The Aspect Systems of Some Philippine Languages—Developments From Proto-Austronesian

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Abstract

This paper describes the development of the aspect systems of seven Philippine languages from the ancestral aspect system of Proto-Extra-Formosan (Reid 1992), and ultimately from the aspect system of the earlier protolanguage PAn (Ross 2009, 2015). This analysis finds (a) that there may be three ways by which the aspect systems developed from PAn (and from PEF) which resulted in the aspect systems of the seven languages examined for this paper—one is largely retentive, and the others are innovative, resulting in two distinct aspect systems;

> (b) that one of these two aspect systems (i.e., languages spoken in southern Philippines) has undergone a simplification, having lost the marking for the distinction in the realis aspect, as well as the marking for the irrealis aspect; (c) that this innovation might have been a shared historical development by the southern PLs Talaandig and Salug-Subanen; (d) that the other aspect system (i.e., central) innovated in such a way that resulted in the prefixation of the realis verb instead of the reduplication that is characteristic of the morphology of this aspect; (e) that this prefixation proceeded from the <*in*> infixation that eventually syncopated, leaving only the prefix in Cebuano (*gi-*), and the remnant of the vowel syncopation in Waray (*gin-*); and (f) that the retentive development is observed in the languages spoken in northern Philippines, which retain most of the morphological behavior of the ancestral PAn.

Ross (2009, 2015) reconstructed the verbal morphology of ancestral Proto-Austronesian (PAn). In these papers, Ross identifies the morphology in four verbal aspects: what he calls the AV realis (infinitive), realis imperfective, realis perfective, and irrealis. Out of these reconstructions, the aspect system of PAn may be readily derived, and compared with the aspect systems of Philippine languages (PLs). Such a work as the latter has been done by Reid (1992), who reconstructed the aspect system of Proto-Extra-Formosan (PEF) from his analysis of the aspect systems of PLs. In this work, Reid traced the development of Ilokano and Tagalog from PEF; Ilokano and Tagalog being

the two PLs representative of the two main classifications of languages in the Philippines as regards aspect systems: one that distinguishes between [+BEGUN] and [-BEGUN]; and the other, that distinguishes between [+COMPLETED] and [-COMPLETED]. Reid demonstrates how such a comparison may be done, and shows the pertinent parameters that may be identified in PLs in order to analyze their development from the aspect system of the ancestral PEF.

Based on these works, this paper attempts to describe the development of the aspect systems of some PLs from the ancestral aspect system of PEF, and ultimately from the aspect system of the earlier protolanguage PAN. The paper begins by showing the geographic location and the linguistic subgroups in which the seven languages studied for this paper belong. Section 2 aims to disperse the ambiguity that arises in the use of the many labels pertaining to verbal morphology through a summary of the most-used terminologies. The paper then proceeds to show four things: (a) the reflexes of the ancestral Proto-Austronesian affixes in the seven Philippine languages, namely, Kapampangan, Tuwali, Northern Catanduanes Bikol, Cebuano, Waray, Talaandig, and Salug-Subanen; (b) a description of the voice and aspect morphology of verbs from these seven PLs; (c) a description of the development of the verbal morphology of the seven PLs from the ancestral PAN morphology; and (d) a discussion of the development of the aspect systems of these languages from the ancestral aspect system of PAN, which will be derived based on Ross's reconstructions (in Ross 2009, 2015).

1 Geographic and Genetic Positions

The seven PLs that are examined in this paper are subgrouped by various references as follows: Tuwali Ifugao belongs with the Cordilleran microgroup; Kapampangan subgroups with the Central Luzon microgroup; Cebuano belongs to the Central Philippine supgroup spoken in Cebu, Negros Oriental, eastern Visayas, and the coastal areas of northern and eastern Mindanao. The Cebuano which is studied in this paper is subgrouped by the Ethnologue under Mindanao Visayan. Also belonging with Cebuano in the Central Philippine Subgroup are Northern Catanduanes-Bikol (NC-Bikol) and Waray. The map in Figure 1 summarizes these languages and where they are spoken.

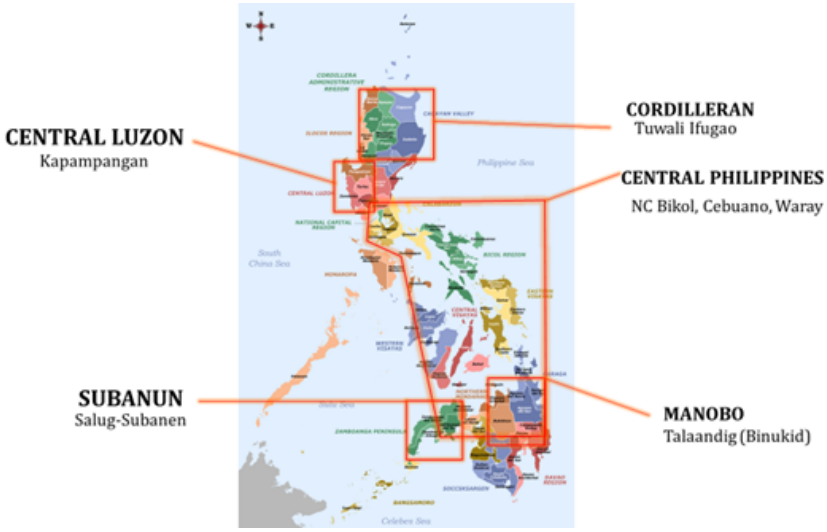


Figure 1. The Seven PLs and Their Location

Talaandig is spoken in the mountains of Bukidnon in Mindanao. It belongs with other Binukid languages, under the Manobo sub-

group. Salug-Subanen belongs to the Subanen group of languages spoken in the Zamboanga Peninsula, also in Mindanao. Subanen has eight known members (Lobel 2013): Kolibugan, Western Subanon, Tawlet-Kalibugan, Salug-Godod Subanen, Southern Subanen, Central Subanen, Northern Subanen, and Eastern Subanen.

2 Nomenclature

There have been varying terminologies that are used across the literature on Philippine verbal morphology. Pertinent among linguists are the terminologies used by Schachter & Otanes (1983), De Guzman (in Reid 1992), Reid (1992), and Ross (2009, 2015). In order to minimize ambiguity in the use of these terms, I present Table 1, where I summarize the terminologies; additionally, I map each term onto its respective counterpart in each of the other studies.

