

Split Number in Nungon

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1. Abstract. ‘Mixed’ or ‘top and second’ number systems (Dixon 2012:52, Corbett 2000:120-121), in which different number systems occur in different parts of a language’s grammar, are not unusual in Papuan languages. The Animacy Hierarchy (Corbett 2000:56; Smith-Stark 1974) dictates that if a grammar involves more than one number system, the system that includes more number distinctions should function higher on the hierarchy (Corbett 2000:121). Papuan languages of the Finisterre branch of the Finisterre-Huon language group (Madang and Morobe Provinces, Papua New Guinea) are unusual in that number system splits may be found, not only along the Animacy Hierarchy, but between different sets of pronouns, and even between different verbal tense markings. This paper describes the number system splits in the Finisterre Papuan language Nungon and gives historical explanations for the splits between pronoun sets and some of the splits between tenses.

2. The Nungon language. McElhanon (1967) classed the Papuan Uruwa language family, which includes Nungon, as Eastern Finisterre within the larger Finisterre-Huon language group (Madang and Morobe Provinces, Papua New Guinea). Nungon is spoken by about 1,000 people. The first grammatical description of Nungon is Sarvasy (2015).

3. Split number systems. Smith-Stark (1974) introduced a hierarchy based on cross-linguistic evidence for which types of nouns are more likely to be marked for number. This resembled the hierarchy related to ergativity splits introduced by Silverstein (1976). Smith-Stark’s hierarchy was modified by Corbett (2000:56), as in Figure 1.

pronouns			nouns			
1 > (speaker)	2 > (addressee)	3 >	kin >	human >	animate >	inanimate

Figure 1. The Animacy Hierarchy (Corbett 2000:56)

Two basic conjectures of the Animacy Hierarchy are: **a)** when a language’s grammar includes more than one number system, the system with the most choices in number values must apply to the top of the hierarchy; and **b)** likelihood of distinguishing number, and of distinguishing the most number values, decreases monotonically from left to right along the hierarchy, with no intervening increases.

Nungon may be described as having three different number systems active throughout its grammar. These are: a tripartite system, distinguishing three number values (singular, dual, plural, where plural indicates more than two referents); a bipartite system, distinguishing two number values (singular, non-singular, where non-singular indicates more than one referent); and a null system, in which number is not marked.

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4. Number system splits among pronouns. Nungon independent and bound pronouns display various combinations of the three number systems.

4.1. INDEPENDENT PRONOUNS. Independent pronouns prototypically refer to humans and other animates. Inanimates are referred to with nominal demonstratives. There are two sets of Nungon independent pronouns; in the Finisterre-Huon Papuan linguistic tradition, the functionally-unmarked pronouns are called ‘basic’ and the contrastive/reflexive pronouns are called ‘emphatic’. All three number systems of Nungon are active among the independent pronouns, as seen in Tables 1 and 2. Throughout this paper, table cells that function according to the null number system lack shading, cells with the bipartite system are lightly shaded, and cells with the tripartite system are shaded the darkest.

	singular	non-singular
1	<i>nok</i>	<i>non</i>
2	<i>gok</i>	<i>hon</i>
3	<i>yu</i>	

Table 1. Nungon basic pronouns

	singular	dual	plural
1	<i>naga</i>	<i>nori</i>	<i>noni</i>
2	<i>gaga</i>	<i>hori</i>	<i>honi</i>
3	<i>ino</i>	<i>yori</i>	<i>yoni</i>

Table 2. Nungon emphatic pronouns

All three number systems of Nungon are represented among the independent pronouns. Tripartite: all emphatic pronouns, bipartite: first and second person basic pronouns, null: third person basic pronoun.

Comparative-historical evidence indicates that the Nungon basic pronouns *non* ‘1NSG’ and *hon* ‘2NSG’ probably originally designated only more than two referents, with original dual forms **not* and **hot* indicating exactly two referents. The original plural forms then generalized into non-singulars, with the original dual forms dropping out of use. Related languages Nek (Linnasalo 1993) and Kâte (Pilhofer 1933) retain tripartite systems in their basic independent pronouns, while the basic pronouns of another relative, Nukna (Taylor 2013), show an intermediate stage: the loss of basic dual forms is complete (except in a few village-lects) for second person, but the basic first person dual form is still used. There is no cross-linguistic evidence that the Nungon (or Nek, or Nukna) third person basic pronoun ever operated according to a tripartite, or even bipartite, system.

