

# **The Papuanness of New Guinea's eastern highlands**

**Mark Donohue**  
*Australian National University*

Howard McKaughan's work has focused on Philippine linguistics, but he also edited the first large collection of papers on languages of New Guinea (McKaughan 1973). As such, that volume played a major role in shaping the views of a generation of linguists on what Papuan languages are like structurally. In this study I show that McKaughan's pioneering work not only succeeded in assembling the known facts of the linguistics of the eastern highlands of Papua New Guinea but also struck into the syntactic heart of what it means to be prototypically—albeit not modally—Papuan. In order to make this claim, I shall present primary data from McKaughan (1973), and compare it with various Papuan languages of New Guinea that were beyond the scope of his work. I shall then present figures on various structural features as they are attested in the Papuan languages, with a particular eye for the geographic distribution of the atypical, or nonmodal, features.

## **1. The grammar of 'Papuan' languages**

Many authors, writing about the languages of New Guinea, assert that the order of elements in phrases and clauses is consistently head-final; for instance, Foley (1998:513–514) writes:

Papuan syntax is governed by the overriding structural trait that they are phrasally right headed languages [...] so that the following specific five traits are consequences:

- (a) Basic clausal constituent order is SOV [...]
- (b) Postpositions are used [...]
- (c) Determiners [...] follow the noun [...]
- (d) Modifiers generally precede their head noun [...]
- (e) Clauses are linked by clause chaining without conjunctions.

Wurm et al. (1975:172, 188) are more cautious, mentioning only the consistently verb-final order in clauses, but other authors such as Haiman (1980:xlvi) repeat the head-final claim. The data presented in McKaughan (1973) support this claim for consistent head-finality; to select examples (somewhat) at random, we find data such as (1), (2), and (3), all drawn from chapters of McKaughan (1973). In (1a) we can see that an adjective precedes a modified noun; (1b) shows that numerals also precede nouns.<sup>1</sup>

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<sup>1</sup> Abbreviations used in this paper are as follows: 1/2/3: first/second/third person, A(dj): adjective, DAT: dative, Dem: demonstrative, F: feminine, GEN: genitive, INDIC: indicative, INSTR: instrument, N: noun, NOM: nominative, Num: numeral, N1: final nasal that shows morphophonological pattern 1

## (1) Awa

- a. kadiq poedahq  
 small pig  
 'small pig' (Loving 1973:79)
- b. mobediah kabada  
 five bird  
 'five birds' (Loving 1973:80)

In (2a) the demonstrative precedes the noun, and (2b) shows that relative clauses (here 'from the garden') precede their modified nouns and also that Usarufa employs postpositions. In (2c) we see that genitive modifiers are similarly prenominal.

## (2) Usarufa

- a. min-ááwáqá  
 miN2 aawaQ1-ma  
 that food-NOM  
 'that food' (Bee 1973:279)
- b. anó-yopake-kaayukae  
 anóN1 yóN2-paQ-keN waayúkán1-e  
 big garden-place-from man-INDIC  
 'He is a big man from the garden.' (Bee 1973:280)
- c. ketí iyámmá  
 keV2-ni iyaN2-ma  
 1SG-POSS.SG dog-NOM  
 'my dog' (Bee 1973:281)

The Tairora sentence in (3) shows that objects precede the verb that heads the clause.

## (3) Tairora

- Bainti nahentiba'norama oru kuna bara'te.  
 man woman went.along python took  
 'Men and women used to marry pythons.' (Vincent 1973:626)

In all, there is a remarkable and consistent head-final setting for these different word order parameters, as shown in (4). Inside the NP all modifiers precede the noun, whereas the head of a PP, the postposition, follows the N(P), and the head of the clause, the verb, follows any object that it might govern.

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(in Usarufa), N2: final nasal that shows morphophonological pattern 2 (in Usarufa), O: object, PL: plural, Po: postposition, POSS: possessive, Q: final glottal stop (in Usarufa), Q1: final glottal stop that shows morphophonological pattern 1 (in Usarufa), Rel: relative clause, S: subject, SG: singular, V: verb, V2: final vowel that shows morphophonological pattern 2 (in Usarufa). Data from other works follow the transcription used there. Any data not attributed to a published work were elicited by me.