<table>
<tr><th>Traditional Label</th><th colspan="2">Ross 1995; 2009; 2015</th><th colspan="3">De Guzman in Reid 1992</th><th colspan="2">Schachter & Otanes, 1972</th></tr>
<tr><td>infinitive form</td><td rowspan="3">realis</td><td>AV realis</td><td colspan="3">[-FINITE]</td><td colspan="2">nonfinite</td></tr>
<tr><td>past form</td><td>perfective realis</td><td rowspan="3">[+FINITE]</td><td rowspan="2">[+BEGUN]</td><td>completed aspect [+BEGUN, +COMP]</td><td rowspan="3">finite</td><td>perfective</td></tr>
<tr><td>progressive form</td><td>imperfective realis</td><td>incompleted aspect [+BEGUN, -COMP]</td><td>imperfective</td></tr>
<tr><td>future form</td><td></td><td>irrealis</td><td colspan="2">[-BEGUN]</td><td>contemplated</td></tr>
</table>

Table 1. Nomenclature in the Literature on Verbal Morphology

Traditionally, we distinguish among the infinitive form of the verb, the past form, the progressive form, and the future form (see column

1 of Table 1). In the same way, Schachter & Otanes (in Reid 1992) distinguishes between the nonfinite form of the verb, and three finite forms: perfective, imperfective, and contemplated.

De Guzman uses the labels [-FINITE] and [+FINITE]. For finite verbs, De Guzman distinguishes between [+BEGUN] and [-BEGUN], which is the invariant future or irrealis/contemplated form. For [+BEGUN] verbs, she distinguishes between two aspects: *completed* and *incompleted*. De Guzman's terminology is especially helpful in describing Philippine aspect systems which differ in paradigmatic forms, such as what Reid shows for Ilokano and Tagalog in his 1992 paper. In this paper, he shows (using De Guzman's terminology) the aspect system of Ilokano as essentially differing from that of Tagalog. Reid (1992) notes that Central PLs behave like Tagalog in that they distinguish between begun (present and past) and not-begun (future); Ilokano and the other PLs distinguish between completed (past) and not completed (present and present progressive).

Finally, Ross (2015) distinguishes between the realis forms and the irrealis form, which de Guzman (in Reid 1992) calls the [-BEGUN]. Ross makes a distinction among three realis forms: (a) what he calls the *AV realis* in his earlier paper (Ross 1995), which is equivalent to what we know as the nonfinite form; (b) the *perfective realis*, which is what de Guzman (in Reid 1992) calls the completed aspect [+BEGUN, +COMP] and what we know as the past form; and (c) *imperfective realis*, which is what de Guzman calls the incompleted aspect [+BEGUN, -COMP] and what we know as the progressive form.

In this paper, I use Ross's terms for in-text descriptions, but I use the distinctions [+/-BEGUN] and [+/-COMPLETED] in the maps I derive for the aspect systems of the PLs, in order to enable comparison with the maps used in Reid (1992).

3 Reflexes of the PAN Verbal Affixes

The Philippine languages, like other Austronesian languages, have a system of marking the agentive voice with two sets of affixes (called the *M-forms for PAN by Ross [2009, 2015]): the infix <*um*> and its variants, and the prefix *mag-* and its variants. According to Reid & Liao (2004: 457), "*mag-* historically developed by attaching UM to a word that had been previously derived with the prefix PEF *paR-. Reflexes of PEF *maR- verbs typically appear as either *ag-*, *mag-*, or *may-* in languages in which the expected reflex of *R is *g* or *y*." Reid & Liao (2004) further adds that in contrast to UM verbs, which are either punctual or inchoative, MAG verbs have been described as being durative.

Reid (1992) distinguishes between these two agentive voices: the <*um*>-form and the *mag*-form. Additionally, he identifies three non-agentive voices: objective, locative and instrumental voices. Ross (2009, 2015), on the other hand, presents four voices in his morphological reconstruction of PAN. These include the (a) actor voice, and three undergoer voices: (b) patient, (c) location, and circumstance, under which he identifies and exemplifies only the (d) instrumental voice.

	PAn *M-	PAn *-en	PAn *-an	PAn *Si-/*Sa-	PAn *Si-/*Sa-
PEF	*-um-/*mu-/*m-	*-ən	*-an	*ʔi-	*ʔi-/*-an/ *ʔi- -an
Kapampangan	-um- mag-	-an	-an	i-	i- or -an
Tuwali	-um- mag-	-on	-an	i-	i- -an
NC Bikol	mag-	-on	-an	i-	-an
Cebuano	mu- mag-	-on	-an	i-	-an
Waray	-um- mag-	-on	-an	i-	-an
Talaandig	<um><in> mag-	-on	-an	i-	i-
Salug-Subanen	-um- məg-	-ən	-an	pe-	-an

Table 2. Verbal Affixes of the Seven PLs

Data for this paper includes one additional circumstance voice, which is the benefactive voice, for which Reid & Liao (2004) reconstructs the affixes in PEF. The reflexes of this affix (and the morphology of this voice) are discussed in Section 4.2.3. Presented in Table 2 is the summary of the reflexes of the various voice affixes; the table compares the affixes of the seven PLs with the affixes in ancestral PAn and PEF.

The reflexes of PAn *M in PEF are PEF *-um-, PEF *mu-, and PEF *m. There are four reflexes of the ancestral agentive affixes that emerged from the seven PLs: (a) the infix <*um*>, as in Kapampangan, Tuwali, Waray, Talaandig and Salug-Subanen; (b) the prefix *mu-*, as in Cebuano; (c) the prefix *mag-* in addition to the <*um*> infix; and (d) the variant *məg-* in Salug-Subanen. NC Bikol only has the *mag*-form and does not employ the *um*-form.

For patientive voice, there are three reflexes of the patientive *-en: it is *-on* in most PLs, but *-an* in Kapampangan. In Salug-Subanen, the PEF form is retained: *- ən. For the locative voice paradigm for PAn *-an, a retention is observed in all seven PLs.

Reid & Liao (2004) reconstructs PEF *ʔi- for the ancestral PAn *Si-. This Proto-Extra-Formosan affix that is used for instrumental voice is retained in all seven PLs, except in Salug-Subanen where its reflex is *pe-*. Finally, for the benefactive voice affix which this paper includes, the reflexes of the PEF *ʔi-/*-an/*ʔi- -an, are found dispersed (and retained) in the seven PLs. Reid & Liao (2004) observes that PLs generally fall under any of five types as regards their preference in the use of the benefactive affix. The table summarizes which of these five types each of the seven languages uses; these are discussed in Section 4.2.3.

