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On The Development of Applicative Constructions in Austronesian Languages

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オーストロネシア諸語における適用態構文の歴史的变化

菊澤律子

In this paper¹⁾, based on a comparison of the forms and functions of applicative verbs in Austronesian languages and of the clause structures in which such verbs appear, I will discuss the mechanisms by which the reconstructed proto-system developed into the diverse systems currently found in the language family today.

I will first show that what have been described as applicative verbs for Austronesian languages typologically belong to three different types, which will be referred to in this paper as “Philippine-type,” “Malay-type,” and “Oceanic-type.” Second, I will propose a reconstructed system for Proto-Austronesian, and demonstrate how the three different types of applicative constructions developed from it. I will argue that a system with two transitive constructions, general transitive (marked with *-a) and locational transitive (marked with *-i), are clearly reconstructible for Proto-Austronesian. From this system, Formosan and Philippine languages developed their systems by increasing the number of types of transitive clause, while some languages in Indonesia developed their systems by extending, and subsequently re-organizing their inherited verb paradigm. It appears that Oceanic languages developed from a system in which the earlier derivational distinction between extended-intransitive and transitive verbs was lost. The changes described for the three types of languages discussed in this paper must have taken place independently from one another, and the changes suggested for Malay-type languages appears to reflect relatively recent innovations.

The proposed scenario ultimately provides explanations for many phe-

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nomena related to applicative verbs in Austronesian languages, such as the functional and semantic differences among the different types of applicative sentences.

本論では、オーストロネシア語族における適用態動詞の形態および機能、また適用態構文の比較に基づき、この語族にみられる多様な適用態が歴史的にどのような経緯を経て発達したのか、について議論する。

まず、オーストロネシア語族の言語に関して、これまで同じ「適用態」という名称で記述されてきた構文が類型論的には異なる性質をもつことを示し、それぞれを、「フィリピン型」、「マレー型」、「オセアニア型」と呼ぶ。次に、オーストロネシア祖語の構文を示し、3つの適用態の型が共通する祖構文からそれぞれどのように発達したのかについて議論する。とくに、これまでに再建された多数の他動詞語尾のうち、*-a「一般他動詞語尾」および*-i「場所を表わす他動詞語尾」の意味および機能と、形態統語論的比較分析の結果を組み合わせるとうまく説明ができるとし、その結果、フィリピン型の言語は他動詞の型の数を増やす方向に変化したこと、マレー型の言語では動詞の体系そのものが変化し、新たなパラダイムが発達したこと、オセアニア型の言語では、祖語における拡張自動詞文と他動詞文の区別が失われたと考えられることを示す。なお、これらの3つの変化は、それぞれの言語グループで独自に発達したものであり、同じ方向に向かう単一の変化の異なる段階を示すものではない。

本論は、適用態構文に関する特徴の一部のみを扱ったものであるが、今後ここで示された構文の変化を軸とすることで、異なる型の適用態における機能や意味の変化、また、同じ形態素が関わる使役構文の発達との関係等、関連するさまざまな議論をすすめることができると考える。

1 Introduction	3.3.2 Reconstructing the functions of *-i and *-akən
2 Applicative constructions in Austronesian languages	4 A new hypothesis of the development of applicative constructions in Austronesian languages
2.1 Philippine-type applicative constructions	4.1 The Proto-Austronesian verb system and its development in Philippine-type languages
2.2 Applicative constructions in Malay-type languages	4.2 The development of the Malay-type system
2.3 Oceanic-type applicative constructions	4.2.1 Grammaticalization of the preposition *-kən
3 Comparison and reconstruction of applicative constructions in Austronesian languages	4.2.2 Reorganization of the verb paradigm
3.1 Transition from Proto-Austronesian to the Pre-Indonesian system	4.2.3 Extension of the use of transitive endings
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3.2 Verb affixes previously reconstructed for Proto-Austronesian	
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3.3.1 Relevant formal reconstructions	

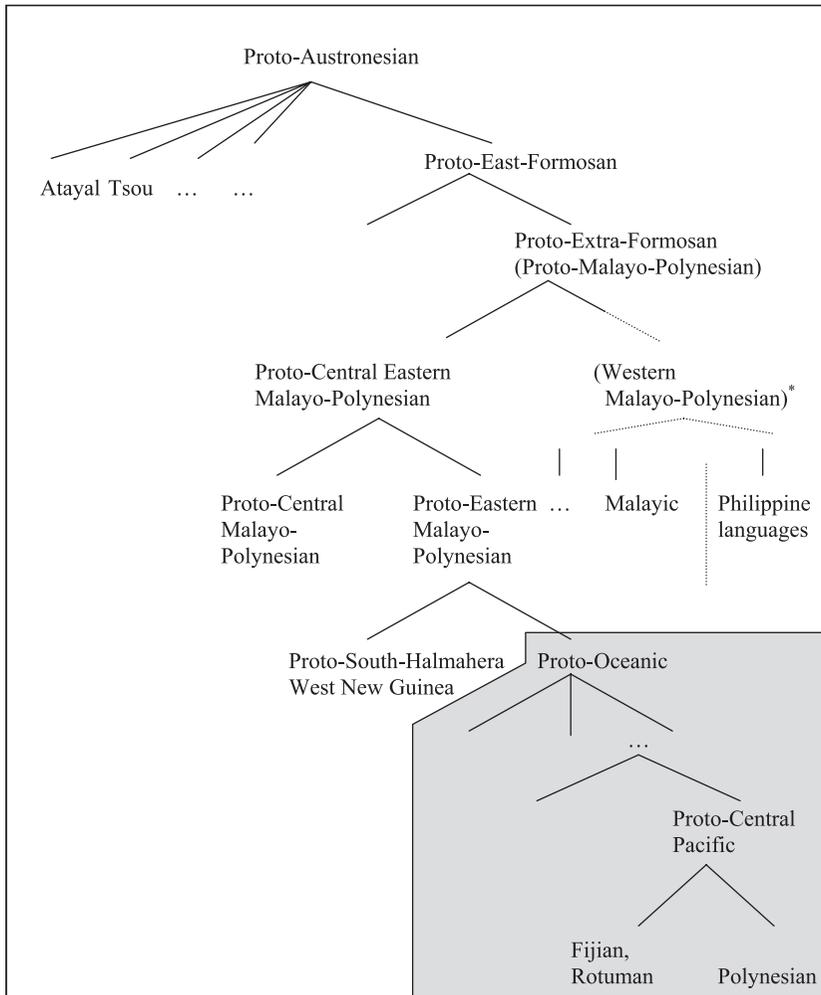


Figure 1 The Austronesian Language Family**

* 'Western Malayo-Polynesian has... been used as a convenient 'catch-all' category for all M[alayo-]P[olynesian] languages which do not exhibit the innovations diagnostic of Central-Eastern Malayo Polynesian...the WMP languages are the residue that results from subtracting the CEMP languages from the MP category' (Blust 1999: 68).

** The family tree is based on Blust 1977, 1999; Reid 1982, p.c.

Contrasts such as those shown with the Balinese sentences are found in some languages in Indonesia, such as Malay and Indonesian, and Javanese.

In Oceanic languages, a somewhat similar contrast is seen, often involving the suffixes *-i* and *-akin[i]*. Example sentences are shown in (2) from Standard Fijian. In (2)a, the verb *lako* does not carry any suffix and simply means ‘to go’. In (2)b, the verb appears with the ending *-va* (< *(v)-i-a) and is transitive, taking an object expressing the goal of the event, while in (2)c, the verb has the ending *-vaka* (< *(v)-aki-a) and takes a comitative object expressing someone/something accompanying the action.⁵⁾

(2) Standard Fijian (Kikusawa, fieldnotes)

- a. *Au-lako*. [Ø, intransitive]
 1SG.AGR-go{Ø}
 ‘I(‘ll) go/leave.’
- b. *Au-lakova na valenibula*. [-a, location]
 1SG.AGR-go{-a} DET hospital
 ‘I(‘ll) go to the hospital.’
- c. *Au-lakovaka na gone*. [-aka, concomitant]
 1SG.AGR-go{-aka} DET child.(ACC)
 ‘I(‘ll) go with the child./I(‘ll) accompany the child.’

Discussion as to the possible historical sources of these verb endings appears in various studies. Harrison (1982) and B. Evans (2003) in the context of their own reconstructions provide a summary of the reconstruction of **i* and **aki(ni)/*akin[i]* related forms in comparative Oceanic literature. Although details vary, most researchers agree that verbs ending in **-i* and **-akin[i]* are reconstructible to Proto-Oceanic. In addition, it is commonly agreed that these two Proto-Oceanic forms are somehow related to some suffixes found in languages in Indonesia, and ultimately to the rather complicated verb derivational systems found in the Formosan and Philippine languages (for example, Ross 2002). The question is how they are related.

There has been some discussion as to the possible historical sources of the forms of these suffixes and relevant grammatical changes. Pawley and Reid (1979) reconstruct the forms **-i* and **-akən* for Proto-Austronesian, or at least as prepositions **i* and **akən*, from which they considered the *-i* and *akan*-like forms in languages in Indonesia developed, and also the **-i* and **-akin* endings in Proto-Oceanic developed. Starosta, Pawley and Reid (2009 [1981]) propose that an oblique preposition **kən* was “captured” by the verb, to be grammaticalized as an applicative verb ending. Other possible sources have also been proposed (Harrison 1982; B. Evans 2003; Zobel 2002; summarized in Lynch, Ross and Crowley 2002),

however, none bridges the assumed Proto-Austronesian system and the *-i and *-akin[i] endings in an arguable way as discussed later in this paper (in particular, in section 3).

A part of the difficulty with the previous studies is that the functional reconstruction of the relevant forms based on a comparison and reconstruction of the clause structures in which they occurred is missing. Formal cognacy has been assumed based on sound correspondences, and functional correspondence has been discussed to some extent in the context of the verb paradigm. However, changes in the clause structures in which these forms occurred has not been systematically examined, resulting in comparison of verb paradigms, whose privileges of occurrence did not systematically correspond (section 3.1).

The purpose of this paper is to re-examine the evidence provided in the previous studies in the context of the development of the clause structures in Austronesian languages. More specifically, the following will be the main points to be argued.

- 1) The development of the verb system is examined in association with (but not as a part of) the development of the case-marking system. Based on this examination, it will be made clear that there was a re-organization of the verb paradigm in some post Proto-Extra-Formosan period, possibly in Proto-Central-Eastern-Malayo-Polynesian.
- 2) The semantic and syntactic characteristics of the clause structures involving *-i* and *-akin* endings can be explained by assuming the existence of two types of transitive constructions in Proto-Austronesian, namely a general transitive (with **-a* suffix) and a locational transitive (with **-i* suffix). These two types of transitive construction are clearly reconstructible, with reflexes found not only in Formosan and Philippine languages, but also in Indonesian and Oceanic languages. This raises the question as to when the other endings involving transitive structures widely found today in the Formosan and Philippine languages developed.
- 3) A possible scenario as to the development of the verb systems involving applicative sentences in Austronesian languages is provided. This involves at least the following three developments: (1) the grammaticalization of the oblique marking preposition **kən*; (2) an extension of the function of the earlier locational transitive ending **-i*, to occur also on intransitive verbs⁶⁾; and (3) the innovation of a parallel verb paradigm with the ending **-akan* (> **-akin*).

