

# Conducting Syntactic Reconstruction of Languages with No Written Records

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## Abstract

This article focuses on the methodology for syntactic reconstruction in languages without a written record from the past. The idea is to follow the principles of the Comparative Method, the scientific procedure to compare and reconstruct sounds and lexical items in various proto-languages. The method originally developed out of the comparison and reconstruction of classic languages in Indo-European languages, but has been successfully applied to Austronesian languages, where information about old forms of languages is hardly available from literature. The claim in this article is that there are ways to conduct syntactic reconstruction with languages without a written record. It is shown that, by using correct comparanda and by combining structural analyses with results of sound and lexical reconstruction, clause structures of such languages can be compared and reconstructed, and the developmental paths from one system to another can be traced.

## 1 Introduction

Syntactic reconstruction was once considered a hazardous if not impossible endeavour, however, the interest these days is more on how to carry out syntactic reconstruction rather than whether it is possible or not.<sup>1</sup> Watkins' (1964) discussion of the reconstruction of "Indo-European sentence structure," has resulted in considerable work being published (Barðdal 2014, Fried 2008, Harris

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2008, Gildea 1998 and others), and aspects related to the methodology have been gradually elaborated (Barðdal & Eythórsson in this volume). However, the application of the method to languages without written records is still limited and yet to be established. My aim in this article is, by taking clause structures of Austronesian languages as an example, to demonstrate ways to conduct syntactic comparison of data exclusively from modern languages for the purpose of diachronic reconstruction.

In the comparison and reconstruction of data from languages without a written record, some basic principles and methodology are commonly shared with those languages with philological data. This article follows the basic principles proposed in the research on languages from other families. First, comparanda (comparable units, cf. Ferraresi & Goldbach 2008) must be of surface structure, where changes are directly observable. Second, because each grammatical change is gradual and discrete from other grammatical changes (Fried 2008: 48, Roberts 2007: 6, De Smet 2015), when examining the historical development of a linguistic structure, the linguistic features that form part of the examined structure are decomposed and analysed separately. Thus, changes in pronouns, marking on lexical noun phrases, verb morphology, word order and others are all examined separately (more discussion in Kikusawa 2017). Keeping these principles, the practical procedure applied here is as follows: i) describe the basic clause structures (abstracting relevant patterns) for each language examined, and ii) identify cognacy between the languages, among the structures described; iii) clarify the differences, discuss the changes that brought about the differences, then identify the direction of change. This is also in line with what has been proposed in previous studies on syntactic reconstruction.

In examination of each of these stages, however, special approaches are required so that data from languages with no philological materials can be dealt with and correctly analysed. For example, the description of clause structures requires reanalyses of information available in the description of each language. This is because, typically, the description of each language follows and uses terms according to the type of system each language synchronically exhibits, which is discrete from inheritance. Also, the framework applied in the descriptions differs from language to language. Therefore, consistency is required for a cross-linguistic analysis. Another example is that when historical documentation is not available, the direction of change needs to be identified based on various scientifically based inferences. In the examination of changes that took place in argument structures in Indo-European languages, documented clauses are compared and the cognacy of the compared clauses

is secured by the cognancy of the forms comprising the clauses compared (cf. Barðdal & Eythórsson 2012).

This article is about how these problems are overcome in a specific case of syntactic reconstruction in Austronesian languages, and about how the applied methodology could be generalised. In discussing practical aspects of syntactic reconstruction, Barðdal states that syntactic reconstruction must “abide [by] certain procedural requirements, of which the first one is to identify the cognates, the next is to set up correspondence sets, and the third is to model the reconstructed material with adequate formal tools” (Barðdal 2014: 367). Here, cognate structures are identified by relating the structures with forms reconstructed applying the Comparative Method, the standard method for comparing and reconstructing lexical and morphological items. By identifying the correct morphological component as an anchor for tracing the inherited positions in each structure, it is shown that cognate structures, even when they look completely different today, can be identified without any historical record. Once correspondence sets are determined, various changes can be identified. It is shown that the results of such an endeavour indeed enable us to explain historically various morphological and syntactic phenomena in the modern languages of the family.

The rest of this article is organised as follows. In Section 2, an overview of syntactic reconstruction in the context of Austronesian historical linguistics will be provided. In Section 3, clause structures of five distantly related Austronesian languages are compared. The “basic clause structures” of each language are first schematically represented for the purpose of syntactic comparison and reconstruction, and then by examining the positions where genitive pronouns occur, cognacy among the clause structures is identified. Based on the identified cognacy, it is shown that change in the case alignment systems can be reconstructed and developmental paths described. In Section 4, the results of the examination presented in Section 3 are extended to identify changes that brought about other syntactic phenomena in this language family. Two cases are presented, namely, word-order change and the development of part of the verb morphology. Section 5 provides a summary and concluding remarks.

## 2 Syntactic Reconstruction and Austronesian Languages

Austronesian languages, consisting of some 1,200 languages spoken in the Pacific and surrounding areas, have insufficient historical text documentation and thus historical comparison and reconstruction is only conducted by

comparing data from modern languages.<sup>2</sup> The Austronesian language family is often referred to as an exemplary case of application of the Comparative Method. As a result, while the languages are known to be typologically diverse, the general subgroup membership of languages is fairly clear. This makes Austronesian languages a good subject for syntactic comparison and reconstruction, not only for clarifying the developmental paths of their syntactic features, but also for developing the methodology of syntactic reconstruction. In addition, many languages in this family are morphologically complex, and their syntax commonly has a morphological correlate, a condition which is considered to favour the reconstructibility of syntactic structures (Harris 2008: 91). However, in traditional Austronesian historical linguistics, on the one hand, “grammatical reconstruction” has typically referred to lexical comparison and the reconstruction of grammatical or functional forms (e.g. Pawley 1970); on the other hand, attempts at direct comparison and reconstruction of linguistic components with a structural nature (or patterns) has been limited.

In the comparison and reconstruction applied to Austronesian languages demonstrated in this chapter, following the principles outlined in Section 1, patterns found in languages are directly compared and reconstructed, and in doing so, the traditional Comparative Method is consciously utilised. For example, reflexes of the earlier genitive pronominal set (hypothesised as having also marked ergative agents of transitive constructions, see 3.1) are regarded as most suitable for tracing clause pattern change and thus are used to identify cognate structures in this study. The reconstruction of pronominal forms, however, is conducted separately from clause structure comparison. But by combining the results of the two, it becomes possible to identify the direction of change in the clause structures, and to clarify the merger and split of syntactic functions associated with positions in a clause in each stage of the development.

One may consider that verb morphology may better serve the same purpose. However, despite the elaborate morphological systems in western Austronesian languages, their supposed remnants are limited in Oceanic languages (cf. Starosta, Pawley & Reid 1982), while the reflexes of the earlier

2 Text materials of old forms of the languages include those of Old Cham (4th century AD), Old Malay (7th century AD), and Old Javanese and Balinese (9th Century AD) (Adelaar 2005, Blust 1995). However, because of the phonological uncertainty of the scripts and limited textual content, they do not make good source materials for comparative syntax. Gilles-Maurice de Schryver (pers. comm.) points out that descriptions of languages from colonial periods (16th century on, by Spanish, Dutch and other European visitors) and also translations of the Bible should be considered as useful resources, a perspective missing in my previous research.

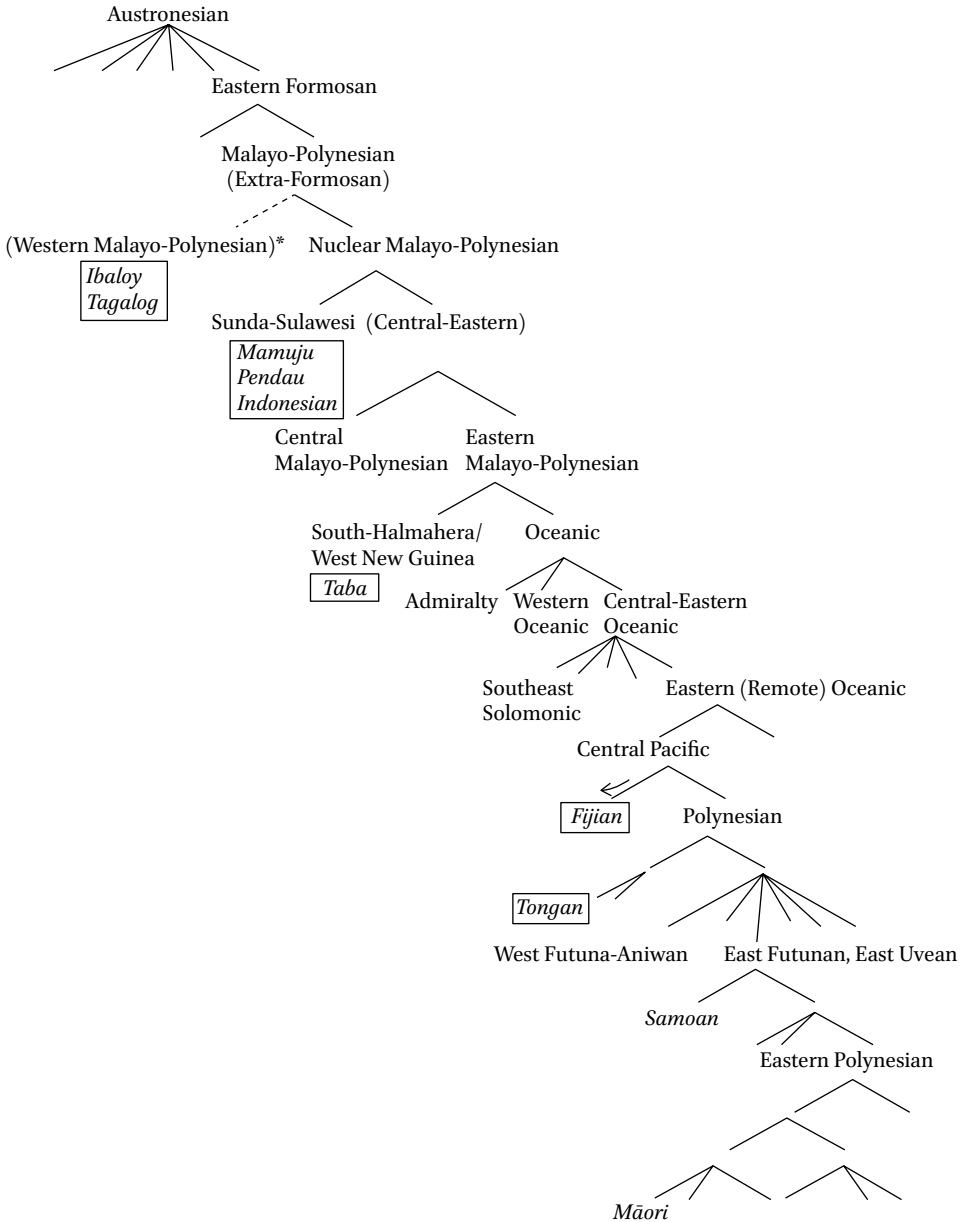
genitive pronouns are traceable in most branches of the family. This procedure does not limit the results to the understanding of change in pronominal arguments and case related changes, but further enables us to compare and reconstruct other grammatical features, including verb morphology. To illustrate this, two case studies are presented in this chapter, namely, a word order change, and a change in the distribution of transitive/applicative verb suffixes. My aim is to demonstrate that, once cognacy is identified, specific changes and their directionality can also be identified by applying the principles of the Comparative Method that are used for lexical comparison and reconstruction.

In this article, five selected languages, namely Ibaloy, Pendau, Taba, Fijian, and Tongan, are compared. These are all daughter languages of Proto-Malayo-Polynesian (Figure 3.1), however, they are only distantly related and are spoken in areas that are geographically not adjacent to one another. The advantages of conducting such a macro-comparison is that, as discussed by Kikusawa (2018), it makes it easier to identify direct inheritance. Historical examination of closely related languages (micro-comparison) is often complicated by the mixture of direct and indirect inheritance (i.e., borrowing from closely related languages), as well as sporadic local innovations (forming areal features), where earlier features are obscured by layers of change that have taken place subsequent to the split of the languages.

It should be remembered that the comparison and reconstruction of lexical items and sound systems, which is usually conducted today by applying “bottom-up” methodology, was initially done by macro-comparison, which set the basis for detailed bottom-up micro-comparison (cf. Blust 1990: 137–138). Needless to say, follow-up modification of any proposed hypothesis is necessary, based on new data and the results of micro-comparison. What is presented here is macro-comparison as an initial attempt of investigating syntactic change.

### 3 Clause Structures and Their Cognacy

In this section, the methodology for comparing and reconstructing clause structures in Austronesian languages will be demonstrated, and the cognacy of clauses from five Austronesian languages will be shown. A working hypothesis is presented in 3.1, with some background linguistic information related to the analyses of the languages. The clause structures of five selected Austronesian languages are schematically described in 3.2. With analyses conducted specifically for comparison of clause patterns of languages with different typological



\* Western Malayo-Polynesian is not considered an established subgroup. It is a label referring to a group of languages that do not share the defining innovations of the Nuclear Malayo-Polynesian group.

FIGURE 3.1 Languages referred to in this article (italic font and boxed) and their proposed genetic relationships

systems, it will be shown that the clause patterns are abstracted in a systematic way. In 3.3, how this leads to identifying cognate structures and also reconstruction of the developmental paths will be demonstrated. Understanding clause structure change sometimes results in understanding change in the functions of relevant grammatical forms. It will be shown in 3.4, how the findings presented in 3.3 help to re-evaluate previous lexical reconstructions of pronominal systems.

