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21 *Reassessing the reconstruction of plural affixes in PAn: evidence from the Formosan languages*

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1 Introduction¹

Over the past decade, our understanding of plural formation and plural marking in Formosan languages has steadily improved as more synchronic studies have become available. In the 1970s and the 1980s, plural formation did not draw the attention of many linguists in the field. It was discussed as a specific morpho-syntactic device in only two grammars (Li 1973, Pecoraro 1979).² Li (1973:107) argued that in Tanan Rukai, 'the features "dual", "plural" and "collective" have little or no syntactic consequence aside from the semantic content.' Pecoraro (1979:61) mentioned that 'in discourse, the plural form is usually omitted and is used when something needs to be stressed upon ...' (my

¹ Sections of this paper were presented or discussed in several occasions, most notably at (i) the *Tenth International Conference on Chinese linguistics*, June 22–24, 2001 at Irvine, (ii) the *International Symposium on Austronesian cultures: issues relating to Taiwan*, Dec. 8–11, 2001 at Academia Sinica, (iii) the *Tuesday seminar of the UH Linguistics Department* (University of Hawai'i at Mānoa), February 8, 2007 and (iv) the International Conference *The past meets the present: a dialogue between historical linguistics and theoretical linguistics*, Taipei, Academia Sinica, July 14–16, 2008. I am grateful to all the participants for their and comments, in particular Robert Blust, Lillian M. Huang, Lawrence Reid and Joy J. Wu. I would also like to thank Laurent Sagart, Stacy Teng and Raleigh Ferrell for their helpful suggestions on earlier versions of this manuscript as well as Hua Jia-jing and Chu Tai-hwa for discussions on Southern Paiwan and Tungho Saisiyat respectively. I am also indebted to two reviewers for their pertinent comments. This study was financially supported by a grant from the National Science Council NSC 92-2411-H-001-078 MD.

² As of June 2006 when a draft of this paper was revised for publication purposes, twenty grammars had been consulted; thirteen written in Chinese (Series on Formosan languages): Huang (2000a,b,c), A. Chang (2000), H.-h. Chang (2000), H. Chang (2000a-b), Lin (2000), Wu (2000), Yeh (2000), Zeitoun (2000a,b,c) on nearly all the extant Formosan languages except Saaroa and Kanakanavu and seven written in English (see Huang 1995a on Atayal, Holmer 1996 and Pecoraro 1979 on Seediq, Tung et al. 1964 on Tsou, Wang 2004 on Thao, A. Chang 2006 on Paiwan, Li 1973 on Tanan Rukai). Two more grammars are now available that treat this issue much more extensively, Teng (2008) on Nanwang Puyuma and Zeitoun (2007) on Mantauran Rukai.

translation, EZ). In the late 1990s and early 2000s, studies on (i) the typology of personal pronouns in Formosan languages (Huang et al. 1999; Zeioun 2001a), (ii) the notion of quantification in Tsou (H. Chang 2002), (iii) plurality in Mantauran (Rukai) (Zeioun 2001a and Zeioun 2007) and (iv) numeral classifiers in Northern Paiwan (Tang 2004) demonstrated that plural marking is overtly expressed on pronouns, nouns and/or verbs in many Formosan languages. Huang et al. (1999) and Zeioun (2001b) claimed that plurality is overtly expressed at the morphological level in personal pronouns in many Formosan languages. In Zeioun (2001b), I showed that in Mantauran Rukai, plural marking is expressed through morphological means (affixation and/or reduplication); syntactically, it is both subject-sensitive and object-sensitive, i.e. it is triggered by the quantification of a subject and yielded by the occurrence of a non-volitional/human/oblique participant; semantically, the notion of plurality is closely associated with that of 'humanness', i.e. (usually) only nouns referring to humans are overtly marked as plural. H. Chang (2002) investigated the syntax and semantics of distributive quantifiers in Tsou in relation to the notions of collectivity and plurality. Tang (2004) examined the morphological, syntactic and semantic behavior of numerals primarily in Northern Paiwan in correlation with plural marking.

