT message-OBLIQUE=GEN:1S D:2S
'You must not forget my message.' (Egerod 1966:358)

d. *Si=nha? sr?ag-i ma ai.*
ACTUAL=GEN:3P go.along-LV.AT it.is.said INTERJECTION
'They were following (the river).' (Egerod 1969)

The first morpheme in each example in (14) is an auxiliary, and in these cases (but not in all Atayal sentences beginning with an auxiliary) the subordinate verb is atemporal. In (14a) *hŋu?* is the actor voice atemporal form (cf *h‹m›ŋu?* actor voice neutral). In (14b,c,d) the subordinate verb is a location voice atemporal marked with *-i*.

The third use of atemporals is to express non-initial sequential events in narrative. This is illustrated in the Paiwan examples in (15). The first verb has the neutral form, and verbs

42 Some Malayo-Polynesian reflexes are possessive pronouns ('mine', 'yours' etc).

following it have (apparently optionally) the atemporal form. Another example is the verb *kani* in (4) above.

(15) Paiwan

a. *Ribu-in sa pa-d^{y}ulu-i.*
defeat-PV CJ CS-be.simple-PV.AT
'He defeated and pacified it [i.e. the village].' (Egli 1990:226)

b. *Kiqənəc-an sa pa-pa-piriq-i.*
look.at-PV CJ RECIP-R-divide-PV.AT
'He looked at and divided it.' (Egli 1990:242)

c. *Vułuq-ən sa ka-d^{y}aməq.*[43]
spear-PV CJ AT.PASSIVE-hit
'He speared it and it was hit.' (Egli 1990:226)

Atemporal verbs in narrative sequences are also common in the Dusunic languages of Sabah (Kroeger 1991).

3.2 The rise of the Proto Austronesian system

3.2.1 The voice-from-nominalisation hypothesis

There are four observations that can be made about the reconstructed PAn morphology shown in Table 1:

(16) a. The mixture of a prefix (**Si-*), an infix (**‹um›*) and two suffixes (**-ən*, **-an*) marking voice in indicative forms makes for a paradigm with unusual asymmetries.

b. Indicative verb forms also occur as (apparent) nominalisations, but non-indicative forms don't.

c. Despite the asymmetries of the voice morphemes in indicative forms, the aspect morphemes which occur in these forms are paradigmatically regular: the perfective is marked by **‹in›*, the durative by reduplication. The one exception is that perfective **‹in›* and patient voice **-ən* do not cooccur.

d. In contrast with the indicative forms, the morphemes of non-indicative forms make up a fairly symmetrical paradigm, except for the presence of **‹um›* in the actor voice projective form.

Observations (a) and (b) are not new, and (b) is illustrated by the following derivations from the verb root *kan* 'eat' (Ferrell 1982:17, 106):

(17)

Paiwan	verb form	nominalisation
k‹əm›an	actor voice neutral	'eater', 'someone who eats'
kan-ən	patient voice neutral	'food', 'something to be eaten'
k‹in›an	patient voice perfective	'consumed food', 'something eaten'
kan-an	location voice neutral	'place where one eats'
si-kan	circumstantial voice neutral	'eating utensil', 'something to eat with'

43 The verb *ka-d^{y}aməq* is the atemporal form of the Paiwan passive. The passive is unique to Paiwan, and is formally resembles an actor voice verb of the *ka-* class: its neutral form begins with *ma-* (cf. *maɬimək* in (4)), its atemporal with *ka-*.

Observations (a) and (b) are accounted for if we infer, with SPR, that the indicative verb forms are derived from the nominalisations, since there is no reason why a language's nominalising morphemes should form a symmetrical paradigm. Under this hypothesis, the original verb forms were those of the (symmetrical) non-indicative paradigm, the atemporals having originally been the neutral forms. Ross (1995a) posits a series of diachronic steps whereby this derivation occurred. The most important of these is that a predicate nominalisation was used to put a non-agent noun phrase into the syntactic pivot slot. We can see how this might have happened by examining the Paiwan sentences in (1) and (2). (1a) is repeated below.

(1a) Paiwan
təkəl-ən a vaua
drink-PV SPEC wine
'the wine will be drunk' ('s/he/they will drink the wine')

If *təkəl-ən* in (1a) is interpreted as a nominalisation, i.e. 'something to be drunk', then the example can be reglossed as:

(18) Paiwan
təkəl-ən a vaua
drink-NOM SPEC wine
'the wine is something to be drunk'

We turn now to the expansion of (1a) given as (2a) above:

(2a) Paiwan
təkəl-ən nua qała a vaua
drink-PV GEN stranger SPEC wine
'the wine will be drunk by a/the stranger' ('a/the stranger will drink the wine')

Again interpreting *təkəl-ən* as a nominalisation, the example is reglossed as:

(19) Paiwan
təkəl-ən nua qała a vaua
*drink-NOM GEN stranger SPEC wine
*'the wine is something of a/the stranger's to be drunk'

The verbs in (1a) and (2a) are patient voice forms, but similar considerations apply at least to location voice forms. Example (1c), *təkəl-an a kakəsan* 'the kitchen will be drunk in' ('s/he/they will drink it/them in the kitchen'), is derived from 'the kitchen is the place of drinking'.

Under the hypothesis, this highly marked strategy became decreasingly marked until the nominalisations were reinterpreted as verb forms and ousted the original neutral (realis) verb forms from main and perhaps relative clauses, leaving them as atemporals in imperatives and the other contexts mentioned above. The same morphemes continued to be used to form nominalisations, with the result that sentences like (1a) and (2a), at least when taken out of context, are vague as to their predicate structure in some modern Philippine-type languages.

There is formal support for the inference that the PAn non-indicative morphemes reconstructed in Table 1 originally formed a system in which the atemporals were the realis verb forms, the projectives irrealis. These morphemes form a pattern of two elements in actor, patient and location voices, shown in (20), the first element opposing atemporal

(< realis) zero to projective *-a* (< irrealis), and the second making a three-way contrast between AV zero, PV **-u* and LV **-i*:

(20)	Actor	Patient	Locative	Circumstantial
Atemporal	√ *-Ø -Ø*	√ *-Ø -u*	√ *-Ø -i*	√ *-án -Ø -i*
Projective	√ *-a -Ø*	√ *-a -u*	√ *-a -i*	√ *-án -a -i*

As Table 1 indicates, **-a* is reconstructable as an alternant of atemporal patient voice **-u*. Clearly **-a* does not fit this pattern (see Ross 1995a for discussion). It is possible that **-a*, **-u* and **-i* all represent captured phrase markers and/or prepositions, as suggested by Starosta (1995) for **-a* and **-i*, and that **-a* and **-u* reflect captured phrase markers that contrasted on a proximate/distal axis (cf Table 2).

The circumstantial morphemes in (20) show a different patterning:[44] they consist of the morpheme **-án-* plus the locative voice suffixes. The fact that **-án-* took the locative suffixes suggests that it was itself once a verb, and that its suffixation to the root reflects grammaticisation. Two further pieces of evidence speak in favour of this suggestion. First, unlike all the other suffixes in Table 1, **-án-* was stressed, indicating phonologically incomplete grammaticisation. Second, in Squliq Atayal, *an* and *anai* are auxiliaries which precede the verb (which is itself prefixed with *s-* CV), as illustrated in (21):

(21) Squliq Atayal (Egerod 1965:282)

Anai-ta?	*s-blaq*	*k‹m›aial.*
CV.IRR-GEN:1IP	CV-good	‹AP›tell

'Let's talk it over on that [basis]'

Given that grammaticisation processes tend to be irreversible, it is likely that Squliq Atayal reflects the PAn situation, i.e. there was still a verb or an auxiliary **án-*, and the grammaticisation process was also syntactically incomplete in PAn. Hence the non-indicative circumstantial forms with auxiliaries, **án-i* + √ and **án-ay* + √, in Table 1 are reconstructable for PAn, but the suffixed forms **√-áni* and **√-ánay* may only have arisen later.

The neatness of Table 1 suggests a more orderly set of developments than probably occurred. If the voice-from-nominalisation hypothesis for indicative verb forms were completely correct then we would expect these morphemes

(i) to function in each language both as voice morphemes and as nominalisers;

(ii) not to occur in non-indicative verb forms.

In fact, neither expectation is met. Table 4 shows the distribution of Formosan reflexes of PAn indicative voice morphemes. AV, PV, LV, CV and UV indicate that the relevant morpheme is used to mark that voice in that language, whilst 'nom' indicates that it is used to form a nominalisation.[45] The morpheme **‹in›* is also included: PF indicates that it marks perfective aspect across voices.

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44 These forms were not reconstructed by Ross (1995a). Reflexes of **-áni* are Squliq Atayal *an*, Mayrinax Atayal and Saisiyat *-ani* and Puyuma *-an*, all CV atemporal, Tsou *-[n]əni* CV neutral, Paiwan *-an* CV atemporal/imperative, Aklanon and Samar Leyte *-án* CV dependent, Javanese *-ʔan* CV imperative/optative. Reflexes of **-anay* are Squliq Atayal *anai* CV projective, Puyuma *-anay* CV indicative/imperative, Siraya *-anei* LV projective.

45 Table 4 is based on Table 7 of Ross (1995a), with information for Pazeh and Thao drawn from Blust (1999b) and Blust (In press) respectively.