### 3.1 *Working Hypothesis*

A working hypothesis to be tested in this study is that the parent language of the five languages compared in this article, namely, Proto-Malayo-Polynesian (PMP, sometimes referred to as Proto-Extra-Formosan), was an ergative language. The Agent (A) of a bivalent (syntactically transitive) clause was expressed by a genitive pronoun, while the Subject (S) referring to the actor/undergoer of intransitive clauses, and the Patient (P) of transitive clauses were expressed by a nominative pronoun. The abbreviations used to indicate the syntactic roles of the arguments of transitive and intransitive clause follow Comrie (1989) and Dixon & Aikhenvald (2000). A full list of abbreviations is given at the end of this chapter.

It should be noted that determining the case of an Austronesian language in the description of the language is usually based on typological criteria. The form or marking on S is by definition nominative. If A receives a different marking from that on S, it is typically labelled as ergative, while if it is P that receives a different marking, it is typically labelled as accusative. The marking on A and the form of the associated pronouns is often shared in Austronesian languages with that of the possessor of a noun in noun phrases and is consequently labelled as genitive (rather than ergative). It should be noted that, unlike Indo-European case labels, such typologically defined terms do not necessarily reflect etymological relationships, and the functional change of each case needs to be traced, based on formal correspondences.

The PMP ergative system is schematically shown in Figure 3.2. The pronoun that expressed A is referred to as genitive, for it also occurred on noun phrases expressing a possessor. Clause structures reflecting this system as well as example clauses are presented in (1) and (2) respectively. Example (2a) is an intransitive clause where the S is expressed as a nominative, while (2b) is a transitive clause where the A appears as genitive, while the P is marked as nominative.

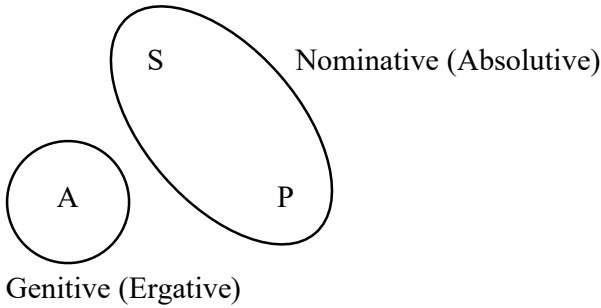


FIGURE 3.2 The PMP case-marking system based on Starosta, Pawley & Reid. (1982) and Reid (2009, 2016)

(1) Assumed PMP clause structures (1) Intransitive and transitive

INTRANSITIVE	S NOM actor/undergoer	
TRANSITIVE	A GEN actor	P NOM undergoer

(2) Ivatan examples illustrating clause structures shown in (1) (Reid 1966: 143, data modified following L. A. Reid pers. comm.)

a. INTRANSITIVE

*mangay* [ʔo tao]<sub>S</sub>  
go NOM man  
'The man is going.'

b. TRANSITIVE

*ʔamoʔmohen* [no tao]<sub>A</sub> [ʔo motdeh]<sub>P</sub>  
frighten GEN man NOM child  
'The man is frightening the child.'

In PMP, in addition to the two clause structures presented in (1), it is assumed that there was a dyadic intransitive – Dixon's extended (E) intransitive – structure. This is a structure which can be described as semantically transitive and syntactically intransitive. Although semantically two participants are involved, the verb morphology is typically the same as that of the monadic intransitive clause. In addition, the NP expressed by the nominative case is



identical to the sole NP of a monadic intransitive clause.<sup>3</sup> The clause structure of a dyadic intransitive is shown in (3). An example is given in (4) where the S is expressed in nominative while the E is expressed in oblique.

- (3) Assumed Proto-Malayo-Polynesian clause structure (2) Dyadic intransitive

DYADIC INTRANSITIVE	S	E
	NOM	OBL/LOC
	actor	undergoer

- (4) Ivatan (Reid 1966: 22–23, data modified following L. A. Reid pers. comm.)

DYADIC INTRANSITIVE				
<i>mang-amoʔmo</i>	[ʔo	tao] <sub>S</sub>	[so	motdeh] <sub>E</sub> .
frighten	NOM	man	OBL	child
‘The man is frightening a child.’				

The E of a dyadic intransitive and the P of a transitive construction are both considered to have carried the semantic macro-role “undergoer” that expressed patient, location, goal, instrument, beneficiary, and other functions. This system is similar to that in many Philippine and Formosan languages today. The full set of assumed PMP clause structures is shown in (5). For more examples illustrating the system, see 3.2.1, particularly (7–9).

- (5) Proto-Malayo-Polynesian clause types based on Starosta, Pawley & Reid (1982).

i.	INTRANSITIVE	S	
		actor/undergoer	
ii.	DYADIC INTRANSITIVE	S	E
		actor	undergoer
iii.	TRANSITIVE	A	P
		actor	undergoer

3 Dyadic intransitive clauses may appear to be similar to antipassives, however, they are different constructions. In this article, the former is analysed as one of the basic sentence structures, while the latter is a derived construction and therefore excluded from the discussion. In both structures, the actor (S) is expressed with nominative forms, and the undergoer (E) is expressed with oblique/genitive forms. However, the two are different in that: i) dyadic intransitive clauses may contain the same morphological forms as those occurring in monadic intransitives, such as *mang-* in the verbs in (2a) and (4), while antipassive clauses may contain verb morphology shared with a corresponding transitive clause; ii) the semantic property of the arguments does not always match between a dyadic intransitive clause and a corresponding transitive clause (e.g. ‘the child’ and ‘a child’ in (2b) and (4)), while it does between a transitive clause and its derived antipassive clause. In the two structures, for example in Kalanguya, spoken in Northern Luzon, the difference is clearly reflected in verb morphology (Santiago 2016).

The hypothesis that PMP had an ergative system with structures i. through iii. is to be tested against data from modern languages. As the first step for doing so, clause structures in some daughter languages and the function of the possible reflexes (or the remnants) of the earlier genitive pronoun set are identified. The position where such pronouns are found is referred to in this study as the “X-position”. In what follows, the basic structures of five Austronesian languages, namely, Ibaloy, Pendau, Taba, Fijian and Tongan, are described and the X-position of each language is examined.

To identify the X-position in each language, the forms of pronouns expressing A are first examined against the reconstructed pronominal forms presented in Table 3.1. In addition, the pronominal forms expressing A are compared

TABLE 3.1 Reconstructed Proto-Malayo-Polynesian clitic pronouns and their variants (based on Blust 1977, Blust & Trussel on-going, Reid 2016) <sup>a,b</sup>

	1MIN	1+2MIN	2MIN	3MIN	1AUG	1+2AUG	2AUG	3AUG
GENITIVE <sup>c</sup>	*=ku	*=ta	*=mu	*=ya	*=mi	*=tamu ~ *=tamuyu ~ *=tayu	*=muyu ~ *=yu	(*da)
NOMINATIVE <sup>d</sup>	*=aku~ *=ak	*=ta	*=kaʔu~ *=kaw ~ *=ka	*∅	*=kami	*=takamu	*=kamu ~ *=kamuyu ~ *=kayu	(*ida)

- a The terms “minimal” and “augmented” are used for first and second person pronouns to better capture the paradigmatic systematicity of first person inclusive dual (1+2MIN), first person inclusive plural (1+2AUG), and first person exclusive plural (1AUG) pronouns, see Cysouw (2003).
- b Forms for the 1st and 2nd persons are from Reid (2016). Multiple forms are reconstructed when Reid considers that reflexes found in modern languages imply that there were such variants in PMP (Reid 2016). Forms for the 3rd person are based on Blust (1977), Blust & Trussel on-going. The 3AUG forms are independent pronouns and not clitics and are thus shown in parentheses. The forms listed in the original literature are: \*=ya/ni-ya ‘3SG’ (Blust 1977) and \*ida ‘they, them’ (Blust & Trussel on-going).
- c A genitive form could occur as an enclitic to a verb, to function as the actor of a transitive clause, or to a noun, to function as a possessor. It could also appear encliticised to one of the genitive specifiers, PMP \*ni ~ \*ʔi, and become the complement of an oblique/locative/dative specifier.
- d A nominative form could occur as an enclitic to a verb, to function as the actor or undergoer of an intransitive clause. It could also appear encliticised to the personal noun specifier (PMP \*si), or to the topic specifier (PMP \*ʔi), and function as an independent pronoun expressing the grammatical subject of a transitive clause, a predicate, or a fronted topic, etc.

with the current genitive forms marking the possessor of the noun. The current function of the reflex/remnant of a pronominal set may not be exclusively marking A. In such cases, the distribution of the pronominal set under examination needs to be described and the developmental path has to be discussed. Reflex forms do not always compose a full set, however, it is often found that a few clear reflexes of the earlier genitive forms express a related function. In this article, I limit the discussion here to clause structures with pronouns, and those with lexical arguments are referred to only when relevant.

Many modern Austronesian languages, including the five languages that are described in this section, show either a reflex set of the reconstructed PAN genitive/ergative set, or a remnant of it. These forms occur as enclitics on the verb, marking either A showing an ergative pattern, or marking A of one of the two transitive clauses, or a semantic actor (A and S) showing an accusative pattern, as is shown in 3.2. The significance of these X-positions for morphosyntactic reconstruction and the direction of morphosyntactic change is further summarised and discussed in 3.3.

### 3.2 *Clause Structures and the X-Position in Five Austronesian Languages*

#### 3.2.1 Ibaloy

Ibaloy is a language spoken in Northern Luzon in the Philippines. It shows an ergative system (Ruffolo 2004), where the A of a transitive clause is expressed with a genitive pronoun, identifying it as the X-position. Clause structures with pronominal arguments are presented in (6) with the X-position constituent bold, followed by examples in (7–9) demonstrating each clause structure. Analyses and glossing follow the source descriptions of each language, unless otherwise specified.

(6) Ibaloy argument structures with pronominal NPs (without an auxiliary verb)

- i. Vi[=**NOM**]<sub>S</sub>
- ii. Vi[=**NOM**]<sub>S</sub> [*son* IND]<sub>E</sub>
- iii. Vt[=**GEN**]<sub>A</sub>[=**NOM**]<sub>P</sub>

- (7) Ibaloy examples of Clause (i) with pronominal arguments, without an auxiliary verb

a. *ondawakda*

ʔon-law[=ak]<sub>S</sub>=la

ACTV.IPF-go=1.NOM=toward

'I went away' (Ruffolo 2004: 412)

b. *naogip*

*ira*

na-ʔogip [ʔida]<sub>S</sub>

POTPATV.PFT-sleep 3+.NOM

'They are asleep.' (Ruffolo 2004: 411)

Examples (7a–b) are monadic intransitive clauses. The core argument S is expressed by a nominative pronoun. A clause with no expressed nominative form is understood as having a 3rd person singular 'he/she/it' pronoun (Ruffolo 2004: 175). This is indicated by the symbol "= $\emptyset$ " in example sentences.

- (8) Ibaloy examples of Clause (ii) with pronominal arguments, without an auxiliary verb

*on'aseba*

*son si'kato*

ʔon-ʔasəwa[= $\emptyset$ ]<sub>S</sub>

[son<sup>4</sup> siʔgato]<sub>E</sub>

ACTV.IPF-marry=3MIN/NOM OBL 3MIN.IND

'She will get married to him.' (Ruffolo 2004: 150)

The example in (8) is a dyadic intransitive clause where the S is expressed by a nominative pronoun like in monadic intransitive clauses. The E, expressing the undergoer, is marked with the oblique marker *son*. An independent (case-neutral) pronoun *siʔgato* follows this form. In both examples (7) and (8), monadic and dyadic intransitive clauses respectively, the verb carries the prefix *ʔon-* on the verb, thus sharing the same morphology. This, along with the fact that the S is marked by nominative in both structures, is one of the main reasons why this structure is analysed as dyadic intransitive rather than syntactically transitive.

4 Author's interpretation. The original description by Ruffolo further breaks down the form *son* into *so=n* 'OBL=GEN/PERS'.

(9) Ibaloy examples of Clause (iii) with pronominal arguments, without an auxiliary verb

a. *ensemektoka*

ʔən-səmək[=to]<sub>A</sub>[=ka]<sub>P</sub>

PotPatV.en-love=3MIN.GEN=2MIN.NOM

'He loves you' (Ruffolo 2004: 175)

b. *intongkaloanto*

ʔin-tɔŋgal-an[=to]<sub>A=j</sub>

BNFV.PFT-buy-BNFV=3MIN.GEN

'He bought them some meat' (Ruffolo 2004: 141)

*ira*

[ʔida]<sub>P</sub>

3+.NOM

*ni*

[ni

GEN

*apag*<sup>5</sup>

ʔapag]<sub>E</sub>

meat

Examples (9a–b) are transitive clauses. The third person augmented nominative form is typically not a clitic, cf. *ʔida* in (9b).

Ibaloy genitive pronouns are listed in Table 3.2. Ibaloy clitic pronouns are Wackernagel clitics and occur in the second position of a clause (Ruffolo 2004: 175). Clause structures with auxiliary verbs, which occur in clause initial position in basic clauses, are shown in (10) to illustrate this, where enclitic pronouns are encliticised to the auxiliary verb and precede the main verb.

TABLE 3.2 Ibaloy genitive pronouns (based on Ruffolo 2004: 175)

	1MIN	1+2MIN	2MIN	3MIN	1AUG	1+2AUG	2AUG	3AUG
Genitive	= <i>k</i> ,	= <i>ta</i>	= <i>m</i> ,	= <i>to</i>	= <i>mi</i>	= <i>tajo</i>	= <i>jo</i>	= <i>da</i>
(on N & V)	= <i>ko</i>		= <i>mo</i>					
Nominative	= <i>ak</i>	= <i>kita</i>	= <i>ka</i>	∅	= <i>kami</i>	= <i>kito</i> ,	= <i>kayo</i>	(=)ʔida <sup>a</sup>
(clitic)						= <i>kitajo</i>		

a The form *ʔida* may appear either as a clitic or an independent form.