More recently, the issue on whether plural marker(s) should be reconstructed in Proto Austronesian has been addressed again.³ Blust (2005)⁴ proposes the reconstruction of three genitive case forms in Proto Austronesian: *nu, *ni and *na and argues that '*nu marked the genitive of common nouns, while *ni and *na marked the genitive of singular and plural personal nouns respectively' (p.215). Two papers were written in response to Blust's (2005) hypothesis, one by Ross (2006) and the other by Reid (2007). Ross (2006:527, 530–531) questions Blust's reconstruction of *na as a plural form for personal nouns and posits the reconstruction of a plural marker *a based on the evidence of the nominative case marker *si-a (reflected in Amis *ca* [tsa] and Paiwan *ti-a*) and the genitive case marker *ni-a (> Paiwan *ni-a*), concluding that 'the derivation of *na* from *nia is straightforward: *nia > *ña > *na*' (Ross 2006:513). He shows that this reconstructible plural marker *a also occurs in third-person pronominal forms in Paze and Saisiyat. He mentions, in passing, that Saisiyat and Proto Atayal reflect a plural marker *-la- in third-person pronouns but dismisses this form as 'unconnected with other data' (Ross 2006:537). Reid (2007) reassesses the reconstruction of the three genitive case markers *nu, *ni and *na by examining data from Central Philippine and East-Formosan languages and concludes that there is no strong evidence in support of such a reconstruction because the current forms appear to result from parallel drift and convergence of form and function. Because of the non-cognacy of the data at hand, he proposes different analyses to account for the development of the plural genitive case marker *na in the Philippine and in the East-Formosan languages. He shows that in Philippine languages the most plausible analysis is to assume that the third person plural pronouns *si=dá and *ni=dá were attached to the personal case markers *si (unmarked) and *ni (genitive), yielding respectively **si=dá + si NP and **ni=dá + ni NP. In the daughter languages, these forms later merged, (i) either giving rise to *sidá and *nidá or (ii) undergoing subsequent sound changes, with *d becoming l in *sila* and *nila* (*d > l) or, as in *da*, with loss of the unstressed initial syllable. He argues that in the East Formosan languages the formation of certain demonstratives

developed through the cliticisation of the ligature *a* onto demonstrative forms, e.g. Sakizaya Amis *ina* 'this' < Proto Amis *ini=a. By the same process, *na* developed through (i) the cliticisation of *ni* to genitive plural pronouns beginning with the vowel *a* and (ii) the deletion of the vowel *i*, e.g., Amis *namu* '2P' < Proto Amis *ni=amu. By analogy, *na was reanalyzed as a marker for genitive plural nouns (Reid 2006:245).

The present paper re-examines plural formation and plural marking from a synchronic and a diachronic perspective. Synchronically, it discusses the plural marking of pronouns and nouns in nine Formosan languages (Pingwan Atayal, Central Amis, Isbukun Bunun, Southern Paiwan, Mantauran Rukai, Saaroa, Tungsho Saisiyat, Thao, Tsou) and shows that these languages exhibit two plural affixes, viz. *la-*⁵ and *a-/a-*. Diachronically, it suggests that these two plural affixes should be reconstructed in PAN as *Na- and *a-/a-, based on the fact that these languages, though all spoken in Taiwan, belong to various primary subgroups (see Blust 1999).

2 Morphological marking of plurality on pronouns

In a majority of Formosan languages, with the exception of Kavalan, Seediq, Tsou, Puyuma and Kanakanavu, plural marking is expressed through the affixation of *a-/a-* or *la-* to the base of third person pronouns.

2.1 Affixation of *a-/a-* to the pronominal base

The affixation of *a-/a-* to the pronominal base form to mark plural is found in four languages: Central Amis (1), Southern Paiwan (2), Thao (3) and Paze (4).

