

# Non-Verbal Predicates in Tongan

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## 1 Introduction

In any head-driven theory of clause structure, where clauses are some sort of verbal category, the presence of clauses without an overt verb poses an interesting puzzle. Should or can the non-verbal clauses be assimilated to verbal clauses via a phonologically-null verb, or should they be analyzed in another way? This issue has been the subject of a fair amount of research in HPSG over the last 10 years (Sag and Wasow 1999 and Bender 2001 looking at AAVE, Avgustinova 2006 looking at Russian, and Henri and Abeillé 2007 looking at Mauritian Creole). In this paper, I add another language – the Polynesian language Tongan – to the discussion, both to better understand this kind of construction cross-linguistically and to better understand the nature of Tongan clause structure. After illustrating the differences between verbal and non-verbal clauses in Tongan, I consider both constructional (phrase structure-based) and head-driven (lexical item-based) analyses for the latter kind of clause. I argue that a head-driven approach, where an element within the predicate is the head, is the best solution. However, such an analysis has to split the head’s arguments so they do not combine with the head simultaneously.

## 2 Basic Data

All clauses in Tongan share some properties: the predicational elements appear near the left-edge and the two clause types share some argument realization patterns. Thus, in the verbal clause in (1), the predicate – a verb (bracketed) – appears after a Tense–Aspect–Mood (TAM) word and an absolutive-marked NP (among other arguments) appears:

- (1) Na'e [tō] 'e Sione 'a e manioke.  
PST plant ERG (name) ABS DET cassava  
TAM V Erg NP Abs NP  
'Sione planted the cassava.'

In the non-verbal clause in (2), the predicate (bracketed) also appears early in the clause and there is an absolutive-marked NP (the predicate is initial in (2) because this kind of non-verbal predicate cannot appear with a TAM; others can, in which case the predicate does follow the TAM):

- (2) [Ko e faiako] ia.  
ESS DET teacher 3SG  
Predicate Abs NP  
'He is a teacher.' (Churchward 1953, 25)

However, the two different types of clauses differ in a number of respects.

The first area of difference is, somewhat obviously, in the presence of a verb. Tongan, unlike many other languages with non-verbal clauses, lacks an alternation between verbless and verb-ful constructions. Instead, all predicate locatives and nominals appear with an initial preposition (like *ko* in (2)) while simplex eventive and property predicates are realized as single words: verbs (like *tō* in (1)).

The second area of difference is in the amount of ordering freedom with nominal expressions. In verbal clauses, the nominal expressions are free to appear in any order after the predicates. So, in addition to the ergative NP < absolutive NP order in (1), the reverse order is also possible, as shown in (3):

- (3) Na'e tō 'a e manioke 'e Sione.  
 PST plant ABS DET cassava ERG (name)  
 TAM V Abs NP Erg NP  
 'Sione planted the cassava.'

However, the order of nominal expressions is not free in non-verbal clauses, as shown in with the predicate nominal in (4):

- (4) a. Ko e faiako 'a Sione.  
 ESS DET teacher ABS (name)  
 'Sione is a teacher.'  
 b. \*Ko 'a Sione e faiako  
 ESS ABS (name) DET teacher

In fact, the actual predicate nominal must immediately appear after the preposition *ko*.

Furthermore, there are differences in adverbial positioning. A certain class of adverbials canonically appears after the verb in verbal clauses, as shown in (5):

- (5) Na'e tō *foki* 'e Sione e manioke.  
 PST plant also ERG (name) ABS.DET cassava  
 'Sione also planted the cassava.'

However, in predicate nominals, this kind of adverbial must appear after the predicate, and cannot appear immediately after *ko*, as shown in (6):

- (6) a. Ko e faiako *foki* au.  
 ESS DET teacher also 1SG  
 'I am also a teacher.'  
 b. \*Ko *foki* e faiako au  
 ESS also DET teacher 1SG

Finally, there is a difference in the patterns with coordination. A subject cannot distribute over putative coordinated head + complement units in a verbal clause (7), but a subject can distribute over coordinated predicate nominals (8):

- (7) \*Na'e [kai e ika] pea [fufulu e ngaahi tisi] 'e Sione  
 PST eat ABS.DET fish and wash ABS.DET PL dish ERG (name)  
 Intended: 'Sione ate the fish and washed the dishes.'  
 (8) [Ko e faiako] pea [ko e tangata fa'a] 'a Sione.  
 ESS DET teacher and ESS DET man farming ABS (name)  
 'Sione is a teacher and is a farmer.'