5 L. A. Reid (pers. comm.) notes that the final *=j* on the 2nd interlinear line of this example is actually the initial component of the 3+.NOM pronoun that Ruffolo analyses as an independent pronoun in the first line of the example. Reid suggests that this pronoun is also an enclitic based on phonological reasons. On the other hand, Ruffolo describes some syntactic behaviours, particularly word order, that are exclusively associated with the 3AUG form and not with other bound pronouns (2004: 175–180). It appears that the characteristics associated with this form are the result of being in a transition stage between being an independent form and a clitic (relevant discussion appears in 4.1).

- (10) Ibaloy argument structures with pronominal NPs (with Aux)
- i. VAUX[=NOM]<sub>S</sub>                      Vi
  - ii. VAUX[=NOM]<sub>S</sub>                      Vi [son IND]<sub>E</sub><sup>6</sup>
  - iii. VAUX[=GEN]<sub>A</sub>[=NOM]<sub>P</sub>      Vt

Examples in (11) are sentences illustrating the structures with auxiliary verbs presented in (10). It can be seen that both =*ʔida* '3AUG.GEN', =*to* '3MIN.GEN' and =*ka* '2MIN.NOM' are cliticised to the auxiliary verb *ʔag* 'negative' that occurs in clause initial position. It appears that the existence of the two structures shown in (6) and (10), contributed to the development of the types of argument structure that are found in some modern Austronesian languages today, that are referred to as ergative, inverse, accusative, etc., as presented in later sections.

- (11) Ibaloy examples with pronominal arguments (with auxiliary verb)
- a. *eg'ira*                      *ondaw*                      *chima*                      *pa'dok*  
     ʔag[=*ʔida*]<sub>S</sub>              ʔon-law                      dima                      paʔlok  
     NEG=3+.NOM    ACTV.IPF-go              LOC.DIST              creek  
     'They will not go to that creek.' (Ruffolo 2004: 178)
  
  - b. *egtoka*                      *kegtinan*  
     ʔag=[*to*]<sub>A</sub>=[*ka*]<sub>P</sub>              gətin-an  
     NEG=3.GEN=1.NOM    step-LOCV.IPF  
     'He will not step on you.' (Ruffolo 2004: 179)

Finally, the nominative NP may be expressed by a clitic pronoun as in (6), or a corresponding independent pronoun, in which case the clause structure can be described as in (12). Examples are provided in (13), where *siʔgato* '3MIN.NOM' expresses the S of intransitive and ditransitive clauses (13a–b) and the P of a transitive clause (13c).

6 Ruffolo analyses the oblique marking form *son* preceding independent pronouns as *so=n* 'oblique=genitive' where =*n* is the genitive form preceding a personal noun or pronoun. However, L. A. Reid (pers. comm.) points out that there is no clear evidence that this form developed from a sequence *so=nen* (the latter being the marker that elsewhere precedes genitive personal nouns in Ibaloy). Nevertheless, the form *ni* is found as a genitive specifier in other languages preceding personal nouns and pronouns, and it is also reconstructed for PMP. Reid suggests, therefore, that =*n* may be a remnant of that earlier form in Ibaloy.

## (12) Ibaloy argument structures with independent pronouns (without Aux)

- i. Vi [NOM/IND]<sub>S</sub>  
 ii. Vi [NOM/IND]<sub>S</sub> [son IND]<sub>E</sub>  
 iii. Vt[=GEN]<sub>A</sub> [NOM/IND]<sub>P</sub>

## (13) Ibaloy examples demonstrating nominative independent pronouns

- a. *yet mandotopay si'kato*  
 jət man-loto=paj [siʔgato]<sub>S</sub>  
 and then ACTV.IPF-cook=still 3MIN.IND  
 'then she will still cook' (Ruffolo 2004: 174)

- b. *emandoto si'kato ni timol*  
 ʔəman-loto [siʔgato]<sub>S</sub> [ni timol]<sub>E</sub>  
 ACTV.CNTV-cook 3MIN.IND GEN pig.food  
 'she is cooking some pig food' (Ruffolo 2004: 145)

- c. *amta ni daki si'kato*  
 ʔamta [ni laki]<sub>A</sub> [siʔgato]<sub>P</sub>  
 know GEN man 3MIN.IND  
 'the man knows her/him' (Ruffolo 2004: 419)

In short, i) Ibaloy pronouns may occur in different positions in relation to the main verb; ii) regarding nominative pronouns, either clitic or non-clitic forms may occur. The forms of the pronouns are morphologically different between genitive and nominative and they can thus be said to be morphologically case-marked. The A, when expressed by a pronoun, is consistently expressed by a genitive clitic pronoun and not an independent pronoun as in (14).

## (14) Ibaloy example with a genitive clitic pronoun expressing the A

- Saknitantoy onas*  
 saknit-an[=to]<sub>A</sub>[=j ʔonas]<sub>P</sub>  
 peel-LOCV.IPF=3MIN.GEN=NOM sugar.cane  
 'He will peel the sugar cane.' (Ruffolo 2004: 146)

## 3.2.2 Pendau

Pendau, a language spoken in South Sulawesi and which probably belongs to the Tomini-Tolitoli group, has been analysed as showing what is referred to as an "inverse" system by Quick (2007). Clause structures with pronominal arguments in Pendau are shown in (15). This language has two dyadic clause

structures, which are referred to by Quick as “active voice” (av) (15b) and “inverse voice” (iv) (15c). Between these, the A of an inverse clause is expressed by a genitive pronoun and all other pronominal arguments are expressed by what are labelled as “absolute” pronouns. The term “absolute” as used here follows that in Quick (2007). The position following the main verb in inverse voice (bold) is identified as the X-position in Pendau.

(15) Pendau argument structures with pronominal NPs (an inverse system)  
(Quick 2007: 123)

- i. [ABS]<sub>S</sub> Vi
- ii. [ABS]<sub>A</sub> Vav [ABS]<sub>P</sub>
- iii. [ABS]<sub>P</sub> Viv[(=)GEN]<sub>A</sub>

Examples are presented in (16) below. In (16a), the sole argument S is expressed by the 3SG absolute pronoun *io*. In (16b), an actor voice clause, two absolute pronouns occur, one preceding and the other following the verb. The functions of the two arguments are determined by their relative position to the verb, namely, the one preceding the verb *io* ‘3SG.ABS’, expresses A, while the one following the verb *ʔaʔu* ‘1SG.ABS’, expresses P. Example (16c) is also a dyadic clause, however, it differs from (16b) in two respects. First, one of the forms of the arguments expressing the A is a genitive clitic pronoun, instead of an absolute pronoun. Second, the relative position of the A and P are reversed, with the argument expressing the P now preceding the verb, while that expressing the A follows the verb. Thus, in (16c), for example, *io* ‘3SG.ABS’ preceding the verb expresses the P of the clause, while *=ʔu* ‘1SG.GEN’ encliticised to the verb expresses the A, and the clause means ‘he (A) left me (P)’. In (16d), on the other hand, *ʔaʔu* ‘1SG.ABS’ preceding the verb expresses the P while *=nyo* ‘3SG.GEN’ encliticised to the verb expresses the A and the clause means ‘I (A) left him (P)’.

(16) Pendau examples with pronominal arguments<sup>7</sup>

- a. ... *Paey io nopoʔoro*, ...
- paey [io]<sub>S</sub> n-popo-ʔoro*
- and.then 3SG.ABS R-SF.POS-stand
- ‘And then, he stood up ...’ (Quick 2007: 140)

7 In Quick (1994) the absolute and genitive cases are labelled as proximate and obviate respectively. The glossing here follows that in Quick (2007).



- b. *Io*            *nengebiling*    *‘a’u*  
 [Io]<sub>A</sub>        neng-ebiling    [ʔaʔu]<sub>P</sub>  
 3SG.ABS    AV.R-leave    1SG.ABS  
 ‘He left me.’ (Quick 1994: 467)
- c. *Io*            *niebilingo’u*  
 [Io]<sub>P</sub>        ni-ebiling[=ʔu]<sub>A</sub>  
 3SG.ABS    IV.R-leave=1SG.GEN  
 ‘I left him.’ (Quick 1994: 467)
- d. *‘a’u*        *niebilingonyo*  
 [ʔaʔu]<sub>P</sub>    ni-ebiling[=nyo]<sub>A</sub>  
 1SG.ABS    IV.R-leave=3SG.GEN  
 ‘He left me.’ (Quick 1994: 467)

The two sets of pronouns that express arguments, namely “genitive” and “absolute” are listed in Table 3.3.

Genitive pronouns are either enclitic (1SG, 2SG, 3SG and 1INPL) or non-bound (1EXPL, 2PL, 3PL). Those occurring on the verb expressing the A argument show a slight difference from those occurring on nouns, in that two forms (1SG and 2SG) may occur as a prefix rather than an enclitic, giving a variant to clause structure iii, as in (17).

TABLE 3.3 Pendau pronouns

		1SG	2SG	3SG	1INPL	1EXPL	2PL	3PL
Genitive	on N (marking possessor)	=ʔu	=mu	=nyo	=to	<i>mami</i>	<i>miu</i>	<i>nijimo</i>
	on V (marking A) <sup>a</sup>	=ʔu ʔu-, noʔu-	=mu mu-	=nyo	=to	<i>mami</i>	<i>miu</i>	<i>nijimo</i>
Absolute		<i>aʔu/haʔu</i>	<i>oo</i> <sup>b</sup>	<i>io</i>	<i>ito</i>	<i>ami</i>	<i>emu</i>	<i>jimo</i>

- a In an inverse clause where the A of the clause is 1SG or 2SG, either a prefixed pronominal form (ʔu-/noʔu- or mu-) or an enclitic pronominal form (=ʔu or =mu) occurs. According to Quick (2007: 374), the prefixed pronominal forms are portmanteau pronouns, carrying information as to the person and number of A, as well as that of tense (realis/irrealis distinction).
- b Word initial glottal stop is not indicated in this table following the orthography in Quick (2007).

- (17) Pendau argument structures with a prefixed genitive/ergative pronoun  
 iii. *var.* [ABS]<sub>P</sub> [GEN-]<sub>A</sub> Viv

In addition to the word order shown in (15), absolute NPs may occur following all the other constituents of the clause. This is shown in (18). Based on a comparison with Ibaloy, I claim that those shown in (18) are the earlier word order in Pendau and those shown in (15) are more innovative forms. See 4.1 for discussion.

- (18) Pendau argument structures with pronominal NPs (2) (based on Quick 2007, in particular, pp. 365–366)
- |        |                          |                                       |
|--------|--------------------------|---------------------------------------|
| i-2.   | V <sub>i</sub>           | [ABS] <sub>S</sub>                    |
| ii-2.  | V <sub>av</sub>          | [ABS] <sub>P</sub> [ABS] <sub>A</sub> |
| iii-2. | Viv[(=)GEN] <sub>A</sub> | [ABS] <sub>P</sub>                    |

### 3.2.3 Taba

Taba is spoken in southern Halmahera in North Maluku province of Indonesia (Bowden 2001). This language has a set of cross-referencing forms expressing the person and number of part of S (actor S but not undergoer S) and A. The P of a transitive clause does not have any cross-referencing on the verb, and is simply expressed by an independent pronoun or a lexical noun phrase. In addition, Taba has a dyadic intransitive structure, which is referred to by Bowden as “semi transitive”. The clause structures in (19) are summaries, based on the clause types listed by Bowden (2001: 102). Among the seven clause structures that Bowden describes, structures i to iv occur with “underived” root verbs, while structures v to vii are derived constructions with verbs with applicative suffixes. In this study, we focus on the four clause structures that are underived.

As can be seen in (19), Bowden lists two intransitive clause structures (i and ii), a “semi-transitive” structure (iii) and a transitive structure (iv). In an “undergoer intransitive” clause (i), the S of the clause is typically an undergoer of the event. A cross-referencing form indicating the person and number of the undergoer may optionally appear on the verb in this structure. In an “actor intransitive” clause (ii), the S is typically the actor of the event. Unlike in undergoer intransitive clauses, a cross-referencing form indicating the person and number of the actor obligatorily appears on the verb. A “semi transitive” clause (iii) has the same structure as the actor intransitive clause in that the S is an actor and a cross-referencing form indicating the person and number of the actor appears on the verb. In addition, a locative complement phrase expressing nE follows the verb in this structure. The locative complement phrase

may be optionally followed by a locative post position *li*. A transitive clause (iv) consists of an independent noun phrase expressing the A, which is cross-referenced on the verb and another independent noun phrase expressing the P following the verb.

(19) Taba cross-referencing system

UNDERGOER INTRANSITIVE			Vi	[IND] <sub>S</sub>
ACTOR INTRANSITIVE	[IND] <sub>S</sub>	[CR=] <sub>S</sub>	Vi	
SEMI TRANSITIVE	[IND] <sub>S</sub>	[CR=] <sub>S</sub>	Vst	[IND] <sub>E</sub> ( <i>li</i> )
TRANSITIVE	[IND] <sub>A</sub>	[CR=] <sub>A</sub>	Vt	[IND] <sub>P</sub>
NON-ACTOR BIVALENT	[IND] <sub>P1</sub>		Vb	(P) [IND] <sub>P2</sub>
DIRECT DITRANSITIVE	[IND] <sub>A</sub>	[CR=] <sub>A</sub>	Vdt	[IND] <sub>P1</sub> [NP] <sub>P2</sub>
REMOTE DITRANSITIVE	[IND] <sub>A</sub>	[CR=] <sub>A</sub>	Vdt	[IND] <sub>P1</sub> (P) NP <sub>P2</sub>

Examples illustrating the first four structures are presented in (20), where the numbers correspond to the structures listed in (19). Example (20)i is an example of the undergoer intransitive clause structure. The 3SG independent pronoun *i* occurs expressing the undergoer S. Example (20)ii is an example of the actor intransitive clause structure. The 1SG independent pronoun *yak* occurs expressing the actor S, and the 1SG cross-referencing form *k=* occurs on the verb indicating the person and number of the actor. Example (20)iii is an example of a semi transitive clause. A lexical noun phrase *Yanti* '(personal name)' expresses the actor S, and a 3SG cross-referencing form *n=* occurs on the verb, indicating the person and number of the actor. A locative complement phrase *um li* 'house locative' follows the verb. Finally, example (20)iv is an example of a transitive clause. The 1EX.PL pronoun *am* expresses A and the 3PL independent pronoun *si* (indicated here as being cliticised to the verb) expresses P. The 1EX.PL cross-referencing form *a=* occurs on the verb indicating the person and number of A.

