

A PRELIMINARY ACCOUNT OF THE PHRASE STRUCTURE IN WAIMIRI ATROARI: A CARIBAN LANGUAGE

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RESUMO: Waimiri Atroari é uma língua com pouquíssimos estudos lingüísticos, a maioria deles tratam de questões fonológicas (HILL; HILL 1985, LACERDA, 1991, BRUNO, 1995, 2003, 2004, 2005 e 2006). Considerando esta situação, este artigo propõe uma descrição preliminar da estrutura frasal (do nome, posposição e do verbo) em Waimiri Atroari, utilizando a abordagem da Teoria X-Barra.

PALAVRAS-CHAVE: Língua Waimiri Atroari; Estrutura Frasal; Teoria do X- Barra.

ABSTRACT: Waimiri Atroari is a chronically underdescribed language. There are few linguistic studies about it, most of them being phonological sketches (HILL; HILL 1985, LACERDA, 1991, BRUNO, 1995, 2003, 2004, 2005 e 2006). Taking this situation into consideration, this article provides a first preliminary account of the phrase structure (noun, postposition, and verb) in Waimiri Atroari under the X-Bar Theory framework.

KEYWORDS: Waimiri Atroari Language; Phrase Structure; X-Bar Theory.

1 INTRODUCTION

In this article, I assume some ideas related to the structure of phrases that have been utilized in the X-Bar approach. In particular, I assume that phrases are built around an element whose head is

instantiated by a major lexical class, such as N, V, or A. Second, I assume that there are at most two projections of each class, an intermediate projection X' and a maximal projection XP, and we can add adjuncts at any level. Since X-Bar Theory allows "Parameters"¹ on the position of heads, complements, and adjuncts, I use it to explain the phrase structure in this language. According to Greenberg (1963), there is a general word order tendency in natural languages that tends to place modifier elements either before or after the head. On the other hand, it is observed that the position of heads and complements in different kinds of phrases seems not to be limited to the binary choice where all the heads must be either left or right. In other words, there would be some 'mixed head languages', as for example Basque - Radford (1988, p.39).

In Waimiri Atroari, phrase heads occur predominantly at the right edge of the constituent in noun, verb, and postpositional phrases. However, in instances of noun phrases containing a numeral, a quantifier word, or adjective, this does not seem to be always the case. As it will be demonstrated below, the fact that the head can be positioned either to the left or to the right in these kinds of phrases is probably related to the fact that numerals, adverbial quantifiers, and adjectives are adjuncts, and, as such, can occupy variable positions.

2 NOUN PHRASES

In Waimiri Atroari, the simplest case of noun phrases may consist of a single a single noun (1) or a pronoun (4). The clearest cases of NPs involving two nouns are examples of possessive phrases, which present the order possessor-possessed (7a and 8a):

¹ According to Travis (1989, p.264), "[L]anguage variation is allowed through parameters which introduce a limited flexibility to the system. Parameters represent the range of variation that can be found in natural languages as well as what has to be learned by the children."

- | | |
|--|---|
| (1) <i>mabaia</i> 'a/the papaya(s)' | (4) <i>amyry</i> 'you' |
| (2) <i>mydy</i> <i>i-apremy</i>
House REL-master;owner
'the master of the house' | (5) <i>Ewepe pyruwa</i>
Ewepe arrow
'Ewepe's arrow' |
| (3) <i>maryba</i> <i>i-apremy</i>
song/festivity REL-master
'The master of the song or of the party' | (6) <i>Iawara</i> <i>mydy</i>
Iawara house/village
'the village of Iawara' |

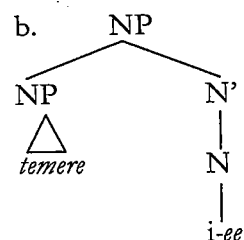
Moreover, the examples involving noun phrases seem to present instances of both adjunction and complements. In the trees below (7b and 8b), the SPEC N is a possessor and the head is the N'. Unlike English, where the possessive clitic 's is attached to the possessor NP, in Waimiri Atroari it is the possessed noun that receives morphological indication of the genitive relationship (head marking)². Moreover, in cases such as example 6 above, the noun-noun construction can be ambiguously interpreted as a typical possessive phrase (i.e., 'the village that belongs to Iawara') or a 'naming' construction ('the village whose name is Iawara') showing a relation of modification, such as 'modifier-modified'. The possessives will be always on the left because they will be either complement or specifier

