

One phrase structure

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Configurationality is usually described for a language in terms of the degree to which phrase structure rules play a role in determining the order of constituents in a clause. Typically described as involving permutations of the NPs for A, S, O, and the verb, non-configurationality is a parameter that affects phrases as well as clauses. In One, a West Wapei language of the Torricelli mountains of PNG, main clauses have rigid word order, yet NPs show a surprising degree of non-configurationality, to the extent of scrambling phrases. We examine the parameter of configurationality in One, concluding that verbs have extensive maximal projections, but non-verbal categories show no such projections.

1. Configurationality: the parameter in the literature

Configurationality is, in essence, the parameter that determines whether or not, or the degree to which, phrasal categories (NP, VP etc.) play a role in a language. At its most restrictive, rigid configurationality would not allow a language to show any variation in the word order of the elements of a sentence: the order of elements in a clause would be determined from language-specific semantic role factors, grammatical function identities, case assignment, or a combination of these factors, without variation. Approximations to this type of language lie at the core of the idea of phrase structure grammars, since such grammars assume that we can assign hierarchical order to the elements of a sentence, or phrase. At the opposite extreme, a completely non-configurational language would allow any elements of a sentence to occur in any position or order without reference to semantic cohesiveness. This can be seen in Warlpiri, where not only is there no fixed order for the arguments of a clause, but even elements of the one (semantically determined) nominal referring expression can appear discontinuously.

(1) Warlpiri

[_{NP} Marlu-ngku]	ka-ju	ngaju	[_{NP} wita-ngku]	nya-nyi.
kangaroo-ERG	AUX-1SG.OBJ	1SG.ABS	small-ERG	see-NPAST
‘The small kangaroo sees me.’				

Before examining the parameter of configurationality in One, we shall examine the different senses in which the word has been used in the linguistic literature.

1.1 Non-configurationality: the accepted variables

There are essentially three senses in which the term ‘(non-)configurationality’ is commonly used:

- No obvious VP

There does not appear to be any special relationship between the nominal object and the verb; this is either as a result of VAO or OAV word order, or the lack of any tests that identify a VP.

- No phrasal order in the clause

No word order pattern holds dominant in the language; the verb, NP for A, and NP for O can appear in any order with respect to the verb, which is not bound in initial, final or medial position.

- No apparent NPs

Elements of the one NP can appear scrambled through a sentence, and through each other. This is shown in the Warlpiri example in (1).

These three degrees are taken to be ordered, in that, for instance, the lack of any apparent NPs implies the lack of phrasal order in the clause, and this in turn implies the lack of an obvious VP. I shall argue that there are varieties of non-configurationality that do not fit these patterns. I do not challenge the hierarchy of clausal non-configurationality presented, but suggest that it is not the only dimension in which non-configurationality can be found in the clause.

1.2 Odd NP structures: Leitre possession

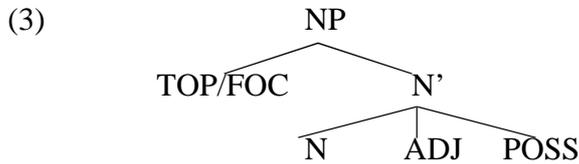
Elements of limited less-than-canonically-configurational behaviour can be found in pragmatic phrase-structure positions that have been proposed for many languages. One example can be mentioned from Leitre (Sko family, Vanimo coast). In this language, possession behaves at odds to the rest of the structure of the NP. Most NP-internal positions are fixed: (N-Adj, N-Dem, for instance). Possession, however, can be either pre- or post-nominal. In (2)a and (2)c we can see that property modification with adjectives must be post nominal. (2)a and (2)b, however, show that possession can be marked either preminally or postnominally.

- (2) a. *naké dámε nyì*
dog big 1SG
'my big dog'
- b. *nyì naké dámε*
1SG dog big
- c. * *dámε naké nyì*

Although there is variation in the position of the possessive marker, there is not total randomness in its location. It may appear in either pre- or post-nominal position, but if post-nominal, it must follow any modifying adjective, as in (2)a, and cannot occur between it and the noun, as in (2)d:

- d. * *naké nyì dámε*
dog 1SGbig

Other languages have been reported as having pragmatic phrase-structure positions inside the NP as well, such as Finnish. This analysis involves having alternative positions for the realisation of adnominal categories, analogous to the analysis of structural positions for topic and focus pragmatic roles (see Aissen 1992). Whether this is an appropriate account of the Leitrite data is not known at this point; if it is, we would represent the alternation in (2) as involving the following (partial) phrase structure:



The possibility of this analysis for One will be addressed in section 3.