The rest of this paper is presented as follows. In section 2, a typological summary of the constructions that have been referred to as *APPLICATIVE* in Austronesian languages is presented, discussing how applicative types differ from one another. In section 3, problems in previous reconstructions involving applicative constructions are pointed out, at the same time shedding new light on

the methodological requirements for morphosyntactic reconstruction. Following this, in section 4, a hypothesis as to the development of applicative constructions in Austronesian languages is proposed, and the mechanisms and motivations for the changes that occurred are discussed. Concluding remarks appear in section 5.

2 Applicative constructions in Austronesian languages

Three types of systems found in Austronesian languages are discussed here. They are classified based on differences in their case-marking patterns and basic clause structures.⁷⁾ They are referred to in this paper as Philippine-type, Malay-type and Oceanic-type. In each type, there are constructions to which the term “applicative” has been applied. In this section, such constructions are described, showing how they fit into the overall pattern of clause structures for each type.

The basic clause structures are described according to the case-marking patterns on their core arguments, using the terms “intransitive”, “extended intransitive” and “transitive”, following the descriptions of basic clause structures in Austronesian languages by Kikusawa (2003b, 2008, 2012, and others).⁸⁾ This terminology, although not commonly found in many descriptions, is used in order to provide a basis for their reconstruction, and to trace their historical development as applicative constructions in the daughter languages. It should be noted in particular that what are referred to as transitive clause structures here are the ones that can be traced back to the transitive clause structure in Proto-Austronesian, where the agent/actor was expressed by a genitive (marking ergative) element. Following this principle, the labels indicating the clause structure of example sentences appearing in the following sections have been modified by the author when cited from other sources.

2.1 Philippine-type applicative constructions

By Philippine-type languages is meant here languages with the following characteristics. First, they have an ergative case alignment, as presented in Table 1 and three clause structures, namely, intransitive, extended intransitive, and transitive.⁹⁾ Among the clause structures which constitute a Philippine-type system, there are two clause structures in both of which an actor and an undergoer are expressed. These are labelled as extended intransitive^{10,11)} and transitive structures. It should be noted that the case-marking patterns of these two structures differ in that in the former, the actor is expressed by a nominative noun phrase, while the undergoer is marked as oblique, but in the latter, the actor is marked as genitive while the undergoer is expressed by a nominative noun phrase.¹²⁾ Example sentences of an extended intransitive sentence and a transitive sentence are given in (3) from Hiligaynon, where, the actor is underlined with a double line, and the undergoer with a single line.

Table 1 “Philippine-type” (Ergative) Case Alignment

	ACTOR	UNDERGOER
A. INTRANSITIVE	S (NOM)	
B. EXTENDED INTRANSITIVE	S (NOM)	E (OBL)
C. TRANSITIVE	A (GEN)	O (NOM)

(3) Hiligaynon (Western Visayas, Philippines)

a. *Nag-lampos=ako kay Pedro.* [Extended Intransitive]
 struck=1SG.NOM OBL Pedro
 ‘I struck Pedro.’ (Wolfenden 1975: 104)

b. *Buas nga daan duaw-on=ko ikaw.* [Transitive]
 tomorrow LG way will.visit=1SG.GEN 2SG.(NOM)
 ‘First thing tomorrow I’ll visit you.’ (Wolfenden 1975: 62)

One of the characteristics of Philippine-type languages is that the semantic role of the O (expressed with the nominative phrase in transitive sentences) may vary, and transitive clauses can be classified into either three or four TYPES according to the semantic nature of the undergoer (which are all case-marked as nominative) associated with the verb form alternation. A four-type system with semantically distinct undergoers is summarized in Table 2. Example sentences, again from Hiligaynon, follow in (4).

Table 2 Various Types of Transitive Sentence in a Philippine-type System¹³⁾

	ACTOR	UNDERGOER
GENERAL TRANSITIVE	A (GEN)	O (NOM): General
LOCATIONAL TRANSITIVE	A (GEN)	O (NOM): Location
INSTRUMENTAL TRANSITIVE	A (GEN)	O (NOM): Instrument
BENEFACTIVE TRANSITIVE	A (GEN)	O (NOM): Beneficiary

(4) Hiligaynon—Different types of transitive sentence

a. GENERAL TRANSITIVE

Buas nga daan duaw-on=ko ikaw.
 tomorrow LG way will.visit=1SG.GEN 2SG.(NOM)
 ‘First thing tomorrow I’ll visit you.’ (Wolfenden 1975: 62)

b. LOCATIONAL TRANSITIVE

Pungko-an=mo ang bangko. [-an, location]
 will.sit.on{-an}=2SG.GEN (NOM) chair
 ‘You will sit on the chair.’ (Wolfenden 1975: 113)

- c. INSTRUMENTAL TRANSITIVE [i-, instrument]
I-pang-luto '=ko sang lumpya ang kalaha'.
 will.cook.with{*i-*}=1SG.GEN OBL lumpia (NOM) frying.pan
 'I will use the frying pan to cook some lumpia.' (Wolfenden 1971: 131)
- d. BENEFACTIVE TRANSITIVE [i- -an, benefactive]
I-lutu-an =ko kamo sang paniudto.
 will.cook.for{*i-*, -an}=1SG.GEN 2PL(NOM) OBL lunch
 'I will cook lunch for you all.' (Wolfenden 1975: 95)

Note that in all these examples, the actor is expressed with a genitive clitic pronoun and the undergoer is expressed with an independent pronoun or noun phrase, interpretable as nominative. However, the semantic role of the element expressed with the nominative argument differs depending on the form of the verb, such as goal of an action ((4)a), the location related to the action ((4)b), the instrument used to perform the action ((4)c), and the person who received advantage/disadvantage in the event ((4)d).

In languages with this kind of system, the verbs in each of the transitive clauses typically show different derivational morphology. Parallel examples are given from Tagalog in (5)a–d.

- (5) Tagalog transitive sentences illustrating the “Philippine-type” system (de Guzman 1997: 306)¹⁴⁾
- a. *L*<*in*>*utu*?(Ø) nang babai ang manok sa pugon.
 COMP.cook GEN woman NOM chicken LOC oven
 'The woman cooked the chicken in the oven.' [*-in/Ø*, general goal]
- b. *P*<*in*>*ag-lutu-an* nang babai nang manok ang pugon.
 COMP.cook.in GEN woman OBL chicken NOM oven
 'The woman cooked the chicken in the oven.' [*-an*, location]
- c. *I-p*<*in*>*ang-lutu*? nang babai nang manok ang canola oil.
 COMP.cook.with GEN woman OBL chicken NOM Canola oil
 'The woman cooked chicken with the Canola oil.' [*ipang-*, location]
- d. *I-p*<*in*>*ag-lutu*? nang babai nang manok ang kaniya-ng bisita.
 COMP.cook.for GENwoman OBL chicken NOM her-LG visitor
 'The woman cooked chicken for her visitor.' [*ipag-*, beneficiary]

Table 3 shows the derivational forms of the verb and the semantic roles associated with them in Tagalog, combined with the clause structures and types of transitive clauses given in Tables 1 and 2. The types of transitive clause are determined by the forms of the verb affixes and the corresponding semantic roles of the nominative

phrases.¹⁵⁾ There are, however, a wide range of roles associated with each sentence type, with general transitive constructions having undergoers that are typically directly affected, locational transitive constructions having undergoers that are typically only surface affected, and instrumental constructions having undergoers that are typically transported or moved through time or space, so that the constructional labels are chosen more for convenience than for an accurate representation of the range of semantic roles that they signal. Some languages have transitive sentences with four types as has been shown with Hiligaynon and Tagalog, while some (such as Kapampangan) have three.

Table 3 Tagalog Verb Forms and Transitive Clause Structures

CLAUSE STRUCTURES	VERB FORM	CASE-MARKING PATTERN ON THE ARGUMENT(S)	
		A (GEN)	O (NOM)
C. TRANSITIVE			
GENERAL	<i>-in</i>		goal
LOCATIONAL	<i>-an</i>		location
INSTRUMENTAL	<i>ipang-</i>		instrument
BENEFACTIVE	<i>ipag-</i>		beneficiary

In the description of Formosan and/or Philippine languages, which show the Philippine-type system that has been described above, the term applicative is typically used to refer to non-general transitive sentences, namely, locational transitive, instrumental transitive and benefactive transitive (if any) (Daguman 2004; Mithun 1994; Peterson 1997; Reid and Liao 2004; Ross 2002; and others).¹⁶⁾ Such transitive sentences satisfy the characteristics commonly associated with applicative constructions, in that the O expresses the element that is peripheral to the event, and which occurs as an adjunct in other sentence types. In languages such as Tagalog and Hiligaynon with four transitive sentence types, there would thus be three applicative constructions (involving three sets of verb affixes), while in languages with three transitive sentence types, there would be two applicative constructions. Among the three Kapampangan transitive sentences given in (6), for example, it is (6)b–c that are referred to as applicative constructions by Mithun (1994: 257–258).

(6) Kapampangan (Mithun 1994: 257–258)

- a. (I)buklat ne. [*i-*, target]
 {i-}buklat
 open 3ERG/3NOM
 ‘He’ll open it.’
- b. Pamuklat ne. [*paN-*, instrument]
 {paN-}buklat
 open.with 3ERG/3NOM
 ‘He’ll open (things) with it.’

- c. *Buklatan ne.* [-an, beneficiary]
 buklat{-an}
 open.for 3_{ERG/3NOM}
 ‘He’ll open (it) for him.’

Betsimisaraka, a variety of Malagasy spoken in Madagascar, is another language with a Philippine-type system but with only two types of transitive sentence, such as those shown in (7)b and (7)c. In such a situation, there is only one construction that may be referred to as applicative, namely (7)c.^{17,18)}

- (7) Betsimisaraka Malagasy (Kikusawa, fieldnotes)
- a. *Mamafa traño zaho.* [EXTENDED INTRANSITIVE]
 sweep house.(OBL) 1_{SG.IND.}(NOM)
 ‘I sweep a house./I do house-sweeping.’
- b. *Fa:fâ=ko traño amna fa:mâfa.* [TRANSITIVE, general]
 sweep=1_{SG.GEN} house.(NOM) with broom
 ‘I sweep the house with a broom.’
- c. *Mafaà=ko traño fa:mâfa.* [TRANSITIVE, instrument]
 sweep.with=1_{SG.GEN} house.(OBL) broom.(NOM)
 ‘I sweep a house with the broom.’

As has been shown above, in languages with a Philippine-type system, applicatives are certain types of transitive constructions, where the semantic role of the nominative argument changes corresponding to changes in the verb morphology.

2.2 Applicative constructions in Malay-type languages

Malay-type languages, like the Philippine-type languages, have three basic clause structures, which are also labelled here as intransitive, extended intransitive and transitive.¹⁹⁾ These are shown in Table 4.