In summary, the seven PLs examined in this paper are observed to have largely retained the ancestral voice affixes that are believed to have existed in Proto-Austronesian (i.e., it is retention rather than innovation that occurred in the development of the affixes to their present forms). Innovation, on the other hand, is observed more often in the aspectual morphology in which these affixes are employed. Ross (2009, 2015) reconstructs the morphology involving each of these affixes in PAn, as they are used in four aspects: the actor voice (AV) realis (infinitive or nonfinite form), realis perfective, realis imperfective, and irrealis.

4 The Development of the PL Verbal Morphology from PAN

Ross (2009, 2015) reconstructs three sets of realis forms: "a set unmarked for aspect and labelled 'realis' (formerly 'neutral'), a perfective aspect set encoding completed events, and an imperfective aspect set encoding incomplete, ongoing events or changes of state."

ROSS's Proto-Affixes						
ASPECT	ACTOR VOICE		UNDERGOER VOICE			
	mag- form	*um-* form	Patient	Location	Circumstance	
					Instrument	Benefactive
AV REALIS	*M-STEM		*STEM-en	*STEM-an	*Sa-/Si-STEM	
REALIS PERF	*M-<in>STEM		*<in>STEM	*<in>STEM-an	*<in>Si-STEM	
REALIS IMPERF	*M-Ca-STEM		*Ca-STEM-en	*Ca-STEM-an	*Sa-/Si-Ca-STEM	
IRREALIS	*Ca-STEM		*Ca-STEM-en	Ca-STEM-an	*Ca-STEM	

Table 3. Proto-Austronesian Verbal Morphology

In the paradigm in Table 3, what is evident is the reduplication labeled *Ca-STEM in the imperfective and the irrealis aspects. Ross (2009, 2015) reconstructs this reduplication as "reduplication of the initial syllable and replacement of its vowel by -a-." However, in 2015, Ross explores the argument offered by Reid in a talk in 2007, where he "argues on phonological grounds that *Ca- reduplication must be derived from earlier *CV- reduplication." About this, Ross resolves that this could be correct, but that this *CV-reduplication occurred earlier than PAn (i.e., in a stage Ross calls PNAn or Proto-Nuclear-Austronesian), and that this morphology is reflected in Proto-Malayo-

Polynesian (from which, of course, the PLs are descended). Ross (2009: 298) says (emphasis mine):

> I infer that PAn *Ca- imperfective reduplication reflects a *CV reduplication which occurred at a pre-PAn stage for which we have no witnesses, whereas PNAn *CVCV-/*CV- durative reduplication reflects a later innovation, one which took place after the earlier *CV- had become PAn *Ca-. ***Ca-reduplication was replaced by CV- reduplication** in Saisiyat, Pazih, Bunun, Paiwan and **Proto Malayo-Polynesian because of its formal and functional similarity to CVCV-/CV- durative reduplication.**

In Philippine languages, this reduplicative morphology is not always retained, but when it is, the reduplicating segment is reflected as CVC as in (1), or CV as in (2).

(1) CVC-reduplication in the imperfective (Tuwali)

Tumtummadog	nan unga.
<um>∼tadog	nan=unga
<AV>REAL.IMPERF∼stand	SUBJ=child

'The child is standing.'

(2) CV-reduplication in the imperfective (Kapampangan)

Ing anak	**kakanan**	ne	ing mangga.
ing=anak	**∼kan-an**	=ne	ing=mangga
CORE=child	**REAL.IMPERF∼eat-PV**	=3S.CORE	SUBJ=mango

'It is the child who is eating the mango.'

4.1 Agentive *M: um-form vs. mag-form

Reid & Liao (2004) reconstructs the PAn *M affix in Proto-Extra-Formosan as having three reflexes: PEF *-um-, PEF *mu-, and PEF *m. The verbal morphology containing this affix in the seven languages is summarized in Table 4.

	AV REALIS		REALIS PERF	
PAn	***M-STEM**		***M-<in>STEM**	
Kapampangan	0-STEM	mag-STEM	<in>-STEM	meg-STEM
Tuwali	<um>STEM	mag-STEM	<in>-STEM	nuN-STEM
NC Bikol	mag-STEM	mag-STEM	nag-STEM	nag-STEM
Cebuano	mu-STEM	mag-STEM	ni-STEM	nag-STEM
Waray	<um>STEM	mag-STEM	<um>STEM	nag-STEM
Talaandig	<um><in>STEM	ag-STEM	<um><in>STEM	ag-<in>STEM
Salug	<um>-STEM	meg-STEM	<um><in>STEM	mig-STEM

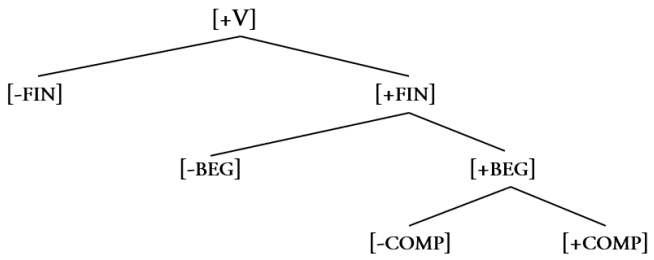
	REALIS IMPERF		IRREALIS	
PAn	***M-Ca-STEM**		***Ca-STEM**	
Kapampangan	CV-STEM	ma-CV-STEM	<um>-STEM; 0-STEM	ma-STEM
Tuwali	<um>-CVC-STEM	muN-CVC-STEM	<um>-STEM	muN-STEM
NC Bikol	ga-STEM	ga-STEM	ma-STEM	ma-STEM
Cebuano	nag-a-STEM	nag-a-STEM	mu-STEM	mag-STEM
Waray	na-STEM	nag-CV-STEM	ma-STEM	mag-CV-STEM
Talaandig	<um><in>STEM	ag-<in>STEM	<um><in>STEM	ag-STEM
Salug	<um><in>STEM	mig-STEM	me-STEM	meg(k)-STEM

Table 4. Verbal Morphology of the Seven PLs (Agentive Voice)

Cross-linguistically, this behavior of the agentive forms is expected, as M-stems (stems marked with the Austronesian agentive affix [Ross 1995, 2009]) usually will have one class taking an *um*-reflex (Ross 2009), and another taking a *maR*-reflex (Reid 1992). The reasons for this subcategorization are language-specific, ranging from phonologi-

cal motivations, to syntactic ones, such as marking distinctiveness of the roots (as in southeast Sulawesi [Blust in Wouk & Ross 2002]) or marking transitivity (as in Kelabit [Blust in Wouk & Ross 2002]).