² In Waimiri Atroari, a number of vowel-initial noun and verb stems take the 'linking prefix' *i-* when immediately preceded by their determiners (that is, the possessor, with nouns, and the object, with transitive verbs). This prefix occurs generally with obligatorily possessed nouns, such as nouns denoting a 'part-of-a-whole' relationship (body-part and kinship terms, etc.). Examples are the stems *eba* 'eye' and *akyna* 'sweep':

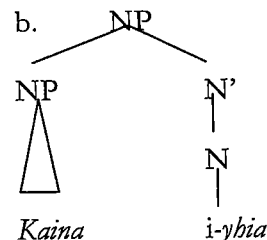
- | | | |
|---|--|--|
| (i) a. <i>Ewepe i-eba</i>
Ewepe REL-eye
'Ewepe's eye' | b. <i>k-eba</i>
1+2-eye
'our eyes' | c. <i>a=i-eba</i>
2=REL-eye
'your eye' |
| (ii) <i>babinja</i> <i>n-itxi-pia</i>
child 3-go-IM | <i>mydy</i>
house | <i>i-akyna-se</i>
REL-sweep-in.order.to
'The child went to sweep the house.' |

(Comp for inalienable and Spec for alienable). The example (5) does not have this problem because the only possible interpretation is 'the arrow that belongs to Ewepe'.

(7) a. *Temere i-ee*
jaguar REL-tooth
'The jaguar's tooth.'



(8) a. *Kaina i-yhia*
Kaina REL-hair
'Kaina's hair.'



2.1 NOUN PHRASES CONTAINING ADJECTIVES³

As illustrated in the trees below, adjectives are adjuncts—or, in X-Bar terminology, a sister to a single bar level of an N' and

On the other hand, consonant-initial stems do not present any linking prefix under these circumstances:

(iii) a. <i>Ewepe pana</i> Ewepe ear 'Ewepe's ear'	b. <i>ky-pana</i> 1+2-ear 'our ears'	c. <i>a=pana</i> 2=ear 'your ear'
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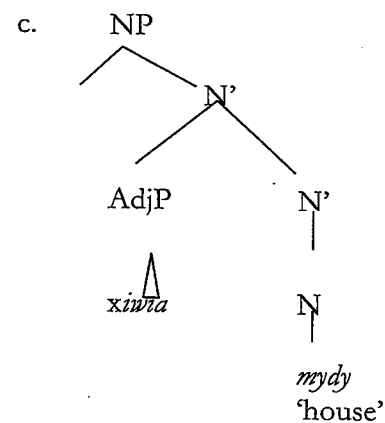
I term *i-* a *relational prefix*. Relational prefixes are also mentioned in languages of the Tupí and Macro-Jê stocks (RODRIGUES, 1994).

³ Many Carib languages do not have adjective as a syntactic class (part of speech). Words corresponding semantically to adjectives are classified as nouns. Based on morphological evidence, I claim that Waimiri Atroari *does* have adjectives. Syntactically, adjectives can, like nouns, occur in subject or object position. However, unlike nouns, adjectives cannot take the suffix *-my* that indicates 'absence' (e.g. *ety-my* 'nameless'). Furthermore, only adjectives can take the emphatic suffix

daughters of a single bar level N' (CARNIE, 2001, P.117). Because adjuncts can be more flexible in their distribution, in a noun phrase containing adjectives, the adjectives can be either to the left or at the right of the head noun. At this moment, I cannot determine whether this variation is purely stylistic, or whether it entails any semantic difference.