Table 4 “Malay-type” Case Alignment (I)²⁰⁾

	ACTOR	UNDERGOER
A. INTRANSITIVE	S (NOM)	
B. EXTENDED INTRANSITIVE ²¹⁾	S (NOM)	=E
C. TRANSITIVE	=A, or A=	O (NOM)

In a Malay-type system, the E of extended intransitive sentences and the A of transitive sentences have a fixed position relative to the verb. When the A is

expressed with a clitic pronoun, in some languages such as Totoli (spoken in Sulawesi), the clitic pronoun set consists of both proclitics and enclitics.²²⁾ The position of S and O varies, either following the verb and its clitic(s) (creating structures such as V=E S and V=A O), or preceding it (S V=E and O V=A), or both. Example sentences illustrating this system are given in (8) from Indonesian. It can be seen in (8)a, the actor *ia* ‘she’ precedes the verb, while the undergoer *Nama-nya* ‘her name’ immediately follows the verb, while in (8)b, the undergoer *Nama-nya* ‘her name’ precedes the verb and the form =*nya* expressing the actor follows the verb.

(8) Indonesian (Adelaar 2005: 7)

- a. *Ia* *mənulis* *Nama-nya*. [EXTENDED INTRANSITIVE]
 3SG write name-3SG.GEN (Ø, general)
 ‘She wrote her name.’
- b. *Nama-nya* *di-tulis*=*nya*. [TRANSITIVE]
 name-3SG.GEN PASS-write=3SG.GEN (Ø, general)
 ‘She wrote her name.’

It has been shown in 2.1 that, in the Philippine-type languages, there are different types of transitive clause some of which can be analysed as applicative constructions. It has been also mentioned earlier that, in Malay-type languages, there are certain verb endings, such as Indonesian *-i* and *-kan*, that have been treated as applicative suffixes. Such forms derive a verb that takes a location or a locational target or source, etc. as its direct object (*-i*), or a beneficiary, cause of emotion, instrument, etc. (*-kan*). Thus, like in the Philippine-type languages, verbs with either of these endings satisfy the characteristics of applicative constructions in that the O expresses the element that is peripheral to the event, or occurs as an adjunct in other sentence types. In addition, it is often the case in Malay-type languages that applicative affixation increases valency with the result that the construction becomes ditransitive.

However, unlike in Philippine-type languages where applicative constructions are subtypes of transitive sentences, in Malay-type languages, such forms may occur on the verbs of both extended intransitive as well as transitive sentences. The Indonesian applicative suffix *-i* occurring on verbs in both extended intransitive and transitive sentences can be seen in (9), while sentences having verbs with *-kan* are shown in (10).

(9) Indonesian *-i* occurring on both extended intransitive and transitive verbs (Adelaar 2005: 7)

- a. *Aku* *məN-tulis-i* *amplop itu*. [EXTENDED INTRANSITIVE]
 1SG AV-write-APPL envelope DIST (-i, APPLICATIVE 1)
 ‘I scribbled on the envelope.’

- b. *Amplop itu ku-tulis-i.* [TRANSITIVE]
 envelope DIST 1SG-write-APP1 (-i, APPLICATIVE 1)
 ‘I scribbled on the envelope.’

10) Indonesian -kan occurring on both extended intransitive and transitive verbs
 (Adelaar 2005: 7)

- a. *Ia mən-tulis-kan saya bon.* [EXTENDED INTRANSITIVE]
 3SG AV-write-APP2 1SG receipt (-kan, APPLICATIVE 2)
 ‘He wrote me a receipt.’
- b. *Saya di-tulis-kan bon.*²³⁾ [TRANSITIVE]
 1SG UV-write-APP2 receipt (-kan, APPLICATIVE 2)
 ‘They wrote me a receipt.’

Parallel examples are given in (11) (verbs with *-in*) and (12) (verbs with *-ang*) from Balinese.

(11) Balinese sentences illustrating extended intransitive and transitive sentences
 (Arka 2003: 199)

- a. *Ia negak-in dampar-e lung.* [EXTENDED INTRANSITIVE]
 3SG/PL AV.sit-APP1 bench-DEF broken (-in, APPLICATIVE 1)
 ‘S/he sat on the bench and the bench broke.’
- b. *dampar-e tegak-in=a lung.* [TRANSITIVE]
 bench-DEF OV.sit-APP1=3SG/PL broken (-in, APPLICATIVE 1)
 ‘S/he sat on the bench and the bench broke.’

(12) Balinese -ang occurring on both extended intransitive and transitive verbs
 (Arka 2003: 203)

- a. *Tiang ng-alih-ang ia potrekan awakne.* [EXTENDED INTRANSITIVE]
 1SG AV-search-APP2 3SG/PL picture self (-ang, APPLICATIVE 2)
 ‘I searched for the picture of himself for the benefit of him.’
- b. *Ia alih-ang tiang potrekan awakne.* [TRANSITIVE]
 3SG/PL OV.search-APP2 1SG picture self (-ang, APPLICATIVE 2)
 ‘I searched for the picture of himself for the benefit of him.’

Thus, unlike the applicative constructions in Philippine-type languages, which form a transitive paradigm with the general non-applicative construction, the applicative verbs in Malay-type languages form a distinct paradigm which parallels the non-applicative paradigm, as shown in Table 5. The difference between applicatives in Philippine-type languages and those in Malay-type languages described in this sec-

tion has hardly been discussed in previous studies in the context of their historical development.

Table 5 Applicative Suffixes and Case Alignment in Indonesian (based on Adelaar 2005: 7)

		GENERAL	APP1	APP2	ACTOR	UNDER-GOER
A. INTRANSITIVE					S (NOM)	
B. EXTENDED INTRANSITIVE	<i>məN-</i>	-Ø	-i	-kan	S (NOM)	=E
C. TRANSITIVE	<i>di-</i>	-Ø	-i	-kan	=A, A=	O (NOM)

Applicative 1 = location, locational target, source, etc.

Applicative 2 = beneficiary, cause of emotion, instrument, etc.

2.3 Oceanic-type applicative constructions

Oceanic-type languages typically show an accusative case alignment. This is shown in Table 6, followed by example sentences (13) from Standard Fijian.

Table 6 “Oceanic-type” (Accusative) Case Alignment²⁴⁾

	ACTOR	UNDERGOER
A. INTRANSITIVE (I)	S (NOM)	
B. INTRANSITIVE (II)	S (NOM) + PP (LOC/OBL)	
C. TRANSITIVE	A (NOM)	O (ACC)

(13) Standard Fijian sentences illustrating their basic case alignment (Pawley and Reid 1979: 121, my analysis)

a. *Au-davo*. [INTRANSITIVE (I)]

1SG.AGR-lie
‘I(’ll) lie (down).’

b. *Au-davo e na ibe*. [INTRANSITIVE (II)]

1SG.AGR-lie LOC DET mat
‘I lay on the mat.’

c. *Au-davo-ra na ibe*. [TRANSITIVE]

1SG.AGR-lie.3SG{-ra} DET mat.(ACC) (-Ca, direct location)
‘I lay on the mat.’

In each of the sentences in (13), the actor agrees with the form *au-*, which indicates the person and number of S (in intransitive constructions) or A (in transitive constructions). Sentences (13)a and (13)b are intransitive sentences, with or without a prepositional phrase. Sentence (13)c is a transitive sentence that corresponds to the intransitive sentence with a preposition, where the O indicates the thing on which the event takes place. A similar alternation is possible, for example, with the verb

laxo in Kadavu Fijian, as shown in (14).

(14) Kadavu Fijian (Kikusawa, fieldnotes)

- a. *Au-laxo* *xi na lori.* [INTRANSITIVE (II)]
 1SG.AGR-go to DET car
 ‘I(‘ll) go to the car.’
- b. *Au-laxo-va* *na lori.* [TRANSITIVE]
 1SG.AGR-go{-va} DET car (-*Ca*, goal/direct location)
 ‘I(‘ll) go for the car (e.g., to fetch the car).’

In some Oceanic languages such as Fijian, the transitive verb carries either of two verb endings, which are sometimes referred to as “short transitive” or “remote transitive” endings (Pawley 1973; B. Evans 2003). Their forms are commonly represented as *-Ca* for the former and *-Caka*, *-Cakin*, *-Cakini* for the latter, with *C* standing for a consonant that is lexically determined for each verb. With verbs carrying the “short transitive” ending, the O of the sentence typically indicates general patient, location, locational goal, etc., as shown in (15), while with verbs carrying one of the “remote transitive” endings, the O of the sentence typically indicates concomitant, instrument, cause of emotion, beneficiary, etc., as shown in (16). The latter, because of the peripheral semantic nature of the O, is sometimes referred to as applicative.

(15) Kadavu Fijian (Kikusawa, fieldnotes)

- a. *Au-viri-ka* *na toa* (*e na solo*). [TRANSITIVE]
 1SG.AGR-pelt{-ka} DET chicken with DET stone (-*Ca*, goal)
 ‘I(‘ll) pelt the chicken (with stones).’

(16) Kadavu Fijian (Kikusawa, fieldnotes)²⁵⁾

- a. *Au-viri-taxina* *na solo* *xi na toa.* [TRANSITIVE]
 1SG.AGR-pelt{-taxina} DET stone to DET chicken (-*Caka*, instrument)
 ‘I(‘ll) throw stones at the chicken.’
- b. *Au-laxo-vaxina* *na gone.* [TRANSITIVE]
 1SG.AGR-go.with{-vaxina} DET child.(NOM) (-*Caka*, concomitant)
 ‘I go with the child. / I accompany the child.’

The sentences shown in (15) and (16) are all transitive constructions, the only difference among them being the form of the endings that the verbs carry. In this respect it appears that applicative constructions in Oceanic-type languages align with the other transitive constructions in the same way that applicative constructions do in Philippine-type languages. However, there is an additional derivational system

associated with the *-Ca* and *-Caka* endings in Oceanic-type languages that is not found in Philippine- and Malay-type languages. This is described below.

Verbs with the endings *-Ca* and *-Caka* in Fijian all have a corresponding intransitive form with the ending *-Ci* and *-Caki* respectively, where the undergoer of the event is expressed as the nominatively marked sole core argument (or, “S”) of the sentence.²⁶⁾ Intransitive sentences corresponding to some of the transitive sentences in (14) through (16) are provided in (17).

(17) Kadavu Fijian

- a. *E-laxo-vi* *na lori.* (cf. (14)b) [INTRANSITIVE]
 3SG.AGR-lie.3SG{-vi} DET car.(NOM) (-*Ci*, goal/location)
 ‘(Someone) went to the car. (Lit. The car was gone to.)’

- b. *E-laxo-vaxi* *na gone.* (cf. (16)b) [INTRANSITIVE]
 3SG.AGR-go.with{-vaxi} DET child.(NOM) (-*Caki*, concomitant)
 ‘The child was gone with (by someone).’ or ‘The child was accompanied with (by someone).’

- c. *E-viri-xa* *na toa* (*e na solo*). (cf. (15)) [INTRANSITIVE]
 3SG.AGR-pelt{-xa} DET chicken with DET stone (-*Ci*, goal)
 ‘The chicken was pelted (with stones).’