We see from Table 4 that the distributions of the morphemes vary considerably. At one extreme is **‹um›*, which marks actor voice in every language except Rukai but serves as a nominaliser only in Paiwan and Puyuma.[46] This suggests that its story is different from those of the other voice morphemes: it was probably a verbal morpheme which became a nominaliser only in daughter-languages and by analogy with the other voice morphemes. This inference is supported by the fact that **‹um›* also defies our second expectation, by appearing in projective actor voice forms in Atayal, Bunun, Kanakanavu, Saaroa, Siraya, and Puyuma. Furthermore, although Table 1 shows the atemporal actor voice form as consisting of the root alone, Puyuma makes a contrast between a root-only imperative and a dependent reflecting **‹um›*. There are also dependent actor voice forms in Seediq, Puyuma and Bonggi which reflect **‹um›*.[47] It is difficult to know whether these forms are inherited or whether dependents with **‹um›* result from an analogical extension of the latter's use. Either way, however, **‹um›* was not limited to indicative forms in PAn, and was therefore probably a pre-PAn verbal morpheme rather than a nominaliser.

If **‹um›* was indeed a verbal morpheme, then what was its function in PAn? As noted in §3.1, it also occurred in intransitives denoting actor-controlled processes, and the best generalisation we can make is that it marked its verb as having an actor pivot and denoting a process, usually one which was under the actor's control.

Table 4: Formosan reflexes of PAn indicative voice morphemes

	**‹um›*		**-ən*		**-an*		**Si-*		**‹in›*	
Saisiyat	AV	—	PV	nom	—	nom	CV	—	PF	nom
Atayal	AV	—	PV	nom	LV	nom	CV	nom	PF	nom
Seediq	AV	—	PV	nom	LV	nom	CV	—	PF	nom
Kavalan	AV	—	—	—	UV	nom	—	nom	PF	—
Amis	AV	—	PV	—	—	nom	—	—	—	nom
Tsou	AV	—	—	—	—	nom	—	—	—	—
Kanakanavu	AV	—	PV	—	LV	nom	—	nom	PF	—
Saaroa	AV	—	—	—	LV	nom	—	—	PF	—
Rukai	—	—	—	—	—	nom	—	—	—	—
Thao	AV	—	PV	nom	LV	nom	—	—	PF	nom
Pazeh	AV	—	PV	nom	LV	nom	CV	nom	PF	nom
Puyuma	AV	nom	—	nom	—[48]	nom	—	nom	—	nom
Paiwan	AV	nom	PV	nom	LV	nom	CV	nom	PF	nom

At the opposite distributional extreme in Table 4 from **‹um›* is **-an*, whose reflexes serve as a locative nominaliser in all the languages and as a location (or undergoer) voice marker in most languages which reflect any of **-ən*, **-an* and **Si-* as voice morphemes

46 Ironically, the other morphemes in Table 4 are not reflected as voice markers in Puyuma. This means that the analogy hypothesis is not directly valid for Puyuma. However, as Blust (1999) shows, Puyuma shows ample signs of borrowing from Paiwan, and this is a likely source of Puyuma nominalisations reflecting **‹um›*.

47 I am indebted to Nikolaus Himmelmann for drawing my attention to the Seediq and Bonggi data.

48 Ross (1995a) took Puyuma CV forms in *-an* to be reflexes of LV **-an*, but this is probably incorrect. It is more likely that they reflect CV **-áni*.

(Tsou, Rukai and Puyuma reflect none of them as voice morphemes[49]). Since Philippine-type languages commonly have nominals in the predicate slot, the same was almost certainly true of PAn and earlier stages still. Nominalised forms in **-ən, *-an* and **Si-* would have occurred in the predicate slot as a matter of course, with the possibility of being reinterpreted as verbs. Since the converse process — a verbal form frequently occurring in an argument slot — is far less probable, one can reasonably infer that **-an* was originally a nominalising morpheme. The same argumentation applies to **-ən* and to **Si-*, although the distributions of their reflexes in Table 4 are less decisive.

The foregoing discussion suggests a basic pre-PAn system that looked something like this:

(22)

	Actor	Patient	Location	Circumstantial
verb	√, ‹um›√	√-u	√-i	—
nominalisation	—	√-ən	√-an	Si-√

If the actor, patient and location voice morphemes displayed in (22) do represent the basic system as it was before nominalisations were reinterpreted as indicative verbal forms, then there was already a three-way voice system which provided the template for this reinterpretation. If, as is implicit in the discussion above, circumstantial **-án-* represents a later development than the other non-indicative voice morphemes, then it would also not be surprising if, at the stage we reconstruct as PAn, circumstantial **Si-* had not yet been reinterpreted as an indicative voice morpheme. That is, its reconstruction in Table 1 remains very tentative.

The reader may notice that (22) leaves a significant chunk of morphology incompletely explained. Under the voice-from-nominalisation hypothesis, durative reduplication and the perfective infix **‹in›* occurred in verb forms with **‹um›* and in nominalisations (Table 1). This is an odd distribution and it provides a motivation for an alternative hypothesis presented in the next section. The hypothesis itself is new, but several of its features have been touched on in the literature.

3.2.2 An alternative hypothesis

Under the voice-from-nominalisation hypothesis, it is assumed that nominalisation and indicative voice were already discrete phenomena in PAn, that is, that derived nominals and indicative verbs were homophonous forms belonging to separate word classes, as, for example, in (17). The hypothesis also proposes that some of the morphemes in Table 4 originally formed nominalisations, but by PAn times had also been reinterpreted as indicative verbs. It follows that between these interstages predicate nominalisations were only gradually reinterpreted as homophonous indicative verb forms (cf examples (1a), (2a), (18) and (19)). In other words, there must have been an interstage when derived nominals and indicative verbs were not yet discrete. Most modern Philippine-type languages tend to be analysed as having homophonous forms belonging to separate word classes (indicative verbs and nominalisations), but one, Tagalog, has been analysed such that these forms comprise a single word class whose members occur in both predicate and argument slots. The question is, does Tagalog represent a direct continuation of the PAn situation? If it does, then the

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49 It is essentially the absence of these morphemes in these languages that causes Starosta (1995) to propose that Rukai and Tsou (he does not refer to Puyuma) separated from all other Austronesian lects before a system of the kind reconstructed in Table 1 came into being. The alternative explanation of this absence, discussed in Ross (1995a), is that these morphemes lost their verbal function in these languages.

voice-from-nominalisation hypothesis is wrong, and an alternative hypothesis is needed. This alternative will be formulated after a brief look at Himmelmann's (forthcoming a) analysis of Tagalog.

Himmelmann outlines an analysis of Tagalog as a language in which there are distinct morpholexical categories, but no distinct terminal syntactic categories. If pronominal clitics are ignored, all Tagalog phrasal categories except (most) clause-initial predicates consist of a phrase marker and a content word, as illustrated in (23):

(23) Tagalog (Himmelmann forthcoming a)

Iniabót	*ng*	*manggagamot*	*sa*	*sundalo*	*ang*	*itlóg.*
i-‹in›abót	naŋ	maŋgagamot	sa	sundalo	aŋ	itlóg
CV-‹PF›reach	GEN	doctor	LOC	soldier	SPEC	egg

'The physician handed the egg to the soldier.'

Almost every content word may head a phrase in either the predicate slot or an argument slot. Unlike in European languages, there is no correlation between the class of the content word and the category of the syntactic slot in which it occurs (Sasse 1993:200). In (24) the voice- and aspect-marked content word *àalagaan* is used in an argument slot:

(24) Tagalog (Himmelmann forthcoming a)

Iuuwi=nya	*ang*	*àalagaan=nya.*
i-REDUP-uwi?=niyá	aŋ	REDUP-alaga?-an=niyá
CV-DUR-return=GEN:3S	SPEC	DUR-care.for-LV=GEN:3S

'He would return the ones he was going to care for.'

In (25) *artista*, which cannot be marked for voice or aspect, is the predicate, whilst the voice-marked content word *yumaman* heads the phrase in the argument slot:

(25) Tagalog (Schachter & Otanes 1972:62)

Artista	*ang*	*y‹um›aman*
actress	SPEC	‹AV›wealthy

'The one who got rich is an actress.'

Tagalog content words fall into two major morpholexical classes: those which do not include voice- or aspect marking (in the examples above *manggagamot* 'doctor', *sundalo* 'soldier', *itlóg* 'egg', *bata* 'child', *artista* 'actress') and those which do (*iniabót* < *abót* 'within reach', *iuuwi* < *uwi* 'return', *àalagaan* < *alaga* 'pet, ward', *y‹um›aman* < *yaman* 'wealth'). One might label the first class 'nouns'on the basis of the ontological category of THING/PERSON that its members usually denote. The second class (which falls into morpholexical subclasses) is less readily labelled, however, as its underived roots tend to denote items in the ontological categories of either THING/PERSON or STATE/PROPERTY, while forms derived from them denote items in both these categories and, crucially, in the category of ACTION/EVENT as well. The labelling difficulty reflects the fact that these word classes are only morphological, correlating neither with ontological nor syntactic categories. Here I will label the category of words which do not include voice- or aspect marking '–VM words' and those which do '+VM words'.[50]

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50 Sasse (1993) makes a distinction in Cayuga between'simplex words' and 'roots'. However, the first category in Tagalog includes derived words like *manggagamot* 'doctor' and so the term 'simplex' is inappropriate here. It is in any case appropriate to label the two classes of *words* rather than to refer to roots.