(20) Taba examples

a. *Mapot i.*  
 be.heavy 3SG  
 'It's heavy.' (Bowden 2001: 102)

b. *Yak kwom.*  
 yak k=wom  
 1SG 1SG.CR=come  
 'I've come.' (Bowden 2001: 187)

- c. *Yanti nchung um (li)*<sup>8</sup>  
 yanti n=sung um (li)  
 Yanti 3SG.CR=enter house (LOC)  
 ‘Yanti entered the house.’ (Bowden 2001: 102)

- d. *Am aamsi do.*  
 am a=am=si do  
 1EX.PL 1EX.PL=see=3PL REAL  
 ‘We already saw them.’ (Bowden 2001: 35)

One of the characteristics of this language, in contrast to Ibaloy and Pendau, is that there is only a single set of pronouns, namely independent pronouns (IND) in the language. However, in addition, there is a set of “cross-referencing” forms (CR=) that occur on verbs indicating the person and number of A and part of S.

What is interesting here is that the forms of at least some of these cross-referencing formatives share some forms with what Bowden refers to as the “possessive ligature”. This implies that the cross-referencing forms developed from an earlier genitive pronominal set. The relevant forms of Taba pronouns are listed in Table 3.4. Explanations follow.

TABLE 3.4 Taba pronouns (cited from Bowden 2001: 271)

	1SG	2SG	3SG	1IN.PL	1EX.PL	2PL	3PL
Independent forms	<i>yak</i>	<i>au</i>	<i>i</i>	<i>tit</i>	<i>am</i>	<i>meu</i>	<i>si</i>
CR formatives	<i>k=</i>	<i>m=</i>	<i>n=</i>	<i>t=</i>	<i>a=</i>	<i>h=</i>	<i>l=</i>
possessive ligatures	<i>ni-k</i>	<i>ni-m</i>	<i>ni-∅</i>	<i>ni-t</i>	<i>am</i>	<i>meu</i>	<i>ni-di</i> ~ <i>di</i>

8 I have been unable to find an example where both of the arguments are expressed by a pronoun for this construction. An example of a locative complement phrase expressed with a pronoun (*yak li*) can be seen below.

*Malusa nim wlo maduga yak li.*  
 m=ha-lusa nim wlo m=ha-duga yak li  
 2SG=CAUS-say 2SG.POSS liver 2SG=CAUS-only 1SG LOC.  
 ‘You said your heart was only for me.’ (Bowden 2001: 323)

A “possessive ligature” expresses the person and number of the possessor in a possessive construction, connecting the noun phrase expressing the possessor and the possessee. Examples of possessive expressions in Taba are presented in (21). Example (21a) indicates ‘my foot’, with the possessor expressed by the independent pronoun *yak* ‘1SG’, followed by a possessive ligature *nik* ‘1SG.POSS’, then the possessee *wwe* ‘foot’. Example (21b) indicates ‘Mado’s child’, with the possessor expressed by a noun *Mado* ‘(personal name)’, followed by a possessive ligature *ni* ‘3SG.POSS’, then the possessee *mtu* ‘child’. A possessive ligature may occur without a noun phrase overtly expressing the possessor. Examples in (22) are the same as those in (21), but without the noun phrases *yak* ‘1SG’ (a) and *Mado* ‘(personal name)’ expressing the possessor.

(21) Taba possessive expressions (Bowden 2001: 173)

- a. *Yak nik wwe*  
 1SG 1SG.POSS foot  
 ‘my foot’
- b. *Mado ni mtu.*  
 Mado 3SG.POSS child  
 ‘Mado’s child’

(22) Taba possessive expressions without an overtly expressed possessor (Bowden 2001: 173)

- a. *nik wwe*  
 1SG.POSS foot  
 ‘my foot’
- b. *ni mtu*  
 3SG.POSS child  
 ‘his/her child’

As can be seen in Table 3.5, 1SG, 2SG, 3SG, and 1EX.PL cross-referencing formatives and possessive ligatures carry shared consonants *k*, *m*, *n*, and *t* respectively. Their etymological relationship becomes more obvious when compared with the reconstructed PMP forms given in Table 3.1. The forms listed in Table 3.5 are the same as the genitive pronouns in Table 3.1, however, both basic genitive forms and the genitive forms preceded by the genitive specifier \**ni* (see fn. 2)

TABLE 3.5 Reconstructed Proto-Malayo-Polynesian genitive clitic pronouns (cf. Table 3.1)

PMP	1MIN	2MIN	3MIN	1+2MIN	1+2AUG	1AUG	2AUG	3AUG
Genitive	*=ku	*=mu	*=ya	*=ta	*=tamu ~ *=tamuyu ~ *=tayu	*=mi	*=muyu ~ *=yu	(*ida)
*ni + Genitive	*ni=ku	*ni=mu	*ni=ya	*ni=ta	*ni=tamu ~ *ni=tamuyu ~ *=tayu	*ni=mi	*ni=muyu ~ *ni=yu	*ni ida
Taba	1SG	2SG	3SG	1N.PL	-	1PL	2PL	3PL

are listed. The order of person and number has been modified to match that in Table 3.4 for the sake of easier comparison. Note that the PMP (bare) genitive forms are the ones that are considered to have been cliticised to the verb expressing A. It is commonly known that the reflexes of the earlier genitive pronouns indicating S and/or A appear in both/either enclitics and/or proclitic in Austronesian languages (Himmelman 1996, Kikusawa 2003c). Based on the above information, it is not unreasonable to assume that the cross-referencing position is the X-position in Taba.

The current cross-referencing system in Taba as described above might be described as showing an accusative type, in the sense that nominative covers S and A, with a split in the marking of S, as has been mentioned above. The cross-referencing marker is obligatory for the A and S of “actor intransitive verbs,” while optional for the S of “undergoer intransitive verbs” (Bowden 2001: 147–148, 223). On the assumption that cross-referencing in Taba developed from earlier genitive pronouns which marked A, it may be inferred that genitive pronouns have changed from marking both a syntactic case (genitive) and a semantic role (A) to one in which syntactic case marking has been lost and only the semantic role, actor, remains and was extended to cover what originally was marked by another syntactic case ( $S_{\text{actor}+A}$ ). This process is schematically presented in Figure 3.3.

In Taba, we also note that the cross-referencing form is optional in undergoer intransitive clauses. This implies a further stage, where the function of the cross-referencing form is extending from a semantic role to a syntactic one, namely S, in that it includes both actor and undergoer marking.

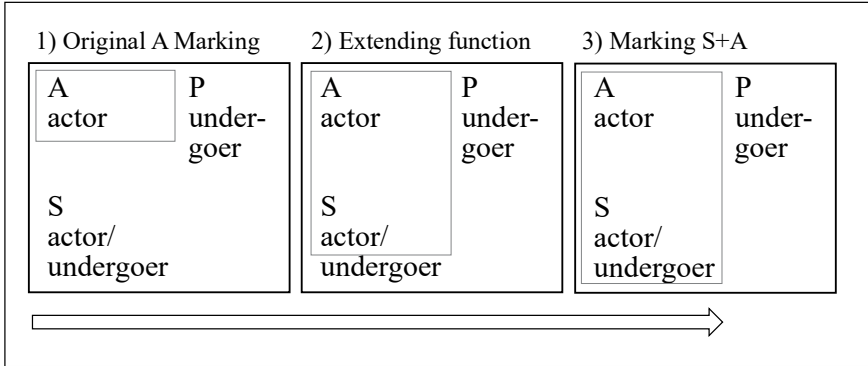


FIGURE 3.3 Possible paths of functional change from A to S+A

### 3.2.4 Fijian

Fijian languages are spoken in the Republic of Fiji Islands in the South Pacific, and their pronominal systems show a clear accusative pattern. The languages all have a set of “subject pronouns,” or cross-referencing forms expressing the person and number of the actor (S+A). In addition, many Fijian languages also have another set of pronouns expressing the P of transitive clauses. Fijian clause structures with pronominal arguments are shown in (23). The components in parentheses are optional and can co-occur with a subject clitic pronoun for emphatic effect. Examples illustrating these structures appear in (24).

#### (23) Nadrau Fijian clause structures with pronominal arguments

- i.  $[CR_1=]_S$  Vi  $([o\ IND]_S)$   
 iii.  $[CR_1=]_A$  Vt $[=CR_2]_P$   $([o\ IND]_A)$

#### (24) Nadrau Fijian

##### a. Intransitive

$[Au=]_S$  *sā mata moce.*  
 1SG ASP want sleep

‘I want to sleep. / I feel sleepy now.’ (Kikusawa 2001: 55)

##### b. Transitive

$[Au=]_A$  *sā zivi[=xexo]<sub>P</sub> qaca*  $([oyau]_A)$ .  
 1SG ASP see=2SG finish (I)

‘I have already seen you.’ (Kikusawa 2001: 86)

A possible trace of the earlier genitive forms in these languages is the 1SG subject pronoun *qu=* or *=qu* [ŋgu] that widely occurs in Western Fijian languages (Pawley & Sayaba 1971), and this is the form that is identical with the 1SG genitive form in possessive noun phrases found throughout the Fijian languages.

Kikusawa (2002) considers this to be a remnant of an earlier genitive pronoun. An example with the form *qu=* is presented in (25).

(25) Nabukelevu Fijian

*qu= laka a niavi*  
 I.PAST go 3SG.PAST yesterday  
 'I went yesterday.' (Pawley & Sayaba 1971: 419)

In some of the western Fijian languages, such as Lomawai and Malomalo in Nadrogā, the forms for the 2SG and 3SG subject pronouns are also either fully or nearly identical with the corresponding genitive forms. Malomalo pronouns, where singular subject pronouns are identical to genitive pronouns, are presented in Table 3.6.

TABLE 3.6 Malomalo Fijian pronominal forms (P. Geraghty, unpublished fieldnotes and pers. comm.)

	1SG	2SG	3SG	1IN.DL	1EX.DL	2DL	3DL	1IN.PL	1EX.PL	2PL	3PL
INDEPENDENT FORMS	<i>yau</i>	<i>iko</i>	<i>kua</i>	<i>ketaru</i>	<i>kemaru</i>	<i>kemuru</i>	<i>kuru</i>	<i>ketatou</i>	<i>kematou</i>	<i>kemutou</i>	<i>kora</i>
SUBJECT PRONOUNS (default)	<i>qu</i>	<i>mu, o</i>	<i>a</i>	<i>taru</i>	<i>maru</i>	<i>muru</i>	<i>aru</i>	<i>tu</i>	<i>matu</i>	<i>mutu</i>	<i>ara</i>
SUBJECT PRONOUNS (present-future, < default + <i>i</i> )	<i>qi</i>	<i>ι</i>	<i>e</i>	<i>tari</i>	<i>marī</i>	<i>muri</i>	<i>eri</i>	<i>μ</i>	<i>maμi</i>	<i>myi</i>	<i>era</i>
POSSESSIVE SUFFIXES I	<i>-qu</i>	<i>-mu</i>	<i>-(y)a</i>	<i>-taru</i>	<i>-maru</i>	<i>-muru</i>	<i>-dru</i>	<i>tatou</i>	<i>-matou</i>	<i>-mutou</i>	<i>-dra</i>
POSSESSIVE SUFFIXES II	<i>-qu</i>	<i>-mu</i>	<i>-(y)a</i>	<i>-taru</i>	<i>-maru</i>	<i>-muru</i>	<i>-dru</i>	<i>-tu</i>	<i>-matu</i>	<i>-mutu</i>	<i>-dra</i>
PREPOSED POSSESSIVE FORMS (parts of wholes, including body parts) (ex. 4 below)	<i>qu-</i>	<i>mu-</i>	<i>e-</i>	<i>taru-</i>	<i>maru-</i>	<i>muru-</i>	<i>eru-</i>	<i>tu-</i>	<i>matu-</i>	<i>mutu-</i>	<i>era-</i>

Notes: Possessive suffixes I are used when the suffixed form occurs as a noun, as in exs. 1 and 2 below, while Possessive suffixes II are used when the suffixed form modifies a noun, as in ex. 3. An example of preposed possessive form is also given in ex. 4 below.

ex1. *na le-tatou* 'ours'      ex3. *le-tu were* 'our house'

ex2. *luve-tatou* 'our child'      ex4. *qu-lima* 'my hand' (body parts, names, parts of wholes such as plants, fish, etc.)



TABLE 3.7 Some singular subject pronoun sets found in Fijian languages (based on P. Geraghty, unpublished 100 word lists)

	Languages	1SG	2SG	3SG
Set 1	Standard Fijian and some eastern Fijian languages	<i>au~u</i>	<i>o</i>	<i>e</i>
Set 2	Some eastern Fijian and Kadavu languages	<i>au</i>	<i>ko~?o</i>	<i>e~i</i>
Set 3	Some western Fijian languages	<i>qu~kau</i>	<i>ko~kō</i>	<i>ka~a</i>
Set 4	Lomawai, Malomalo (in Nadrogā)	<i>qu</i>	<i>mu~mū</i>	<i>a</i>

Table 3.7 is intended to show that there is a wide variety of pronominal forms found in Fijian languages with historical implications, and this is by no means an exhaustive list. Alternating forms indicate variants, and they do not necessarily occur in a single language.