- d. *E-viri-taxi* *na solo* (*xi na toa*). (cf. (16)a) [INTRANSITIVE]
 3SG.AGR-pelt{-taxi} DET stone to DET chicken (-*Caki*, instrument)
 ‘Stones were thrown (at the/a chicken).’

A summary of the clause structures and verb forms is given in Table 7. Note that the clause structures of Intransitive I, II and Intransitive III are the same; the only difference between the two is the form of the verb.

Table 7 “Oceanic-type” (Accusative) Case Alignment

			ACTOR	UNDERGOER
A. INTRANSITIVE (I)	-Ø		S (NOM)	
B. INTRANSITIVE (II)			S (NOM) + PP (LOC/OBL)	
C. TRANSITIVE	<i>-Ca</i>	<i>-Caka</i>	A (NOM)	O (ACC)
D. INTRANSITIVE (III)	<i>-Ci</i>	<i>-Caki</i>	S (NOM) S (NOM) + PP (LOC/OBL)	

An exhaustive summary of the function and meaning of these endings, along with data from various Oceanic languages appears in B. Evans 2003.

3 Comparison and reconstruction of applicative constructions in Austronesian languages

As has been seen in section 2, the term applicative is used in the descriptions of a wide range of Austronesian languages, but the nature of its reference varies. The constructions to which the term applicative has been applied involve various types of transitive sentence (in Philippine-type and Oceanic-type languages), as well as to extended intransitive and transitive constructions with *-i* and *-kan* verb endings (in the Malay-type languages).²⁷⁾ Since it is obvious that we cannot simply assume that all applicative constructions are cognate constructions, that is, constructions that developed from some shared proto-construction, they need to be systematically compared in order to reconstruct the structures in Proto-Austronesian from which they must have originated, and to clarify the processes by which they developed.

In this section, the discussion will focus on problems that arise when considering relevant issues appearing in previous studies, as a prelude to the presentation of new hypotheses in section 4 which better account for the range of structures discussed in the previous sections. In section 3.1, I will point out that in previous reconstructions, the development from the proposed Proto-Austronesian system to the later systems has never been made explicit, and this is because of an inadequate recognition of the cognacy of relevant structures in the daughter languages—that is, which structures are common developments from the same reconstructed structure. In section 3.2, I discuss the consequence of this, namely an inadequate reconstruction of Proto-Austronesian verb affixation. In section 3.3, I will summarize proposals that have been made as to the possible sources of the *-i* and *-kan* applicative verb affixes of Malay-type languages.

3.1 Transition from Proto-Austronesian to the Pre-Indonesian system

3.1.1 Problems in previous reconstructions

One of the major problems in previous reconstructions involving verb systems is that it is not clear how the reconstructed Proto-Austronesian system could have developed into Malay-type systems. This becomes obvious when we compare, for example, Table 8 and Table 9. Table 8 is an extract of the relevant verb forms from the Proto-Austronesian “voice, mood and aspect morphemes” presented by Ross (2002: 33), and Table 9 is based on Ross’s “hypothetical early Indonesian-type language” (based on Wolff 1996). Ross notes that this table is “a hypothetical picture” of a language in an early stage of its transition to what he calls the Indonesian-type. The names of sentence types in Table 9 follow those in the original.

Table 8 Proto-Austronesian Verb Forms (based on Ross 2002: 33)²⁸⁾

SENTENCE TYPES	INDICATIVE NEUTRAL	NON-INDICATIVE, ATEMPORAL
(EXTENDED) INTRANSITIVE	<um>	Ø
GENERAL TRANSITIVE	-ən	-u, -a
LOCATIONAL TRANSITIVE	-an	-i
CIRCUMSTANTIAL TRANSITIVE	Si- ²⁹⁾	án-i-

Table 9 A Hypothetical Early Indonesian-type Language (based on Ross 2002: 53)³⁰⁾

SENTENCE TYPES	ACTIVE	PASSIVE
PATIENT UNDERGOER	maN- or <um>	Ø
LOCATION UNDERGOER	maN- -i or <um> -i	-i
CIRCUMSTANTIAL UNDERGOER	maN--an	-an

A quick glance at Tables 8 and 9 immediately raises the question as to how the forms reconstructed for Proto-Austronesian in Table 8 developed into those shown in Table 9. The system reconstructed for Proto-Austronesian (and in other places for Proto-Malayo–Polynesian) closely follows and is based on what has been characterized above as a Philippine-type system, with one “active” construction, presented in Table 8 as (extended) intransitive and three transitive constructions. The implication is that the transitive constructions of the Philippine-type system are somehow cognate with the three undergoer constructions of the “early Indonesian-type” system in Table 9. Ross’s claim regarding the suffix *-an* makes explicit this matching. He states, i) the passive “circumstantial undergoer suffix **-an*” in Table 9 reflects the Proto-Malayo–Polynesian circumstantial transitive atemporal form **-án* (not shown in the table), and; ii) it was replaced in many Indonesian-type languages by a reflex of **-[a]kən* (Ross 2002: 55–56). However, as we have seen in section 2, the occurrence pattern of the *-KAN* endings in Malay-type languages is different from that of the *-AN* ending in Philippine-type languages. Although both forms could be referred to as applicatives and are phonetically similar, the structures in which they appear are not cognate and are functionally and semantically distinct. I argue that these problems arise as a result of wrong assumptions regarding cognate structure correspondence. An alternative proposal is presented in section 3.1.2 below.

3.1.2 Determining the cognacy of clause structures in Malay- and Philippine-type languages

In Kikusawa 2003b, based on what is known about the distribution of genitive clitic pronouns in Austronesian languages, it was shown that transitive sentences in the Philippine-type languages are cognate structures of the so-called “undergoer voice” sentences (referred to as transitive in this paper) in Malay-type languages.³¹⁾ Likewise, extended intransitive sentences of Philippine-type languages are cognate structures of so-called “actor voice” sentences (referred to as extended intransitive

in this paper) of Malay-type languages. The mechanism of the development of the three different systems in Austronesian languages, namely, the Philippine-type, Malay-type and Oceanic-type has been discussed elsewhere (based on case-marking patterns), and the details are not repeated here (see Kikusawa 2002, 2003a, 2008). However, a summary of the hypothesis is provided in Figure 2. The parts of the figure that are directly relevant to the current discussion are the top three boxes which show the development from a Proto-Extra-Formosan (Ross’s Proto-Malayo-Polynesian) system to two Malay-type systems.

Because it is the constructions that are referred to as “active” and “passive” in Table 9 that historically go back to the same source as the “(extended) intransitive” and “transitive” structures in Table 8, a reorganization is necessary for the sake of easier comparison of the verb forms in the two tables. Thus, a flipped version of Table 9 is given as Table 10. It now parallels Table 5, the relevant part of which is repeated here as Table 11, and better displays the historical relationship among clause structures of the two systems, as can be seen in Figure 3.

Table 10 Reformed Version of Ross’s Hypothetical “Early Indonesian-type Language” System

SENTENCE TYPES	PATIENT UNDERGOER	LOCATION UNDERGOER	CIRCUMSTANTIAL UNDERGOER
ACTIVE (< *EX.INTR)	<i>maN-</i> , or < <i>um</i> >	<i>maN- -i</i> , or < <i>um</i> >- <i>i</i>	<i>maN- -an</i>
PASSIVE (< *TR)	∅	- <i>i</i>	- <i>an</i>

Table 11 Applicative Suffixes and Case Alignment in Indonesian (based on Adelaar 2005: 7)

		GENERAL	APP1	APP2
A. INTRANSITIVE				
B. EXTENDED INTRANSITIVE (< *EX.INTR)	<i>məN-</i>	-∅	- <i>i</i>	- <i>kan</i>
C. TRANSITIVE (< *TR)	∅, <i>di-</i>	-∅	- <i>i</i>	- <i>kan</i>

In Figure 3, it is now clear that the occurrence of <*um*> in “active” sentences is a retention of the form that occurred on intransitive verbs in Proto-Austronesian.³²⁾ What needs to be accounted for, however, is first, the difference in the number of types of transitive sentence in Proto-Austronesian and the Malay-type languages (to be discussed in section 3.2), and secondly, how the paradigm contrasting “general”, applicative 1, and applicative 2 constructions in Malay-type languages that is not found in the Proto-Austronesian system developed (to be discussed in section 3.3).

3.2 Verb affixes previously reconstructed for Proto-Austronesian

In previous reconstructions of Proto-Austronesian clause structures, as shown in Table 8, a Philippine-type tripartite transitive system is assumed (Pawley and Reid 1979; Starosta, Pawley and Reid 2009 [1981]; Wolff 1973; Ross 2002; summarized

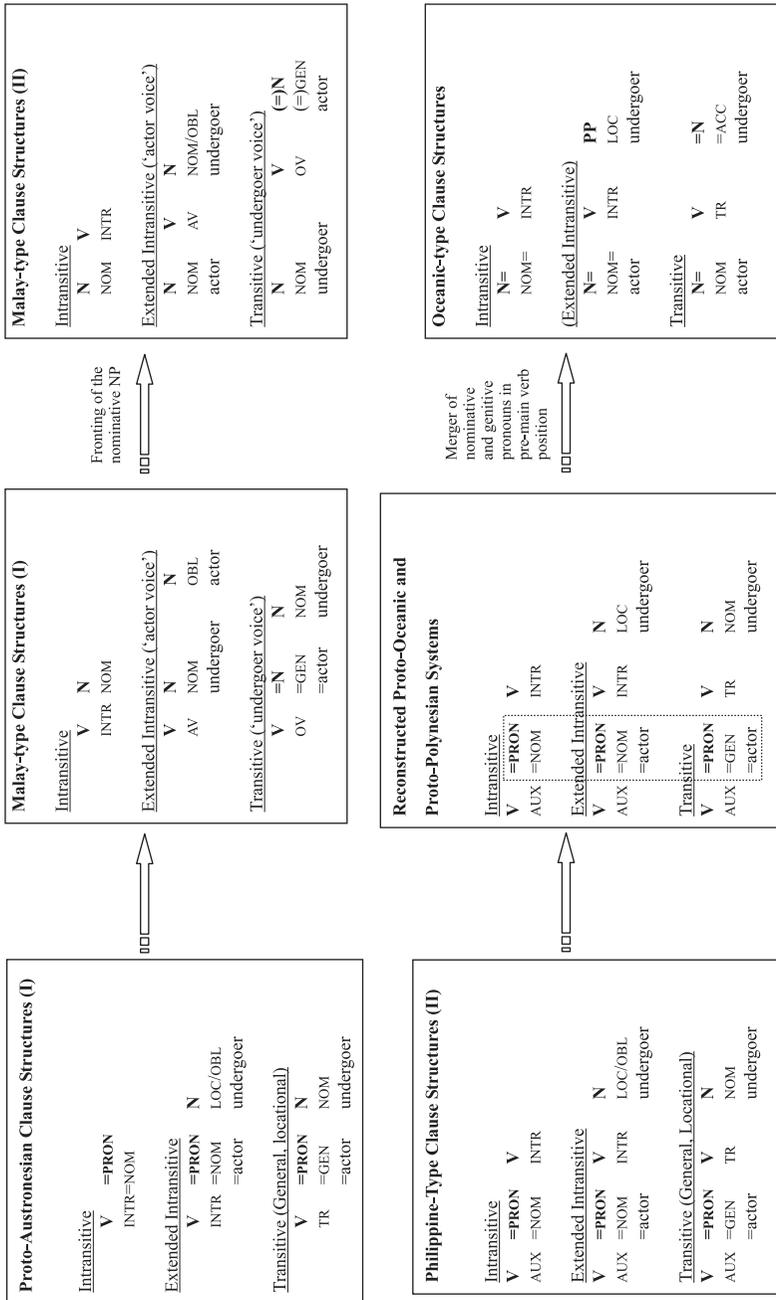


Figure 2 Cognate Structures among Austronesian Languages

(Table 10 A Hypothetical Early Indonesian-type Languages)