Was PAn like modern Tagalog? It certainly had both –VM and +VM words. For example, Blust (1998, 1999a) notes a PAn distinction between C*a*- reduplication, which formed instrumental nouns, i.e. a sublcass of -VM words, and **Si-/*Sa-*, which formed instrumental words "categorially ambivalent between verbal and nominal uses" (1999a:359), i.e. a subclass of +VM words.

Unfortunately, most descriptions of Formosan languages rely heavily on elicited sentences in which predicates are marked for voice and aspect and arguments are not. Texts, however, sometimes show a Tagalog-like use of a voice-marked content word in an argument slot. In (26) the content word of the syntactic pivot is *c‹in›abu*' '(it was)wrapped':

(26) Mayrinax Atayal (L. Huang 1995:259)

Si-he?e=nia?	*c-ku?*	*ngaquwaq*	*n-ku?*	*nabakis*	*ku?*
CV-pour=GEN:3S	NPIV-SPEC	mouth	GEN-SPEC	old.man	SPEC

c‹in›abu?=nia?	*c-ku?*	*abag*	*na?*	*bakati?*.
‹PF›wrap=GEN:3S	NPIV-SPEC	leaf	GEN	*bakati*

'He poured the thing wrapped by him in the *bakati* leaf into the old man's mouth.'

There are not enough good dictionaries of Philippine-type languages for us to determine the ontological categories denoted by underived roots in these languages, let alone to reconstruct them for PAn, but Formosan examples like (26) do display a Tagalog-like mismatch between word class and syntactic slot. In other words, it appears likely that a +VM word formed from a PAn root could occur either as a predicate or, preceded by a noun phrase marker (Table 2), as an argument.

If this inference is right, then the voice-from-nominalisation hypothesis is wrong, because it proposes that one word class — nominalisations — gave rise to two — nominalisations and indicative verbs. The evidence just reviewed indicates that this split had not taken place in PAn and still has not taken place in Tagalog and probably some other Philippine-type languages. The alternative hypothesis proposes that +VM words were a single class in PAn, and that their members were used in both predicate and argument slots.

The Tagalog analysis, however, requires us to go further. The alternative hypothesis does not simply say that the voice-from-nominalisation process was incomplete in PAn: it questions whether, at any reconstructable interstage, PAn +VM words ever were nominalisations. It is to this question that we now turn.

As Himmelmann (forthcoming a) points out, on his analysis Tagalog bears a resemblance to certain indigenous North American languages, namely Straits Salish in the northwest and Cayuga, an Iroquoian language, as analysed respectively by Jelinek and Demers (1994) and Sasse (1993). If PAn resembled Tagalog, it must also have been typologically like these languages. In Straits Salish all content words take markers of transitivity, voice, tense, mood and argument coreference; in Cayuga, roots take markers of tense, aspect and argument coreference; in PAn, +VM words, formed with **-ən, *-an, *Si-* and **‹in›*, included voice- and aspect-markers. That is, in the three languages there is a major class of morphologically complex content words. These words are marked for categories which are associated in many languages with verbs and which occur in both predicate and argument slots. In all three languages, their use in an argument slot is/was indicated by a preceding noun phrase marker. However, there are differences. In Tagalog, PAn and Cayuga there is/was a distinction between +VM and –VM words. In Straits Salish the roots of content words are not divisible into major morpholexical classes and all can apparently be marked for transitivity, voice and tense.

In Straits Salish and Cayuga, content words are analysed as predications, and the phrase marker in an argument slot is analysed as marking an embedded predication.[51] There is evidence that a similar analysis is appropriate for at least some modern Philippine-type languages, and therefore for PAn. In Tagalog the item which characterises the phrase semantically and syntactically — the traditional head — may be either preceded or followed by attributes, and head and attributes are linked by a ligature, regardless of the order in which they occur. The ligature has two phonologically determined allomorphs *=ŋ* and *na*, and the language allows pairs of phrases like those in (27), (28) and (29), where the attributes are an adjective, a 'verb', and a prepositional phrase respectively.

(27) Tagalog (Schachter & Otanes 1973:122–123)

a. *aŋ bantog na siyudad*
SPEC famous LIG city

b. *aŋ siyudad na bantog*
SPEC city LIG famous
'the famous city'

(28) Tagalog

a. *aŋ ni-luto=mo=ŋ pagkain*
SPEC PV-cook=GEN:2S=LIG food

b. *aŋ pagkai=ŋ ni-luto=mo*
SPEC food=LIG PV-cook=GEN:2S
'the food cooked by you'

(29) Tagalog

a. *aŋ nasa mesa=ŋ libro*
SPEC on table=LIG book

b. *aŋ libro=ŋ nasa mesa*
SPEC book=LIG on table
'the book on the table'

The inference to be made from these examples is that Tagalog lacks a noun phrase construction with a head noun and that arguments are expressed by strings of embedded predicates, the first marked by *aŋ*, and any others by the ligature. Thus (27a) and (27b) can be roughly glossed respectively as 'the [one that is] famous [that is a] city' and 'the [one that is a] city [that is] famous'. In this respect Tagalog seems to be typical of Philippine-type languages. For example, Ferrell (1980:13) analyses the Paiwan string in (30) as being interpretable as either 'the female child' or 'the young female', i.e. neither word is the head:

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51 Only during the final stage of preparation of this paper did I come across Mithun's (2000) analysis of word classes in Iroquoian languages, including Cayuga. She sets out to refute Sasse's analysis, arguing that Cayuga has nouns and verbs, distinguishable on the grounds of morphological structure and of syntactic function: a verb may serve as either a predicate or an argument, but a noun never serves as a predicate. She thus rejects the analysis of arguments as embedded predications. Her arguments appear to be well grounded, and if they are correct, Cayuga is less similar typologically to PAn than suggested in this section.

(30) Paiwan

a ałak a vavaian
SPEC child LIG woman

Significantly, in Paiwan and in some other Philippine-type languages, the ligature is identical in form to the phrase marker, supporting — at least diachronically — the analysis of an argument as a string of predicates.

Since the major class of roots in Straits Salish and Cayuga is the language's main source of content words, the class embraces a wide range of ontological categories. The same is true of Philippine-type languages, and presumably of PAn. Not only did predications denote items in the categories of THING/PERSON, STATE/PROPERTY, and ACTION/EVENT : they also denoted the MANNER of an action or event and certain pronominal categories.

In (31) and (32), the words denoting 'slowly' are the main predications:

(31) Kavalan (Lee 1997:86)

M-ŋasan q‹m›an tu ʔmay ya sunis=su.
AV-slow ‹AV›eat NPIV rice SPEC child=GEN:2S
'Your child ate the meal slowly.'

(32) Tagalog (Schachter & Otanes 1972:306)

Bagal-an=mo ang lakad=mo.
slow-LV=GEN:2S SPEC walk=GEN:2S
'Walk slowly.'

The most striking piece of evidence that most content words were predications in PAn, or perhaps at some pre-PAn stage, was mentioned in §3.1: personal pronouns took the voice markers **-ən* (or **-n*) and **-an* (or **-nan*). This suggests that, like the corresponding root in Straits Salish (Jelinek and Demers 1994:715), second person singular **Su*, for example, was a content word whose meaning might be translated as 'be you', **i-Su* a phrase meaning 'the one who is you' (**i-* being a determiner), **Su-n* a content word meaning '[the one that] is you-ed', i.e. '[the one that] is yours', and **Su-(n)an* a content word meaning '[the place that] you are at'. Forms in **-ən* with possessive meaning are reflected in the Philippines. Forms in **-an* retain their locative meaning in the Formosan language Pazeh (*yamiʔan* 'at our.EXC place', *imuʔan* 'at your.PL place'; Ferrell 1968). In other Formosan languages they are the personal pronouns used where a common noun phrase would be marked with a non-pivot phrase marker, as in:

(33) Wulai Atayal (L. Huang 1995:129)

M-ihiy k-nan Taliʔ.
AV-beat 1S-LV Tali
'Tali beat me.'

Despite the similarities between PAn and Tagalog that I have adduced here, PAn differed from Tagalog in a significant respect. In Tagalog there is no correlation between word class and syntactic slot: any word, whether –VM or +VM, may occur in either the predicate slot or an argument slot. But in Philippine-type languages which retain non-indicative verb forms (and Tagalog doesn't), a non-indicative form derived from a root may only occur in the predicate slot, and the same must have been true of PAn. That is, in PAn, a –VM or +VM word occurred in both predicate and argument slots, but non-indicative forms in zero,**-a* and **-i* occurred only in the predicate slot. On the basis of their correlation of morphology and

syntactic distribution, we may legitimately call words formed with zero; **-a* and **-i* 'verbs'. This distribution is depicted in Table 5.