TABLE 3.8 Reconstructed Proto-Oceanic clitic pronouns (Lynch, Ross, & Crowley 2002: 68)

	1SG	2SG	3SG	
Set I	<i>au=</i>	<i>ko=</i>	<i>i=</i>	< nominative
Set II	<i>ku=</i>	<i>=mu</i>	<i>=(y)a, ña=</i>	< genitive
Set III	<i>[y]a=</i>	<i>o-</i>	<i>e-</i>	
Object enclitics	<i>=au</i>	<i>=ko</i>	<i>=a</i>	< nominative

Subject pronoun forms in some Fijian languages are shown in Table 3.7 and the forms of reconstructed Proto-Oceanic singular clitic pronouns are presented in Table 3.8. By comparing these two, it can be seen that Fijian Set 1 and 2 are reminiscent of the Proto-Oceanic Set I, which Lynch, Ross & Crowley (2002: 83) claim may have developed from the earlier nominative set. Clearly, Fijian Set 4 is an obvious reflex set of the Proto-Oceanic Set II, which Lynch, Ross & Crowley claim may have developed from the earlier genitive set. More discussion regarding these forms appears in 3.3. Fijian Set 3 is presented as an example set consisting of forms with a mixed origin.

Tables 3.7 and 3.8 show that Fijian subject pronouns show a clear accusative pattern, with “subject pronouns” indicating the person and number of S and A, and another set of pronouns expressing P. Second, the subject pronoun sets in Fijian languages have various patterns in terms of their origin. Although limited to the singular forms, in some languages, the subject pronoun set reflects an earlier genitive set, while in some, it reflects an earlier nominative set. In some languages, the forms are mixed and appear to show transition. Thus, in Fijian, the subject pronoun position should be treated as a remnant of the X-position.

### 3.2.5 Tongan

Tongan is spoken in the Kingdom of Tonga in the South Pacific and belongs to the Polynesian language group. Tongan personal pronouns occur in two different patterns, i) a common set of clitic pronouns marking both S and A, with an independent pronoun marking P of a transitive clause, and thus occurring in an accusative case-alignment pattern; ii) independent pronouns occurring in the same ergative pattern as lexical NPs. The accusative clitic pronoun system is commonly shared with other Oceanic languages, such as the one described as “subject pronouns” in Fijian languages, while the ergatively marked independent pronoun system is unique to the Polynesian language group. According to Otsuka (2017), the use of independent pronouns in lexical NP slots is, like in Ibaloy, “marked and has an effect of emphasis.” The Tongan pronominal systems described above alternate with their corresponding NPs (pronominal or non-pronominal), and thus, the Tongan system is different from that of Fijian where an NP or an independent pronoun may co-occur with a subject clitic pronoun for the purpose of emphasis. Tongan clause structures with clitic pronouns and independent pronouns are summarised in (26) and (27).

#### (26) Tongan pronominal system (clitic and independent pronoun for E)

- i. VAUX [CLTC]<sub>S</sub> Vi
- ii. VAUX [CLTC]<sub>S</sub> Vid [*ki-ate* IND]<sub>E</sub>
- iii. VAUX [CLTC]<sub>A</sub> Vt [IND]<sub>P</sub>

#### (27) Tongan pronominal system (independent pronouns)

- i. VAUX Vi [*?a* IND]<sub>S</sub>
- ii. VAUX Vid [*?a* IND]<sub>S</sub> [*ki-ate* IND]<sub>E</sub>
- iii. VAUX Vt [*?e* IND]<sub>A</sub> [*?a* IND]<sub>P</sub>

These patterns are exemplified in (28–30).

(28) Tongan examples of structures (i) and (ii) with clitic pronouns (Otsuka 2017: 993)

a. *Naʔa ku kata.*  
 PAST 1SG laugh  
 'I laughed.'

b. *Naʔa ku ʔaʔahi ki he fanga tamaiki kotoa ʔi falemahaki.*  
 PAST 1SG visit to DEF PL children all in hospital  
 'I visited the children in the hospital.' (Chung 1978: 192)

(29) Tongan examples of structure (ii) with clitic pronouns (Otsuka 2017: 993)

c. *Naʔa ku maʔu ʔa e ika.*  
 PAST 1SG get ABS SPEC fish  
 'I caught a fish.'

d. *Naʔe taaʔi au ʔe Sione.*  
 PAST hit 1SG ERG John  
 'John hit me.'

(30) Tongan examples of structures (i–iii) with independent pronouns (Otsuka 2017: 992)

a. *Naʔe ʔomai ʔe Sione ʔa e tohi ki-ate au.*  
 PAST give.me ERG John ABS SPEC book to-PRON 1SG  
 'John gave a book to me.'

b. *Naʔe taaʔi ʔe Sione ʔa koe.*  
 PAST hit ERG John ABS 2SG  
 'John hit you.'

c. *Naʔe tala mai ʔe ia ʔoku tonu.*  
 PAST tell DIR ERG 3SG PRS correct  
 'He told me (that) it was correct.'

Clitic pronouns in Polynesian languages are typically treated as a separate set from other pronominal sets. However, when the forms of clitic pronouns and the genitive forms occurring on nouns are compared, a significant overlap between them is noted as shown in Table 3.9. It appears that there is some kind of

TABLE 3.9 Tongan personal pronouns

	CLITIC	GENITIVE <sup>a</sup>	INDEPENDENT
1SG	<i>ou, u</i> <i>ku</i>	<i>ku</i>	<i>au</i>
2SG	<i>ke</i>	<i>o, u</i>	<i>koe</i>
3SG	<i>ne</i>	<i>ne</i> <i>no, na</i>	<i>ia</i>
1DL.IN	<i>ta</i>	<i>ta</i> <i>taua</i>	<i>(ki)taua</i>
1DL.EX	<i>ma</i>	<i>ma</i> <i>maua</i>	<i>(ki)maua</i>
2DL	<i>mo</i>	<i>mo</i> <i>moua</i>	<i>(ki)moua</i>
3DL	<i>na</i>	<i>na</i> <i>naua</i>	<i>(ki)naua</i>
1PL.IN	<i>tau</i>	<i>tau</i> <i>tautolu</i>	<i>(ki)tautolu</i>
1PL.EX	<i>mau</i>	<i>mau</i> <i>mautolu</i>	<i>(ki)mautolu</i>
2PL	<i>mou</i>	<i>mou</i> <i>moutolu</i>	<i>(ki)moutolu</i>
3PL	<i>nau</i>	<i>nau</i> <i>nautolu</i>	<i>(ki)nautolu</i>

a The longer possessive forms are used for emphasis.

historical connection between the clitic pronoun set and the genitive set. Thus, it is worth examining whether earlier genitive pronouns are a possible source for Tongan clitic pronouns.

### 3.3 *A Summary of Pronoun Position Comparison*

In 3.2, abstracted clause structures and the X-position (a reflex of the earlier genitive position) have been described for five languages. The findings are

summarised in Tables 3.10 and 3.11. In Table 3.10, the formal characteristics of the reflex set of the earlier genitive and its functions are listed. In Table 3.11, pronominal sets that are used to express S, A and P are summarised and the columns that indicate a pronominal set which is related to the earlier genitive in some way is filled with grey. It can be seen in Table 3.11 that the genitive set is exclusively related to the marking of A in Ibaloy and Pendau. In the other three languages, it is evident that there is some continuation of the earlier genitive set, marked with grey, occurring in each language although the function and syntactic distribution is completely different. It is obvious from the two tables that the earlier genitive set merged with the earlier nominative set and that the new pronominal set covers both S and A, which were earlier expressed by nominative and genitive respectively. The X-position is the position where forms in such sets occur in actual clauses, and it is one of the components that can be used to identify cognacy and to clarify the developmental paths of clause structures.

TABLE 3.10 Possible remnants of the earlier genitive pronoun marking ergative

Language	Formal characteristics of the reflex set	Function
Ibaloy	clitic	A
Pendau	clitic/independent	A of Viv
Taba	part of cross-referencing form	S (actor) + A
Fijian	part of clitic (~cross-referencing) set	S + A
Tongan	part of clitic	S + A

TABLE 3.11 A comparison of pronominal sets marking S, A and P

	Ibaloy	Pendau	Taba	Fijian	Tongan	
S (undergoer)	=NOM	ABS		NOM=	=CLTC	'a IND
S (actor)	=NOM	ABS	CR=	NOM=	=CLTC	'a IND
A	=GEN	=GEN	CR=	NOM=	=CLTC	'e IND
P	=NOM OR IND	ABS	IND	=ACC (~IND)	IND	'a IND

### 3.4 *Discovery of the Merger of Pronominal Sets in Oceanic Languages*

In Austronesian languages, the pronominal systems in Taiwan and the Philippines show a morphologically marked ergative system like the one in Ibaloy, while those in many Oceanic languages show an accusative pattern, as has been presented in Section 3.3. Kikusawa (2002, 2003b, 2015), based on a comparison of the forms of the pronouns composing relevant sets, proposes a hypothesis that the direction of the change must have been from ergative to accusative. For supporting evidence, as well as references to proposals that the shift was from accusative to ergative rather than the reverse, see Kikusawa 2002, 2003b, and 2017. The directionality of the change is identified with reference to change in pronominal patterns, namely merger, which is known to be strongly unidirectional.

As an example of the change in the order that is proposed here I compare the argument structures with an Auxiliary verb in Ibaloy (repeated in (31)), and the clitic pronoun system in Tongan (repeated in (32)).

(31) Ibaloy argument structures with pronominal NPs (with Aux) (= (10))

- i. VAUX [=NOM]<sub>S</sub> Vi
- ii. VAUX [=NOM]<sub>S</sub> Vid [son IND]<sub>E</sub>
- iii. VAUX [=GEN]<sub>A</sub> Vt [NOM/IND]<sub>P</sub>

(32) Tongan pronominal system (clitic pronouns) (= (26))

- i. VAUX [CLTC]<sub>S</sub> Vi
- ii. VAUX [CLTC]<sub>S</sub> Vid [ki-ate IND]<sub>E</sub>
- iii. VAUX [CLTC]<sub>A</sub> Vt [IND]<sub>P</sub>

By comparing these two systems it can be seen that one of the major differences between them is the set of pronouns that express S or A following the Auxiliary verb. In Ibaloy, the nominative clitic pronoun expresses S and the genitive clitic pronoun expresses A (thus showing an ergative pattern), while in Tongan, a single set of pronouns (“clitic pronouns”) express both S and A, or the actor. It has been argued that the latter developed from the former as a result of the merger of the two clitic pronoun sets that occurred in post-Auxiliary positions in the earlier system. The claimed direction and mechanism of the change is indicated in (33), and the assumed precondition is that the position of pronominal forms expressing S and A was fixed as the post-Auxiliary (pre-main verb) position. Once this happened, the forms occurring in the post-Auxiliary position (shown in (33) in a box with dotted lines) must have been recognised as belonging to a single set covering both S and A (those in a box with straight lines). It is hypothesised that this eventually resulted in

the merger of what originally were genitive and nominative sets, resulting in a system that is analysed as having changed to an accusative pattern.

(33) Corresponding arguments and claimed direction of the development

- i. VAUX [ $\boxed{=NOM}$ ]<sub>S</sub> Vi  
 ii. VAUX [ $\boxed{=NOM}$ ]<sub>S</sub> Vi [*son* IND]<sub>E</sub>  
 iii<sub>2</sub>. VAUX [ $\boxed{=GEN}$ ]<sub>A</sub> Vt [*NOM/IND*]<sub>P</sub>
- ↓
- i. VAUX [ $\boxed{CLTC}$ ]<sub>S</sub> Vi  
 ii. VAUX [ $\boxed{CLTC}$ ]<sub>S</sub> Vi [*ki-ate* IND]<sub>E</sub>  
 iii. VAUX [ $\boxed{CLTC}$ ]<sub>A</sub> Vt [*IND*]<sub>P</sub>

The proposed change is supported by the fact that the forms that occur in the boxed positions in the new system are etymologically a mixture. As has been mentioned earlier, Lynch, Ross & Crowley (2002: 83) reconstruct “subject clitic pronouns” and “object clitic pronouns” for Proto-Oceanic, however, they are aware that their reconstructions are not problem-free. They state that “[a]lthough subject proclitics (or prefixes) occur in many well distributed Oceanic languages and we can infer their presence in P[roto-]Oc[eanic], their forms vary considerably and a number of competing reconstructions can be made” (*ibid.*, 68). They therefore reorganise the reconstructed forms as in Table 3.12 and point out that “Sets I and II respectively reflect the P[roto-]M[alayo-]P[olynesian] nominative and genitive clitics.” Here, I provide the data presented in Table 3.13 to show how diverse the forms are that are found in the reflexes in modern languages, and how their etymology can be identified by assuming multiple sources. A simple examination of the forms of the clitic pronouns reveals that that they have actually come from at least two different sources, namely, earlier nominative and genitive. However, Lynch, Ross & Crowley did not have any explanation as to why this situation was brought about historically.