The nominal and adverbial ordering data, plus the coordination data, suggest that the predicate in non-verbal clauses is a phrasal constituent; thus, the principal difference between verbal and non-verbal clauses that the latter has a phrasal predicate constituent. The question then becomes how to ensure that the predicate is, in fact, a phrase in non-verbal clauses.

I assume, following Dukes (2001) and Ball (2008, ch. 3), that verbal clauses (the TAM notwithstanding) form a flat head + arguments structure. So, the verb and its arguments combine simultaneously using Schema 3 from Pollard and Sag 1994, 40, given in (9) using the constraint language and feature geometry of Sign-Based Construction Grammar (Sag 2007):

- (9)  $head-all-valents-cxt \Rightarrow$   

$$\left[ \begin{array}{c} phrase \\ SYN \left[ \begin{array}{c} CAT \quad \boxed{0} \\ VAL \quad \langle \rangle \end{array} \right] \end{array} \right] \rightarrow \mathbf{H} \left[ \begin{array}{c} SYN \left[ \begin{array}{c} CAT \quad \boxed{0} \\ VAL \quad \langle \boxed{1}, \dots, \boxed{n} \rangle \end{array} \right] \end{array} \right] \boxed{1}, \dots, \boxed{n}$$

The question then becomes how to deal with non-verbal clauses within this view of verbal clauses. I will consider the same kinds of analyses that Bender (2001, ch. 3) discusses for possible analyses of the verbless construction in AAVE.

### 3 Zero Copula and Constructional Analyses

An obvious approach to non-verbal clauses is to suppose that non-verbal clauses do have a verb, albeit one with no phonological content (such an analysis is proposed for Tongan’s relative Niuean by Massam, Lee, and Rolle (2006)). For Tongan predicate nominals, such a verb would have to select for a PP headed by *ko* and an absolutive-marked NP. Such a verb could give rise to the structure in Figure 1 via (9). While this analysis provides a rationale for why the prepositional phrase behaves as a unit, it suffers

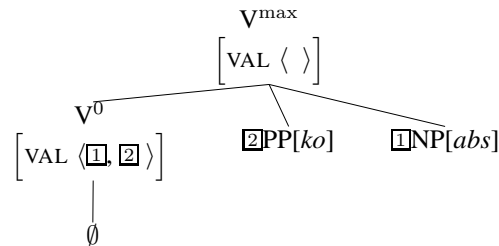


Figure 1: A Zero Copular Analysis of Tongan Predicate Nominals

from several problems. First, given the general syntactic flexibility of verbal arguments in Tongan, there seems no principled reason on the zero copula analysis why the NP[*abs*] and PP[*ko*] could not occur in a different order. Yet they cannot, as shown in (10):

- (10) \*∅ ‘A Sione ko e faiako  
 (be) ABS (name) ESS DET teacher  
 Intended: ‘Sione is a teacher.’

Furthermore, if postverbal adverbials come after verbs, the predicted slot for adverbials is before the PP[*ko*]. Yet, this order, too, is impossible, as in (11):

- (11) \*∅ Foki ko e faiako ‘a Sione  
 (be) also ESS DET teacher ABS (name)  
 Intended: ‘Sione is also a teacher.’

Constructional analyses, like those shown in Figure 2, are also problematic. The central problem for

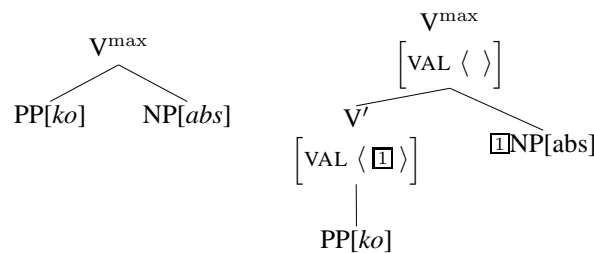


Figure 2: Constructional Analyses of Tongan Predicate Nominals

these accounts is of the same kind that Bender (2001) points out as problematic for the constructional accounts of AAVE zero copula constructions: copular clauses in Tongan do not obligatorily require an subject, as shown in (12):

- (12) Ko e tangata faiako foki.  
 ESS DET male teacher too  
 ‘He is a teacher, too.’

The fact illustrated in (12) requires either approach given in Figure 2 to posit either multiple constructions for the full range of data or a phonologically-null *pro* in the syntax, lessening the appeal of either approach.