- (4)
- |     |   |    |
|-----|---|----|
| Adj | N |    |
| Num | N |    |
| Dem | N |    |
| Rel | N |    |
| Gen | N |    |
|     | N | Po |
| O   | V |    |

While the data in (1), (2), and (3) do not cover all of the languages described in McKaughan (1973), they are typical. By contrast, when we examine the order of elements in *most* languages of New Guinea, we find a different picture; typical data is shown in (5a–b), from Skou (coastal north-central New Guinea). In (5a) the clausal order is head-final, with the serial verb complex as the last elements of the clause, and an object-topic beginning the sentence. Within the NP, however, the opposite order holds for most elements. In the first NP we can see the order N-Adj-Dem. In (5b) we can see that relative clauses follow their heads, but that possessors precede their possessums.

- (5) Skou

- a. [NP Hang bápáli fue a ] pe pe=r-úe r-óe  
       coconut big that 3SG.F 3SG.F=3SG.F-F.pick 3SG.F-get.PL  
       p-ú toe.  
       3SG.F-F.carry 3SG.F:come  
       ‘She fetched those big coconuts.’
- b. [NP Pe=ueme [RC [NP nì móe-nì=ne ]  
       3SG.F=woman 1SG fish-1SG.GEN=1SG.DAT  
       pe=p-ang ] =inga ], pe=te Àbe.  
       3SG.F=3SG.F-eat =the 3SG.F=3SG.F.go Abepura  
       ‘The woman who ate my fish has gone to Abepura.’

Sentence (6), presenting data from Lani, in the western highlands of New Guinea, shows that numerals follow their modified nouns, and that postpositions follow nouns.

- (6) Lani

- [PP [NP wim mbere]=nen ] wam enogo wakerak.  
       arrow two=INSTR pig the 1SG:hit:3SG  
       ‘I shot the pig with two *wim* arrows.’

As summarized in (7), head-finality is found in the clause-level OV order, in the postpositions, and in the prenominal genitives. All of the other NP-internal modifiers follow their head. Compare (7) with (4) above.

- (7)
- |     |   |     |
|-----|---|-----|
|     | N | Adj |
|     | N | Num |
|     | N | Dem |
|     | N | Rel |
| Gen | N |     |
|     | N | Po  |
| O   | V |     |

## 2. The (dis)harmony of word order

It is certainly true that, around the world, most languages show verb-final order at the clause level, but, as Dryer (1992) points out, the AN correlate of OV order is not commonly found outside Eurasia. Table 1 shows the distribution of AN and NA orders in languages with preverbal objects in languages in Eurasia, compared to languages from the rest of the world (Dryer 2005).<sup>2</sup> Clearly AN & OV order is strongly dispreferred across most of the world, with only twenty-six percent of languages outside Eurasia (100 out of 379) showing this order, while within Eurasia fully ninety-three percent of the languages (101 out of 109) follow this pattern. While there is a global tendency for OV languages to show an NA order (287 out of 388 languages, or 59% of all languages in the sample), this preference is overridden by the Eurasian areal preference for AN order.

**Table 1: The order of adjective and noun in OV languages**

	Eurasia	Rest of the world	All of world
OV and AN	101	100	201
OV and NA	8	279	287
Total OV	109	379	388

Table 2 shows that, amongst the non-Austronesian languages of Papua New Guinea the same correlations as the ones shown in table 1 are found. Comparing the rows, it is clear that OV is dominant; all eight exceptions to this order are found in the languages of the Torricelli family in the north.<sup>3</sup> Comparing the columns, it is also clear that an NA order is dominant regardless of the order of the verb and the object. Exceptions to the VO and NA pattern are minimal. (In Dryer's data set, Arapesh, a Torricelli language, fits this description.) However, exceptions to the combination of OV with NA are more numerous. That is to say, whereas OV languages typically have NA patterns in Papua New Guinea (and across the world), there are some languages, a minority, that display OV and AN order.

**Table 2: The order of object and verb, and adjective and noun, in the non-Austronesian languages of Papua New Guinea**

	AN	NA
OV	16	53
VO	1	7

<sup>2</sup> Only languages with a clear preference for either pre- or postverbal adjectives have been included; languages with no dominant order, for instance, are not counted here.

<sup>3</sup> The Bird's Head in the far west of New Guinea also has VO non-Austronesian languages.

Similar figures can be obtained when other elements of the NP (e.g., numeral, demonstrative, or relative clause) are compared with the main elements of the clause, except for genitives, which usually precede the noun.<sup>4</sup> (There are only seven exceptions on the mainland of Papua New Guinea in Dryer's data base, and only three other languages in the west of New Guinea.) This is shown in table 3.