The Central Philippine language Waray makes a full distinction between the *um*-form and the *mag*-form. This means that the *um*-form takes one set of morphology, and the *mag*-form takes another. Note below how Waray employs reduplication only with *mag*-stems and not with *um*-stems in the agentive voice. In Waray, reduplication is employed in both irrealis and the realis imperfective aspects.



agentive (*um*-)	<um>-STEM *tumukdaw* 'to stand'	ma-STEM *matukdaw* 'will stand'	na-STEM *natukdaw* 'standing'	<um>-STEM *tumukdaw* 'stood'
agentive (*mag*-)	mag-STEM *mag-alog* 'to get water'	mag-CV-STEM *mag-aalog* 'will get water'	nag-CV-STEM *nag-aalog* 'getting water'	nag-STEM *nag-alog* 'got water'
objective	STEM-on *kuhaon* 'to get'	CV-STEM-on *kakaonon* 'will eat'	gin-CV-STEM *ginsasaka* 'climbing'	gin-STEM *ginsaka* 'climbed'
locative	STEM-an *tamnan* 'to plan'	STEM-an *tatamnan* 'will plant'	gin-CV-STEM-an *gintatanunan* 'planting'	gin-STEM-an *ginlutuan* 'cooked in'
instrumental	ipaN-STEM *ipansurat* 'to write'	ipaN-CV-STEM *ipansusurat* 'will write'	gin-paN-STEM *ginpapansurat* 'wrote'	gin-paN-STEM *ginpansurat* 'wrote'

Figure 2. The Aspect System of Waray

This reduplication in Waray, as can be seen in Figure 2, is a CV reduplication. In other PLs, reflexes of the *CV-reduplication also includes CVC-reduplication, like Tuwali (1). Kapampangan also reflects CV-reduplication. Of these three languages that reduplicate for the agentive voice, only Waray reduplicates also in the irrealis aspect. In ancestral PAn, this behavior is reconstructed, and of the seven PLs, only Waray retains the behavior, but only in its *mag*-form.

(3) reduplication in irrealis (Waray)
Magtatanom an parag-uma hin kamote.
mag∼tanom an=parag-uma hin=kamote
IRR.AV∼plant SUBJ=NOM-field OBL=kamote
'The farmer will plant kamote.'

Realis perfective. In the realis perfective aspect, the Philippine languages employ the replacive *n-* in the *mag*-stem. This replacive affix is analyzed as a portmanteau affix that encodes both agentive voice and realis modality. In all these languages, only the Mindanao languages Talaandig and Salug-Subanen retain the ancestral morphology *M<in>STEM. All others have innovated in such a way that the two affixes have coalesced into the portmanteau infix <*in*> which carry both information for agentive voice and realis modality.

(4) <um><in> realis form (Talaandig)
a. **Lumenatun** ta buntud sa malake.
<um><in>latun ta=buntud sa=malake
<AV><REAL>climb OBL=mountain SUBJ=man
'The young man climbed the mountain.'

b. **Kumenaun** sa bata hu mangga.
<um><in>kaon sa=bata hu=mangga
<AV><REAL>eat SUBJ=child OBL=mango
'The child ate the mango.'

(5) <um><in> realis form (Salug-Subanen)

a. **Mineneek** tug buwid sug glitaw.
<um><in>neneek tug=buwid sug=glitaw
<AV><REAL>climb CORE=mountain SUBJ=man
'The young man climbed a mountain.'

b. **Mimula** sug mingumbal gubi.
<um><in>(p)ula sug=ming-(g)umbal gubi
<AV><REAL>plant SUBJ=NOM-till CORE=camote
'The farmer planted some camote.'

This is also true in NC Bikol. In NC Bikol, the affixed realis form exists only in old speech, and is only seldom heard used by the general population. It is reportedly used in pragmatically marked constructions, when two past events are referenced in a construction, and one of the past events has happened more relevantly. In these constructions the <*um*><*in*> morphology is used for the more relevant action in realis form. In the Mindanao languages Talaandig and Salug-Subanen, the <*um*><*in*> morphology continues to be used today.

4.2 Non-agentive Voice

4.2.1 Patientive PAN *STEM-en

Reid & Liao (2004) reconstructs the patientive PAn *en as PEF *ən in Proto-Extra-Formosan. In the PLs, this affix is realized with the reflex of *ə that the specific language has. As such, this is *-an* in Kapampangan, and *-on* in Tuwali, NC Bikol, Cebuano, Waray and Talaandig. In Salug-Subanen, the PEF *ən is retained.

	AV REALIS	REALIS PERF	REALIS IMPERF	IRREALIS
PAn	*STEM-en	*<in>STEM	*Ca-STEM-en	*Ca-STEM-en
Kapampangan	STEM-an	<in>-STEM	CV-STEM-an	STEM-an
Tuwali	STEM-on	<in>-STEM	CVC-STEM-on	STEM-on
NC Bikol	STEM-on	<in>-STEM	pig-a-STEM	CV-STEM-on
Cebuano	STEM-on	gi-STEM	gi-na-STEM	STEM-on
Waray	STEM-on	gin-STEM	gin-CV-STEM	CV-STEM-on
Talaandig	STEM-on	<in>-STEM	<in>-STEM	STEM-on
Salug-Subanen	STEM-ən	<in>-STEM	<in>-STEM	STEM-ən

Table 5. Verbal Morphology of the Seven PLs (Patientive Voice)

Of all the PLs studied for this paper, it is Salug-Subanen that retains the ancestral PEF affix *en that marks the patientive voice in verbs. It also retains the morphology of the ancestral PAn infinitive form and the ancestral realis perfective form *STEM-en.