- | | | | | | |
|--|-------------------|------------------|----|-----------------|------------------|
| (1) Central Amis (Huang 1995b; Huang et al. 1999; Wu 2000) | | | | | |
| a. | <i>ts-a-ŋra</i> | 'they (NOM)' | vs | <i>tsiŋra</i> | 's/he (NOM)' |
| b. | <i>ts-a-ŋraan</i> | 'they (LOC)' | vs | <i>tsiŋraan</i> | 's/he (LOC)' |
| c. | <i>n-a-ŋra</i> | 'their (GEN)' | vs | <i>ni(ŋ)ra</i> | 'his/hers (GEN)' |
| (2) Southern Paiwan | | | | | |
| a. | <i>ti-a-maŋu</i> | 'they (NOM)' | vs | <i>tiŋmaŋu</i> | 's/he (NOM)' |
| b. | <i>ni-a-maŋu</i> | 'their (GEN)' | vs | <i>niŋmaŋu</i> | 'his/her (GEN)' |
| (3) Thao (Huang 2000b:82) | | | | | |
| a. | <i>θ-a-yθuy</i> | 'they (NEUTRAL)' | vs | <i>θiθu?</i> | 's/he (NEUTRAL)' |
| b. | <i>θ-a-yθuy</i> | 'their (GEN)' | vs | <i>θiθu?</i> | 'his/her (GEN)' |
| c. | <i>θ-a-yθun</i> | 'them (ACC)' | vs | <i>θiθun</i> | 'him/her (ACC)' |
| (4) Paze (Lin 2000:109) | | | | | |
| a. | <i>-(a)-misiw</i> | 'they (NOM)' | vs | <i>-misiw</i> | 's/he (NOM)' |
| b. | <i>-y-a-misiw</i> | 'they (NOM/OBL)' | vs | <i>-imisiw</i> | 's/he (NOM/OBL)' |
| c. | <i>n-a-misiw</i> | 'them (GEN)' | vs | <i>n-imisiw</i> | 'his/her (GEN)' |

⁵ This prefix has different realisation in the Formosan languages and I will refer to *la-* for convenience.

³ See Blust (2005) for a detailed literature review of this topic.

⁴ This paper is dedicated to Robert Blust as a token of my gratitude for his kindness and guidance to me as a newcomer in the field in the early 1990s and for his friendship.

In Central Amis, Southern Paiwan and Thao, the pronominal forms consist of a (non-common/personal noun) case marker plus a pronominal base. In Southern Paiwan and in Thao, the plural marker *a-/a* is added to the base; in Amis, it replaces the vowel *i*. In Pazeh, *a-/a* is either attached to the base or it replaces the vowel *i*; compare (4a-b) with (4c).

2.2 Prefixation of *la-* to the pronominal base

The occurrence of *la-* is found in at least four languages: Tungho Saisiyat (5), Atayal (6), Saaroa (7), and Mantauran Rukai (8).

(5) Tungho Saisiyat

- | | | | | |
|------------------------|---------------------|----|------------------|----------------------|
| a. <i>la-θia</i> | 'they (NOM)' | vs | <i>θia</i> | 's/he (NOM)' |
| b. <i>hi-la-θia</i> | 'them (ACC)' | vs | <i>hi-θia</i> | 'him/her (ACC)' |
| c. <i>kan-la-θia</i> | 'them (LOC)' | vs | <i>kan-θia</i> | 'him/her (LOC)' |
| d. <i>ni-la-θia</i> | 'their (GEN)' | vs | <i>ni-θia</i> | 'his/her (GEN)' |
| e. <i>ʔan-la-θia-a</i> | 'theirs (POSS)' | vs | <i>ʔan-θia-a</i> | 'his/hers (POSS)' |
| | <i>ʔin-la-θia-a</i> | vs | <i>ʔin-θia-a</i> | 'his/hers (POSS)' |
| f. <i>ʔini-la-θia</i> | 'them (BEN/DAT)' | vs | <i>ʔini-θia</i> | 'him/her (BEN/DAT)' |
| g. <i>ki-la-θia</i> | 'with them (COM)' | vs | <i>ki-θia</i> | 'with him/her (COM)' |
| | <i>ki-l-θia</i> | | | 'with them (COM)' |