TABLE 3.12 Reconstructed Proto-Oceanic clitic pronouns (Lynch, Ross, & Crowley 2002: 68) (=Table 3.8)

	1SG	2SG	3SG	
Set I	<i>au=</i>	<i>ko=</i>	<i>i=</i>	< nominative
Set II	<i>ku=</i>	<i>=mu</i>	<i>=(y)a, ña=</i>	< genitive
Set III	<i>[y]a=</i>	<i>o-</i>	<i>e-</i>	
Object enclitics	<i>=au</i>	<i>=ko</i>	<i>=a</i>	< nominative

TABLE 3.13 1SG Clitic pronoun forms found in Central-Pacific languages organised according to their etymology

	< 1SG.GEN	< 1SG.NOM	< 1SG.IND	Source
Rotuman	<i>ŋou</i>			(Churchward 1998)
W. Fijian	<i>ŋgu</i>	–	–	(Pawley & Sayaba 1971)
E. Fijian	–	<i>au</i>	–	(Pawley & Sayaba 1971)
Tongan	<i>ku</i>	<i>ou~u</i>		(Pawley 1970)
Samoan	<i>ʔou</i>	<i>ou</i>	<i>oʔu</i>	(Pawley 1970)
Tokelauan	<i>kō</i>			(Huntsman, Hooper, & Simona 1986)
East Futunan	<i>kau</i>			(Pawley 1970)
East Uvean		<i>u~au</i>		(Pawley 1970)
Tuvaluan	<i>kau</i>		<i>aku</i>	(Besnier 2000)
West Futuna-Aniwan	<i>ŋk~nk~ŋ~n~h</i>		<i>ah</i>	(Dougherty 1983)

With the proposed hypothesis, the existence of a variety of forms in the “clitic pronoun” set expressing the actor in modern Oceanic languages can be readily explained by assuming a merger of the two earlier pronominal sets. The reverse direction is not possible, for it would have to be assumed that every language where the A is marked by a form that has its origin in a genitive pronoun independently re-aligned the system by selecting the same form out of a mix of earlier genitive and nominative forms. In such a case like the one presented in this section, directionality is strongly supported by the merger itself. Merger is a change known for its unidirectionality. A reversal change requires an item-by-item relearning, which could not take place in separate languages for the same system to be produced as a result.

#### 4 Cognacy, Structural Changes and Directionality

In this section, the X-positions identified in Section 3 are used to determine cognate structures. Once cognate structures are identified, the principles of the Comparative Method are applied, then the scenario of the historical development among the cognate structures is clarified. This process also involves an examination of the diachronic relationship between those with the X-position and those without. The resulting hypothesis should be an “optimal theory of



the differentiation of” the daughter systems developing from a proto-system, that is, that the proto-system must be plausible as a human language and the assumed changes must be natural (Clark 1976: 24–28). To postulate such a hypothesis, distributional evidence is first scrutinised, and then the results are examined as to their plausibility.

There are two identifiable cases of change that can be determined by applying the methods that are presented in this section. The first case is a word order change of pronominal NPs, the directionality of which is ascertained based on the possible motivation of the change (4.1). The second case is the development of applicative systems (4.2). In the latter, the directionality of the change is first hypothesised based on the distributional pattern of relevant grammatical morphemes. Results of the examination show a transitional stage between the old system and the system where the innovative applicative system exists, and thus support the proposed working hypothesis. These hypotheses are summaries of discussion from previous publications (Kikusawa 2002, 2003, 2015).

#### 4.1 *Word Order Change of Pronominal NPs*

Ibaloy and Pendau are relatively closely related, nevertheless, the former shows a clear ergative system while the latter shows an inverse system. In this section, I argue that one of the major changes by which the two systems developed is a word order change of pronominal NPs, where the earlier nominative NP that occurred in post-verbal position acquired a preverbal clause initial position. The developmental paths and the process of the change are identified in this section based on a comparison of cognate structures.

The focus of this chapter is strictly on the method for the applying the Comparative Method to syntactic features. That the verb-initial word order is more conservative and the nominative NP came to occupy preverbal position has been discussed in Kikusawa (2003) and Aldridge (2010). The discussion in the latter is based on theoretical underpinnings, rather than comparative, and the fact that two researchers with different perspectives separately come up with the same conclusion supports and strengthens the two hypotheses.

The schematic structures of Ibaloy (without Auxiliary, (6)) and Pendau (15) are repeated in (34), this time with pairs of cognate structures indicated with boxes. Among these, X-positions occur in dyadic structures in iii., and these are identified as cognate clause structures. Structures in i. are the sole single argument structures in each language and are assumed to have developed from the intransitive structure in the shared proto-language. Structures in ii. are dyadic intransitive structures, and based on negative evidence (the lack of the X-position), they are also provisionally treated as possible cognate structures.

## (34) Ibaloy and Pendau argument structures with pronominal NPs and their cognacy

Ibaloy (without Aux)		Pendau	
i.	Vi[=NOM] <sub>S</sub>	i.	[ABS] <sub>S</sub> Vi
ii.	Vi[=NOM] <sub>S</sub> [son IND] <sub>E</sub>	ii.	[ABS] <sub>Aav</sub> Vav [ABS] <sub>Pav</sub>
iii.	Vt[=GEN] <sub>A</sub> [=NOM] <sub>P</sub>	iii.	[ABS] <sub>Piv</sub> Viv[=GEN] <sub>Aiv</sub>

Based on a comparison of the occurrence distribution and function of NPs in the structures in iii., the nominative NP in Ibaloy can be analysed as corresponding to the absolute NP in Pendau. The genitive NP in Ibaloy by default corresponds to the genitive NP in Pendau, both being the X-position. However, the positions of supposedly corresponding nominative NPs in the two languages do not match. For example, in Ibaloy, both genitive and nominative pronouns expressing A and P are encliticised to the verb, while in Pendau, the absolute pronoun expressing P precedes the verb, while the genitive pronoun expressing A is encliticised to the verb just as in Ibaloy. Since it is known that the two languages developed from a single system, namely PMP, it can be hypothesised that the word order changed in either or both of the languages.

To identify their developmental paths, first I examine the word order restrictions of each of the two languages. Starting with Ibaloy, as mentioned in 3.2.1, the pronoun expressing the nominative NP of the clause may be either a clitic or an independent pronoun. The relative word order of the pronouns to the main verb is commonly shared by both languages in that they follow the verb in the order of genitive, then nominative. Clause structures with independent pronouns are repeated in (35).

## (35) Ibaloy argument structures with independent pronouns (without Aux, =(12))

i.	Vi	[NOM/IND] <sub>S</sub>	
ii.	Vi	[NOM/IND] <sub>S</sub>	[son IND] <sub>E</sub>
iii.	Vt[=GEN] <sub>A</sub>	[NOM/IND] <sub>P</sub>	

In addition, in Ibaloy, either the nominative or genitive component may be topicalised. In such a case, an independent NP may appear in the clause initial position (Ruffolo 2004: 469). The NP appearing in the clause initial position may be a pronoun or a lexical NP, and whichever the case is, it co-occurs with the corresponding clitic nominative pronoun. Example (36) is an example where 1SG independent pronoun *si?gak* is topicalised and occurs before the verb indicating “as for me” and co-occurs with the 1SG genitive clitic

pronoun =*ko*. The clause structure with topicalised independent pronouns are shown in (37). It is assumed here that the topicalised NP could also be an independent pronoun when it corresponds to the nominative component.

(36) Ibaloy example with a topicalised pronominal NP

*nem si'kak, kowankoy aychi!*  
 nəm siʔgak kowan[=ko]<sub>A</sub>[=j ʔajdi]<sub>P</sub>  
 but 1.IND say=1.GEN=NOM no  
 'but as for me, I said no!' (Ruffolo 2004: 474)

(37) Ibaloy argument structures with topicalised pronominal NPs

- i. PRON.IND Vi[=NOM]<sub>S</sub>
- ii. PRON.IND Vi[=NOM]<sub>S</sub> [son IND]<sub>E</sub>
- iii. PRON.IND Vt[=GEN]<sub>A</sub>[=NOM]<sub>P</sub>

Thus, Ibaloy exhibits three structures for the transitive clause, including the one with a topicalised NP, as shown in (38).

(38) Variations of Ibaloy structure iii.

- a. Vt[=GEN]<sub>A</sub>[=NOM]<sub>P</sub>
- b. Vt[=GEN]<sub>A</sub> [NOM.IND]<sub>P</sub>
- c. PRON.IND Vt[=GEN]<sub>A</sub>[=NOM]<sub>P</sub>

In Pendau, on the other hand, Quick (2007: 123), in his description of basic clause structures, introduces the notion “pivot” to refer to the component that occurs in clause initial position, the function of which overlaps with those that are typically associated with subjecthood, such as quantifier float, relativisation and equi-subject deletion (2007: 127–132). However, according to Quick (2007: 365–366), the position of the absolute NPs is not completely fixed, and the component occurring in the pivot position may occur following all the other constituents of the clause. Such structures are repeated in (39).

(39) Pendau argument structures with pronominal NPs (2) occurring in the phrase final position (=18))

- i. Vi [ABS]<sub>S</sub>
- ii. Vav [ABS]<sub>P</sub> [ABS]<sub>A</sub>
- iii. Viv[(=)GEN]<sub>A</sub> [ABS]<sub>P</sub>

(40) Variations of Pendau structure iii.

- a. [ABS]<sub>PiV</sub> Viv[=GEN]<sub>AiV</sub>
- b. Viv[(=)GEN]<sub>A</sub> [ABS]<sub>P</sub>

To compare and reconstruct the Ibaloy and Pendau systems, I first focus on the variations of structure iii. in the two languages, namely those listed in (38) and (40), which we know are cognate structures. Then, the results are examined as to whether they are consistent with the structures in i and ii. In doing so, principles of the Comparative Method summarised by Clark (1976: 24–27) are applied. That is, in reconstruction, positing a hypothesis with fewer and more natural changes based on distributional evidence and plausibility is considered to be more appropriate than otherwise.

Between Ibaloy and Pendau structures, there is one structure that appears to be commonly shared between the two languages, namely (38-ii) and (40-ii). These clause structures are analysed differently by the analyst of each language (transitive for Ibaloy, and inverse for Pendau), however, they are both i) a two argument structure, ii) verb initial, iii) with a genitive clitic expressing the grammatical function A and, iv) with an independent pronoun expressing P following the A. Assuming that the “majority rule” is valid for the reconstruction of syntactic structures, this two-argument verb structure is reconstructed as a proto-structure as in (41). I refer to it as Proto-Ibaloy-Pendau (PIP). The rest of the structures are listed in (42). The question here is how many of the structures in (42) can be explained by the hypothesis in (41).

(41) Possible Proto-Ibaloy-Pendau two argument structure

$V[=GEN]_A [IND]_P$

(42) Structures that are different from the reconstructed one

i. Ibaloy  $Vt[=GEN]_A[=NOM]_P$  = (34c)

ii. Ibaloy PRON.IND  $Vt[=GEN]_A[=NOM]_P$  = (37c)

iii. Pendau  $[ABS]_{Piv}$   $Viv[(=)GEN]_{Aiv}$  = (34c)

The difference between the reconstructed structure in (41) and (42-i) is whether the NP expressing the P is a clitic or not. It is commonly known that pronouns can be grammaticalised to become clitics and eventually agreement markers (e.g., De Vogelaer 2008: 223–225). It appears that there is a good possibility that Ibaloy, along with other Philippine languages today, shows a stage in the change where a nominative pronoun is becoming a clitic and this claim contradicts current reconstructions of nominative pronouns as clitics. According to Reid & Liao (2001: 21–24), the status of the pronoun expressing P varies among Philippine languages, being either a clitic or an independent pronoun or both, and this appears to support the claim that the clitic status was acquired after the dispersal of these languages. PMP Nominative pronouns have been reconstructed as clitics as shown in Table 3.1. It is necessary to examine both the form and distribution of these pronouns in western Austronesian languages,

combining morphological reconstruction with clause structure reconstruction to clarify the actual developmental path.

Structure (42-ii) is a derived structure of (42-i), with an independent NP expressing the topicalised element of the clause. Topicalisation of an argument by fronting an NP is widely found in Austronesian languages, although the conditions vary. Further discussion of this point appears in Section 4.1.

The difference between the reconstructed structure and (42-iii) is the position of the NP expressing P. It should be noted here that the two sets of pronouns in Pendau, which Quick refers to as absolute and genitive, are formally non-bound and bound pronouns respectively. The former carries functions carried by independent pronouns in other languages, occurring in both argument positions of equative clauses and copula clauses, the object of prepositional phrases, and other argument positions except for the argument expressing A of an inverse structure (2007: 126). When we compare (41) and (42-iii) bearing this in mind, the major difference between the two is the position of the “independent” NP expressing P. Here I show that by assuming a topicalised construction in the proto-system, we can explain not only the development of (42-iii) but also that of the other clauses. By topicalised construction is meant here a structure where an independent NP expressing the nominative element is fronted. In (43–44), these assumed proto-structures are presented. An independent NP expressing S or P in the clause appears following the verb in (43), while in (44), it occurs preceding the verb.

(43) Proto-Ibaloy-Pendau basic argument structures

- i. Vi [NOM.IND]<sub>S</sub>
- ii. Vi [NOM.IND]<sub>S</sub> [son IND]<sub>E</sub>
- iii. Vt[=GEN]<sub>A</sub> [NOM.IND]<sub>P</sub>

(44) Proto-Ibaloy-Pendau topicalised constructions

- i. [NOM.IND]<sub>S</sub> Vi
- ii. [NOM.IND]<sub>S</sub> Vi [son IND]<sub>E</sub>
- iii. [NOM.IND]<sub>P</sub> Vt[=GEN]<sub>A</sub>

The structures in (43) are shared by both languages. The current Ibaloy system can be explained as resulting from nominative pronouns developing into clitics from this system.<sup>9</sup> The Pendau system on the other hand appears to have

9 In structure ii, in Ibaloy, it is the nominative S that is phonetically attached to the verb, while in Pendau, it is the P (equivalent of E in Ibaloy) that is closely attached to the verb (Quick 2007: 366). This appears to support the idea as well that the clitic status of nominative in

developed as a result of the structures in (44) becoming basic (unmarked) structures. This hypothesis would be naturally motivated if the PMP (thus PIP) system was not only morphologically ergative but also syntactically ergative. It has been reported that in some Philippine-type languages spoken today, nominative NPs are the only core NPs that can be fronted for topicalising (or, “extracted”, cf. Payne 1982, Aldridge 2004).<sup>10</sup> Thus, the word order change between the two systems is readily explained by the allowed fronting of nominative arguments in system (i) becoming a fixed position in system (ii) (Kikusawa 2003, To appear).