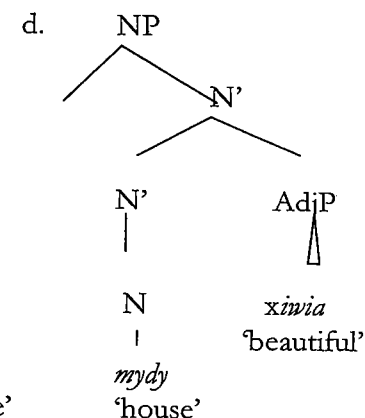
(9) a. *xiwia mydy*
house'

beautiful house



b. *mydy xiwia* 'beautiful

house beautiful



-pa (e.g. *tamkwa-pa* 'very short'). In Waimiri Atroari there is a second position particle, *ram*. It can never intervene between two elements of the same phrase. However, it is not clear whether one can use the second position particle *ram* as a boundary constituent in phrases of the type <N Adj>.

a. **kyryry xiwia ram mixopa*
snake red 2PART long
'The long red snake'

b. *wykyry sehe ram waryna wu-se tsi-pia*
man tall 2PART paca kill-in.order.to go-IM
'The tall man went to kill *paca* (a kind of rodent).'

- (10) a. *taha* *kyrywy* b. *Kyrywy taha*
big/large snake
big/large
'big snake'

- (11) *pana* *a'a* *n-itxi-piany* [*taha*
kanuwa] *ta*
Yesterday 1+3PRO 1+3S-go-REC big canoe
LOC

- warara* *bi* *pipe-se*
turtle eggs look.for-in.order.to
'Yesterday, we went in the big canoe to look for turtle's
eggs.'

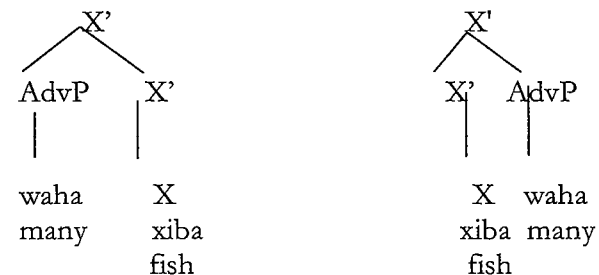
- (12) [*wykyry sehe*] *txi-pia waryna wu-se*
man tall go-IM paca kill-in.order.to
'The tall man went to kill a *paca* (a kind of rodent).'

2.1.1 Noun Phrases Containing Quantifiers Words

As with noun phrases containing adjectives, noun phrases containing quantifiers also present a certain degree of positional variation. However, I don't consider adjectives and quantifiers as in the same lexical category because they don't get the same morphemes. As shown in examples (13-17) below, adverbial quantifiers can occur either to the left or to the right of the head noun. As the syntactic trees in (13c) and (13d) demonstrate, I consider such quantifiers as adjuncts, what would explain their relative mobility.

- (13) a. *waha xiba* b. *xiba waha*
many fish
'many fish'

- c. XP d. XP



- (14) a. *wapy kinja wyty ipo-piany*
many people meat look.for-REC
'Many people hunted.'

- b. *kinja wapy waty ipo-piany*
people many meat look.for-REC
'Many people hunted.'

- (15) *tabkome wapy n-oosa-pa kamakaxi*
taka
elders many 3S-climb-REM tree (sp.)
AL

- xirikiki baka-paiky*
parakeet kill-T/A
'Many elders climbed trees to kill parakeets.'

- (16) *kinja wyty ipo-piany wapy.*
people meat look.for-REC many
'People hunted a lot.'

- (17) *njawa nyn-pa waha kipety tarara many*
rain come-REM many wind thunderstorm too
'It rained a lot with wind and thunderstorm as well.'

Although examples (18), (19), and (20) are not examples of adverbial quantifiers, I provide them to show that other kinds of adverbs behave in the same way, presenting the same mobility.

(18) *mamyhkypa* *a'a* *n-y-sapa* *kwata*
 wu-se
 Tomorrow 1+3PRO 1+3S-go-T/A
 spider.monkey kill-in.order.to
 "Tomorrow we will go to kill spider monkey."

(19) *a'a* *n-y-sapa* *kwata* *wu-se*
 mamyhkypa
 1+3PRO 1+3S-go-T/A spider monkey kill-
 in.order.to tomorrow
 "We will go to kill spider monkey tomorrow."

(20) *a'a* *n-y-sapa* *mamyhkypa* *kwata*
 wu-se
 1+3PRO 1+3S-go-T/A tomorrow spider.monkey
 kill-in.order.to
 "We will go tomorrow to kill spider monkey."