(6) Plngawan Atayal

- | | | | | |
|-----------------|------------------|----|--------------|------------------|
| a. <i>lahan</i> | 'them (OBL)' | vs | <i>hiyan</i> | 'him/her (OBL)' |
| b. <i>laha?</i> | 'they (NEUTRAL)' | vs | <i>hiya?</i> | 's/he (NEUTRAL)' |

(7) Saaroa (Li 1997:285)

- | | | | | |
|---------------------------------|--------|----|-----------------|--------|
| a. <i>isa-la-isa</i> | 'they' | vs | <i>-iʔa-isa</i> | 's/he' |
| b. <i>-ʔa-isa</i> | 'they' | vs | <i>-isa</i> | 's/he' |

(8) Mantauran Rukai

- | | | | | |
|-------------------|---------------|----|-------------|-----------------|
| a. <i>i-l-inə</i> | 'them (OBL)' | vs | <i>-inə</i> | 'him/her (OBL)' |
| b. <i>i-l-iðə</i> | 'them (OBL)' | vs | <i>-iðə</i> | 'him/her (OBL)' |
| c. <i>l-i-ni</i> | 'their (GEN)' | vs | <i>-ni</i> | 'his/her (GEN)' |
| d. <i>l-i-ðə</i> | 'their (GEN)' | vs | <i>-ðə</i> | 'his/her (GEN)' |

In Tungho Saisiyat, all the pronominal forms are inflected for case (Ø for Nominative, *hi* for Accusative, *kan* for Locative etc. ...). Among these, *ʔan-la-θia-a* ~ *ʔin-la-θia-a* 'theirs (POSS)' and *ki-la-θia* ~ *ki-l-θia* 'with them (COM)' occur in free variation. In both Mantauran Rukai and Plngawan Atayal, deletion is observed: in Plngawan Atayal *iy* is deleted in the plural form, and in Mantauran Rukai, *la-* actually surfaces as *l-* (the circumfix *i-...-ə* represents the marking of the oblique case).

Isbukun Bunun pronominal forms are very neat and thus may have undergone restructuring. In any case, this language exhibits an opposition between the singular forms, marked by *s-* and the plural forms, marked by *n-*.

(9) Isbukun Bunun

- | | | | | |
|----------------------|--------------|----|-------------------|--------------|
| a. <i>n-aia?</i> | 'they (NOM)' | vs | <i>s-aia?</i> | 's/he (NOM)' |
| b. <i>n-aitia?</i> | 'they (ACC)' | vs | <i>s-aitia?</i> | 's/he (ACC)' |
| c. <i>ʔ-n-aitia?</i> | 'they (GEN)' | vs | <i>ʔ-s-aitia?</i> | 's/he (GEN)' |

2.3 Partial conclusions

The occurrence of the two affixes *a-/a* and *la-* in so many languages cannot be treated as a mere coincidence or as a result of diffusion or borrowing as suggested in Li (1997) because they exhibit both cognacity and paradigmaticity. Ross (2006) has demonstrated that the contrast between Paiwan *ti-a* (NOM.pl) and *ti-* (NOM.sg), *ni-a* (GEN.pl) and *ni-* (GEN.sg) supports the reconstruction of the plural **a* in PAN. Such a reconstruction is further evidenced by the pronominal paradigms of Central Amis, Thao and Pazeh. In Tungho Saisiyat, Mantauran Rukai, Plngawan Atayal and Saaroa, *l/ʔ* are reflexes of PAN **N* (see Ross 1992 and Li 1997) and the occurrence of *la-/l-/ka-* points toward the reconstruction of the PAN form **Na-*. Though Bunun has merged PAN **N* and **n* into *n*, the data fits the paradigm given for the other Formosan languages. I agree that in general 'third-person personal pronouns in Formosan languages either are derived from or still are demonstrative pronouns' (Ross 2007:536) and believe that such forms were marked as plural at the PAN level.