SENTENCE TYPES	GENERAL (PATIENT UNDERGOER)	APP1 (LOCATION UNDERGOER)	APP2 (CIRCUMSTANTIAL UNDERGOER)
ACTIVE (< *EX.INTR)	Ø	-i	-kan
PASSIVE (< *TR)	Ø	-i	-kan

(Table 8 Proto-Austronesian Verb Forms)

SENTENCE TYPES	INDICATIVE NEUTRAL	NON-INDICATIVE, ATEMPORAL
EXTENDED INTRANSITIVE	<um>	Ø
GENERAL TRANSITIVE	-ən	-u, -a
LOCATIONAL TRANSITIVE	-an	-i
CIRCUMSTANTIAL TRANSITIVE	Si-	an-i-



Figure 3 Correspondence between Structures in Tables 8 and 10 Based on Their Cognacy (arrows indicate the sets of constructions that are historically reliable)

in Adelaar 2005). However, as has been pointed out in 3.1, the pre-Indonesian system of Ross 2002 (and the Malay-type system described in 2.2) shows only one type of (post-)transitive clause structure.³³⁾ It has been generally assumed that the Malay-type system is the result of the reduction of the contrasts found in the earlier multi-transitive system. However, it is also possible that the multi-transitive system found in Formosan and Philippine languages is the result of subsequent (parallel) innovations after, say, Proto-Central–Eastern-Malayo–Polynesian split off. In this light, the following are worth re-evaluating.

First, according to previous studies, the reconstructed Proto-Austronesian verb affixes particularly those that have been reconstructed as indicative forms appear to have reflexes with the same function only within Philippine-type languages. Regarding this, the following two sets of information are provided in Pawley and Reid 1979. First, they point out that the use of transitive verb affixes *as nominalizers* is clearly reconstructible for Proto-Austronesian.

The use of verb stems plus nonactor focus [= transitive] affixes as nouns is clearly PAn. The nominal uses are found throughout Philippine-type subgroups as well as in Oceanic and Toba Batak of Sumatra, and their PAn status can hardly be questioned. (1979: 119–120)

Second, they mention that (although they reconstruct the forms as verb affixes), the reflexes of such forms as **-an* ‘locational transitive’, **i-* ‘instrumental transitive’ are found in Oceanic languages only as nominalizers.

We find in Oceanic languages cognates of all the focus affixes of Philippine languages. In Oceanic these affixes are noun-deriving. **-an* and **i-* are quite widely reflected and still productive...**-an* derives nouns denoting the place of an action, an object which is characteristically the place or goal of a posture, movement, etc. ... Also, **i-* derives nouns denoting instrument or product of a verb of manufacture—in general, objects associated with the act named by the verb...**-ən* has traces only, and must have ceased to be productive by POc times. (1979: 119)

Similarly, in the latest summary of Proto-Oceanic verb morphology, the reflexes of the forms commonly reconstructed as transitive verb affixes in Proto-Austronesian, such as POc **-on*, **-an*, and **i-* are considered to have functioned as nominalizers (Table 12), being in accord with Pawley and Reid 1979.

Table 12 A Reconstruction of the Proto-Oceanic System (Lynch, Ross and Crowley 2002: 62)

	VERB	NOMINALIZATION	
		NEUTRAL	PERFECTIVE
		-	-
(relic transitives)	(<i>paN-</i> , <i>N-</i>)	(<i>-on</i>)	-
direct transitive	<i>-i</i>	<i>-an</i>	< <i>in</i> > [<i>-an</i>]
benefactive/instrumental transitive	<i>-aki(n)</i> , <i>-akini</i>	<i>i-</i>	-

It appears that the most simple reconstruction based on these facts is to reconstruct the forms **-ən*, **-an*, **Si-* for Proto-Austronesian only as nominalizing affixes. If we assume that this is correct, the forms that have been reconstructed for Proto-Austronesian as “indicative verb affixes” differentiating different types of transitive verbs (Table 8) are later developments in Formosan and Philippine languages, resulting from the extension of their function as nominalizers, the mechanism for which was detailed in Starosta, Pawley and Reid 2009 [1981].³⁴⁾ Furthermore, if we assume that the verb affixes in Proto-Austronesian were limited to those that have been reconstructed as “dependent verb affixes”, the development of applicative constructions in languages in Malay- and Oceanic-type languages is better accounted for, as shown in section 4.

3.3 Whence the applicative endings

Attempts have been made in previous studies to clarify the sources of the applicative endings (*-i* and *-kan* like forms) in Malay-type languages, and the **-i* and **-akin[i]* endings of Proto-Oceanic. These will be discussed in section 3.3.1, while structural changes that are relevant to their functions will be discussed in section 3.3.2.

3.3.1 Relevant formal reconstructions

Discussion as to the reconstruction of the *-i* and *-kan* like applicative endings appears in various places. Those given in Table 13 are the commonly accepted formal reconstructions. It should be noted that the stage between Proto-Austronesian and Proto-Oceanic which is indicated as “Pre-Indonesian”, is not meant to be ancestral to all Malay-type languages, since “it is not clear that they form a subgroup within Malayo-Polynesian [= Extra-Formosan]” (Ross 2002: 52).

Table 13 Reconstructions of Ancestral Forms of Applicative Affixes

Proto-Austronesian	<i>*i</i>	<i>*[a]kən</i>	Pawley and Reid 1979
Pre-Indonesian	<i>*-i</i>	<i>*-[a]kən</i>	Ross 2002 ³⁵⁾
Proto-Oceanic	<i>*-i</i>	<i>*-akin[i]</i>	B. Evans 2003

The vowel **i* in the second syllable of Proto-Oceanic **akin[i]* is not a regular reflex of Proto-Austronesian **ə* (with the expected Proto-Oceanic reflex being **o*). Pawley and Reid state:

“It can hardly be doubted that P[roto-]Oc[eacnic] **akin* is cognate with **aken* as reflected in Toba Batak, Malay, Javanese, Wolio, etc. The irregular appearance of **-i-* instead of **-o-* as the reflex of the P[roto-]A[ustro]n[esian] central vowel **-e-* in **akin* can be explained simply. Pre-Oceanic developed obligatory pronominal suffixes in transitive constructions, giving the series **ákon-(i)áu*, **-ákon-íko*, **-ákon-ía*, **-ákon-ikámi*, **-ákon-ída*, etc., with stresses on the penult and alternate preceding syllables. The high

frequency of third singular and third plural endings **-ákonía* and **-ákonída* was the precondition for an assimilation of unstressed **o* to **i* before stressed **i*, yielding **-akinia*, **-akinida*, **-akiniko*, etc. This, the most frequent variant, was then generalized to all positions.” (1979: 125, footnote 15)

For the sake of discussion in this paper, I accept the forms as reconstructed for Proto-Oceanic by Pawley and Reid and refer to them hereafter as **-i* and **-akən*, the latter being the form from which the POC form developed.

3.3.2 Reconstructing the functions of **-i* and **-akən*

It has been mentioned in previous reconstructions that the applicative 1 ending **-i* may go back to a “locational focus” affix **-i* in Proto-Austronesian, and I follow this view.³⁶⁾ The form has been reconstructed as a “locational focus” affix occurring only on dependent (Wolff 1973) or non-indicative verbs (Ross 2002), along with PAN **-a* which has been reconstructed as a dependent “goal focus” transitive.³⁷⁾ Alternatively, as will be shown in section 4.2, if one reconstructs the form PAN **-i* along with PAN **-a* not as affixes on dependent verbs, but as the locational and general transitive verb affixes of indicative constructions (instead of **-an* and **-ən*), the development of the Proto-Austronesian system to the Malay- and Oceanic-type systems is much more readily explained.

Unlike the applicative affix **-i*, there is no likely source found in previously reconstructed Proto-Austronesian affixes for the applicative affix **-akən*. It has also been claimed that **-akən* is not reconstructible for Proto-Malayic (Adelaar 1992: 147–148). Pawley and Reid suggest that “both **i* and **akən* were present in PAN, at least as prepositions” and that these prepositions were “‘captured’ by the verb to become a suffix or clitic” (1979: 112). Starosta, Pawley and Reid 2009 [1981] follows this claim that **-akən* was an earlier preposition that was grammaticalized, and attempts to show the mechanisms of this change. As a preposition they suggest that it marked “accessory” phrases. Here I propose instead that **-[a]kən* is not reconstructible to Proto-Austronesian, and in order to adequately account for it, it is necessary to assume an oblique-marking preposition **kən* that was captured by the verb to eventually develop into **-[a]kən*.³⁸⁾ It will be shown in section 4 that, functionally, this, along with the endings **-a* and **-i*, provides us with a means to explain the development of the Pre-Indonesian system.

4 A new hypothesis of the development of applicative constructions in Austronesian languages

In this section I will provide a hypothesis that may better account for the development of applicative verbs in Austronesian languages than those that have been discussed in the previous sections of this paper. This hypothesis is proposed based on observations described in the previous sections, an attempt based on a

deductive approach rather than on bottom-up reconstruction.

In section 4.1, I outline the developments that brought about the structures of Philippine-type languages. In section 4.2, I outline the developments that resulted in the structures of Malay-type languages, and in section 4.3, those that resulted in the structures of Oceanic-type languages.

4.1 The Proto-Austronesian verb system and its development in Philippine-type languages

Based on the observations made in section 3, I propose that Proto-Austronesian had a system in which there were two types of transitive verbs, namely general transitive (marked with *-a) and locational transitive (marked with *-i), as shown in Table 14. In addition, there were at least two affixes that derived nouns from verbs, shown in (18). It is possible that there was also a nominalizing affix *-ən,³⁹⁾ which developed into the general transitive suffix found today in a wide range of Philippine-type languages. The fact that I do not mention other forms that appear in previously reconstructed verbal paradigms (e.g., Ross 2009; Blust 2003: 471–475; etc.) simply means that they are not directly relevant to the transitive-intransitive and applicative-non-applicative alternations and thus are outside of the scope of this paper.