Irrealis. While all of the other seven PLs (except Salug-Subanen) have the reflex *-on* for the patientive *an affix, Kapampangan has the reflex *-an*. Like Tuwali, Kapampangan has retained the PAn morphology for all aspects except the irrealis aspect, where both Tuwali and

Kapampangan do not reduplicate. This is interesting because like PAn, both do reduplicate for the imperfective aspect; in PAn, the imperfective and the irrealis share the same morphology.

(6) realis imperfective and irrealis verbal morphology (Kapampangan)

a. Ing anak **kakanan** ne ing mangga.
ing=anak ∼**kan-an** =ne ing=mangga
CORE=child **REAL.IMPERF∼eat-PV** =3S.CORE SUBJ=mango
'The child is eating the mango.'

b. Ing anak **kanan** ne ing mangga.
ing=anak **kan-an** =ne ing=mangga
CORE=child **eat-IRR.PV** =3S.CORE SUBJ=mango
'The child will eat the mango.'

(7) realis imperfective and irrealis verbal morphology (Tuwali)

a. **It-itanom** nan manalun nan gatuk hidi.
∼**tanom** nan=manalun nan=gatuk hidi
REAL.IMPERF.PV∼plant CORE=farmer SUBJ=gatuk OBL.DIST
'It is camote that the farmer is planting there.'

b. **Kanon** nan unga nan mangga.
kan-on nan=unga hu=mangga
eat-IRR.PV CORE=child SUBJ=mango
'It is the mango that the child will eat.'

The reduplication that occurs in the PAn irrealis form is retained in NC Bikol and Waray. All the other five PLs have innovated in such a way that this reduplication is lost, resulting in the present unmarked irrealis form in these languages.

(8) reduplication in the irrealis aspect (NC Bikol)

Sasakaton	man niya	yung Bundok Apo.
∼**sakat-on**	man niya	yung=Bundok Apo
IRR∼**climb-PV**	PRT	3S.CORE SUBJ=Mt. Apo

'It is Mt. Apo that he will also climb.'

Realis Perfective. One other feature that distinguishes the Mindanao languages from the rest of the languages in this paper is the loss of the distinction in the realis. Salug-Subanen does not distinguish between imperfective and perfective; the same is true with Talaandig. Both also do not mark their irrealis form, which is unlike the ancestral PAN morphology. These two innovations resulted in a two-aspect system for both Mindanao languages. It can be seen, then, that both the Mindanao languages Talaandig and Salug-Subanen innovated their two-aspect system, having undergone simplification by retaining the morphology of the PAN infinitive also for their irrealis, and by retaining the realis PAN morphology for both their perfective and imperfective forms. In all other languages, the morphology of the realis perfective for the patientive voice in PAn which is reconstructed as <*in*>-STEM is retained.

The exceptions to this are the Central PLs Waray and Cebuano, where the infixation does not occur. In these two languages, the prefix *gi-*/*gin-* is employed. How did this prefixation develop from the infixation that is characteristic of the morphology of this aspect?

(9) *gi*-affixation (Cebuano)

Gikawras	siya	ug iring.
gi-kawras	siya	ug=iring
REAL.PV-scratch	3S.SUBJ	CORE=cat

'He got scratched by a cat.'

(10) patientive *gin-* (Waray)

Ginkamras	hiya	hin misay.
gin-kamras	hiya	hin=misay
REAL.PV-scratch	3S.SUBJ	CORE=cat

'He got scratched by a cat.'

The Waray prefix *gin-* gives us a hint at the possible development of the *gi-*/*gin-* prefixation from the PAN infixation. It would appear that the prefix did develop from the affixation of a *g*-bearing affix to a stem that has previously been affixed with <*in*>, resulting in a ?*g*<*in*>STEM. Over time, the initial segment of the *g*-bearing affix syncopated in Waray, giving us the present form *gin-*; this further syncopated into just *gi-* in Cebuano.

Additionally, the Cebuano imperfective infix <*na*> is suggestive of this development. In my previous work where a larger cross-linguistic data is available, a comparison of this affix in languages where this kind of infixation occurs reveals that the imperfective affix is, in fact, <*a*>. This vowel may be a remnant of the *Ca*-reduplication that is the ancestral PAN morphology for imperfective aspect. The imperfective <*na*> infix in Cebuano is evidence of the ?*g*<*in*>STEM > *gi-*/*gin-*STEM development, which left a trace: the nasal in <*na*>.

(11) imperfective (Cebuano)

Ginasaka	sa mga bata	ang punuan	sa akasya.
gi-na-saka	sa=mga=bata	ang=punuan	sa=akasya
REAL.PV-IMPERF-**climb**	CORE=PL=child	SUBJ=tree	GEN=acacia

'The children climb the acacia tree.'

Realis Imperfective. NC Bikol also employs this infixation for the imperfective aspect. Like Cebuano, NC Bikol differs from all the others in the realis imperfective aspect because they employ an <*a*> infix instead of reduplication in their imperfective forms. Waray uses a peculiar morphological process in that it employs both reduplication and the prefixation observed to co-occur only with <*a*> infixation, as in (12).

(12) prefixation and reduplication (Waray)

Gintatanom	han parag-uma	an kamote	ngadto.
gin∼tanom	han=parag-uma	an=kamote	ngadto
REAL.PV∼IMPERF-**plant**	CORE=farmer	SUBJ=camote	OBL.DIST

'The camote is being planted there by the farmer.'

Comparing the morphologies of the seven PLs with that of the ancestral PAn morphology for realis imperfective in (13), it can be seen that any of three developments has occurred in the languages: (a) the language has retained the original morphology (i.e., with reduplication), but reflected its own reflex of the PAn *en; (b) the language has employed a voice prefix and an aspect infix, such as <*a*>; and (c) the language has simplified its aspect system by retaining the realis perfective system, resulting in a loss of distinction between the two aspects.

(13) realis imperfective morphology (cf. PAn *Ca-STEM-en)

	REALIS IMPERF
PAn	*Ca-STEM-en
Kapampangan	CV-STEM-an
Tuwali	CVC-STEM-on
NC Bikol	pig-a-STEM
Cebuano	gi-na-STEM
Waray	gin-CV-STEM
Talaandig	<in>-STEM
Salug-Subanen	<in>-STEM

This variation is clear in the data: the languages spoken in northern Philippines retained the ancestral morphology as in (a); the Central PLs behave like (b); and the languages spoken in southern Philippines simplified their systems, as in (c).