Plural marking on pronouns in the nine Formosan languages discussed in this paper is summarised in Table 1, along with the reconstructed PAN forms.

Table 1: Morphological formation of Plural pronouns in nine Formosan languages

Plural marking on:	Paiwan	Amis	Thao	Pazeh	Saisiyat	Rukai	Atayal	Saaroa	Bunun
personal pronouns	-a	-a	-a	a-	la-/l-	l-	la-	ʔa-	n-
PAN reconstruction	*a-/a				*Na-				

The affixes *a-/a* and *la-* also occur in noun phrases (either on the noun or on the case marker) in at least six languages,⁶ viz. Mantauran Rukai, Southern Paiwan, Central Amis, Nanwang Puyuma, Tungho Saisiyat and Tsou.

3 Overt plural marking on nouns and/or case markers

Two generalisations are worth mentioning at the outset: first, plural marking can be expressed either on the noun or on the case marker but never simultaneously on the noun and the case marker that precedes it; second, plural marking usually occurs on nouns with a human reference.

In Central Amis, plural marking is overtly indicated on case markers. In Mantauran Rukai and Tsou, it is specifically marked on nouns. In Tungho Saisiyat and Southern Paiwan, it occurs either on case markers (*-l* in Tungho Saisiyat and *-a* in Southern Paiwan) or on nouns (*la-* in Tungho Saisiyat and *ʔa-* in Southern Paiwan).

Tables 2 and 3 depict the distribution of the affixes *a-/a* and *la-* in the Formosan languages.

⁶ Further investigation may reveal even more complex systems of plural marking in the Formosan languages.

Table 2: Distribution of *a/-a* in Formosan languages

Occurrence of <i>a/-a</i> in:		Pazeh	Thao	Amis	Paiwan	Rukai	Tsou
Pronouns		+	+	+	+	-	-
Case markers		-	-	+	+	-	-
Nouns	Proper and kinship	-	-	-	-	-	-
	Common	-	-	-	-	+	(+)

Table 3: Distribution of *la-* in Formosan languages

Occurrence of <i>la-</i> in:		Saisiyat	Atayal	Paiwan	Rukai	Saaroa
Pronouns		+	+	-	+	+
Case markers		+	-	-	-	?
Noun	Proper and kinship	+	+	+(voc. only)	+	?
	Common	-	-	-	-	?

3.1 Occurrence of *a/-a*

3.1.1 Occurrence of *-a* on case markers

In Central Amis and Southern Paiwan, the suffix *-a* occurs on the case markers preceding proper nouns and kinship terms and indicate associative plurality. As mentioned above, in Central Amis, the suffix *-a* replaces the vowel /i/, while it attaches to the base in Southern Paiwan. The case marking system of these two languages is outlined in (10) and (12) with examples illustrating the singular/plural contrast given (11) and (13).

(10) Southern Paiwan nominal case marking system

	Nominative	Genitive	Oblique
Common nouns	<i>a</i>	<i>n(u)a</i>	<i>t(u)a</i>
Proper nouns	sg. <i>ti</i>	<i>ni</i>	<i>cay</i>
and kinship terms	pl. <i>ti-a</i>	<i>ni-a</i>	<i>cai-a</i>

(11) Southern Paiwan

- a. *na-k<am>əpəm ti kapi cay kivi.*
PRF-beat<AF>beat NOM Kapi OBL Kivi
'Kapi beat Kalalu.'
- b. *na-k<am>əpəm tia kapi cay kivi.*
PRF-beat<AF>beat NOM:pl Kapi OBL Kivi
'Kapi (and his companions) beat Kivi.'