## 4 Head-driven Approaches

A simple head-driven solution (extending (9)) where non-verbal clauses are treated exactly like verbal clauses is also not possible. If *ko* is a head with both the NP[*abs*] and NP[*det*] on its VAL list, (9) could license a structure with *ko*, the NP[*abs*], and the NP[*det*] as sisters. However, as long as (9) allows the valents in any order after the head (needed for the ‘scrambling’ facts illustrated in (1) and (3)), this account would allow for the unacceptable subject-complement and predicate-adverbial orders previously shown in (4b) and (6b). Thus, it appears that, for a head-driven analysis to work, the valents cannot combine with their head simultaneously, but instead have to combine separately in some way.

Any approach that combinatorically separates the ‘subject of predication’ (NP[*abs*]) argument from the argument involved with the predication (NP[*det*]) can easily derive both the phrasality of the predicate and, with the appropriate general constraint on the linear ordering of heads, also the requisite ordering. Furthermore, by using the head preposition as the locus for stating the possible arguments within the clause (the argument structure) – as any head-driven approach would – also allows for a conventional argument realization theory to be used (such as the one discussed by Ginzburg and Sag (2000, 170fn, 171)), straightforwardly allowing for non-verbal clauses without a overt subject, such as (12).

Deciding precisely how to split the valents thus depends on which account can be best integrated into a larger theory of Tongan clause structure. To this end, I propose that the split is into two combinatoric attributes: VAL and GOV. (The use of the feature GOV follows work on complex predicates by Chung 1998 and others; the instance here, like these complex predicates, also seems to require that a special predicative constituent be built before the arguments can combine with it.) Prepositions would have the combinatoric values in (13):

$$(13) \quad \begin{bmatrix} \text{VAL} & \langle \text{NP}[\textit{abs}] \rangle \\ \text{GOV} & \langle \text{NP}[\textit{det}] \rangle \end{bmatrix}$$

This amounts to dividing the arguments of a predicational preposition into sententially-relevant (VAL) and locally-relevant (GOV) groupings. The addition of the GOV feature also requires that an additional phrase structure schema (construction): one that allows a head to combine with the governed argument(s). And to achieve the desired interaction between the new schema and the earlier schema (9), the head-daughter in (9) must be specified to have an empty GOV list. A canonical predicate nominal would thus be licensed through these two schemata (constructions), as shown in Figure 3.

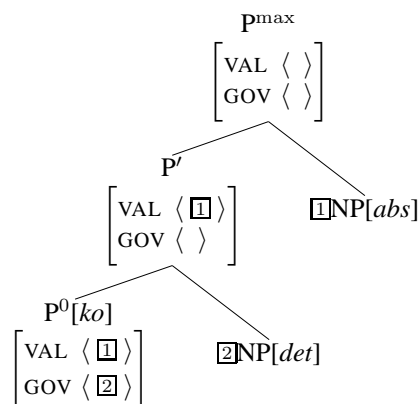


Figure 3: GOV/VAL Split Analysis of Tongan Predicate Nominals

This approach has at least two advantages over the perhaps more obvious split of the VAL list into SUBJ and COMPS features (Pollard and Sag 1994, ch. 9). First, the schema (construction) in (9) can both continue to be utilized for verbal clauses, with only a minimal change, and is extended to cover the final ‘level’ of the formation of non-verbal clauses as well. On an analysis with a SUBJ/COMPS split, in contrast, how verbal clauses are analyzed would have to be re-worked, forcing a decision about what, if anything, is the ‘subject’ in Tongan, a vexed question (Dukes 1998). Second, the VAL/GOV

split analysis offers a much cleaner analysis of the behavior of ‘postverbal’ adverbials. As noted in (5) and (6), these adverbials appear after the predicate. With the GOV feature, this generalization is easily captured, regardless of the precise analysis of the adverbials. The adverbials can either uniformly select for an expression with an empty GOV list (subject to some other semantic restrictions) or, taking the adverbials-as-complements approach (Bouma, Malouf, and Sag 2001, for example), these adverbials could be added members of VAL lists. On either approach, the VAL/GOV approach successfully predicts the location of the adverbials as part of general constraints on the interface between linear ordering and immediate dominance.

## 5 Conclusions

Non-verbal clauses in Tongan are uniformly comprised of a predicational PP + a ‘subject of predication’. Trying to analyze this configuration in the same manner as verbal clauses is problematic, as is an analysis with either a zero copula or a special construction. A split-VAL approach solves the problems of these analyses; however, the split I propose is not the traditional SUBJ-COMPS one (as proposed in head-driven accounts of verbless constructions in Bender 2001; Avgustinova 2006; Henri and Abeillé 2007), but one that more directly splits the sentential and prepositional arguments into separate classes.

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