4.2.2 Locative PAN *STEM-an

Ross (1995, 2009) reconstructed the ancestral affix that carries locative affect as PAn *an. Reid & Liao (2004) has reconstructed the same for Proto-Extra-Formosan as PEF *an. All seven languages studied for this paper are observed to have retained this affix in all four aspects. Ross's reconstructed PAn morphology across all aspects are observed to have developed in various ways in the seven PLs.

Realis Perfective. Table 6 shows that the infinitive (AV realis) morphology is retained in all seven PLs. The PAn realis perfective morphology *<in>-STEM-an is retained in the Luzon languages Tuwali and NC Bikol, and in the Mindanao languages Talaandig and Salug-Subanen. The languages that innovated are Kapampangan and both the

	AV REALIS	REALIS PERF	REALIS IMPERF	IRREALIS
PAN	*STEM-an	*<in>STEM-an	*Ca-STEM-an	*Ca-STEM-an
Kapampangan	STEM-an	STEM-an	CV-STEM-an	STEM-an
Tuwali	STEM-an	<in>-STEM-an	CVC-STEM-an	STEM-an
NC Bikol	STEM-an	<in>-STEM-an	pig-a-STEM-an	CV-STEM-an
Cebuano	STEM-an	gi-STEM-an	gi-na-STEM-an	STEM-an
Waray	STEM-an	gin-STEM-an	gin-CV-STEM-an	CV-STEM-an
Talaandig	STEM-an	<in>-STEM-an	<in>-STEM-an	STEM-an
Salug-Subanen	STEM-an	<in>-STEM-an	<in>-STEM-an	STEM-an

Table 6. Verbal Morphology of the Seven PLs (Locative Voice)

Central PLs. The case of Kapampangan is a case of losing the aspectual marking in the perfective aspect. Kapampangan distinguishes between the perfective and imperfective aspects in its realis verb, and it does so by retaining the PAN marking on the imperfective aspect (14a), but at the same time keeping its perfective form unmarked (14b), which is unlike PAN.

(14) locative voice marking on realis verbs (Kapampangan)

a. **Tatamnan** deng mais ing asikan
∼**tanam-an** deng=mais ing=asikan
REAL.IMPERF∼**plant-LV** OBL=corn SUBJ=field
da.
=da
=3PL.GEN.POST
'They planted their field with corn.'

b. **Liklukan** ne ing ulun.
likluk-an ne ing=ulun
sit-REAL.LV 3S.CORE SUBJ=pillow
'He sat on the pillow.'

Realis Imperfective. Consistent with their behavior in forming their realis imperfective forms in the patientive voice, the PLs spoken in northern Philippines (i.e., Kapampangan and Tuwali) retain the ancestral morphology which is PAN *Ca-STEM-an. Both lose the reduplication in the irrealis aspect that is in the original morphology of the proto-language.

Irrealis. The PAN irrealis morphology *Ca-STEM-an is retained in NC Bikol and in Waray. There are two classes into which the languages may be grouped as regards the formation of the irrealis form: (a) those that retained the PAN morphology such as NC Bikol and Waray; and (b) those that innovated in such a way that the marking is lost, such as all the other five PLs (i.e., the non-Central PLs).

(15) loss of PAN *Ca- locative voice marking in irrealis verbs

a. Tuwali

Higidan nan unga nan kwartu.
higid-an nan=unga nan=kwartu
sweep-IRR.LV CODE=child SUBJ=room
'The child will sweep the room.'

b. Talaandig

Pamulaan e hu malagbasuk sa kamute.
pamula-an e hu=malagbasuk sa=kamute
plant-IRR.LV PROX.OBL CORE=farmer SUBJ=camote
'The farmer will plant camote here.'

In summary, the PAN locative voice marking is largely retained in the seven PLs. This is seen in two ways. First, the morphology of the

infinitive form is retained in all seven PLs. Second, with the exception of Kapampangan, which has lost the marking, all other PLs have retained the morphology of the realis perfective aspect. On the other hand, the innovation of certain languages from the PAn aspect system is seen in (a) the loss of the distinction between the perfective and the imperfective aspects in the Mindanao PLs Talaandig and Salug-Subanen; and (b) the loss of the marking in the irrealis aspect in all but the two Central PLs NC Bikol and Waray.

4.2.3 Circumstance Voice *Sa/Si-STEM

Ross (2009, 2015) reconstructs one circumstance voice. The data for this paper includes two circumstance voices: instrumental and benefactive. Reid & Liao (2004) reconstructs for PEF both affixes for these circumstance voices.

	AV REALIS	REALIS PERF	REALIS IMPERF	IRREALIS
PAN	*Sa-/Si-STEM	*<in>Si-STEM	*Sa-/Si-Ca-STEM	*Ca-STEM
Kapampangan	paN-STEM	peN-STEM	paN-STEM	i-paN-STEM
Tuwali	pun-STEM	nuN-STEM	puN-CVC-STEM	puN-STEM
NC Bikol	i-pang-STEM	<in>-i-paN-STEM	i-<in>-paN-STEM	i-pang-STEM
Cebuano	i-paN-STEM	gi-i-paN-STEM	gi-na-paN-STEM	i-paN-STEM
Waray	i-paN-STEM	gin-STEM-an; gin-STEM; gin-paN-STEM	gin~paN-STEM	CV-STEM-an; i-paN-CV-STEM
Talaandig	i-STEM	i-paN-STEM	i-paN-STEM	i-paN-STEM
Salug-Subanen	STEM-en	pe-STEM-an	pe-STEM-an	STEM-en

Table 7. Verbal Morphology of the Seven PLs (Instrumental Voice)

The reflex of PAn *Si- is PEF *ʔi-, which is the reflex that is retained in most of the PLs. However, in addition to the ancestral instrumental affix, the Philippine language morphology for instrumental voice also bears the affix *-paN-*. Table 7 shows that with the exception of the southern PLs, the PLs bear some form of this affix. In Tuwali, this is *pun-*, and in the other four languages (all the Central PLs and Kapampangan), this is *-paN-*. Interestingly, Talaandig retains the ancestral PAn morphology for the infinitive form, but it does also employ the affix *-paN-* in its other aspects.