Table 5: Distribution of PAn word classes by syntactic slots

	–VM words	+ VM words formed with **-ən, *-an, *Si-* and **‹in›*	Verbs formed with zero, **-a* and **-i*
As predicate?	yes	yes	yes
As argument?	yes	yes	no

The agentive process infix **‹um›* is omitted from Table 5 because the alternative hypothesis proposed here raises afresh the question, did **‹um›* behave like **-ən, *-an* and **Si-* or like zero, **-a* and **-i*? In other words, did it form words which occurred in both predicate and argument slots, or did it only form verbs? On the basis of Table 4, it was excluded above from the 'nominaliser' affix set **-ən, *-an* and **Si-*. However, under the present hypothesis, the distinction made in Table 4 between the verbal voice-marking and the nominalising functions of these affixes does not exist,[52] and there is no logical ground for its exclusion from this set. Instead, the fact that **‹um›* forms are reconstructed with the same durative and perfective morphology as **-ən, *-an* and **Si-* (Table 1) implies that, like them, it formed words which occurred in both predicate and argument slots. This leads to a reformulation of the basic PAn system in (22) as follows:

(34)		Actor	Patient	Location	Circumstantial
	verbs	√	**√-u**	**√-i**	—
	+VM words	**‹um›√**	**√-ən**	**√-an**	**Si-√**

The lack of correlation between word class and syntactic slot in Tagalog is the result of Tagalog's loss of (non-indicative) verb forms, i.e. of the rightmost column of Table 5, and cannot be projected back onto PAn. The presence of these verbs in PAn, however, makes it different not only from Tagalog but also from Straits Salish and Cayuga, as shown in Table 6.

Table 6: Word classes in Straits Salish, Cayuga, Tagalog and PAn

	–VM words	+VM words	Verbs
Straits Salish	no	yes	no
Cayuga	yes	yes	no
Tagalog	yes	yes	no
PAn	yes	yes	yes

This distribution leaves us with a question: what was the functional distinction between the verb and +VM word categories in (34)? The most obvious answer is that it was the same as in Philippine-type languages which reflect this morphological distinction:

52 The differences in the distributions of the different morphemes in Table 4 are then attributable either to their different PAn distributions between predicate and argument uses, or faulty descriptions of the modern languages, as we do not know if some Formosan languages could be better analysed along the same lines as Tagalog.

(i) the verb forms *√, *√-*u* and *√-*i* were used (a) as imperatives; (b) as verbs subordinate to some auxiliaries; and (c) expressing non-initial sequential events in narrative;

(ii) the verb forms *√-*a*, *√-*a-u* and *√-*a-i* were used in irrealis predicates;

(iii) +VM words were used in realis predicates and (as embedded predicates) in arguments.

The AV form of (i) is a plain stem, and this is crosslinguistically consistent with imperative use and with uses where no marking of aspectual categories is required. The acquisition of suffixes in the PV and LV forms is consistent with earlier preposition-capture, as noted above.

This alternative hypothesis is put forth here in order to account for features of the data which do not fit too well under the voice-from-nominalisation hypothesis. However, I do not want to argue that the voice-from-nominalisation hypothesis is wrong and the alternative hypothesis right. Indeed, the alternative hypothesis seems typologically rather odd. My concern is rather to suggest that morphosyntactic reconstruction is fraught with pitfalls, not least in the case of PAn, and that the most obvious reconstruction is not necessarily the right one. If a choice between the two reconstructions ever becomes easy, it will probably be when fine-grained descriptions of more Philippine-type languages — especially those of Taiwan — have been written.

Finally, the two hypotheses are not necessarily mutually exclusive. If the alternative hypothesis is correct, it may be that its content words were nominalisations at some substantially earlier interstage. But this is speculation.

4 Reconstructing Proto Malayo-Polynesian and subsequent interstages

As most of the languages described in this volume are Malayo-Polynesian, it is appropriate to review the reconstruction of PMP and what may have happened subsequently.

4.1 Proto Malayo-Polynesian

The structure of the reconstructed PMP clause was basically the same as that of the reconstructed PAn clause, and reconstructed PMP verb forms are set out in Table 7. They are similar to the PAn forms in Table 1. The alternative categorisations of the indicative forms as homophonous verbs and nouns (§3.2.1) or as an undivided category of content words (§3.2.2) also apply to the forms in Table 7.

A large majority of Malayo-Polynesian languages outside the Philippines are what Himmelmann (this volume) labels 'Indonesian-type' languages — languages which, for example, have preposed clitic pronouns and affix combinations which include reflexes of the applicative markers *-*i* and *-*án*/*-*[a]kən*. Languages of the Philippine-type are limited geographically to Taiwan, the Philippines, north and central Borneo,[53] Madagascar and northern Sulawesi. Because the Philippine type is geographically constrained, it has occasionally been suggested that the latter is simply an areal phenomenon and that PAn and/or PMP are more likely to have been Indonesian-type languages than Philippine-type. However, Figure 1 shows why this cannot be so: Indonesian-type languages occur only

53 Clayre (1996) provides a survey of voice systems in the languages of northern and central Borneo.

within Malayo-Polynesian, i.e. within one subgroup of Austronesian, whereas Philippine-type languages occur within more than one Formosan group and within Malayo-Polynesian. It follows, therefore, that both PAn and PMP must have been Philippine-type languages.

Table 7: Proto Malayo-Polynesian voice, mood and aspect morphemes

See key to Table 1.

	Actor	Patient	Location	Circumstantial
INDICATIVE				
Neutral	**‹um›√**	**√-ən**	**√-an**	**i-√**
	**k‹um›áRaw*	**kaRáw-ən*	**kaRáw-an*	**i-káRaw*
	**k‹um›aRát*	**kaRat-ə́n*	**kaRat-án*	**i-kaRát*
Perfective	**‹umin›√**	**‹in›√**	**‹in›√-an**	**i-‹in›√**
	**k‹um›‹in›áRaw*	**k‹in›áRaw*	**k‹in›aRáw-an*	**i-k‹in›áRaw*
	**k‹um›‹in›aRát*	**k‹in›aRát*	**k‹in›aRat-án*	**i-k‹in›aRát*
Imperfective	**‹um›R-√**	**R-√-ən**	**R-√-an**	**i-R-√**
	**k‹um›a-káRaw*	**ka-kaRáw-ən*	**ka-kaRáw-an*	**i-ka-káRaw*
	**k‹um›a-kaRát*	**ka-kaRat-ə́n*	**ka-kaRat-án*	**i-ka-kaRát*
NON-INDICATIVE				
Atemporal	**√**	**√-a**	**√-i**	**√-án**
	**káRaw*	**kaRáw-a*	**kaRáw-i*	**káRaw-án*
	**kaRát*	**kaRat-á*	**kaRat-í*	**kaRát-án*
Projective	**√-a**	**(√-aw)**	**√-ay**	—
	**kaRáw-a*	*(*kaRáw-aw)*	**kaRáw-ay*	
	**kaRat-á*	*(*kaRat-áw)*	**kaRat-áy*	

The similarity between Table 1 and Table 7 is somewhat deceptive. Whereas a majority of PAn verbs seem to have adhered to the paradigm in Table 1, PMP evidently had a much richer derivational morphology which interacted with the morphemes in Table 7 to produce a bewildering variety of forms. This is an area which needs much more research, but two prefixes can be singled out which formed secondary roots from primary ones:**paN-* 'distributive' and **paR-* 'durative'.[54] The semantic labels are very tentative. Distributive verbs apparently denoted plural actions, actions done by one or more agents to several things or by several agents to one thing. Durative verbs apparently denoted events regarded as ongoing or repetitive, as opposed to events regarded as punctual or viewed in their entirety (this distinction cut across the perfective/imperfective distinction of Table 7 which divided events into complete and incomplete).[55]

54 This quick-and-dirty attempt to reconstruct PMP affixes was limited to an examination of Ilokano (Rubino 2000), Tagalog (Ramos 1971a), the Bisayan dialects (Wolff 1972; Zorc 1977) and Binukid (Post 1992). It is clear that there are many more forms which should be reconstructed, but a much wider collection of data will be needed to do this with a hope of success.

55 It is not easy to sort out the semantics accurately here, since, for example, Ilokano and Tagalog differ in their treatment of the perfective/imperfective distinction (Reid 1992).

Table 8 shows shows part of the reconstructed paradigm of the secondary distributive root **panakaw* 'steal', formed from **paN-* and the primary root **takaw*. The **-N-* of **paN-* combined with root-initial **p*, **t*, **k* and **c/*s* respectively to give **-m-*, **-n-*, **-ŋ-* and **-ñ-*, disappeared before a root-initial nasal, and otherwise became a nasal homorganic with the root-initial consonant. Accent is not reconstructed here, for lack of evidence. The data assembled so far are insufficient to reconstruct imperfective and non-indicative forms solidly, but non-indicative forms can be inferred by analogy with Table 7, e.g. AV atemporal **panakaw*:

Table 8: Proto Malayo-Polynesian **paN-* with voice, mood and aspect morphemes

See key to Table 1.

	Actor	Patient	Location	Circumstantial
INDICATIVE				
Neutral	**maN-√**	**paN-√-ən**	**paN-√-an**	**i-paN-√**
	**manakaw*	**panakaw-ən*	**panakaw-an*	**i-panakaw*
Perfective	**naN-√**	**‹in›paN-√**	**‹in›paN-√-an**	**i-‹in›paN-√**
	**nanakaw*	**p‹in›anakaw*	**p‹in›anakaw-an*	**i-p‹in›anakaw*

Table 9 shows the corresponding paradigm for the secondary durative root **paR-kaRat* 'bite'. From available Philippine data, it seems probable that no PV or LV forms incorporating **paR-* occurred. Instead, the primary root was used.

Table 9: Proto Malayo-Polynesian **paR-* with voice, mood and aspect morphemes

See key to Table 1.