(12) Central Amis nominal case marking system (Wu 2000:64)

	Nominative	Genitive	Accusative	Neutral
Common nouns	<i>ku</i>	<i>nu</i>	<i>tu</i>	<i>u</i>
Proper nouns	sg. <i>ci</i>	<i>ni</i>	<i>ci...-an</i>	<i>ci</i>
and kinship terms	pl. <i>ca</i>	<i>na</i>	<i>ca...-an</i>	<i>ca</i>

(13) Amis

- a. *mapalo? ni ina ci mayaw.*
PF:beat GEN mother NOM Mayaw
'Mayaw was beaten by mother.'
- b. *mapalo? ni ina ca mayaw.*
PF:beat GEN mother NOM:pl Mayaw
'Mayaw (and his companions) were beaten by mother.'

3.1.2 Occurrence of *a-* on nouns

In Tsou and Mantauran Rukai, *a-* occurs on common nouns referring to a human participant to mark the plural. While this process seems to be fossilised in Tsou, it is very productive in Mantauran Rukai.

Examples of plural formation through the affixation of *a-* in Tsou is illustrated in (14); *a-* is usually inserted immediately before the base:⁷

(14) Plural formation in Tsou

- a. *ha-a-hocɲi* 'men' vs *hahocɲi* 'man'
- b. *ma-a-mespiɲi* 'girls, women' vs *mamespiɲi* 'girl, woman'
- c. *ma-a-meoi* 'old men' vs *mameoi* 'old man'

In Mantauran Rukai, nearly all nouns referring to a human participant can appear in a plural form. Different classes of nouns must be distinguished, however, which undergo different plural word formation processes. Nouns referring to a human entity, whether basic (e.g., 'child', 'woman', 'man') or derived through nominalisation (e.g., 'married ones') are marked by *a-* for plural, as illustrated in the paradigm given in (15) and (16).

(15) Mantauran Rukai (Zeitoun 2007:118-119)

- a. *a-savasavara* 'young men' vs *savara* 'young man'
- b. *a-lamatama* 'middle-aged men' vs *tamatama* 'middle-aged man'
- c. *a-tomotomo* 'old (wo)men' vs *tomotomo* 'old (wo)man'
- d. *a-vaʃovaʃo* 'young women' vs *vaʃovaʃo* 'young woman'

(16) Mantauran Rukai (Zeitoun 2007:119)

- a. *ta-a-ʔacakalaa* 'who are married' vs *ta-ʔacakalaa* 'who is married'
- b. *ta-ka-a-roʔaŋa* 'who are old' vs *ta-ka-roʔaŋa* 'who is old'

The contrast between (15a) and (15b-d) on the one hand and (16) on the other shows that the prefixation of *a-* yields the reduplication of the base form of underived nouns, e.g. *a-sava-savara* 'young men' vs *savara* 'young man' unless it is attached to a lexicalised reduplicated root as in *vaʃovaʃo* 'young woman'; in that case, the base form does not undergo further reduplication, e.g. *a-vaʃovaʃo* 'young women'. Such a restriction does apply to nouns derived through nominalisation, see (16).

⁷ In the following examples, I tentatively treat the first syllable as an output of reduplication.

3.2 Occurrence of *la-*

Throughout the Formosan languages, *la-* is more productive with nouns (see §3.2.1) than with case markers (§3.2.2).

3.2.1 Occurrence of *la-* on nouns

To date, the occurrence of *la-* is evidenced by data from Mantauran Rukai, Southern Paiwan, Pingawan Atayal and Tunggho Saisiyat. These languages vary in terms of the types of nouns that can be marked for plural.

In Mantauran Rukai, only vocative and non-vocative kinship nouns as well as family names can be marked for plural through the prefixation of *la-*, as illustrated in (17)–(18).

(17) Mantauran Rukai (Zeitoun 2007:120)

- a. *l-inakə* 'Mother and aunts!' vs *inakə* 'Mother/aunt!'
 a'. *l-iina* 'mother and aunts' vs *ina-* 'mother'
 b. *l-amakə* 'Father and uncles!' vs *amakə* 'Father/uncle!'
 b'. *l-ama* 'father and uncles' vs *ama-* 'father'

(18) Mantauran Rukai (Zeitoun 2007:121)

- a. *ɔnaʔ la-paɔoma oɔaɔə ʔaəla moa*
 that pl-family name DYN.FIN:leave DYN.SUBJ:move DYN.SUBJ:go
soŋao ...
 Bunun
 'As for the Lapadhoma, they left and moved to the Bunun tribe ...'
 b. *ʔəʔŋə-ʔo 0-paɔoma*
 Elenge-1S.NOM 0-family name
 'I am Elenge Padhoma.'