Table 14 Proto-Austronesian Transitive Verb Affixes

GENERAL TRANSITIVE	*-a
LOCATIONAL TRANSITIVE	*-i

(18) Proto-Austronesian nominalizing affixes (based on Starosta, Pawley, and Reid 2009 [1981])

*-an ‘derived a noun indicating a location from verbs’

*Si- ‘derived a noun indicating a tool (in a broad sense) from verbs’⁴⁰⁾

(19) Pre-Malay-type preposition

*kən ‘oblique phrase marking preposition’

From this system with two types of transitives, namely general transitive and locational transitive, Philippine-type languages independently developed the systems described in section 2.1 above, by treating nominalizing affixes as derivational affixes forming applicative verbal constructions. Among the three applicative constructions found in the Philippine-type languages, the benefactive transitive/applicative appears to be an even later innovation, which developed by combining already existing forms **i- and **-an.⁴¹⁾ The development of multiple applicative systems in the Philippine-type languages is summarized in Table 15.

Table 15 Verb Affixes Subsequently Developed in the Philippine-type Languages

	FORMS	FURTHER DEVELOPMENT
GENERAL TRANSITIVE	*-ən, *-Ø (when *-<in> 'perfective' occurred)	
LOCATIONAL TRANSITIVE	*-an	
INSTRUMENTAL TRANSITIVE	*i-	
BENEFACTIVE TRANSITIVE	-	(i- / i- + -a / -an)

A consequence of these innovations was the replacement of the earlier forms *-a and *-i, which occur only in limited environments today, mainly in dependent clauses. This is consistent with the fact that the morphosyntactic features of dependent clauses tend to be more conservative than those occurring in main clauses (cf. Bybee 2002; Matsuda 1998).⁴²⁾

Some parts of the scenario presented above are similar in some respects to those proposed in previous studies. For example, the earlier nominalizers developing into verb affixes has been proposed by Starosta, Pawley and Reid (2009 [1981]). Also, Ross's proposed "pre-Proto-Austronesian system" (2002: 42) is quite similar to what I reconstruct here as Proto-Austronesian. While Ross proposes that the Philippine-type verb system had already developed by the time Proto-Austronesian was spoken, however, in my reconstruction, the Philippine-type system is considered to be the result of subsequent developments.⁴³⁾

4.2 The development of the Malay-type system

4.2.1 Grammaticalization of the preposition *-kən

The capture of an oblique marking preposition by the verb explains many features that are found in applicative constructions, including the distribution of their functions and semantic correspondences. However, this can be seen only when it is put into the context of structural developments in relevant languages, and when related (as well as subsequent) changes are identified as discussed below.

The hypothesis as to the structural developments assumed in this study follows that proposed in Kikusawa 2003b. It has been shown that in Proto-Extra-Formosan, there were three basic clause structures, namely intransitive, extended intransitive and transitive. Proto-Extra-Formosan—a daughter language of Proto-Austronesian and a parent of the protolanguages from which the Malay- and Oceanic-type languages developed—can be assumed to have retained the two Proto-Austronesian transitive verb endings shown in Table 14. The proposed oblique preposition *kən, which introduced adjunct (or, peripheral) elements of the event described in a sentence, would be expected to have occurred in any of the three clause structures. However, if the preposition was captured by a verb, it would probably have been

only intransitive (including extended intransitive) and general transitive verbs that captured it, and not the locational transitive verbs. An explanation for why this was so involves the recognition that the innovation would have taken place to CENTRALIZE (Starosta, Pawley and Reid 2009 [1981]) the peripheral element in order to form a non-locational applicative construction. Note that there already was a locational applicative construction marked with *-i, and the development of a new applicative construction would have formed a paradigm with it, centralizing a peripheral element other than location.

It should be noted that “capture” of the preposition does not imply that the form no longer existed as a preposition in other syntactic contexts. It still did, creating a system such as that shown in Table 16.

Table 16 Preposition *kən Occurring with Different Types of Verbs

SENTENCE TYPE	RETAINED VERB AFFIX	GRAMMATICALIZED *-kən	PREPOSITION *kən
INTRANSITIVE, EXTENDED INTRANSITIVE	*maN- *<um>	*maN- + *-kən *<um> + *-kən	
GENERAL TRANSITIVE	*-a	*-a + *-kən	
LOCATIONAL TRANSITIVE	*-i	-	*kən

The grammaticalization of the preposition yielded the transitive verbs (shown in (20)), general, locational and a third transitive verb that required the nominative element expressing non-locational peripheral element in the event.

(20) New three-transitive verb system

- V-a General transitive
- V-i Locational transitive
- V-a-kən Non-locational, non-general transitive (Possible semantic features expressed by the nominative element being: cause, beneficiary, instrument, source, concomitant, etc.)

It should be noted that, although the system in this stage appears to be parallel to a Philippine-type system with three transitive constructions (general, locational and circumstantial), various formal, functional and semantic differences existed between the two.

4.2.2 Reorganization of the verb paradigm

Once the third transitive verb developed as a result of the grammaticalization of the preposition *kən, the verbal paradigm was reanalyzed creating a system such as that shown in Table 17.

Table 17 Preposition *kən Occurring with Different Types of Verbs

SENTENCE TYPE	GENERAL	APP1	APP2
INTRANSITIVE, EXTENDED INTRANSITIVE	*maN-, *<um>		*maN- + *kən, *<um> + *kən
GENERAL TRANSITIVE LOCATIONAL TRANSITIVE (NEW) TRANSITIVE	*-a	*-i	*-a + *kən

As has been mentioned earlier, the preposition *kən was captured by both intransitive and (non-locational) transitive verbs, however, the order is not clear. It is possible that, the change started with a particular set of verbs (probably because of their semantic features), and subsequently generalized to other verbs. However, the fact that the capture must have taken place on extended intransitive as well as on transitive verbs is clear considering the subsequent changes described in section 4.2.3 below.

4.2.3 Extension of the use of transitive endings

Subsequent to the reanalysis of the verb paradigm as Table 17, the function of the two applicative endings, *-i and *-akən, was generalized and the forms began to widely occur on extended intransitive verbs as well as on transitive verbs. This is probably related to changes that restructured the case-marking patterns of the languages, although details are yet to be examined. Possible motivations for this change are: i) the occurrence of *kən and *-akən on both clause structures, and; ii) that extended intransitive and transitive sentences both expressed actor and undergoer, although with different case-marking patterns. This change is shown in Table 18 (where the arrows indicate the extension of the distribution of each form), and the result is shown in Table 19.

Table 18 Changes Affecting the Distribution of the Applicative Suffixes

SENTENCE TYPE	GENERAL	APP1	APP2
INTRANSITIVE, EXTENDED INTRANSITIVE	maN-/<um>		maN-/<um> + *kən
TRANSITIVE	*-a	*-i	*-akən

Table 19 Malay-type System with Generalized Applicative Suffixes

SENTENCE TYPE	GENERAL	APP1	APP2
INTRANSITIVE, EXTENDED INTRANSITIVE	maN-/<um>	maN-/ <um> + *i	maN-/<um> + *[a]kən
TRANSITIVE	*-a	*-i	*[a]kən

Changes similar to that proposed above have been reported in several previous studies. For example, the development shown in (21), which is summarized by Adelaar (2005: 8, following Starosta, Pawley and Reid 2009 [1981]; Wolff 1996, 2002; Ross 2002), shows the changes where the use of the transitive verb endings *-i* and *-an* was generalized to extended intransitive verbs, a change of the same type as the one described above.

(21) A change in Malay-type languages (after Adelaar 2005: 8)⁴⁴⁾

<i>maN-V</i>	-	-
<i>ku=V</i>	<i>ku=V-i</i>	<i>ku=V-an</i>

↓

<i>maN-V</i>	<i>maN-V-i</i>	<i>maN-V-an</i>
<i>ku=V</i>	<i>ku=V-i</i>	<i>ku=V-an</i>

It is also parallel to what is referred to as “symmetricalization” by Zobel (2002: 425).⁴⁵⁾

4.3 The development of the Oceanic-type system

Languages with the Oceanic-type system must have developed also from the stage shown as Table 16 (repeated below as Table 20), but with different changes from those that took place in languages that developed into the Malay-type system.⁴⁶⁾ The reanalysis of the paradigm that resulted in Table 17 did not take place in these languages, instead, the earlier general and locational transitive sentences merged into the system shown in Table 21.

Table 20 Preposition *kən Occurring with Different Types of Verbs

SENTENCE TYPE	RETAINED VERB AFFIX	GRAMMATICALIZED *-kən	PREPOSITION *kən
INTRANSITIVE, EXTENDED INTRANSITIVE	*<um>	*<um> + *kən	
GENERAL TRANSITIVE	*-a	*a + *kən	
LOCATIONAL TRANSITIVE	*-i		*kən

Table 21 A System after the Merger of the Earlier Transitive Sentences

SENTENCE TYPE	SHORT TRANSITIVE	REMOTE TRANSITIVE	PREPOSITION
INTRANSITIVE, EXTENDED INTRANSITIVE	-	-	*akin
GENERAL TRANSITIVE	*-a/-i	*akin (< *akən)	

This development accounts for the fact that the objects of short transitive verbs (i.e., those with short suffixes such as *-va* and *-xa* in Kadavu Fijian) in Oceanic languages today are either general or locational, while those of remote transitive verbs (i.e., those with suffixes such as *-vaxina* and *-taxina*) usually indicate instrument, cause, beneficiary, etc. The proposed development matches the development of clause structures based on the patterns of marking on nouns, rather than on verbs (see Kikusawa 2002).

The merger described above resulted in the two endings, **-a* and **-i* sharing the same function, and as a result, a reorganization of the marking of transitivity took place, the changes of which resulted in several different systems in Oceanic languages today. For example, in some languages, the ending **-a* has been reinterpreted as a third person object-marking singular pronoun **-a*, resulting in a system where pronominal forms occurred on verb endings (cf. Pawley 1972, 1973; Clark 1973; and others). In other systems, only one of the two suffixes was retained and became interpreted as a transitive suffix. The development of the Fijian system described in section 2.3., with an extra intransitive sentence (III) (in Table 7) was also subsequent to the changes described here. However, due to limited space, details of the development of the various Oceanic systems will be examined in another place.

5 Concluding remarks

In this paper, based on a morphosyntactic comparison of the forms related to applicative constructions, I have reconstructed a verb system for Proto-Austronesian somewhat different from that appearing in earlier proposals. From this proposed system, I have proposed a scenario as to how different applicative constructions found in Austronesian languages today must have developed. The proposed hypothesis is summarized in Figure 4.