	Actor	Patient	Location	Circumstantial
INDICATIVE				
Neutral	**maR-√**	**√-ən**	**√-an**	**i-paR-√**
	**maR-kaRat*	**kaRat-ən*	**kaRat-an*	**i-paR-kaRat*
Perfective	**naR-√**	**‹in›√**	**‹in›√-an**	**i-‹in›paR-√**
	**naR-kaRat*	**k‹in›aRat*	**k‹in›aRat-an*	**i-p‹in›aR-kaRat*

It is clear that there were also many other derivational prefixes, e.g. **paka-* 'abilitative', and that several affixes often combined to give morphologically complex forms, as modern Philippine languages attest.

Noun phrases in PMP were marked in the same basic way as in PAn (Table 2), and PMP noun phrase markers are shown in Table 10. The main differences between the PMP and PAn systems are (i) that there was no separate phrase marker for topics in PMP; (ii) there is evidence of three sets of common phrase markers in PMP rather than two.[56] There is also some evidence that GEN, NPIV and LOC were all distinctly marked in PMP, but we should be cautious about this, as the three-way distinction is made only in Yami, Ivatan and the other languages of the Batan Islands (between Taiwan and the Philippines).

56 This table is based on analysis reported in Ross (2001) and based partly on Reid (1978, 1979). It is possible that three sets of common phrase markers also occurred in PAn, but the evidence is less clear.

Table 10: Some Proto Malayo-Polynesian phrase markers

	SPEC	GEN	NPIV	LOC
common (default)	**i*	**ni*	**si*	**di, *i*
common (present)	**a, (*sa)*	**na*	**ta, *sa*	**da, *ka, *sa*
common (absent)	**u, (*su)*	**nu*	**tu, *su*	**du* (?)
personal	**si*	**ni*	—	**ka [n]i*

The (partial) PAn pronominal system shown in Table 3 evolved into the (partial) PMP system in Table 11. Important changes include what Blust (1977) calls the second politeness shift, a set of innovations that defines the Malayo-Polynesian subgroup. Its elements are:

(i) the PAn plain free and polite free sets became a single PMP free set: the PMP free forms **ikahu* 2S, **[i]kami* 1EP, and **[i]kamu* 2P reflect the polite PAn free forms **i-ka-Su*, **[i-]k-ami* and **[i-]k-amu*, and the plain PAn free forms **[i-]Su*, **i-ami* and **i-amu* are lost;[57]

(ii) PMP **=mu* GEN:2S reflects the PAn 2P clitic **=mu*, and the PAn 2S clitic **=Su* is lost;[58]

(iii) PMP has 2P forms, free **[i]ka-ihu* and **kamu-ihu* and GEN **=ihu*, **=nihu*, **=mu-ihu* which incorporate **-ihu*, apparently reflecting the PAn **free** 2S **i-Su*.[59]

Where only one set of short clitic pronouns for PIV and GEN is reconstructable for PAn, separate sets are reflected in the singular in PMP: new pivot clitics have been created by cliticising free forms, leaving the old short clitic set to serve only as short genitives in PMP. PAn GEN2 clitics have disappeared, except for **=mami* 1EP, and have otherwise been replaced by PAn GEN3, now cliticised.

Table 11: Proto Malayo-Polynesian personal pronouns

	Free[60]	PIV	GEN (short)	GEN (long)
1S	**[i]aku*	**=aku*	**=ku*	**=n(a)ku*
2S	**ikahu*	**=kaw*	**=mu*	**=nihu*
3S	**[s]iya*	**=ya*	**=(y)a, *-ña*	**=niya*
1EP	**[i]kami*	—	—	**=mami*
1IP	**[i]kita, ita*	**=ta*	**=ta*	—
2P	**[i]kamu*	—	—	—
	**[i]ka-ihu*	—	**=ihu*	**=nihu*
	**kamu-ihu*	—	—	**=mu-ihu*
3P	**sida*	**=da*	**=da*	**=nida*

57 Blust (1977) notes this change only with regard to the 2S form. Note, incidentally, that the change does not apply to the 1IP forms, where PAn polite and plain forms are both retained in the PMP 1IP and 1ID.

58 Bungku-Tolaki languages have GEN:2S *-u* alternating with *-mu* and nominative 2S *u-* (this series is also historically derived from the PMP genitives; Mead 1998:122-125, 130-131). It is just possible that these reflect PAn **-Su* and that the latter had not been lost in PMP.

59 Whilst changes (i) and (ii) are typical politeness shifts (the polite form becomes the default, the 2P becomes the 2S), change (iii) isn't. In all probability this is not a politeness shift but a reinforcement of the plural form: we find **kamu* alongside **kamu-ihu*. The form **ka-ihu* may have been a dual, from **kahu-ihu* 'you (and) you'.

4.2 The genesis of Indonesian-type languages

The term 'Indonesian-type language' is, as Himmelmann notes, a vague one. It refers to western Malayo-Polynesian languages with (usually) two-voice verbal systems in which there are (i) preposed clitic pronouns and (ii) affix combinations which include reflexes of the applicative markers **-i* and **-án/*-[a]kən*. These systems vary as to the number of members in the preposed clitic paradigm, but as a rule, if there is just one clitic, it is 1S; if two, then 1S and 2S; if three, then the singular persons (Himmelmann 1996). Indonesian-type languages also vary in the forms of the 'passive' affix/proclitic (**‹in›/*ni-/*di=*) and the circumstantial applicative (**-án/*-[a]kən*), and in numerous details. A proto language ancestral to all Indonesian-type languages is not reconstructed here, as it is not clear that they form a subgroup within Malayo-Polynesian. Indeed, it seems very probable that they don't, and that their similarities are at least in part the results of independent parallel developments and of language contact. Very little is known about any other than the lowest-order subgroups within the region occupied by Indonesian-type languages (southern Borneo, peninsular Malaysia, Sumatra except Aceh, Java, Bali, Lombok, western Sumbawa, and central and south Sulawesi and its southern offshore islands), and even some of the accepted groups are open to question (Ross 1995b). Published reconstructions of verbal morphology of interstage languages within the region are Adelaar's (1992) of Proto Malayic and van den Berg's (1996) of Proto Celebic.[61]

Wolff (1996) takes up insights from SPR and from Himmelmann (1996) to explain how Indonesian-type languages developed from Philippine-type, and my account here largely summarises his. As a prototype of the Indonesian-type system he takes the Standard Indonesian system shown in Table 12.

Table 12: Standard Indonesian voice and applicative morphemes

(Italicised forms are pronominal clitics)

	Active	Passive			
		1S actor	2S actor	3S actor	no actor
Patient object	**meN-√**	*ku=*√	*kau=*√	***di-***√*=ña*	***di-***√
Location object	**meN-√-i**	*ku=*√**-i**	*kau=*√**-i**	***di-***√**-i***=ña*	***di-***√**-i**
Circumstantial object	**meN-√-kan**	*ku=*√**-kan**	*kau=*√**-kan**	***di-***√**-kan***=ña*	***di-***√**-kan**

Wolff identifies three fundamental changes which have occurred to produce the Standard Indonesian system from a Philippine-type system: (1) the formation of a paradigm of passive proclitics — person proclitics for 1S and 2S actors and a general proclitic *di=* otherwise; (2) combinations of voice prefixes and suffixes which do not occur in Philippine-type languages, particularly *meN-* (< **maN-*) and *-i* (< **-i*); and (3) loss of the neutral/perfective distinction. He observes that languages which have made innovation 1 have also made innovation 2 and *vice versa*, but that there are languages that have made innovations 1 and 2 but not 3.

60 Forms with initial **i-* may have been clause-initial topic pronouns.

61 Theses two reconstructions differ in status. Adelaar defines the Malayic subgroup by its shared innovations. Van den Berg assumes the integrity of the Celebic subgroup on the basis of shared similarities and of the fact that he can integrate these languages into a common story: research on shared innovations remains to be done. Van den Berg's reconstruction does not deal with applicative suffixes, although these occur in Celebic languages. Mead's (1998) thesis provides a well argued, well founded reconstruction of aspects of Proto Bungku-Tolaki (southeast Sulawesi).

Languages of the latter type, all in central Sulawesi, represent an early stage of the transition to the Indonesian type, and Table 13 is a hypothetical picture of what such a language might have looked like at an earlier phrase of its history.[62] The 1S clitics *ku=* and *=ku* in the table are stand-ins for what would in some languages have been a defective paradigm with perhaps only (some) singular members. Table 13 is only an aid to presentation, not a reconstruction. It depicts what seem to be the essential features of an early Indonesian-type language, in order to facilitate comparison with Tables 7–9.

Table 13: Voice and applicative morphemes in a hypothetical early Indonesian-type language

See key to Table 1.

	Active	Passive
Patient undergoer		
neutral	**maN-√, ‹um›√**	*√[=ku]*
perfective	**naN-√**	*ku=*√, **‹in›**√*[=ku]*
Location undergoer		
neutral	**maN-√-i, ‹um›√-i**	**√-i***[=ku]*
perfective	**naN-√-i**	*ku=*√**-i, ‹in›**√**-i***[=ku]*
Circumstantial undergoer		
neutral	**maN-√-an**	**√-an***[=ku]*
perfective	**naN-√-an**	*ku=*√**-an, ‹in›**√**-an***[=ku]*

Wolff does not deal with innovation 3, loss of the neutral/perfective distinction, but it is worth noting that Standard Indonesian (Table 12) and other languages which have lost this distinction seem to preserve neutral forms in the active voice, but perfective forms in the passive. It is also noteworthy that Indonesian-type languages have tended to abandon the **‹um›*-infixation (Table 7) in favour of **maN*-prefixing (Table 8).