In Southern Paiwan, Pingawan Atayal and Tunggho Saisiyat, the use of *la-* was generalised to all nouns with a human reference.

In Southern Paiwan, common nouns referring to a human participant can be marked as plural either through the reduplication of the base and/or the prefixation of *la-* (also a reflex of *Na) as shown in (19).

- (19) a. *vavayavayan* '(a group) girls/women' vs *vavayan* 'girl/woman'
 la-vavayavayan 'girls/women'
 b. *ʔuqaʔaqaʔay* '(a group of) boys/men' vs *ʔuqaʔay* 'boy/man'
 la-ʔuqaʔaqaʔay 'boys/men'

Reduplication yields a collective/plural meaning ('a group of'),⁸ whereas prefixation of *la-* yields a vocative/plural meaning; compare (20)–(21).

- (20) a. *vavayan tiamaʔu*
 girl/woman 3P.NOM
 'We are girls.' (two at most)

- b. *vavayavayan tiamaʔu*
 RED:girl/woman 3P.NOM
 'We are girls.' (above three)

- c. **la-vavayavayan tiamaʔu*
 pl-RED:girl/woman 3P.NOM

- (21) *ʔəkəʔ-u, la-vavayavayan*
 drink-IMP pl-RED:girl/woman
 'Girls/women, drink!'

Kinship terms used vocatively are marked by *la-*, as shown in (22)–(23):

(22) Southern Paiwan

- a. *la-ama* 'Father and uncles!' vs *ama* 'father (±voc)'
 b. *la-ina* 'Mother and aunts!' vs *ina* 'mother (±voc)'
 c. *la-vuvu* 'Grandparents/grandchildren' vs *vuvu* 'grandparent/grandchild (±voc)'

- (23) a. *idu, vuvu!*
 come:IMP grandparent/grandchild
 'Come, grandparent/grandchild!'

- b. *idu, la-vuvu!*
 come:IMP pl-grandparent/grandchild
 'Come, grandparents/grandchildren!'

In other words, the neutralisation in Southern Paiwan takes place among vocative nouns. In Pingawan Atayal, the prefix *la-* can attach to proper nouns (24a), kinship terms (24b) and common nouns with a human reference (24c).

- (24) a. *yumin* 'Yumin' ~ *la-yumin* 'Yumin (and friends)'
 b. *la-yaki?* 'grandmothers/grandmother (and friends)' ~ *yaki?* 'grandmother'
 c. *kinsat* 'policeman' ~ *la-kinsat* 'policemen'

Associative plurality in Tunggho Saisiyat is marked on nouns with a human reference through the prefixation of *la-*. Compare (25) and (26).

(25) Tunggho Saisiyat

- a. *ʔafi? ki ʔataw ka-kotih noka hima?*
 Basbi COM 'ataw RED:REC-pinch GEN hand
 'Bashi' and Ataw pinch each other's hands.'
 b. *tatini? ki korkorin ka-kotih noka hima?*
 old man COM child RED:REC-pinch GEN hand
 'The old man and the child pinch each other's hands.'

- (26) a. *ʔafi? ki la-ʔataw ka-kotih noka hima?*
 Bashi COM pl-'ataw RED:REC-pinch GEN hand
 Bashi' and 'ataw (and his friends/companions/relatives ...) pinch one another's hands.'

⁸ As mentioned in Tang (2004), the reduplication of *kakəʔan* 'child' yields *kakəʔkəkəʔan* '(very) young', and not '(a group of) children' as expected.

- b. *tatini?* *ki* *la-korkorin* *ka-kotih* *noka* *hima?*
 old man COM pl-child RED:REC-pinch GEN hand
 'The old man and the children pinch each other's hands.'