This can be summarized in the infinitive form: *i-<paN>*-STEM, which is to say that the PLs innovated in such a way that they employed an infixation of the affix *paN-* for the instrumental voice. This *paN*-infixation is observed across most of the aspect forms of the seven PLs, as in (16). In Waray, the reduplication in realis imperfective is in the *-paN-* affix, as in (17). In the annotation below, I use NOM for the *-paN-* affix; Reid & Liao (2004) does not discuss what this affix is, but their paper hints at the *p*-initial forms in derived verbs as gerundive or nominalizations. Seen from this perspective, *-paN-* does carry a nominalizing affect, as the 'thing used for VERB-ing.' Additionally affixed with the instrument affix *i-*, the verb now carries the morphology which directly translates to 'instrument used for VERB-ing.'

(16) instrumental voice <*paN*> in realis perfective (NC Bikol)

Ipinangputos	niya	yung dyaryo	sa tinapa.
i-<in>-pang-putos	niya	yung=dyaryo	sa=tinapa
IV-<REAL>-NOM-**wrap**	3S.CORE	SUBJ=newspaper	OBL=smoked

'He used the newspaper to wrap the smoked fish with.'

(17) reduplication for instrumental voice (Waray)

Ginpapansurat	han bata
gin∼pan-surat	han=bata
REAL.IV∼IMPERF-NOM-write	CORE=child

an akon lapis.
an=akon=lapis
SUBJ=1S.GEN.PREP=pencil
'The child used my pencil to write.'

The other circumstance voice that this paper examines is the benefactive voice. In typologizing the languages in the Philippines, Reid & Liao (2004) groups the PLs according to the languages' reflexes of the reconstructed PEF *ʔi-/*-an/*i- -an. These are the reflexes of the benefactive voice affix PAN *Si-/*Sa.

	AV REALIS	REALIS PERF	REALIS IMPERF	IRREALIS
PAN	*Sa-/Si-STEM	*<in>Si-STEM	*Sa-/Si-Ca-STEM	*Ca-STEM
Kapampangan	pa-STEM-an	0-STEM; pe-STEM-an	Ca-STEM; pa-STEM-an	i-STEM
Tuwali	i-STEM-an	<in>-STEM-an	i-Ca-STEM-an	i-STEM-an
NC Bikol	STEM-an	<in>-STEM-an	pig-a-STEM-an	Ca-STEM-an
Cebuano	STEM-an	gi-STEM-an	gi-na-STEM-an	STEM-an
Waray	STEM-an	gin-STEM-an	gin-Ca-STEM-an	Ca-STEM-an
Talaandig	pa-STEM	i-pa-STEM	i-pa-STEM	i-pa-STEM
Salug-Subanen	STEM-an	<in>-STEM-an	<in>-STEM-an	STEM-an

Table 8. Verbal Morphology of the Seven PLs (Benefactive Voice)

According to Reid & Liao (2004), the PLs may fall under any of five types of benefactive voice marking: "(1) those that use an *i-* verb and no other for this purpose; (2) those that use an *-an* verb and no other for this purpose; (3) those that use a 'circumfix' *i- -an* on such verbs; (4) those that use either an *i-* verb or *-an* verb; and (5) those

that use either an *i- -an* verb or an *-an* verb, depending on the verb." The table in (18) summarizes the affix(es) that each of the seven PLs take. NC Bikol, Cebuano, Waray, and Salug-Subanen employ the *-an* suffix; Talaandig employs only the *i-* prefix; Kapampangan uses either *i-* or *-an*; and Tuwali uses the circumfix *i- -an*. Of these, it is Tuwali that retains the morphology of ancestral PAn, across three out of four aspects.

(18) types of benefactive voice marking in the seven PLs

	PAN *Si-/*Sa-
PEF	*ʔi-/*-an/*ʔi- -an
Kapampangan	i- or -an
Tuwali	i- -an
NC Bikol	-an
Cebuano	-an
Waray	-an
Talaandig	i-
Salug-Subanen	-an

Recurring in this verbal paradigm is the use of the causative affix *pa-*. It is employed in Kapampangan and Talaandig. The *pa-*affixation in the benefactive verb morphologically communicates 'to cause someone to receive the benefit of an action'. In these three languages, this information is coded morphologically by the causative *pa-*.

(19) the causative *pa-* in benefactive verb (Talaandig)

Igpapalit	din gayud hu bata
ig-pa-palit	din=gayud hu=bata
REAL.IMPERF.BF-CAUS-**buy**	OBL=candy CORE=child
sa laga.	
sa=laga	
SUBJ=maiden	

'The child bought candy for the young woman.'

If we exclude the *pa-*affixation in the analysis of the benefactive voice morphology, it is revealed that all languages except Tuwali have innovated in such a way that they have adapted the locative voice morphology for expressing benefactive affect. This is bound to make sense because in Philippine languages, the benefactor is the entity towards which the benefit of the action denoted by the verb is directed, and is, thus, a location. In fact, all aspectual forms in the benefactive voice in all the languages bear the locative affix *-an*, except in the *pa-*bearing languages Kapampangan and Tuwali. This is to say that all seven languages of this study innovated from the verbal morphology of the PAn benefactive verb form.

In summary, aside from the four (out of five) benefactive verb types that Reid & Liao (2004) typologizes for the Philippine languages, PLs may further be grouped into two types according to benefactive voice morphology: (a) those that employ the causative *pa-*; and (b) those that do not.