Wolff illustrates the first step in innovation 1, the formation of actor proclitics to passives, with examples from the Philippine-type language Cebuano Bisayan. Cebuano has pre-verbal auxiliaries which are followed by an atemporal verb, as described in §3.1. With undergoer-voice verbs, the genitive clitic marking the actor follows the auxiliary, if there is one; otherwise it follows the verb:

(35) Cebuano Bisayan (Wolff 1996:26)

a. *Gi-hugás-an=ku ang manga plátu.*
PF-wash-LV=GEN:1S SPEC P plate
'I washed the plates.'

b. *Walaq=ku hugás-i ang manga plátu.*
NEG=GEN:1S wash-LV.AT SPEC P plate
'I didn't wash the plates.'

62 Wolff (1996:20-21) uses Totoli to illustrate what an early Indonesian-type language would look like, but Himmelmann (1996:123-124) analyses (apparently) the same set of data as a Philippine-type language, so I have preferred not to use it here.

SPR argue that by auxiliary deletion the genitive clitic became stranded in front of the verb. Wolff deletes the auxiliary by an argument based on analogy. Either way, one finishes up with a sentence like the pseudo-Cebuano **ku=hugás-i ang manga plátu* 'I washed the plates', with the genitive clitic in front of the passive verb, as in Tables 12 and 13. In such a sentence the (main) verb has the form of an atemporal from Table 7, because the verb in (35b) is subordinate to an auxiliary. Predictably, all three passive forms in Tables 12 and 13 reflect the PMP atemporals. However, we would expect the passive patient-undergoer form to be suffixed with **-a* (< PMP PV atemporal): instead, it is unsuffixed, perhaps reflecting a conflation of AV and PV atemporals.

Wolff then uses examples from Totoli to illustrate how innovation 2 occurred, whereby combinations of voice prefixes and suffixes arose. In Totoli, only singular pronouns distinguish pivot and genitive forms (see Table 11). Other pronouns and noun phrases are not marked for case. The pair of sentences below reflects the distinction between, in (36a), one of the newly created forms of the previous paragraph, the suffixless PV atemporal and, in (36b), the AV neutral form reflecting **maN-*:

(36) Totoli (Wolff 1996:27)

a. *Ku=kaan* *sagin.*
GEN:1S=eat.PV.NEUTRAL banana
'I eat the banana.'

b. *Aku* *mangaan* *sagin.*
PIV:1S AV.NEUTRAL.eat banana
'I am eating a banana.'

This set the scene for the creation of new verb forms by analogy. The relation in (36) is shown as (37a). Clitic-stranding had created the forms on the left in (37), and the forms **maN-√-i* and **maN-√-an* on the right of these relations were created by analogy:

(37)a. *ku=√* : **maN-√**
b. *ku=√***-i** : **maN-√-i**
c. *ku=√***-an** : **maN-√-an**

The outcome was a reorientation of the PMP system in Table 7 to give systems like the one hypothesised in Table 13. Where PMP had only one set of actor voice forms, an Indonesian-type system has three sets of active forms, with patient, location and circumstantial undergoers respectively. Their corresponding passives are descended from the earlier atemporal patient, location and circumstantial voice forms.

Despite the morphosyntactic changes that separate Indonesian-type languages from Philippine-type, the functions of the voice system have in many languages remained virtually unchanged. The default forms in narrative discourse are passive, whilst actives are reserved for special uses, including when the patient is non-specific and when the syntax requires an actor voice. Wouk (1984, 1986) reports a set of facts regarding Toba Batak pivot choice and the interpretation of undergoer specificity in actor-voice clauses which are parallel to those listed for Tagalog following (8). The condition that a specific patient must be pivot in an independent clause held for early modern Malay (Hopper 1988). Topicality has been shown to be a determinant of pivot choice in Balinese (Pastika 1999) and Sasak (Wouk 1999).

Some languages have undergone a further syntactic innovation. The noun phrase immediately following the verb has become strongly bound to it so that verb + noun phrase form a single constituent. The postverbal noun phrase is the patient with actor voice and the

actor with patient voice, i.e. the voice system is symmetrical. Similar observations have been made about Balinese (Artawa 1994; Arka 1998).

For Toba Batak the bonding of verb + noun phrase is attested by pitch-accent behaviour (Emmorey 1984), by the fact that an adverb cannot intervene between verb and noun phrase, by the fact that such 'verb phrases' can be co-ordinated, whether they are both AV or OV, and by the fact that post-verbal noun phrase cannot be fronted, whereas the pivot noun phrase can (Schachter 1984).

(36) Toba Batak (Schachter 1984:123)

a. *Mang-ida* ***si*** ***Ria*** *si* *Torus.*
AV-see PERS Ria PERS Torus
'Torus sees/saw Ria.'

b. *Di-ida* ***si*** ***Torus*** *si* *Ria.*
PV-see PERS Torus PERS Ria
'Torus sees/saw Ria.'

We do not have direct evidence about how this innovation occurred, but it seems to represent the grammaticisation of frequently occurring (but not rule governed) constituent sequences resulting from the Philippine-type tendency to place the pivot noun phrase at the end of the clause. It was apparently motivated by the loss of phrase markers to indicate case.

A comparison of Tables 11 and 12 shows three other innovations in the Indonesian system which require comment. They are: (i) the form of the general passive proclitic *di=*; (ii) the extent of the paradigm of passive actor proclitics, namely *ku=* and *kau=*; and (iii) the form **-kan.*

As Table 13 shows, Indonesian-type languages may also have a general passive affix reflecting **‹in›*, often as *ni-*. If an actor pronoun cooccurs with this affix, it remains in its inherited position, as an enclitic to the verb. Indonesian and a number of other Indonesian-type languages have replaced this with *di=*. There is good reason to believe that **di=* was a Proto Malayic innovation whose reflexes have spread by contact into non-Malayic languages, replacing the inherited affix reflecting **‹in›* (this is directly attested for Javanese).[63]

Standard Indonesian has two actor proclitics on passive verbs, *ku=* 1S and *kau=* 2S. Other Indonesian-type languages have only one, e.g. Totoli *ku=* 1S. Yet others, e.g. Kulawi (Wolff 1996:29, citing Adriani & Esser 1939), have a full set. More research is needed to understand fully what has happened here. Himmelmann (1996) interprets the Sulawesi data as indicating that pronominal proclitic sets have grown in membership over time. Van den Berg (1996) reconstructs a full set of proclitics for Proto Celebic, inferring that languages with smaller sets have lost members over time. In the case of Indonesian, however, it is unlikely that the language has ever had a full set of actor proclitics, as the enclitic actor pronoun *=ña* in a form like *di=makan=ña* PASS-eat-GEN:3S 'be eaten by him/her' reflects the state of affairs in PMP, i.e. before the rise of Indonesian-type languages.

Finally, Table 13 shows a hypothetical Indonesian-type language with the circumstantial undergoer suffix **-an*, reflecting PMP CV atemporal *-án*, and indeed many Indonesian-type

63 The question of the origin of **di=* is beyond the scope of this paper. A short summary of the relevant literature and an evaluation of the alternatives is given by Ross (forthcoming).

languages, like Totoli, do reflect **-an*.[64] Others, however, have replaced it with a reflex of **-[a]kən*, like Standard Indonesian *-kan*. This form appears to have been a captured preposition, as Indonesian also has the preposition *akan*, but the origins of the suffix **-[a]kən* are not well understood. Adelaar (1992) presents a strong argument that it should not be reconstructed for Proto Malayic. Yet its reflexes have also replaced reflexes of **-an* in non-Malayic languages from Sumatra to Oceania. It is possible that this suffix has arisen sometime during the history of Malay, and that it has been borrowed into Malayic and non-Malayic languages alike as a result of bilingualism in those languages and Malay. But this is an *ad hoc* solution without direct support, and it does not explain the presence of apparent reflexes of **-[a]kən* in Oceanic languages.

The history of Indonesian-type languages outlined in the foregoing paragraphs fits some languages better than others. For example, the Bungku-Tolaki languages of southeast Sulawesi fit our assumed definition of an Indonesian-type language, except that they have lost **-i* 'location undergoer'. However, the alternative forms shown in Table 13 have undergone an interesting functional split. Reflexes of **maN-√* and **ku=√* are what Mead (1998) calls respectively 'antipassive' and 'active'. Despite the (justifiable) shift in terminology, the antipassive is clearly the functional descendant of the PMP actor voice and corresponds to the Indonesian-type active in being used only when the undergoer is non-specific. The active is the functional descendant of the PMP patient voice (!) and corresponds to the Indonesian-type passive as it is the default main-clause transitive form. Meantime, reflexes of **‹um›√* and **‹in›√[=ku]* continue respectively as active and passive in various contexts other than canonic main clauses.

A quite different aberrant Indonesian-type language is Balinese—aberrant because it lacks passive proclitics altogether. Instead the passive has a plain stem and reflects **√[=ku]*, whilst the active stem displays nasal assimilation, i.e. has the form *N-√* (Artawa 1994). Inscriptional Old Balinese, however, reflected passive **‹in›√[=ku]* and both active **‹um›√* and active **maN-√*. Beratha (1992) suggests that modern *N-√* represents a conflation of the two Old Balinese forms. The applicative suffixes corresponding to **-i* and **-an/*-akən* are *-in* and *-aŋ*, both unexpected forms.