The assumed sequence of the development of basic clause structures in Ibaloy and Pendau is presented in (45–47). In each set, the first two lines show the reconstructed PIP structures, followed by the Ibaloy and Pendau reflex clauses.

(45) A sequence of development of the intransitive clause (< \*Intransitive)

PIP BASIC		Vi	[NOM] <sub>S</sub>	=(43a)
PIP TOPICAL.	[NOM.IND] <sub>S</sub>	Vi		=(44a)
> Ibaloy BASIC		Vi	[=NOM] <sub>S</sub>	=(35a)
> Ibaloy TOPICAL.	PRON.IND	Vi	[=NOM] <sub>S</sub>	=(37a)
> Pendau BASIC		Vav	[ABS] <sub>S</sub>	=(39a)
> Pendau BASIC	[ABS] <sub>S</sub>	Vav		=(15a)

(46) A sequence of development of the first dyadic clause (< \*Dyadic Intransitive)

PIP BASIC		Vi	[NOM.IND] <sub>S</sub>	[son IND] <sub>E</sub>	=(43b)
PIP TOPICAL.	[NOM.IND] <sub>S</sub>	Vi		[son IND] <sub>E</sub>	=(44b)
> Ibaloy BASIC		Vi	[NOM.IND] <sub>S</sub>	[son IND] <sub>E</sub>	=(35b)
> Ibaloy TOPICAL.	PRON.IND	Vi	[=NOM] <sub>S</sub>	[son IND] <sub>E</sub>	=(37b)
> Pendau BASIC		Vav	[ABS] <sub>P</sub>	[ABS] <sub>A</sub>	=(39b)
> Pendau BASIC	[ABS] <sub>A</sub>	Vav		[ABS] <sub>P</sub>	=(15b)

Ibaloy and also the syntactic attachment of P in Pendau are both the result of innovations after the languages split. These facts imply that the free position of the absolute A NP in Pendau is an innovation subsequent to the change where P became syntactically closely attached to the verb.

10 In Ibaloy, however, the genitive NP (expressing A) can also be extracted. How the Ibaloy case relates to this historical development requires further examination.

- (47) A sequence of development of the second dyadic clause (< \*Transitive)
- |                   |                        |                          |                        |        |
|-------------------|------------------------|--------------------------|------------------------|--------|
| PIP BASIC         |                        | Vt[=GEN] <sub>A</sub>    | [NOM.IND] <sub>P</sub> | =(43C) |
| PIP TOPICAL       | [NOM.IND] <sub>P</sub> | Vt[=GEN] <sub>A</sub>    |                        | =(44C) |
| > Ibaloy BASIC    |                        | Vt[=GEN] <sub>A</sub>    | [NOM.IND] <sub>P</sub> | =(35C) |
| > Ibaloy TOPICAL. | PRON.IND               | Vt[=GEN] <sub>A</sub>    | [=NOM] <sub>P</sub>    | =(37C) |
| > Pendau BASIC    |                        | Viv[(=)GEN] <sub>A</sub> | [ABS] <sub>P</sub>     | =(39C) |
| > Pendau BASIC    | [ABS] <sub>P</sub>     | Viv[(=)GEN] <sub>A</sub> |                        | =(15C) |

The cognacy of the clause structures under examination and the presented hypothesis as to how the Ibaloy and Pendau developed is supported by the occurrence pattern of a verbal affix (the so-called \*maN-) (Kikusawa 2017, To appear).

The following is a summary of the characteristics of PIP:

- i) It was a verb initial language
- ii) The nominative pronoun expressing S and P was a free form and not a clitic
- iii) In transitive clauses, the genitive pronoun expressing A was encliticised to the verb

Space does not allow detailed discussion, however, it should be mentioned here that parallel correspondences are found in clause structures with lexical NPs in Ibaloy and Pendau, and the same hypothesis can be applied to explain their differences and possible developmental paths. This supports the proposed hypothesis that the Pendau system developed by fronting an NP rather than by the clitic pronoun being stranded by “aux-axing” in preverbal position as proposed by Starosta, Pawley & Reid (1982).

Clause structures with lexical NPs in the two languages are shown in (48–49) and examples illustrating them are given in (50–51).

- (48) Abstracted argument structures with lexical NPs in Ibaloy (an ergative system)
- i. Vi [si/?i NP]<sub>S</sub>
  - ii. Vi [si/?i NP]<sub>S</sub> [son/ni<sub>2</sub> NP]<sub>E</sub>
  - iii. Vt [nən/ni<sub>1</sub> NP]<sub>A</sub> [si/?i NP]<sub>P</sub>

The forms *si* and *?i* in (48) mark the difference between personal and common nouns that express the nominative NP of the structure, likewise *nən* and *ni* mark the difference between personal and common nouns that express the genitive NP of the structure.

## (49) Pendau argument structures with Lexical NPs (an inverse system)

- i. Vi [si/∅ NP]<sub>S</sub>  
 ii. [si/∅ NP]<sub>Aav</sub> Vav [si/∅ NP]<sub>Pav</sub>  
 iii. [si/∅ NP]<sub>Piv</sub> Viv [ni/nu NP]<sub>Aiv</sub>

The alternation between *si* and ∅ in (49) indicates the marking before proper and common NPs respectively.

## (50) Examples in Ibaloy (I-ii) and Pendau (P-ii) (1)

- I-ii. *engoney* *i* *aki* *ni* *otot*  
 ʔəN-ʔonəj [ʔi ʔaki]<sub>S</sub> [ni<sub>2</sub> ʔotot]<sub>E</sub>  
 ACTV.PFT-see NOM monkey OBL mouse  
 ‘The monkey saw a mouse’ (Ruffolo 2004: 238)

- P-ii. [*Si* *kai*]<sub>A</sub> *neng-ita-i* [*si* *be’e*]<sub>P</sub>  
 ABS.PNM grandfather AV.R-see-LOC ABS.PNM grandmother  
 ‘The grandfather saw the grandmother.’ (Quick 1994: 466)

## (51) Examples of Ibaloy (I-iii) and Pendau (P-iii) (2)

- I-iii. *naon’an* *ni dedaki* *sota*  
 na-ʔonəj-an [ni<sub>1</sub> RDP-laki]<sub>A</sub> [sota  
 POTLOCV.PFT-see-LOCV GEN PL-man NOM.REC  
*bibiid* *Batan*  
 RDP-biʔi=d batan]<sub>P</sub>  
 PL-woman=LOC Batan  
 ‘The men happen[ed] to see the women of Batan’ (Ruffolo 2004: 306)

- P-iii. [*Si* *be’e*]<sub>P</sub> *ni-ita-i* [*ni* *kai*]<sub>A</sub>  
 ABS.PNM grandmother IV.R-see-LOC GEN.PNM grandfather  
 ‘The grandfather saw the grandmother.’ (Quick 1994: 466)

Examples in Ibaloy with fronted nominative NPs (52) and a relativised nominative NP (53) are provided. There are structures in Ibaloy where the nominative NP precedes the verb. For example, a nominative NP may be fronted, or “clefted” in Ruffolo’s terms (2004: 379), and it is only a nominative NP that may be fronted in such a construction. Examples are presented in (52). In (52b), the third person independent noun that occurs in the clause initial position corresponds to the nominative NP (actor) of the dyadic intransitive verb, and the



word *ɲanto* ‘what’ in the clause initial position corresponds to the nominative NP (Patient) of a transitive verb in (52c).

(52) Ibaloy examples with fronted nominative NP

a. *siʔkatoɲ*      *dimaw*              *chi*      *Bagiw*  
 siʔgato=j      <im>law              di      bagiw  
 3.IND=NOM      <ACTV.PFT>go      LOC      Bagiw  
 ‘Who went to Baguio?’ (Ruffolo 2004: 380)

b. *ɲantoy*      *dingkatoʔ*  
 ɲanto=j      <in>laga=to  
 what=NOM      <PATV.PFT>do=3.GEN  
 ‘What did he do?’ (Ruffolo 2004: 380)

A nominative NP may also precede the verb in relativised clauses, and in this case also, it is only the nominative NP that may be relativised. An example of a relativised transitive clause is presented in (53).

(53) Ibaloy transitive clause with relativised nominative NP

a. *bara kono i titit ya chakaichemang*  
 wada kono ʔi titit ja daka=ʔi-dəmaŋ  
 exist hearsay NOM bird LK 3+.GEN.ASP=THMV.CNTV-see  
*ya emeboteng*  
 ja ʔəmə-botəŋ  
 LK STAPATV.CNTV-drunken  
 ‘It is said that they keep seeing drunken birds’ (Ruffolo 2004: 407) (LIT.  
 There are, it is said, **birds** that they keep seeing [Ø] and (that) are  
 drunk[Ø].)

Considering the fact that Ibaloy has a clear condition as to when a nominative NP can precede or follow the verb, while in Pendau, there is no clear condition specified by which the position of the corresponding argument, namely, the absolute NP, is determined, it seems reasonable to assume that the direction of the change was from the Ibaloy system to the Pendau one. At least the precondition of the change appears to be clear; that the nominative NP acquired the position preceding the verb as its default position. In contrast, if we assume that the Pendau system was the earlier one, an explanation is needed as to why the NPs preceding the verb came to occur in a post-verbal position in Ibaloy.

Based on the above observation, the direction of the change is shown schematically in (54). NPs that are nominative are bold. The change is applicable to both pronominal and lexical NPs.

## (54) Illustration of word order change from the Ibaloy to Pendau system

Structure	PMP		pre-Pendau		Pendau
i.	*VS	→	SV		→ SV
ii.	*VSE	→	SVE		→ AVP
iii.	*VAP	→	PVA		→ PVA

In what follows, reconstructed PMP clause structures and their reflex structures will be referred to as Structures i., ii., and iii., according to their cognacy.

#### 4.2 *Development of Applicative Verb Suffixes*

In this section, the development of applicative verb suffixes in some Sunda-Sulawesi languages is examined.<sup>11</sup> The discussion starts with the recognition of a discrepancy between the correspondence of clause structures and the distribution of certain verb suffixes in Ibaloy and their apparently corresponding suffixes in Pendau. The suffixes in these two languages could both be referred to as “applicative suffixes,” however, the ones in Ibaloy occur only in Structure iii., while supposedly corresponding suffixes in Pendau occur in both Structures ii. and iii. This fact appears to cast a question on the accuracy of the cognate identification carried out in Section 2 above.

In this section, I show that the proposed clause correspondence helps to clarify the differences between the two languages, and to identify the direction of change. It is shown that the Ibaloy suffixes can be identified as reflecting an earlier system, and the Pendau suffixes extended their distribution from Structure iii. to Structure ii. The directionality of the change is determined based on the fact that some “applicative suffixes” in Pendau show the same syntactic function as those in Ibaloy, occurring only in Structure c. The Pendau system, where two systems are combined, appears to show a transition period between the Ibaloy system and those found in other Sunda-Sulawesi languages, as discussed below. It is possible that the existence of the form *-i* with the wider distribution is a result of contact with Indonesian and other languages spoken in the area. For a detailed discussion, see Kikusawa, 2012 and To appear.

The distribution of relevant verb forms in Ibaloy and Pendau are compared in (55). Semantically, the transitive suffixes in Ibaloy, including *-i* (in complementary distribution with *-an*), and the applicative suffixes *-i* and *-aʔ* in Pendau appear to correspond to each other respectively. However, the Ibaloy affixes mark transitive constructions and occur only in Structure c. as shown in (56), while in Pendau, some affixes occur only in Structure iii. (Quick 2007:

11 The equivalent of the Ibaloy forms in closely related Austronesian languages has been referred to as “applicative” in some literature (Ross & Teng 2005, Daguman 2004, Aldridge 2004, Kaufman 2017).

304), as in the Ibaloy examples in (58–59), while the majority occur in both Structures ii. and iii. (Quick 2007: 288, see 60). For convenience, I will hereafter refer to the first type of affixes as applicative<sub>1</sub> and the second type of affixes as applicative<sub>2</sub>. Applicative related phenomena in Pendau are discussed in detail in Quick (2007: 288–312).

(55) Distribution of “applicative” verb affixes in Ibaloy and Pendau and the semantic roles of applied argument

	IBALOY	PENDAU	
	TRANSITIVE AFFIX	APPLICATIVE <sub>1</sub>	APPLICATIVE <sub>2</sub>
Structure i.			
Structure ii.			
Structure iii.	<i>-ən ~ -a</i> ‘patient’ <sup>a</sup>	<i>-aʔ<sub>1</sub></i> ‘instrumental’	<i>-aʔ<sub>2</sub></i> ‘benefactive, instrument’
	<i>-an ~ -i</i> ‘locative’ <sup>b</sup>	<i>-i<sub>1</sub></i> ‘locative’	
	<i>i-</i> ‘thematic’		<i>-i<sub>2</sub></i> ‘goal, locative’
	<i>i- -an</i> ‘benefactive’		

a The suffix *-a* occurs in continuative and progressive aspects (Ruffolo 2004: 254).

b The suffix *-i* occurs in continuative, progressive and imperative aspects (Ruffolo 2004: 266) and also in various circumfixes in these aspects (Ruffolo 2004: 293, 297, 299, 304).

The examples in (56) illustrate Structures ii. and iii. in Ibaloy with the verb *ʔonəj* ‘see’. Note that in ii., the verb has a reflex of PMP \**maN-* and the actor *aki* ‘the monkey’ is expressed as a nominative NP and the undergoer *otot* ‘a mouse’ as genitive. In structure iii., the verb has the locative affix *-i* and the actor is expressed with genitive forms, while the undergoer of the event is expressed with nominative forms.

(56) Ibaloy example illustrating Structures ii.