**Table 3: The order of object and verb, and genitive and noun, in the languages of Papua New Guinea**

	GenN	NGen
OV	73	3
VO	9	16

Taken alone, we would think that Papua New Guinea could be seen as a microstudy of global word order patterns, at least with respect to the order of elements in the clause or in the NP (though without the same strong skewing that is found with the global distribution). However, just as there is a strongly skewed geographical distribution of the OV & AN type globally, appearing modally in Eurasia and only sparingly elsewhere, so too in Papua New Guinea the languages combining OV with AN are not evenly distributed.

### 3. The special position of the eastern highlands

When we examine the locations of the modal and nonmodal NP orders, particularly with respect to the order of noun and adjective, we find that there are concentrations of exceptions to the modal patterns in four areas. One is centered on the middle Sepik, spanning a number of families ranging from the Torricelli language Arapesh, through and including the Ndu group north of the Sepik down to the Sepik Hills languages such as Alamlak. An isolated area exists to the south of the central cordillera in the center-west, containing languages such as Korowai and Awbono; another area is found in the south, along the border, where languages show consistently head-final NPs, typically lack adpositions, and have either free clausal order or else are verb-final (but without the clause-chaining morphology that characterizes so many supposedly modal languages of New Guinea). The final area with head-final NPs is centered in the eastern highlands, right in the area where McKaughan's work was focused. See the map showing this distribution, where black dots represent languages with NA order and white dots represent languages with AN order. (Gray dots show languages in which both orders are found.) Areas with a concentration of AN languages are circled. (The circled area in the south of the map is based on data from Marind, Morori, and Kanum not included in Dryer 2005.)

What is the significance of the fact that the languages spotlighted in McKaughan's volume show what is in fact an atypical pattern of word order harmony, atypical both within New Guinea and across the world? At the time of publishing, there was no other work that focused attention on any languages of New Guinea. Reference works or articles that have become more frequently cited were not then available. McKaughan's collection of papers, then, in many ways set the linguistics world's impressions of what a Papuan language looks

<sup>4</sup> This, then, suggests that the possessor appears as the head of a Possessive Phrase, which is structurally above the Noun Phrase, as in the structure [<sub>POSSP</sub> *the woman's* [<sub>NP</sub> *coconut big*]] 'the woman's big coconut'. If this is true, then we can preserve the generalization that NPs are head-initial.

Map: AN areas of (Papua) New Guinea



like: consistently head-final, with head-marking and a switch-reference system, and a fairly simple segmental phonology.

Emerging work (e.g., Donohue 2006) suggests that the extreme word order harmony seen in the languages of the eastern highlands in McKaughan's study represents an earlier, relic typology that has been obliterated over most of New Guinea, but which remains in a small number of areas, largely where languages of the Trans New Guinea family are found. In fact, it appears that the languages of the area that was the focus of McKaughan (1973) epitomizes a linguistic type that has all but died out over most of New Guinea, languages with extremely harmonic head-final word order, and the most extreme use of complex clause-chaining, switch-reference morphology. The fact that SVO order is found in areas on the periphery of the putative Trans New Guinea spread (Donohue 2005, 2007) implies that many of the languages in areas currently showing SOV orders may have previously had divergent word order typologies as well, and that this has been partially replaced by the spread of a number of linguistic features, many of them centered on the eastern highlands.

This is not to say that the atypicality of word order patterns in the eastern highlands is the sole point of interest in McKaughan (1973); many other details can be found in the volume that have perhaps been overlooked in the search for generalizations, but which deserve to be reinstated in the New Guinean linguist's mind, such as the prevalence of prenasalized stops which show voiceless plosive components (e.g., [mp], not \*[mb]), a feature shared with the Angan languages to their south.<sup>5</sup> This small detail clearly shows the fact that voicing contrasts are not simply the same as prenasalization contrasts—or, to put it another way, these details show that we cannot consider prenasalization to be simply a low-level phonetic concomitant of voicing.<sup>6</sup>

Without details such as those carefully assembled by McKaughan in phonetics as much as syntax, we would not have been able to draw on so rich a body of data to advance our

<sup>5</sup> See Kaufman (this volume), citing McKaughan's earlier work, on prenasalized stops in Maranao.

<sup>6</sup> Numerous other language facts support this conclusion: languages in which both a voiced and a (possibly voiced) prenasalized series exist, contrasting (for instance)  $p \neq b \neq mb$ ; languages in which both a voiced prenasalized and voiceless prenasalized series exist, as well as both kinds of non-nasal stops (thus,  $p \neq b \neq mp \neq mb$ ).

knowledge. It is a mark of the long-standing relevance of McKaughan's work that it continues to be mined in the quest to understand the linguistic situation across New Guinea.

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