As the discussion in this section implies, the history of Indonesian-type languages is not well understood. Their sheer typological variety requires more research, and should at the same time be a warning to us against jumping to historical conclusions.

References

Adelaar, K. Alexander, 1992, *Proto Malayic: the reconstruction of its phonology and parts of its lexicon and morphology*. Canberra: Pacific Linguistics.

Adriani, Nicolaus and S.J. Esser, 1939, *Koelawische taalstudiën*, 3 vols. Bandoeng: Nix & Co.

Arka, Wayan, 1998, From morphosyntax to pragmatics in Balinese. PhD thesis, University of Sydney.

Artawa, Ketut, 1994, Ergativity and Balinese syntax. PhD thesis, La Trobe University, Melbourne.

64 It is possible that in some Indonesian-type languages *-an* may reflect PMP LV indicative **-an* or represent a conflation of this with CV atemporal **-án*. This needs investigation.

Asai, Erin, 1953, *The Sedik language of Formosa.* Kanazawa: Cercle Linguistique de Kanazawa.

Baker, John W., 1991, Semantic interactions of nominal determiners in Ilokano. Paper presented to the Sixth International Conference on Austronesian Linguistics, Honolulu.

Bell, Sarah J., 1976, Cebuano subjects in two frameworks. PhD dissertation, University of California, San Diego. Reprinted 1979 by the Indiana University Linguistics Club.

Beratha, Ni Luh Sutjiati, 1992, Evolution of verbal morphology in Balinese. PhD thesis, The Australian National University.

Berg, René van den, 1996, The demise of focus and the spread of conjugated verbs in Sulawesi. In Steinhauer, ed., 1996:89-114.

Blust, Robert A., 1977, The Proto-Austronesian pronouns and Austronesian subgrouping: a preliminary report. *University of Hawaii Working Papers in Linguistics*, 9/2:1-15.

1997, Rukai stress revisited. *Oceanic Linguistics*, 36:398-403.

1998, Ca- reduplication and Proto-Austronesian grammar. *Oceanic Linguistics*, 37:29-64.

1999a, Notes on Pazeh phonology and morphology. *Oceanic Linguistics*, 38:321-365.

1999b, Subgrouping, circularity and extinction: some issues in Austronesian comparative linguistics. In Zeitoun and Li, eds, 1999:31-94.

In press, *Thao dictionary*. Canberra: Pacific Linguistics.

Bowden, John, 2001, A revised typology for three place predicates: direct objects, primary objects, and 'split' objects. Unpublished ms. Research School of Pacific and Asian Studies, The Australian National University, Canberra.

Brainard, Sherri L., 1994, Voice and ergativity in Karao. PhD dissertation, University of Oregon.

Clayre, Beatrice M., 1996, The changing face of focus in the languages of Borneo. In Steinhauer, ed., 1996:51-88.

Cooreman, Ann M., 1983, Topic continuity and the voicing system of an ergative language. In Talmy Givón, ed. *Topic continuity in discourse: a quantitative cross-language study*, 425-489. Amsterdam: John Benjamins.

1987, *Transitivity and discourse continuity in Chamorro narratives.* Berlin: Mouton de Gruyter.

Cooreman, Ann M., Barbara Fox and Talmy Givón, 1984, The discourse definition of ergativity. *Studies in Language*, 8:1-34.

1988, The discourse definition of ergativity: a study of Chamorro and Tagalog texts. In McGinn, ed., 1988:387-425.

Cumming, Susanna and Fay Wouk, 1987, Is there "discourse ergativity" in Austronesian languages? *Lingua*, 91:271-296.

Dahl, Otto Christian, 1973, *Proto-Austronesian*. Oslo: Studentlitteratur.

De Guzman, Videa P., 1997, Verbal affixes in Tagalog: inflection or derivation? In Cecilia Odé and Wim Stokhof, ed. *Proceedings of the Seventh International Conference on Austronesian Linguistics*, 303-325. Amsterdam: Rodopi.

2000, Some remarks on the grammatical functions of the nonabsolutive agent in Tagalog. In Videa P. De Guzman and Byron Bender, *Grammatical analysis: morphology, syntax and semantics: studies in honor of Stanley Starosta*. Canberra: Pacific Linguistics.

Dixon, R.M.W., 1979, Ergativity. *Language*, 55:59-138.

1994, *Ergativity*. Cambridge: Cambridge University Press.

Dryer, Matthew S., 1997, Are grammatical relations universal? In Joan L. Bybee, John Haiman, and Sandra A. Thompson, ed. *Essays on language function and language type, dedicated to T. Givón*, 115-143. Amsterdam: John Benjamins.

1999, Functionalism and the metalanguage–theory confusion. Unpublished ms, State University of New York at Buffalo.

Durie, Mark, 1987, Grammatical relations in Acehnese. *Studies in Language*, 11:365-399.

Egerod, Søren, 1965, Verb inflexion in Atayal. *Lingua*, 15:251-282.

1966, Word order and word classes in Atayal. *Language*, 42:346-369.

1969, The origin of headhunting: an Atayal text with vocabulary. *Bulletin of the Institute of History and Philology, Academia Sinica*, 39:291-325.

Egli, Hans, 1990, *Paiwangrammatik*. Wiesbaden: Otto Harrassowitz.

Emmorey, Karen, 1984, The intonation system of Toba Batak. In Schachter, ed., 1984: 37-58.

Evans, Bethwyn and Malcolm Ross, 2001, The history of Proto Oceanic **ma-*. *Oceanic Linguistics* 40.

Ferrell, Raleigh, 1968, The Pazeh-Kahabu language. *Bulletin of the Department of Archaeology and Anthropology, National Taiwan University*, 31–32:73-97.

1980, Phonological subgrouping of Formosan languages. In Naylor, ed., 1980:241-254.

1982, *Paiwan dictionary*. Canberra: Pacific Linguistics.

Foley, William A., 1993, The conceptual basis of grammatical relations. In William A. Foley, ed. *The role of theory in language description*, 131-174. Berlin: Mouton de Gruyter.

Foley, William A. and Robert D. Van Valin jr, 1984, *Functional syntax and universal grammar*. Cambridge: Cambridge University Press.

Gault, JoAnn, 1999, Thoughts concerning ergativity, subject and focus in Sama Bangingi'. In Zeitoun and Li, eds, 1999:393-422.

Gibson, Jeanne D. and Stanley Starosta, 1987, Ergativity east and west. In Philip Baldi, ed. *Linguistic change and reconstruction methodology*, 195-210. Berlin: Mouton de Gruyter.

Halim, Amran, Lois Carrington and S.A. Wurm, eds, 1982, *Papers from the Third International Conference on Austronesian Linguistics* 1: *Tracking the travellers*. Canberra: Pacific Linguistics.

Harvey, Mark, 1982, Subgroups in Austronesian. In Halim, Carrington and Wurm, eds, 1982:47-99.

Himmelmann, Nikolaus P., 1991, The Philippine challenge to universal grammar. *Institut für Sprachwissenschaft, Universität zu Köln, Arbeitspapier*, 15 (Neue Folge).

1996, Person marking and grammatical relations in Sulawesi. In Steinhauer, ed., 1996:115-136.

forthcoming a, Lexical categories and voice in Tagalog. In Peter Austin and Simon Musgrave eds *Voice and grammatical relations in Austronesian languages*. Stanford: CSLI Publications.

forthcoming b, Tagalog. In Nikolaus P. Himmelmann and K. Alexander Adelaar, eds *The Austronesian languages of south-east Asia and Madagascar*. Richmond: Curzon Press.

Ho, Arlene Y.L., 1993, Transitivity, focus, case and the auxiliary verb systems in Yami. *Bulletin of the Institute of History and Philology, Academia Sinica*, 62:83-147.

Hopper, Paul J., 1979, Some discourse sources of ergativity. *University of Hawaii Working Papers in Linguistics*, 11:137-153.

1988, How ergative is Malay? In McGinn, ed., 1988:441-454.

Hopper, Paul J. and Sandra Thompson, 1980, Transitivity in grammar and discourse. *Language*, 56:251-299.

Huang, Lillian M., 1994, Ergativity in Atayal. *Oceanic Linguistics*, 33:129-143.

1995, *A study of Mayrinax syntax*. Taipei: The Crane.

2000, Verb classification in Mayrinax Atayal. *Oceanic Linguistics*, 39:364-390.

Huang, Shuanfang, 2000, The pragmatics of focus in Tsou and Seediq. *National Taiwan University Working Papers in Linguistics*, 3:111-127.

Jelinek, Eloise and Richard A. Demers, 1994, Predicates and pronominal arguments in Straits Salish. *Language*, 70:697-736.

Kroeger, Paul R., 1991, The event line in Kimaragang narrative. In Stephen H. Levinsohn, ed. *Thematic continuity and development in languages of Sabah*, 93-104. Canberra: Pacific Linguistics.

1993, *Phrase structure and grammatical relations in Tagalog*. Stanford: CSLI Publications.

Lee, Amy Pei-jung, 1997, The case-marking and focus systems in Kavalan. MA thesis, Tsing-hua University, Taiwan.