The first point of the proposed hypothesis is that if we assume a bipartite system of transitive clause structures in the proto-system, with a general transitive and an applicative locational transitive, the development of the presently found applicative constructions and the distribution of their semantic characteristics can be readily explained. The derivational endings that are proposed for these two types of transitive sentence are **-a* for general transitive and **-i* for locational transitive, forms that have been reconstructed as goal and locational “focus” affixes respectively for Proto-Austronesian (Wolff 1973), but as dependent verb forms. I have argued that the *-akən* like endings in Malay-type languages developed from an earlier oblique-marking preposition **kən*, which was “captured” by general transitive verbs (with the suffix **-a*), an innovation that resulted in the formation of a non-locational applicative construction. I have also argued that the old Proto-Austronesian applicative locational ending **-i* has been retained throughout the Austronesian languages, reflexes of which are now referred to with various terms,

Development of Philippine-type systems, post-Proto-Central-Eastern-Malayo-Polynesian

	"voice" morpheme	Dependent
EXTENDED INTRANSITIVE ("Actor Focus")	*-<um>	
TRANSITIVE ("Goal Focus")	*-an	*-a
TRANSITIVE ("Locational Focus")	*-an	*-i
TRANSITIVE ("Circumstantial/Instrumental Focus")	*-i-	
TRANSITIVE ("Benefactive Focus")	*-i--an	

	"voice" morpheme
EXTENDED INTRANSITIVE	*-<um>
TRANSITIVE, GENERAL	*-a
TRANSITIVE, LOCATIONAL	*-i

Noun marking form *-an 'location'
 Noun marking form *-i- 'accessory'
 Oblique preposition *kan

	DEFAULT	+APP
EXTENDED INTRANSITIVE	N-	(P *kan)
TRANSITIVE, GENERAL	*-a	*-kan
TRANSITIVE, INST, BENEFACTIVE, CAUSE etc.	*-i	-

	DEFAULT	+APP
EXTENDED INTRANSITIVE	N-	(P *kan)
TRANSITIVE, GENERAL	*-a	*-kan
TRANSITIVE, INST, BENEFACTIVE, CAUSE etc.	*-i	

	SUFFIX 1	SUFFIX 2
POST EXTENDED INTRANSITIVE	*-j/-a	*-akan
POST TRANSITIVE		

Balinese voice and applicative verbal morphemes (based on Arka 2003; Shiohara 2006)

	GENE-	APP 1 (LOC)	APP 2 (OTHERS)
EXTENDED INTRANSITIVE ("actor voice", "AV")	RAL		
TRANSITIVE ("undergoer voice", "UV", "OV")	N-	-i	-ang

Verb system in Standard Fijian (part)

	SHORT	REMOTE
INTRANSITIVE	*-Ci	*-Caki
TRANSITIVE	*-Ci=a	*-Caki=a
	*-C=PROP	*-Caki=PROP

(innovation)

Figure 4 Development of Applicative Verb Morphemes (Block arrows indicate changes in Proto-stages, regular arrows indicate subsequent innovations.)

including “applicative suffix” (Indonesian, Balinese, etc.), “transitive suffix” (Oceanic languages), etc.

The second point to be noted is that subsequently both *-i* and *-akən* like endings, deriving different types of transitive sentences, extended their functions, and started to occur on (extended-)intransitive sentences. This resulted in a reorganization of the verb paradigm, which eventually yielded the Malay-type system.

Finally, I have suggested that in the course of the development of Oceanic-type systems, the merger of different types of transitive sentence took place, resulting in new verb systems, such as the one where object-marking pronominal forms have been incorporated as the verb ending.

In this paper, the kinds of development that are apparently independent innovations subsequent to those in the proto-stages have not been discussed for space reasons. These include, the case-alignment change from ergative to accusative (Kikusawa 2002, 2003c, and others), the development of a new passive structure in many Malay-type languages (involving *di-* in Indonesian, *ni-* in others, and so on, Kikusawa 2012), and separation of the *-kan* and other verb suffixes to develop dynamic applicative constructions (which is a reverse change from the one discussed in this paper, Tadmor 2006a, 2006b; cf. Donohue 2001). Thus, although the clause structures described and discussed in this paper diachronically cover all the Austronesian languages, they do not reflect the results of all the later local changes.

Another matter *not* examined in this paper is how the new hypothesis affects or contributes to sub-grouping hypotheses of Austronesian languages. Although it seems to be a general tendency to consider morphosyntactic developments as valid sub-grouping criteria, I agree with Harrison (1982: 179) that the likelihood of a particular innovation being a “one-off” change differs between that in lexical items and that in grammatical change. Unlike certain sound and lexical innovations (which are based on the arbitrary relationship between meaning and sound), I consider that grammatical innovations commonly occur as parallel innovations and provide only weak evidence for subgrouping hypotheses, a good example being the ergative to accusative drift that has taken place in a large number of Austronesian languages (Kikusawa 2003d).⁴⁷⁾ However, this is not to deny the possibility that, after more detailed examination, some parts of the historical development discussed in this paper may turn out to make good criteria for establishing and/or supporting subgrouping hypotheses.

Abbreviations

A	argument expressing the actor of a transitive sentence
ACC	accusative
AGR	agreement marker
AF	actor focus
APP	applicative
APP1	applicative 1 (see §2.2)
APP2	applicative 2 (see §2.2)
AUX	auxiliary
AV	actor voice, agent voice
BF	benefactive focus
BV	benefactive voice
COMP	completive
CV	conveyance voice
DEF	definite
DET	determiner
DIST	distributive
E	argument expressing the undergoer of an extended intransitive sentence
ERG	ergative
EX.INTR	extended intransitive
GEN	genitive
GF	goal focus
IF	instrumental focus
IND	independent (pronoun)
INTR	intransitive
IV	inverse voice
LRC	Lynch, Crowley and Ross
LF	locative focus
LG	ligature
LOC	locative
LV	locative voice
N	noun
NOM	nominative
O	argument expressing the undergoer of a transitive sentence
OBL	oblique
OV	object voice
PAN	Proto-Austronesian
PASS	passive
PL	plural
POC	Proto-Oceanic

PREP	preposition
PRON	pronoun
PV	patient voice
S	argument expressing the sole argument of an intransitive sentence
SG	singular
TR	transitive
UF	undergoer focus
UV	undergoer voice
V	verb
1	first person
2	second person
3	third person
<x>	marks x as an infix
=	boundary of a clitic form
-	boundary of an affix

Notes

- 1) Earlier versions of this paper were presented at several academic meetings, including the Workshop on Grammatical Change (Brisbane, July 2006), a meeting of the Inter-university Joint Research Project at the Research Institute for Languages and Cultures of Asia and Africa (Tokyo, July 2006), a meeting of the Friday Afternoon Lecture Series of the Leiden University Centre for Linguistics (Leiden, February 2007), a meeting at the Max Planck Institute for Evolutionary Anthropology (Leipzig, November 2007), and the 7th International Conference on Oceanic Linguistics (Noumea, July 2007). I would like to thank the organizers for giving me an opportunity to work on this topic, and also participants for their comments and suggestions. I would also like to acknowledge Hein Steinhauer and the International Institute for Asian Studies for hosting me as an Affiliated Fellow (funded by NWO) from December 2006 to November 2007, when the examination of the major part of this work was conducted.
- 2) The term *APPLICATIVE* is typically used to refer to transitive sentences, in which the second core argument, the undergoer, is marked in the verb as having been derived from a sentence in which the semantic role of the undergoer (typically location, instrument, or benefactive) is expressed as an adjunct noun phrase. See section 2 for specific constructions, and the definitions of and differences among those that are relevant to the development of applicative constructions discussed in this study.
- 3) In the examples presented in this paper, the form expressing the actor noun phrase or pronoun in each sentence is underlined with a double line, while that expressing the undergoer is underlined with a single line. For discussion as to which element in the sentence is identified as the undergoer, see section 2.
- 4) The form *-in* alternates with *-nin*, which appears when the verb ends with a vowel. The word *nasi* (in (1)a and (1)c) indicates ‘cooked rice’, while *baas* is a more general term, indicating either cooked or uncooked rice.
- 5) In many languages, no distinct morphological case-marking occurs, especially on non-proper nouns. In examples in this paper from these languages, the case (indicated in parentheses in the glosses) is generally identified according to the form of the pronouns (which typically are case-marked) with which they potentially alternate. The sole core argument of a monadic intransitive sentence is labelled as “nominative” whether the language is ergative or accusative for ease of comparison

- among languages with different actancy systems.
- 6) This analysis of the development of *-i in Malay-type languages has been revised as this paper goes to press. I currently consider the applicative *-i* suffix on intransitive verbs in these languages to have a different source from the *i*-suffix on transitive verbs. The new analysis was presented at the Max Planck Institute for Evolutionary Science (February 9, 2012) and at a Friday seminar of the Department of Linguistic, Literary and Aesthetic Studies, University of Bergen (February 17, 2012) as “The development of ‘applicative’ constructions in western Austronesian languages: Toward a comparison and reconstruction”.
 - 7) Himmelmann (2005: 112) attempts to typologically classify western Austronesian languages with the notions “symmetrical voice languages” and “preposed possessor languages.” His “symmetrical voice” system roughly corresponds to what is referred to as the Malay-type system in this paper, and in his description, what is referred to as the Philippine-type system in this paper is treated as a subclass of the symmetrical voice system.
 - 8) The term EXTENDED INTRANSITIVE is taken from Dixon and Aikhenvald 2000 and refers to a construction that is semantically transitive in that its verb expects both an actor and an undergoer, labelled by Dixon and Aikhenvald as S and E, respectively. The undergoer is typically case-marked as oblique, and in other respects the construction is syntactically intransitive.
 - 9) Various terms, such as focus, topic, and voice have been applied in the analyses of languages in the Philippines. Ergative analyses appear in various publications including Aldridge 2004, Daguman 2004, de Guzman 1988, Gault 1999, Gerds 1988, Liao 2004, Mithun 1994, and Reid and Liao 2004.
 - 10) Extended intransitive constructions are referred to in some descriptions as “antipassive” or “pseudo-transitive” constructions.
 - 11) An extended core argument (see Dixon and Aikhenvald 2000) is marked as “E” in the Tables.
 - 12) The forms expressing the A of a transitive sentence (marking ergative) typically show the same marking as those expressing the possessor of a noun, and are therefore commonly labelled as “genitive”.
 - 13) The four transitive types listed in this table correspond to what are sometimes referred to as, for example, “goal focus”, “locational focus”, “instrumental focus” and “beneficiary focus”. A general terminology correspondence chart is given as Appendix B at the end of this paper.
 - 14) It should be noted that, in Tagalog, the same form *nang* (represented in the common orthography as *ng*) marks both genitive and oblique noun phrases. Whether a noun phrase carries genitive case or oblique case can be identified by possible alternations with pronouns and other syntactic behaviors.
 - 15) Type distinction is defined according to the derivational morphology on the verb. Thus, two transitive clauses with semantically distinguishable undergoers (for example, one with “instrument” and the other with “the cause of emotion”) would be still analysed as showing the same clause type if the verbs carry the same affix.
 - 16) The use of the term applicative differs depending on the researcher. For example, Payne (1997: 54) calls any sentence in Tagalog with both actor and undergoer macroroles (that is, extended intransitive and all types of transitive sentence) as applicative.
 - 17) Sentences such as (7)c in Malagasy have been referred to as “circumstantial voice” instead of applicative (Trask 1993: 42, citing example sentences from Keenan 1976). However, the difference between what Trask describes as “applicative” and “circumstantial” is not clear except for the fact that his “applicative” example sentences come from an accusative language while his “circumstantial voice” example sentences come from an ergative language.
 - 18) Malagasy is typically analysed applying an active/passive voice alternation. Ergative analyses of a Malagasy language appear in Bittner and Hale 1996, Mirto 1993 (cited from Paul and Travis 2006), and Kikusawa 2008. A theoretical assessment of ergativity in Malagasy appears in Paul and Travis 2006.
 - 19) The transitivity of sentences in Malay-type languages is controversial and is reflected in the various terms used to describe them, such as active versus passive (voice), agent versus undergoer (voice), etc. However, regardless of their synchronic description, it has been shown that the active (or agent) constructions developed from earlier extended intransitive constructions while the agent (or undergoer) constructions developed from earlier transitive constructions (Kikusawa 2003b).
 - 20) The symbol “=” indicates the boundary between the nominal element (“E” or “A”) and the verb

which immediately either precedes or follows it. These elements usually are syntactically closest to the verb in that, for example, other elements cannot intervene between the noun and the verb, an (alternating) pronominal form is cliticised to the verb, etc., showing that such an element carries a different syntactic status from others. An anonymous reviewer points out that the use of the same symbol “=” for E and A obscures the fact that some syntactic property of each element differs from that of the other.