2. One clauses: rigid structure, but some variation allowed

One is the westernmost language of the Torricelli family, spoken in the eastern Bewani mountains in northern New Guinea (Laycock 1975).¹ Constituent order in verbal clauses is rigidly fixed, but variable order is allowed in non-verbal clauses.

In both verbal and non-verbal clauses, we find the following order of constituents in a maximal clause.

- (4) S → Time NP_{SUBJ} Adv V NP_{OBJ} (NP_{BEN}) NP_{INSTR} NP_{LOC}

The morphological structure of verbs is relatively uncomplicated, with up to five morphemes appearing bound to the verb: subject prefix - root - iterative - applicative - object clitic.² Minimally, a clause consists of a predicate and an indication of the subject (either through bound prefix or free noun/pronoun). No variation in the positioning of the elements in (4) is allowed in pragmatically neutral clauses; examples of these restrictions can be seen in the following sentences:³

- (5) *Nounke i efe eri moru wapli*
noʉnkYɛ i ɛfɛ ɛtɛ mɔtu wɔplɛ
 yesterday 1SGstill build house village
 'Yesterday I was still building (my) house in the village.'

¹ I use the label 'One' to refer specifically to the Molmo variety of that language, in which I have most familiarity. I would like to thank the patient people of Molmo village for their time and hospitality, and Melissa Crowther, my co-investigator, for much discussion and insight into One, and more. Examples are given in orthography first, and then a three-line presentation with phonemic vernacular, glosses, and free translation. 'Y' in the phonemic representation indicates a palatalisation prosody.

² The status, both syntactically and morphologically, of the subject agreement morphemes is complicated. Donohue (2000) presents a detailed discussion of the issues, but essentially there are bound prefixes for all the pronouns except 1SG, and noting that 2 and 3 SG conflate. Independent pronouns appear in NP positions.

³ Word divisions in this sentence and others have been made on the basis of the usual tests for grammatical and phonological status: prosodic independence, morphological opacity and syntactic mobility as a unit. Tense is not marked in the verb.

This allows any (one) nominal element to appear before the rest of the sentence, optionally marked with the presupposition marker *sa*. For example,

- (10) *Wapli nounke i efe eri moru*
waple nounkYε i εfe εte mɔtu
village yesterday 1SG still build house
'In the village, I was still building (my) house yesterday.'

- (11) *I moru nounke i efe eri wapli*
i mɔtu nounkYε i εfe εte waple
1SG house yesterday 1SG still build village
'My house, I was still building it in the village yesterday.'

Note that the predicate cannot be topicalised; compare the following with (10) and (11). In (12) we can see that a whole VP predicate cannot be taken as the topic of the sentence.

- (12) **Eri moru sa nounke i efe wapli*
εte mɔtu sa nounkYε i εfe waple
build house PRESUP yesterday 1SG still village
'Building my house, I was still doing it yesterday in the village.'

The rigidity of this word order is in sharp contrast to most reported uses of phrase structure in Papuan languages, such as the lack of phrase-structural restrictions on units above the word in Yimas (Foley 1991), or the relative freedom of position for oblique arguments, and to a lesser extent objects as well, in many highlands languages such as Fore (Scott 1978).⁶

3. One NPs: little constraint in position

Noun Phrases in One show a very different patterns of constituent order compared to the tight restrictions we have seen in main clauses. It is unproblematic that the noun phrase in One requires a nominal head; adjectivally 'headed' NPs are ungrammatical:

- (13) **Firi yi moru*
[NP *feti*] *y-i mɔtu*
small 2/3SG-go house
'The small _____ went to the house.'

This sets up some criteria for separating noun and adjective as lexical classes in One. Apart from this requirement, we find that the internal structure of the NP in One is remarkably free. It is characterised by an absence of fixed word order: in the following sentences,

⁶ More rigid phrase structure does appear to be a feature of languages along the north coast of New Guinea in an area beginning just east of Port Numbay. Tobati (Austronesian family), Skou and other languages related to it (Skou family) and Barupu (Skou family, or isolate?), the languages west and north of One, all display strong restrictions on word order, in contrast to Foley's claims that there is a lack of phrase structure restrictions in units above the word. We do not have reliable information on the Torricelli languages to the east of One.

which show various types of modifiers appearing both before and after the nominal, we can see that NP-internal word order is not fixed, or important.