Li, Paul Jen-kuei, 1978, The case-marking systems of the four less-known Formosan languages. In S.A. Wurm and Lois Carrington, eds *Second International Conference on Austronesian Linguistics: proceedings*, 569–615. Canberra: Pacific Linguistics.

Li, Paul Jen-kuei, Dah-an Ho, Ying-kuei Huang, Cheng-hwa Tsang and Chiu-yu Tseng, eds, 1995, *Austronesian studies relating to Taiwan*. Symposium Series of the Institute of History and Philology, Academia Sinica 4. Taipei: Institute of History and Philology, Academia Sinica.

McGinn, Richard, ed., 1988, *Studies in Austronesian Linguistics*. Athens, Ohio: Center for Southeast Asian Studies, Ohio University Center for International Studies.

Manning, Christopher D., 1996, *Ergativity: argument structure and grammatical relations*. Stanford: CSLI Publications.

Mead, David, 1998, Proto-Bungku-Tolaki: reconstruction of its phonology and aspects of its syntax. PhD dissertation, Rice University.

Mirikitani, Leatrice T., 1972, *Kapampangan syntax. Oceanic Linguistics Special Publication* 10. Honolulu: The University Press of Hawaii.

Mithun, Marianne, 2000, Noun and verb in Iroquoian languages: multicategorisation from multiple criteria. In Petra M. Vogel and Bernard Comrie, ed. *Approaches to the typology of word classes*, 397-420. Berlin: Mouton de Gruyter.

Naylor, Paz Buenaventura, 1980, Linking, relation-marking, and Tagalog syntax. In Naylor, ed., 1980:33-50.

Naylor, Paz Buenaventura, ed., 1980, *Austronesian studies: papers from the Second Eastern Conference on Austronesian languages*. Ann Arbor: University of Michigan, Center for South and Southeast Asian Studies.

Pastika, I Wayan, 1999, *Voice selection in Balinese narrative discourse.* PhD thesis, The Australian National University.

Pawley, Andrew K. and Malcolm D. Ross, 1993, Austronesian historical linguistics and culture history. *Annual Review of Anthropology*, 22:425-459.

Payne, Thomas, 1994, The pragmatics of voice in a Philippine language: actor-focus and goal-focus in Cebuano narrative. In Talmy Givón, ed. *Voice and inversion.* Amsterdam: John Benjamins.

Pecoraro, Ferdinando, 1979, *Eléments de grammaire taroko, précédés del la présentation de la vie et de la culture des taroko.* Paris: Association Archipel.

Post, Ursula, 1992, *Binukid dictionary. Studies in Philippine Linguistics* 9/2. Manila: Linguistic Society of the Philippines and Summer Institute of Linguistics.

Ramos, Teresita V., 1971a, *Tagalog dictionary.* Honolulu: University of Hawai'i Press.

1971b, *Tagalog structures.* Honolulu: University of Hawai'i Press.

Reid, Lawrence A., 1966, *An Ivatan syntax.* Oceanic Linguistics Special Publication 2. Honolulu: Pacific and Asian Linguistics Institute, University of Hawaii.

1978, Problems in the reconstruction of Proto-Philippine construction markers. In Wurm and Carrington, eds, 1978:33-66.

1979, Evidence for Proto-Philippine nominative marking. *Philippine Journal of Linguistics*, 10:1-20.

1982, The demise of Proto-Philippines. In Halim, Carrington and Wurm, eds, 1982:201–216.

1992, On the development of the aspect system in some Philippine languages. *Oceanic Linguistics*, 31:65-91.

Ross, Malcolm, 1992, The sound of Proto-Austronesian: an outsider's view of the Formosan evidence. *Oceanic Linguistics*, 31:23-64.

1995a, Reconstructing Proto Austronesian verbal morphology: evidence from Taiwan. In Li et al., eds, 727-791.

1995b, Some current issues in Austronesian linguistics. In D.T. Tryon, ed. *Comparative Austronesian Dictionary* 1, 45-120. Berlin: Mouton de Gruyter.

2001, The reconstruction of Proto Malayo-Polynesian construction markers. Unpublished ms. Research School of Pacific and Asian Studies, The Australian National University, Canberra.

forthcoming, Notes on the prehistory and internal subgrouping of Malayic. In John Bowden and Nikolaus P. Himmelmann, eds *Papers in Austronesian Linguistics.* Canberra: Pacific Linguistics.

Rubino, Carl R.G., 2000, Ilocano grammar and dictionary. Honolulu: University of Hawai'i Press.

Sasse, Hans-Jürgen, 1993, Das Nomen — eine universale Kategorie? *STUF — Sprachtypologie und Universalienforschung*, 46:187-221.

Schachter, Paul, 1976, The subject in Philippine languages: topic, actor, actor-topic or none of the above. In Charles Li, ed. *Subject and topic*, 491-518. New York: Academic Press.

1977, Reference-related and role-related properties of subjects. In Peter Cole and Jerrold M. Sadock, ed. *Syntax and semantics* 8: *Grammatical relations*, 279-306. New York: Academic Press.

1984, Semantic-role-based syntax in Toba Batak. In Schachter, ed., 1984:122-149.

Schachter, Paul, ed., 1984, *Studies in the structure of Toba Batak*. UCLA Occasional Papers in Linguistics 5.

Schachter, Paul and Fe T. Otanes, 1972, *Tagalog reference grammar*. Berkeley: University of California Press.

Starosta, Stanley, 1985, Verbal inflection versus deverbal nominalisation in PAN: the evidence from Tsou. In Andrew K. Pawley and Lois Carrington, eds *Austronesian linguistics at the 15th Pacific Science Congress*, 281–312. Canberra: Pacific Linguistics.

1986, Focus as recentralisation. In Paul Geraghty, Lois Carrington and S.A. Wurm, ed. *FOCAL I: Papers from the Fourth International Conference on Austronesian Linguistics*, 73-95. Canberra: Pacific Linguistics

1988, A grammatical typology of Formosan languages. *Bulletin of the Institute of History and Philology, Academia Sinica*, 59:541-576.

1995, A grammatical subgrouping of Formosan languages. In Li et al., eds, 1995:683-726.

1999, Transitivity, ergativity and the best analysis of Atayal case marking. In Zeitoun and Li, eds, 1999:371-392.

Starosta, Stanley, Andrew K. Pawley and Lawrence A. Reid, 1981, The evolution of focus in Austronesian. Paper presented to the Third International Conference on Austronesian Linguistics, Bali.

1982, The evolution of focus in Austronesian. In Halim, Carrington and Wurm, eds, 1982:145-170.

Steinhauer, Hein, ed., 1996, *Papers in Austronesian linguistics No.3*. Canberra: Pacific Linguistics.

Thurgood, Graham, 1999, *From ancient Cham to modern dialects: two thousand years of language contact and change*. Oceanic Linguistics Special Publication 28. Honolulu: University of Hawai'i Press.

Van Valin, Robert D., jr, and Randy J. LaPolla, 1997, *Syntax: structure, meaning and function*. Cambridge: Cambridge University Press.

Wolff, John U., 1972, *A dictionary of Cebuano Visayan*, 2. Ithaca N.Y. and Manila: Cornell University Southeat Asia Program and Linguistic Society of the Philippines.

1973, Verbal inflection in Proto-Austronesian. In Andrew Gonzalez, ed. *Parangal kay Cecilio Lopez*, 71-91. Quezon City: Linguistic Society of the Philippines.

1996, The development of the passive verb with pronominal prefix in western Austronesian languages. In Bernd Nothofer, ed. *Reconstruction, classification, description: festschrift in honor of Isidore Dyen*, 15-40. Hamburg: Abera.

Wouk, Fay, 1984, Scalar transitivity and trigger choice in Toba Batak. In Schachter, ed., 1984:195-219.

1986, Transitivity in Batak and Tagalog. *Studies in Language*, 10:391-424.

1999, Sasak is different: a discourse perspective on voice. *Oceanic Linguistics*, 38:91-114.

Wurm, S.A. and Lois Carrington, eds, 1978, *Second International Conference on Austronesian Linguistics: proceedings* Fascicle 1: *Western Austronesian*. Canberra: Pacific Linguistics.

Zeitoun, Elizabeth, 2000, Dynamic vs. stative verbs in Mantauran (Rukai). *Oceanic Linguistics*, 39:415-427.

Zeitoun, Elizabeth and Lillian M. Huang, 2000, Concerning *ka-*, an overlooked marker of verbal derivation in Formosan languages. *Oceanic Linguistics*, 39:391-414.

Zeitoun. Elizabeth and Paul Jen-kuei Li, eds, 1999, *Selected papers from the Eighth International Conference on Austronesian Linguistics.* Symposium Series of the Institute of Linguistics (Preparatory Office), Academia Sinica 1. Taipei: Academia Sinica.

Zorc, R. David, 1977, *The Bisayan dialects of the Philippines: subgrouping and reconstruction*. Canberra: Pacific Linguistics.

1978, Proto-Philippine word accent: innovation or Proto-Hesperonesian retention? In Wurm and Carrington, eds, 1978:67-119.

Ross, M. "The history and transitivity of western Austronesian voice and voice-marking". In Wouk, F. and Ross, M. editors, *The history and typology of western Austronesian voice systems.* **PL-518:17-62**. Pacific Linguistics, The Australian National University, 2001. DOI:*10.15144/PL-518.17*