	Patient	Location	Circumstance	
			Instrument	Benefactive
AV REALIS	*STEM-en	*STEM-an	*Sa-/Si-STEM	*Sa-/Si-STEM
Kapampangan	STEM-an	STEM-an	paN-STEM	pa-STEM-an
Tuwali	STEM-on	STEM-an	pun-STEM	i-STEM-an
NC Bikol	STEM-on	STEM-an	i-pang-STEM	STEM-an
Cebuano	STEM-on	STEM-an	ipaN-STEM	STEM-an
Waray	STEM-on	STEM-an	ipaN-STEM	STEM-an
Talaandig	STEM-on	STEM-an	i-STEM	pa-STEM
Salug-Subanen	STEM-ən	STEM-an	STEM-en	STEM-an
REALIS PERF	*<in>STEM	*<in>STEM-an	*<in>Si-STEM	*<in>Si-STEM
Kapampangan	<in>-STEM	STEM-an	peN-STEM	0-STEM; pe-STEM-an
Tuwali	<in>-STEM	<in>-STEM-an	nuN-STEM	<in>-STEM-an
NC Bikol	<in>-STEM	<in>-STEM-an	<in>-ipaN-STEM	<in>-STEM-an
Cebuano	gi-STEM	gi-STEM-an	gi-ipaN-STEM	gi-STEM-an
Waray	gin-STEM	gin-STEM-an	gin-paN-STEM	gin-STEM-an
Talaandig	<in>-STEM	<in>-STEM-an	ipaN-STEM	i-pa-STEM
Salug-Subanen	<in>-STEM	<in>-STEM-an	pe-STEM-an	<in>-STEM-an; pe-<in>-STEM-an
REALIS IMPERF	*Ca-STEM-en	*Ca-STEM-an	*Sa-/Si-Ca-STEM	*Sa-/Si-Ca-STEM
Kapampangan	CV-STEM-an	CV-STEM-an	paN-STEM	CV-STEM; pa-STEM-an
Tuwali	CVC-STEM-on	CVC-STEM-an	puN-Ca-STEM	i-CVC-STEM-an
NC Bikol	pig-a-STEM	pig-a-STEM-an	i-<in>-paN-STEM	pig-a-STEM-an
Cebuano	gi-na-STEM	gi-na-STEM-an	gi-na-paN-STEM	gi-na-STEM-an
Waray	gin-CV-STEM	gin-CV-STEM-an	gin-paN-STEM	gin-CV-STEM-an
Talaandig	<in>-STEM	<in>-STEM-an	ipaN-STEM; <in>-paN-STEM	i-pa-STEM
Salug-Subanen	<in>-STEM	<in>-STEM-an	pe-STEM-an	<in>-STEM-an
IRREALIS	*Ca-STEM-en	Ca-STEM-an	*Ca-STEM	*Ca-STEM
Kapampangan	STEM-an	STEM-an	ipaN-STEM	i-STEM
Tuwali	STEM-on	STEM-an	puN-STEM	i-STEM-an
NC Bikol	CV-STEM-on	CV-STEM-an	ipang-STEM	CV-STEM-an
Cebuano	STEM-on	STEM-an	ipaN-STEM	STEM-an
Waray	CV-STEM-on	CV-STEM-an	CV-STEM-an; ipaN-CV-STEM	CV-STEM-an
Talaandig	STEM-on	STEM-an	<in>-paN-STEM	i-pa-STEM
Salug-Subanen	STEM-ən	STEM-an	STEM-en	pe-STEM-an

Table 9. Non-agentive Voice Verbal Morphology of the Seven PLs

Compared against the verbal morphology that Ross (2009, 2015) reconstructed for PAn, I summarize in Table 9 the verbal morphology for all the undergoer voice types across all seven PLs.

5 Summary and Future Directions

The findings that are drawn from the comparison of the seven PLs with the ancestral morphology in Proto-Austronesian (and Proto-Extra-Formosan) enables the inference that the PAn aspect system is a three-aspect system that distinguishes between [+COMPLETED] and [-COMPLETED] aspects. This distinction is expressed in reduplication. Likewise, the PAn aspect system marks its irrealis verbs, and this marking uses reduplicative morphology. This behavior is retained in NC Bikol and Waray, the only two PLs that do so. I summarize these and other features in Table 10.

PAn Aspect System	Kap	Tuw	NC Bik	Ceb	War	Tal	S-Sub
Three-aspect system	■	■	■	■	■		
Distinction in realis	■	■	■	■	■		
Distinction is by reduplication	■	■			■		
Irrealis form is marked			■		■	■	
Marking in irrealis is by reduplication			■		■		
Realis is marked by <*in*>	■	■	■			■	■

Table 10. Inventory of Features of the Ancestral PAN Aspect System

Table 10 shows that the two most similar with the PAn aspect system based on these six features are the Central PLs NC Bikol and Waray; but the caveat is this: these two central PLs underwent a more difficult development in their realis morphologies, shifting from the ancestral reduplicative marking to what we might now perceive as prefixation. Further analysis needs to be done on these languages to confirm what is suspected to be a syncopation of the ancestral infix <*in*> with a previously affixed *g*-bearing affix.

The PLs spoken in northern Philippines (Kapampangan and Tuwali), on the other hand, underwent only one innovation and this is the loss of the reduplicative marking in their irrealis forms. It can be said, then, that these group has undergone a retentive development.

The languages that exhibit the most innovation according to these features are the Mindanao languages Talaandig and Salug-Subanen. This means that the aspect systems of these south PLs are the most different from PAn, when compared with how the other Philippine languages compare. On the other hand, these two retain the ancestral realis morphology exhibited by Proto-Extra-Formosan, involving <*um*><*in*>, which have coalesced into a portmanteau in many Philippine languages.

Based on these observations stipulated above, the following inferences may be made: (a) that there may be three ways by which the aspect systems developed from PAn (and from PEF) which resulted in the aspect systems of the seven languages examined for this paper: one is largely retentive, and the others are innovative, resulting in two distinct aspect systems; (b) that one of these two aspect systems (i.e., PLs

spoken in southern Philippines) has undergone a simplification, having lost the marking for the distinction in the realis aspect, as well as the loss of the marking for the irrealis aspect; (c) that this innovation might have been a shared historical development by the southern PLs Talaandig and Salug-Subanen; (d) that the other aspect system (i.e., central) innovated in such a way that resulted in the prefixation of the realis verb instead of the reduplication that is characteristic of the morphology of these aspects; (e) that this prefixation proceeded from the <*in*>-infixation that eventually syncopated, leaving only the prefix *gi-* in Cebuano and the prefix *gin-* in Waray; and (f) that the retentive development is observed in languages spoken in northern Philippines, which retain most of the morphological behavior of the ancestral PAn.

Symbols and Abbreviations Used in This Description

~	reduplication
=	clitic
-	morpheme boundary
0	zeroed morpheme/segment
1	first person
2	second person
3	third person
( )	deleted/replaced segment
ABS	absolutive
CAUS	causative
CONJ	conjunction
DISJ	disjunctive
DIST	distal
EXIST	existence
FOCUS	
GEN	genitive
IMP	imperative
INT	intransitive
IRR	irrealis
LKR	linker
NEXIST	non-existence
NEG	negative
NOM	nominalization
OBL	oblique

PL	plural	REAL	realis
PREP	prepositive	STAT	stative
PROX	proximal	STEM	stem affix
PRT	particle	TR	transitive

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