Noun + Adjective

- (14) *kupu napo* ~ *napo kupu*
kopo napo ~ *napo kopo*
 wallaby big big wallaby
 'big wallaby'

Noun + Demonstrative

- (15) *onku nu* ~ *nu onku*
onku nu ~ *nu onku*
 cuscus that that cuscus
 'that cuscus'

Noun + Numeral

- (16) *noula plana* ~ *plana noula*
noɯla plana ~ *plana noɯla*
 sugarcane two two sugarcane
 'two (sticks of) sugarcane'

Even phrasal categories (a degree adverb with an adjective both serving to modify a noun, for instance) show no fixed order.^{7,8} Degree modifiers of adjectives can appear before or after the adjective, as long as they are in the same noun phrase, as shown in (17):

- (17) a. *Efefe aula meli tame nofu ne*
ɛfɛfɛ aula meli tame n-ɔfu n-ɛ
 young very children walk 3PL-play 3PL-be
 'The very young children are walking about playing.'
 b. *Aula efefe meli tame nofu ne*

It is, however, not just relative ordering but also contiguity and scope that are unspecified for these degree adverbs. With two adjectives following the noun, a prenominal adverb can be construed as modifying either of these adjectives, and can be separated from both of them, as in (18).

- (18) *Aula poli firi oli wai teu tiri*
aula poli feti ɔli w-ae teu titi
 very pig small black 2/3SG-sit foot top
 'The very small black pig is sitting on (her) feet.' OR
 'The small, very black pig is on (her) feet.'

⁷ This could also be taken as an argument against the existence of adjective phrases in One. I shall not address this issue in detail here, save to note that data from predicative adjectives suggests that there are AP categories.

⁸ Other degree adverbs, mostly based on kin terms, are positionally fixed to the end of the phrase. A very large black pig would be a *poli napo oli moa*, or any combination of *poli*, *napo* and *oli*, but necessarily with *moa* ('mother') phrase-finally, and ambiguous.

With possession, we find that there are some restrictions on the position in which pronominal possessors can appear, and this is dependent on the case that is used with the pronoun. There is still a remarkable freedom in the ordering with most cases. With nominal possessors case is not marked, and the possessor can be pre- or post-nominal. With pronominal possessors, either the genitive *enu* or the possessive *e* may be used.

- (19) a. *Aimo i enu*
aimɔ i-enu
 knife 1SG-GEN
- b. *I enu aimo*
i-enu aimɔ
 1SG-GEN knife
- c. *Aimo ie*
aimɔ i-ε
 knife 1SG-POSS
- d. *Ie aimo*
i-ε aimɔ
 1SG-POSS knife
- e. *I aimo*
i aimɔ
 1SG knife
 'My knife'
- f. **Aimo i*
aimɔ i
 knife 1SG
- (20) a. *Imfla Malesia*
imfla malesYa
 husband Malesia
- b. *Malesia imfla*
malesYa imfla
 Malesia husband
- c. *Imfla Malesia enu*
imfla malesYa-enu
 husband Malesia-GEN
 'Malesia's husband (Afe)'
- d. **Malesia enu imfla*
malesYa-enu imfla
 Malesia-GEN husband

With N-N compounds we find freedom of order, though there is more likely to be a standardised form for the compound: this is determined lectally, and not by the language as a whole unit.

- (21) *au nenta* ~ *nenta au*
aʉ nenta ~ *nenta aʉ*
 sago bamboo bamboo sago
 'sago cooked in a bamboo tube'⁹

We might wish to argue that the variation in modifiers in One (pre-nominal, post-nominal position) can best be modelled with NP-internal pragmatic structural positions, such as the following, modelling the two sentences in (22) (using TOP as a cover label for pragmatically salient information).

⁹ This cannot be interpreted as 'bamboo tube for cooking sago'; this is expressed as *au ninto sala*. All compounds follow this pattern, with separate lexical expression for compounds of different types.

In sum, the order of elements in an NP is not fixed. There are some phrase-final elements, and there are case marking options that preclude certain orders, but there are no relative orderings of types of modifiers.

4. Relative clauses: verbs meet NPs

We have seen that for many kinds of modifiers within an NP (possession, adjectives, numerals, demonstratives, and noun-noun compounds) there is not a fixed order to the elements. Relative clauses, however, act very differently: an RC in an NP will freeze the position of all NP elements; not just the RC and N, but the rest of the NP as well. Notice how the position of the Dem and Adj become fixed when a relative clause is in the phrase.