3.2.2 Occurrence of *-l* on case markers

The occurrence of the plural *-l* on case markers is found in only one language, Tungbo Saisiyat: instead of appearing on the noun, the plural marking is overtly expressed on the case marker as in (27a). The ungrammaticality of (27b) shows that *la-* and *-l* cannot occur simultaneously on the noun and on the case marker. Besides, case markers preceding common nouns with a human reference cannot be overtly marked for plurality, as shown in (27c).

- (27) a. *βafi?* *ki-l* *ʔataw* *ka-kotih* *noka* *hima?*
 Bashi' COM-pl 'ataw RED:REC-pinch GEN hand
 Bashi' and 'ataw (and his friends/companions/relatives ...) pinch one another's hands.'
- b. **βafi?* *ki-l* *la-ʔataw* *ka-kotih* *noka* *hima?*
 Bashi' COM-pl pl-'ataw RED:REC-pinch GEN hand
- c. **tatini?* *ki-l* *korkorin* *ka-kotih* *noka* *hima?*
 old man COM-pl child RED:REC-pinch GEN hand

3.3 Summary

The distinction between *a/-a* and *la-* (the function of these affixes overlaps somehow in the six languages compared above) can be captured as follows:

- (i) In Central Amis and Southern Paiwan, the plural suffix *-a* occurs on case markers (preceding proper nouns and kinship terms) and marks (associative) plurality.
- (ii) In Southern Paiwan, the prefix *la-* attaches to vocative nouns with a human reference.
- (iii) In Pingawan Atayal and Tungbo Saisiyat, there is neutralisation between plural common and proper/kinship nouns: both types of nouns can be prefixed by *la-* to form the plural. In Tungbo Saisiyat, the prefix *la-* can further be attracted to the case marker preceding proper/kinship nouns. It is then realised as *-l*.
- (iv) In Mantauran Rukai, there is a distinction between plural common nouns marked by *a-* (as in Tsou), and plural non-common nouns marked by *la-*.

Table 4 provides a tabular summary of these generalisations.

Table 4: Morphological marking of plurality on nouns in six Formosan languages

Plural marking on:	Saisiyat	Atayal	Paiwan	Rukai	Amis	Tsou
Noun	<i>la-</i> (1/2)	<i>l-</i> (1/2)	<i>la-</i> (2/3)	<i>a-</i> (2) <i>la-</i> (3)	—	(<i>a-</i>) (2)
case marker	<i>-l</i> (1)	—	<i>a-</i> (1)	—	<i>-a</i> (1)	—

- Notes: 1. forms between parentheses indicate unproductive or fossilised marking.
 2. (1) indicates associative plural, (2) plural meaning in human common nouns, and (3) plural meaning in proper nouns, kinship terms and/or family names.

4 Conclusion

Ross (2006) and Reid (2007) do not reconstruct any third-person plural pronouns for PAN: since 'Proto Austronesian probably did not have any third person personal pronouns, [...] their presence in the daughter languages in Formosa and the Philippines is the result of independent innovations in a number of subgroups.' (Reid 2007:245) On the other hand, they both agree with Blust (2005) that at either a higher (i.e., PAN) or at a lower level (i.e., PCP), case markers could be marked as plural. Their respective analyses differ as to what should be reconstructed at one level or the other.

The present paper provides an alternative analysis, giving support to Ross's (2006) hypotheses. It shows that a close inspection of different Formosan languages leads to the reconstruction of two plural affixes **Na-* and **a/-a* which occurred in nouns with a human reference (including proper and kinship nouns as well as common nouns) and third person pronouns (usually derived from demonstratives). It would be interesting to go further and try to find out whether PAN **Na-* and **a/-a* also occurs in other Western Austronesian languages (among others, the Philippine languages), given that the only reconstructed PMP plural form so far is **da* (Reid 2007). This issue goes, however, beyond the scope of this paper.

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Part 4

Subgrouping