- 21) In my previous work, structures B and C in the Malay-system are referred to as “Transitive (I) and Transitive (II)”, reflecting the fact that which one (or both) should be analysed as transitive has been one of the main issues in some analyses. However, in this study, to highlight the cognacy of these structures with those in Philippine-type languages, I use the same labels as those used in the Philippine-type system. The glosses are cited from the original data, using the commonly applied voice description, namely AV and OV, or AV and PV depending on the author.
- 22) See, for example, Himmelmann 1996, Kikusawa 2003c, 2012, Mead 2002, and van der Berg 1996.
- 23) In this sentence, the general actor ‘they’ is implied, but not overtly expressed.
- 24) In an accusative language, the structure labelled as “Intransitive (n)” is typically analysed simply as “Intransitive with an adjunct phrase,” showing the same kind of contrast as between English “look” and “look at”. However, in Table 6, the two structures, i.e., Intransitive I and II, are separated for comparison with the other systems discussed in the section.
- 25) The corresponding Standard Fijian verbs forms are respectively: *viritaka* and *lakovaka*.
- 26) cf. Kikusawa 2000, 2001.
- 27) The suffix *-kan* is used here to represent the variety of phonologically and functionally similar suffixes in various Malay-type languages.
- 28) The original table includes forms indicating mood and aspect, which do not involve changes in clause structure. The terms “actor”, “patient”, “location”, and “circumstantial”, are used in the original, instead of “(extended) intransitive”, “general transitive”, “locational transitive” and “circumstantial transitive” respectively.
- 29) Dahl (1973: 119) reconstructs this form as *Si-, while Starosta, Pawley and Reid (2009 [1981]: 159) reconstruct the form as *iSi-, based on its *is-* reflex in Bunun. However recent work by Lin (2006) suggests that Bunun *is-* is the result of the loss of the vowel of PAN *Si-, with subsequent epenthesis of *i-* to remedy an initial consonant cluster when the form is prefixed to a consonant-initial base.
- 30) The “neutral” and “perfective” forms that appear in the original but are not relevant to the discussion have been excluded from the table.
- 31) This correspondence, which assumes that Malay-type “passive” clauses are a retention of earlier transitive structures, appears to contradict Wolff’s proposal that the passive paradigm is an innovation in the pre-Indonesian system. It should be pointed out that the constructions that Wolff refers to as “passive” consist of different syntactic elements that historically go back to (at least) two different sources. One is the “passive” constructions that developed directly from the structures referred to in this paper as transitive sentences. The other is the new “passive” construction that developed from transitive constructions in pre-Malay as the result of the development of a new verb prefix that alternates with pronominal forms. This subsequent development is examined in detail in Kikusawa 2012, where a hypothesis as to the motivation and the mechanism of the development of the new passive marking affixes in different western Austronesian languages is presented.
- 32) The prefix *maN-* is a retention of a form which is generally believed to have developed in Proto-Extra-Formosan (if not earlier) as a marker of extended intransitive sentences as the result of derivation of *paN- derived nominals with an <um> infix. (Reid, L.A., pers. comm.)
- 33) The term POST-TRANSITIVE is used to identify any construction (whether transitive or not) that can be shown to have developed from an earlier transitive construction. Similarly POST-EXTENDED INTRANSITIVE is used to identify any construction that can be shown to have developed from an earlier extended intransitive construction.
- 34) Chamorro, which appears to have split off at an early stage of the dispersal of Extra-Formosan (Reid 2002), provides further support for this hypothesis in that the reflexes of the reconstructed “transitive verb” affixes that are retained only function as nominalizers.
- 35) Ross lists the form *-án along with *-[a]kən, overlooking the miss-match in function between the two forms. See section 3.1.2 for relevant discussion.

- 36) Pawley and Reid state that “There are no definite cognates in Philippine languages, though there are possible candidates, such as the *-i* form for verbs marked with locative focus in some Philippine and Formosan languages.” (1979: 112) Sirk also discusses the matter and states, “In view of these facts I maintain that the suffix *-i*, widespread in languages of western Indonesia, is cognate with the *-i* visible in dependent and/or imperative forms of a number of Philippine and Formosan languages.” (1996: 195)
- 37) “Wolff (1973: 86–88) reconstructs **-i* and **-a* for PAN, as the “dependent” forms of **-an* and **-ən*, respectively, on the basis of their occurrence in Samar-Leyte and Atayal. In the Philippines a fair number of other languages, including Maranao, Western Bukidnon Manobo, and Inibaloi have retained reflexes of **-i* and **-a*. The forms are required in each of these languages in imperative sentences ... Each of these languages has other constructions in which these forms must also be used. In Maranao and Western Bukidnon Manobo, the forms imply conditional, contingent, or potential activity. In Inibaloi they are used to indicate progressive aspect.” (Pawley and Reid 1979: 124; footnote 12)
- 38) Reconstruction of **kən* as an oblique preposition at some early stage of Austronesian, post Proto-Extra-Formosan, is supported by the widespread occurrence of reflexes of a **kən* (< **kən=ni*) ‘preposition introducing oblique/locative personal noun phrases’ in Philippine languages. It is reflected in some languages, such as Ilokano, as *kən*. It appears also in Formosan languages, e.g., Saisiyat *kan* ‘locative case-marker’, and Proto-Puyuma **ka ni* ‘oblique case marker’ (Ross 2006).
- 39) Starosta (1995) claims that it was innovated in a lower-level subgroup of Formosan languages.
- 40) Peterson (1997) proposes that the instrumental transitive verb prefix **i-* developed from an earlier auxiliary verb, captured by the verb, and now left only as a nominalizer in many languages.
- 41) The motivation for the same two verb affixes to be combined to develop the third (benefactive) applicative type independently in different language groups is probably related to the fact that causative, instrumental, and applicatives share certain semantic features which can be associated with certain grammatical operations (cf. Bybee 1985; Haspelmath and Müller-Bardey 1991; Shibatani 1996, and others).
- 42) An alternative hypothesis is that the subordinate clause structure with the forms **-a* and **-i* were ‘insubordinated’ (N. Evans 2007) in languages with Malay-type or Oceanic-type systems.
- 43) This reconstruction was revised in Ross 2009. Ross (2009), however, completely revised his reconstruction of PAN verbal morphology consistent with his revision of the upper phylogeny of Austronesian languages, where what had originally been reconstructed for Proto-Austronesian is now considered to belong to Proto-Nuclear-Austronesian.
- 44) The form *ku=* stands for any proclitic pronoun that is a reflex of an earlier genitive (i.e. post-genitive) pronoun, and V stands for the verb. The presentation of the paradigm has been adjusted so that the correspondence between the two proposals is clear.
- 45) Parallel developments that are considered to have taken place independently in Philippine languages are also discussed in Reid 2002.
- 46) B. Evans (2003) considers that **akin[i]* existed in Proto-Oceanic both as a verb ending and as a preposition.
- 47) Related discussion appears in Section 5.3.

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Appendix A:

The following tables are repeated for the sake of easier comparison. Boxes with thick lines indicate the forms that are referred to as “applicative” in each type.

Table 3 Tagalog Verb Forms and Transitive Sentence Structures

SENTENCE STRUCTURES	VERB FORM	CASE-MARKING PATTERN ON THE ARGUMENT(S)	
		A (ERG)	O (NOM)
C. TRANSITIVE			
GENERAL	<i>-in</i>		goal
LOCATIONAL	<i>-an</i>		location
INSTRUMENTAL	<i>ipang-</i>		instrument
BENEFACTIVE	<i>ipag-</i>		beneficiary

Table 5 Applicative Suffixes and Case Alignment in Indonesian (based on Adelaar 2005: 7)

		GENERAL	APP1	APP2	ACTOR	UNDER-GOER
A. INTRANSITIVE					S (NOM)	
B. EXTENDED INTRANSITIVE	<i>məN-</i>	<i>-Ø</i>	<i>-i</i>	<i>-kan</i>	S (NOM)	(V=)E
C. TRANSITIVE	<i>di-</i>	<i>-Ø</i>	<i>-i</i>	<i>-kan</i>	(V=)A	O (NOM)

Applicative 1 = location, locational target (recipient), source, etc.

Applicative 2 = beneficiary, cause of emotion, instrument, etc.

Table 7 “Oceanic-type” (Accusative) Case Alignment

	SHORT	REMOTE	ACTOR	UNDERGOER
A. INTRANSITIVE (I)	<i>-Ø</i>		S (NOM)	
B. INTRANSITIVE (II)			S (NOM) + PP (LOC/OBL)	
C. TRANSITIVE	<i>-Ca</i>	<i>-Caka</i>	A (NOM)	O (ACC)
D. INTRANSITIVE (III)	<i>-Ci</i>	<i>-Caki</i>	S (NOM)	

Suffix 1 = general transitive, location, locational target

Suffix 2 = beneficiary, cause of emotion, instrument, concomitant, etc.

Appendix B: Correspondence Chart for Terminology Used in Previous Works Referred to in This Paper

	SENTENCE STRUCTURES (OF PHILIPPINE AND MALAY-TYPE LANGUAGES)	TYPES OF TRANSITIVE SENTENCES	TYPES OF APPLICATIVES IN MALAY-TYPE SYSTEM
In this paper	Extended Intransitive	Transitive	General, Applicative 1 (app1), Applicative 2 (app2)
Pawley and Reid 1979	Antipassive Active	Transitive Passive	
Starosta, Pawley and Reid 2009 [1981] Ross 2002, Ross 2009 (of Phil)	Actor voice	Focus Undergoer voice	
Ross 2002 (of ML) Mead 1998 (of ML)	Active voice Antipassive	Passive voice Active	
Himmelmann 2005 (of ML) de Guzman (1997)	Actor voice Active voice	Undergoer voice Non-active voice	Objective voice, Dative voice, Locative voice, Benefactive voice, Instrumental voice, Reason voice
Adelaar 2005 (of ML) Arka 2003	Actor voice Agent voice	Undergoer voice Object voice	

Phil = Philippine-type system, ML = Malay-type system