- (26) a. *I wani pala yaplere nu*
i wane pala yaplɛtɛ nu
1SG see dog 2/3SG-run that
'I saw that running dog.'

b. * *I wani yaplere pala nu*

c. *I wani nu pala*

d. * *I wani nu yaplere pala*

- (27) a. *I wani pala napo yaplere*
i wane pala napo y-aplɛtɛ
1SG see dog big 2/3SG-run
'I saw the big running dog.'

b. *I wani napo pala*

c. * *I wani napo yaplere pala*

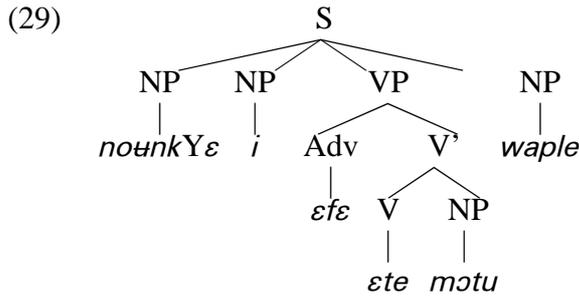
Similar fixed orders are found with the other modifiers in the noun phrase when a relative clause is present, yielding a with-RC NP structure of:

- (28) NP → N Adj Num Poss'n RC Dem

In sharp contrast to the free orders seen in section 3, this order is fixed. Relative clauses investigated so far all involve verbs; there do not appear to be relative clauses based on non-verbal clauses, such as 'The woman who is my wife.'

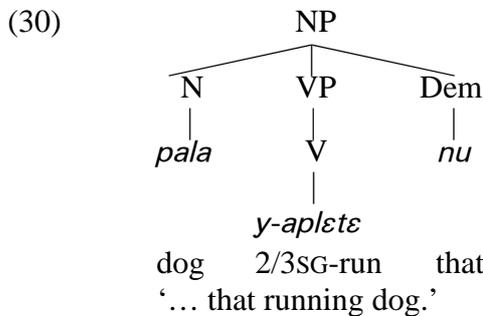
5. Configurationality

At both the clausal level and the phrasal level we have seen that the presence of a verb dictates configurationality. Most crucially, the verb dictates word order to one level higher than the VP. The following structure is one possible model of (5) seen earlier, and shows that the configurationality that is found when verbs are present extends past the VP to the clause level.



yesterday 1SG still build house village
 ‘Yesterday I was still building (my) house in the village.’

In this example the sisters to VP are strictly bound in their positions, yet are outside the scope of the maximal projection of V (VP). Noun phrases present a similar picture; when we consider a relative clause, we similarly find that the freezing of word order applies above the VP level:



Although the maximal projection of the V is to the VP, the order of elements that are sisters to VP is also fixed. In this case, the elements *pala* and *nu* in the NP are sisters to an S projected above the relative clause VP; pruning follows conventions in Bresnan (2001), with the VP (rather than S, or IP etc.) displayed for continuity. All One RCs can be analysed as VPs in this way.

6. Conclusions

Based on the evidence presented in the preceding sections, we can conclude that

- the basic phrase structure in One is flat, with no evidence appearing for configurationality-inspiring projections from N or A lexical categories.

This would, minimally, allow for free phrasal order within the clause, and we would probably predict a lack of overt phrasal categories as well. But there is a major exception to this:

- tight configurational structure is obvious for projections involving a V: this lexical class projects word order restrictions on elements both within and also beyond its maximal projection

Therefore, we must conclude that projections and phrase structure can be dependent on the identity of lexical class, and are not necessarily universal parameters that are set language

by language. In One, verbs obligatorily project a configurational phrase, and there are strict restrictions on position both within that phrase and beyond it. Nouns, on the other hand, appear to have phrasal projections (witness the fact that NPs are necessary and discrete analytical units in a description of One clauses), but there is no evidence of configurationality within these phrases. Adjectives show no evidence for configurational APs, and scant to no evidence for an AP at all, since there are no conditions in which scope or contiguity play a role in determining a degree adverb's relationship to an adjective. This is all charted in table 1.

Table.1. Projections and lexical classes

Lexical class	Projects XP?	Configurational XP?
N	yes	no
A	no	no
V	yes	yes

We can see then that configurationality is a phenomenon associated with ordering within a domain defined as slightly higher than the maximal projection of the lexical item that heads the phrase. Moreover, as stated above, the setting for configurationality within this domain is set by the lexical class, not as a whole for the language.¹⁰ In One, word order or configurationality does not reflect information structure in either clauses or NPs (apart from the extra-sentential topic position; see (10)-(12)), and is only fixed when there is a V under the maximal projection for the clause or NP.

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¹⁰ Similar facts are reported for Tagalog, where, for instance, a V predicate forces a more configurational, phrasally defined clause than an N head, and a P head optionally projects a phrasal structure, but not obligatorily so (defined by second-position clitic placement, which with a PP head can occur either following a PP or following the P: *Galing sa Manila siya* from DAT Manila 3SG.NOM 'S/he is from Manila.' and *Galing siya sa Manila*).