4.2. BOUND PRONOUNS. Three sets of bound pronouns—morphemes with shifting person and number reference—are discussed here: possessive suffixes, object prefixes, and subject suffixes.

	singular	dual	plural
1	<i>-na</i>	<i>-nori</i>	<i>-noni</i>
2	<i>-a</i>	<i>-hori</i>	<i>-honi</i>
3	<i>-(n)o</i>	<i>-yori</i>	<i>-yoni</i>

Table 3. Possessive suffixes

	singular	non-singular
1	<i>n(a)-</i>	<i>n(i)-</i>
2	<i>g(a)-</i>	<i>k(a)-</i>
3	<i>i-/y-</i>	<i>y(o)-</i>

Table 4. Animate object prefixes

	singular	dual	plural
1	<i>-t</i>	<i>-mok</i>	<i>-mong</i>
2	<i>-rok</i>	<i>-morok</i>	<i>-ng</i>
3	<i>-k</i>		

Table 5. Subject suffixes (post-tense marking)¹

Among the bound pronouns, the split among number systems varies depending on syntactic function: Possessor and S/A are referenced using the tripartite number system, while animate object arguments are indexed with the bipartite number system. The prefixes listed in Table 4 only occur on a closed sub-class of transitive verbs that can be analyzed as prototypically taking human, or at least animate, O arguments. All other transitive verbs never bear any indexation for O argument person/number at all, so this can be considered a null system.

5. The number system split among nouns. Only Nungon nouns with prototypically-human referents (all kin terms, plus *nuk* ‘friend’, *morum* ‘owner’, and *wase* ‘namesake’) are marked for number, and only when such a noun is possessed by a singular Possessor. All other nouns—and prototypically-human nouns that lack a singular possessive suffix (Table 3)—are never marked for number. Thus, nouns show a split between a maximal, tripartite number system available to human nouns and the minimal, null system used with non-human nouns.

Pr.	singular		dual		plural	
1sg	<i>nuk-na</i>	‘my friend’	<i>nuk-na-in</i>	‘my (2) friends’	<i>nuk-na-i</i>	‘my (≥3) friends’
2sg	<i>nug-a</i>	‘your friend’	<i>nug-a-in</i>	‘your (2) friends’	<i>nug-a-i</i>	‘your (≥3) friends’
3sg	<i>nuk-no</i>	‘his/her friend’	<i>nuk-n-in</i>	‘his/her (2) friends’	<i>nuk-n-i</i>	‘his/her (≥3) friends’

Table 6. Prototypically-human noun *nuk* ‘friend’ with number marking

Prototypically-human nouns show number marking even in contexts where they happen to refer to non-humans. In the Nungon taxonomical system, relatives of flora and fauna are described using the term *nuk* ‘friend’. In example (1), *nuk* refers to trees, but is still marked for plural number:

- (1) Giyöng=kon nuk-n-i koitno ir-a-ng.
betelnut=GEN friend-3SG.POSS-PL many exist-PRES.NSG-2.3PL
‘Many relatives of betelnut exist.’

6. The number split among tense markings. Most unusual about Nungon and other Finisterre Papuan languages is the double-marking of S/A number in verbs bearing tense markers. In Nungon, S/A number is indexed both in the final person/number suffix (Table 5) and, in all tenses except the Remote Past, again in the tense suffix, where it is fused with tense marking. Different

¹ A second set of suffixes is used in the absence of tense marking: Sarvasy (2015a, b).

number systems are evident in different tense markers. The splits between these systems coincide with the division of tenses under negation, when two tense distinctions are neutralized.

	suffix form	number system	neutralization
Remote Past	-go- (all numbers)	NO DISTINCTIONS	none
Near Past	-wa- (sg.) -a- (n-sg.)	BIPARTITE	Near Past form used under negation
Present	-ha- (sg.) -wa- (n-sg.)		
Near Future	-(w)angka- (sg.) -rangka- (du.) -nangka- (pl.)	TRIPARTITE	Remote Future form used under negation
Remote Future	-i- (sg.) -ri- (du.) -ni- (pl.)		

Table 7. Number systems and tense markings

Tense markers of related Papuan languages Nek (Linnasalo 2014), Yopno (Reed 2000), Ma Manda (Pennington 2014), and Irumu (Ross Webb, p.c.) vary, with a few patterns evident: the tripartite system is only found in future tenses, the present tense always uses a bipartite system, and the null system only occurs in the past tenses.

7. Conclusion. If the number systems of the Nungon emphatic independent pronouns and nouns are plotted together along the Animacy Hierarchy, both major stipulations are upheld. But if the basic pronouns are plotted together with the nouns, both stipulations are violated. The Animacy Hierarchy also fails to predict a number system split between the basic and emphatic pronoun sets. Further, the differences in number systems among the bound pronouns relate to syntactic function, rather than person or animacy status, of the nominal referent. Finally, the number system splits among tense markings are cross-linguistically unusual.

History may partially explain the unusual number system split between basic and emphatic pronouns, as well as the double-marking of subject number on future tense verbs according to a maximal, tripartite system. Nominalized verb forms that are marked for only subject number, not person, are found in Nungon and other related languages. If today's future tenses originated as these number-marked forms combined with auxiliary verbs, this could explain their double marking of number, but single marking of person. The time depth of such a development is uncertain, however, because similar splits are found in several related languages.

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