<i>engoney</i>	<i>i</i>	<i>aki</i>	<i>ni</i>	<i>otot</i>
ʔən-ʔonəj	[ʔi	ʔaki] <sub>S</sub>	[ni	ʔotot] <sub>E</sub>
ACTV.PFT-see	NOM	monkey	GEN	mouse
‘The monkey saw a mouse.’ (Ruffolo 2004: 238)				

(57) Ibaloy example illustrating Structures iii.

<i>on'im</i>	<i>kari</i>	<i>iman!</i>
ʔonəj-i[=m] <sub>A</sub>	kadi	[ʔiman] <sub>P</sub>
see-LOCV/IMP=2.GEN	request	NOM.DIST.PRON
‘Look at that one!’ (Ruffolo 2004: 164)		

The examples in (58–59) illustrate parallel examples to those presented above in Pendau. The verb *guntung* ‘to light’ in (58a) carries a reflex of PMP \*maN- and the actor is expressed as an absolute pronoun. The form *-i* does not occur on the verb in this structure. In (58b) on the other hand, the verb carries the suffix *-i* and the actor appears in genitive (=nyo ‘3SG.GEN’) and the undergoer *palan* ‘light’ appears in the absolute case preceding the verb. The pair shows a parallel system to the one shown in (56) for Ibaloy. Likewise, in (59a), the verb *mene?* ‘to go up’ carries *N-*, a reflex of PMP \*maN-, the actor is expressed as an absolute pronoun *ʔaʔu* ‘1SG’ and the undergoer *niu* ‘coconut’ follows the verb. The verb does not carry the suffix *-i* in this structure. In (59b), on the other hand, the verb carries the suffix *-i*, and the actor is expressed by the genitive pronoun =nyo ‘3SG.GEN’. The undergoer *taipang* ‘mango tree’ in absolute case follows the verb in this example.

(58) Pendau examples with suffix *-i* occurring only in Structure iii. (1)

a. *Aʔu moguntung palan.*  
*ʔaʔu m-pong-guntung palan*  
 1SG.ABS IR-SF.PT-light light  
 ‘I will light the lamp.’ (Quick 2007: 305)

b. *Palan roguntuninyo.*  
*palan ro-guntung-i=nyo*  
*light IV.IR-light-DIR=3SG.GEN*  
 ‘He/she will light the lamp.’ (Quick 2007: 304)

(59) Pendau examples with suffix *-i* occurring only in Structure iii. (2)

a. *Aʔu nemene? niu.*  
*ʔaʔu n-pe-mene? niu*  
 1SG.ABS RE-SF.DY-go.up coconut  
 ‘I climbed the coconut tree.’ (Quick 2007: 331)

b. *Nipeneʔinyo taipang uo.*  
*ni-peneʔ-i=nyo taipang ʔuo*  
 IV.RE-go.up-DIR=3SG.GEN mango.tree yonder  
 ‘He climbed up that mango tree.’ (Quick 2007: 304)

It should be noted that the examples in (58–59) are not typically occurring patterns of applicative suffixes in Pendau. The majority of applicative suffixes *-i* and *-aʔ* in Pendau occur in both Structures ii. and iii., as in (60) below. In (60a), the verb *ʔomung* ‘to carry’ has a reflex of PMP \*maN- and also the suffix *-i*. The



TABLE 3.14 The distribution of the applicative verb ending in non-Sunda-Sulawesi languages

	IBALOY	PENDAU	TABA	FIJIAN	TONGAN
Structure i.					
Structure ii.		-i, -aʔ			
Structure iii.	-i, -a, -an and others	-i, -aʔ	-o -ak	-i -aki	(-i, -Caki)

Note: Parentheses indicate restricted occurrence.

This hypothesis is supported by the syntactic characteristics associated with the form *-i* in Pendau. Quick (2007: 302) claims that the suffix *-i* in Pendau has at least four known functions, and “[s]ome of these are clearly applicative, some seem marginally applicative and others appear to be idiosyncratic occurrences.” He notes that *-i* has a “low degree of productivity,” and many of the verbs with this form do not have a “locative” function. These appear to imply that the *-i* form is more lexicalised or somewhat fossilised and is probably older than the more productive suffix *-aʔ*, which more clearly shows the nature of applicative<sub>2</sub>. It should be noted that the occurrence of verbal affixes is lexically determined in Ibaloy and the other languages mentioned in Table 3.14.

The assumed direction of change from an Ibaloy distribution where the affixes are restricted to Structure iii., to one where the affixes have spread to Structure ii. seems to be further supported by the distribution of the applicative suffix in Mamuju (Kaufman 2017). Mamuju is another language spoken in Sulawesi. It shows a similar system to that in Pendau, in that it has an A marking with origins in PMP genitive pronouns and in that it has two applicative suffixes, *-i* and *-ang*. However, according to Kaufman (2017), the forms *-i* and *-ang* in Mamuju are “incompatible” with structure ii. It is further mentioned that structures ii. are, however, allowed to combine freely with the forms *-i* and *-ang* when the agent is extracted, in, for example, relative clause constructions. This is the same condition under which definite patients are possible for actor voice predicates in Philippine-type languages (Kaufman 2017, see also Adams & Manaster-Ramer 1988). Thus, the distribution of the forms *-i* and *-ang* in Mamuju can be said to show a stage in between the Ibaloy and Pendau systems, as summarised in Table 3.15.

The condition Kaufman describes for the occurrence of an applicative suffix in structure ii. should help identify the motivation and developmental paths of the applicative suffix extending its distribution from Structure iii. to ii.

TABLE 3.15 The distribution of the applicative verb ending in Sunda-Sulawesi languages

	IBALOY	MAMUJU	PENDAU	INDONESIAN/MALAY
Structure i.				
Structure ii.		(-i, -ang)	-i, -aʔ	-i, -kan
Structure iii.	-i, -a, -an	-i, -ang	-i, -aʔ	
	and others			

Note: Parentheses indicate restricted occurrence.

Indonesian and Malay have been added to the table. These languages share the applicative<sub>2</sub> system with Pendau. It is necessary, moreover, to examine the possibility that it was Indonesian, a lingua franca in the area, that provided the source of the applicative<sub>2</sub> in Pendau.

One of the findings of this distribution is a change in the co-occurrence pattern with the prefix *maN-* and the applicative suffix. The distribution of *maN-* was restricted to structure ii. in PMP (later spreading to structure i. in some languages), and never co-occurred with transitive (“applicative”) suffixes. However, after the applicative verb suffixes extended their distribution to cover Structures ii. and iii., reflexes of PMP \**maN-* and one of the two PMP transitive suffixes, \**-i* or \**-an*, now co-occur in structure ii. The loss of the earlier functional difference between Structures ii. and iii. may be associated with this distributional change of the verb forms, however, this requires further investigation of other linguistic features associated with them.

## 5 Summary and Conclusion

The aim of this article has been to focus on the methodology as to how syntactic reconstruction is conducted with languages without a written record from the past. Any research on the historical development of such languages has to be based on the comparison and reconstruction of data almost solely from modern languages. It is claimed that Austronesian languages make a good candidate for this endeavour, for the genetic relationship among the languages is relatively well established, while the languages show diverse typological characteristics.

Five Austronesian languages were analysed and compared for the purpose of syntactic reconstruction. The selected languages are Ibaloy (ergative), Pendau (inverse), Taba (split between S and A), Fijian (accusative), and Tongan

(accusative pronominal and ergative non-pronominal systems). As the languages show typologically diverse systems, the question was how these different systems developed from an earlier system.

To answer this question, clause structures were abstracted. Structural patterns were described based on the combination of the verb and its argument noun phrases, and then they were classified according to the patterns of the occurrence of the grammatical case of the argument noun phrases. Monadic intransitive, dyadic intransitive, and transitive clauses were considered as basic clause structures and were described based on the argument structure. This descriptive method made it possible to compare structural patterns across typologically divergent languages.

In identifying the cognacy of the abstracted structures, it was shown to be useful to determine the position of each clause where the reflex of earlier genitive pronouns or the remnant of them occurs (labelled as the X-position). It was shown that the reflex could appear in a full or clitic pronominal set, or in reduced (grammaticalised) forms such as verb agreement or simply a consonant occurring on the verb. The existence of this position in each structure is considered a mark of the clause having developed from an earlier transitive clause, since genitive pronouns occurred as the A of transitive clauses.

Although the earlier genitive set is considered to have marked the A of transitive sentences, and thus the structure has been labelled as ergative, the positions associated with the reflexes turned out not to be found only in transitive clauses. Monadic and dyadic intransitive clauses also may have a reflex of the earlier genitive pronouns, including in a clearly accusative language, such as Fijian. This implies that the ergative marking function that was carried by the earlier genitive pronouns changed in some languages as a result of syntactic change. The distribution of the X-positions and the occurrence of the reflexes of the earlier genitive set were analysed in conjunction with one another. The functional change of the pronouns was shown to have resulted from the merger of two earlier pronominal sets, namely, nominative and genitive. It was argued that the motivation for this change was the change from a morphologically marked case-marking system to a word-order oriented system. Based on lexical reconstruction, the pronominal system of Proto-Oceanic had been reconstructed as showing three sets. However, there had been no explanation as to why there were three sets and how each developed in the pronominal system of Oceanic languages. The results of the syntactic reconstructions presented in this chapter clarified the development of the pronominal sets in Oceanic languages. Thus, it was shown that clarifying changes in clause structures also contributes to a better understanding of the development of morphological forms and systems.



The results of the presented reconstruction have the potential for being the bases for the comparison and reconstruction of other syntactic phenomena. To demonstrate this point, two cases of comparison and reconstruction were presented, namely, examination of word-order changes in Ibaloy and Pendau, and one on the extension of the function of certain verbal morphemes in some languages in Indonesia.

Syntactic reconstruction is indeed possible with languages, such as Austronesian, that typically have no old written records. It is possible by the comparison and reconstruction of the surface clause structures, integrated with lexical comparison and reconstruction, applying the traditional Comparative Method. Syntactic reconstruction supplements information that cannot be obtained through lexical comparison and reconstruction. In particular, knowing how syntactic features have changed is inevitable for tracing changes in the function of grammatical forms, since such changes are triggered by or result from syntactic change. In Austronesian historical linguistics, there is much that awaits such examination. One such example is the reconstruction of the verb morphology of Proto-Austronesian, proposed by Ross (2015). This is based on a rigorous examination of form and function correspondences of relevant reflexes and the results are presented in long paradigmatic lists. It is likely that the size of the list is partially due to the existence of what could be referred to as functional doublets. But sorting out syntactic change and the functional changes resulting from them, it is possible that these paradigms will be reduced with information about their developmental histories, just like the reconstructed pronominal system in Proto-Oceanic has been clarified.

As a new area of research, syntactic reconstruction has much to offer, not only for bringing in new knowledge about syntactic change but also extending the limits of the Comparative Method.

### Abbreviations

-	boundary between an affix and its root
<xxx>	indicates that xxx is an infix
[xxx] <sub>Aav</sub>	(Pendau) A of Vav
[xxx] <sub>Aiv</sub>	(Pendau) A of Viv
[xxx] <sub>Pav</sub>	(Pendau) P of Vav
[xxx] <sub>Piv</sub>	(Pendau) P of Viv
[xxxx] <sub>A</sub>	argument expressing A
[xxxx] <sub>E</sub>	argument expressing E
[xxxx] <sub>P</sub>	argument expressing P
[xxxx] <sub>S</sub>	argument expressing S

+	(Ibaloy, PMP) augmented pronoun number
=	boundary between a clitic and its host
1	first person
1+2	first person inclusive
2	second person
3	third person
A	Agent of transitive verbs
ABS	(Pendau) absolute case
ABS	(Tongan) absolutive case
ACTV	(Ibaloy) Actor Verb
ASP	aspect marker
AUG	augmented number
Aux	Auxiliary
AUX	Auxiliary
AV	(Pendau) active voice
BNFV	(Ibaloy) Beneficiary(-oriented) verb
CLTC	(Tongan) clitic
CNTV	(Ibaloy) continuative aspect
CP	clitic pronoun
CR	(Taba) cross-referencing form
DIR	(Tongan) directional
DIST	(Ibaloy) distal demonstrative
DL	dual
E	Extended argument of intransitive verbs
ERG	ergative case
EX	exclusive
GEN	genitive case
IMP	(Ibaloy) imperative
IN	inclusive
IND	independent pronoun
IPF	(Ibaloy) imperfective aspect
LOC	Locative
LOCV	(Ibaloy) Locative(-oriented) verb
MIN	minimum number
N	Noun
NEG	negative
NOM	Nominative
NP	Noun Phrase
OBL	(Ibaloy) oblique case
P	Patient of transitive verbs
P	preposition

PAST	past tense
PATV	(Ibaloy) Patient-oriented Verb
pb	proto-structure ii.
PFT	(Ibaloy) perfective aspect
PL	plural
PMP	Proto-Malayo-Polynesian
PNM	proper noun marker
POS	(Pendau) postural (verb class VI)
PotLocV	(Ibaloy) potentive Locative(-oriented) verb
PotPatV	(Ibaloy) potentive Patient(-oriented) verb
PRON	(Ibaloy) pronoun
PRS	present
R	(Pendau) realis
RDP	reduplicated part
REAL	(Taba) realis
REC	recognitional demonstrative; reciprocal marker
S	Subject (actor/undergoer) of intransitive verbs
SF	augmenting stem prefix former
SG	singular
SPEC	(Tongan)
STAV	(Ibaloy) Stative verb
THMV	(Ibaloy) Theme(-oriented) verb
V	Verb
VAUX	Auxiliary verb
Vav	(Pendau) active voice verb
Vdt	ditransitive verb
Vi	intransitive Verb
Vid	dyadic intransitive verb
Viv	(Pendau) inverse voice verb
Vst	(Taba) semi-transitive verb
Vt	transitive verb

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