Interestingly, the position of an adverbial quantifier such as *waba* 'many, a lot' and *wapy* 'many, a lot' seems to be free when they modify a noun phrase (examples 13-15). However, these adverbial quantifiers seem to occur preferentially in post-verbal position when modifying a verb phrase (examples 16 and 17). What it seems not to be the case of the adjectives, but I still have to check. Waimiri Atroari lacks determiners that correspond to *each*, *every*, *most*, and *some*, a fact that suggests the absence of a class of D-quantifiers⁴ in this language. In Waimiri Atroari quantifiers such as *all*, *many*, and *two* do not belong

⁴ According to Partee *et al* (1987), D-quantifier is associated with determiner-like elements where the scope is restricted to NPs, in specific positions.

to the functional category of determiner; therefore, I prefer to think of them as adverbs.

2.1.2 Noun Phrases Containing Numerals

The native lexicon of Waimiri Atroari has only three numeral words,⁵ whose meaning is not generally restricted to mathematical quantities. The expression *awini* ~ *awinini* ~ *awinihe* ~ *awynihe* means 'alone' and also 'one'; the term *typytyna* means 'a couple', 'a pair', or 'two'; the word for 'three' is *takynynapa*. Thus, traditionally the Kinja⁶ counted only up to three; amounts higher than three were referred to simply as 'several, many'. Today, with the modern necessity for handling money and the introduction of western mathematical concepts through the village schools, the Kinja started using Portuguese loanwords to refer to numbers higher than three. These borrowed numerals occur in the same position as the native words meaning 'one', 'two', or 'three'. Less commonly, Portuguese numerals for 'one', 'two' or 'three' may also be used instead of the native words, especially by the younger speakers (25). As shown by the examples below, numeral words can occur before a noun (21-23), after a noun (25), or by itself, after a verb (24).

(21) *typytyna* *karyka*
 two chicken
 'two chickens'

(22) *awynihe* *petxi* *Kwawura* *i-aryka-pa* *ty-*
kyda tohnaka
 one pig Kwawura REL-put-REM 3REFL-
 back over
 'One wild pig put Kwawura on his own back.'

⁵ I am using the term 'numeral words' instead of 'numerals' because I have no evidence for the existence of numerals as an independent part-of-speech in this language.

⁶ Waimiri Atroari self-denomination.

**The example above was taken from a mythological text. This sentence was introduced in the middle of the myth when the storyteller have talked a lot about the way that the wild pig lived.

(23) *takynyna pahky kaminja napynaka.*
 three only non-native 3S-escape
 'Only *the* three white men escaped.'

(24) *weri samka ka-pia takynynapa*
 woman hammock make-IM three
 'The woman made three hammocks.'

(25) *amy kinja dezessete apytyhy*
 other people seventeen behind

amy kinja dezessete nate'me
 other people seventeen in front
 'Seventeen people were in front, and seventeen were behind.'

It is not totally clear what motivates this variation in the position of the numeral words. However, from the examples seen above, it seems that the variation may be related to issues of specificity and definiteness. That is, if the speaker thinks the listener already knows and can identify the particular referent which will be talked about, the speaker will codify such referents as definite and specific. According to Diesing (1992) and Diesing and Jelinek (1995), there is a mapping between argument structure and information structure. By information structure, Diesing (1992, p.58) refers to "the organization of the clause with respect to presuppositional (familiar) vs. information new to the discourse." Waimiri Atroari clearly follows this mapping when topicalizing some arguments of the clause and also seems to make an association between definiteness and old information vs. indefiniteness and new information through the relative position of the numeral word in a noun phrase. When in

specific and definite contexts, the numeral word seems to take preferably the left side of the noun (21-23), but in unspecific context the numeral word is positioned either post-verbally (24) or at the right side of the noun (25). In this sense, the numeral words in (24) behaves like the adverbial quantifier in example (15), inasmuch as the speaker is not talking about a specific group of people or hammocks. I admit that example (21) and (25) are potentially problematic for my assumptions, since it is not clear if the consultant is talking about two specific chickens or a specific group of seventeen Kinja. Therefore, this is a hypothesis to be further investigated taken into consideration textual evidences and pragmatic aspects.

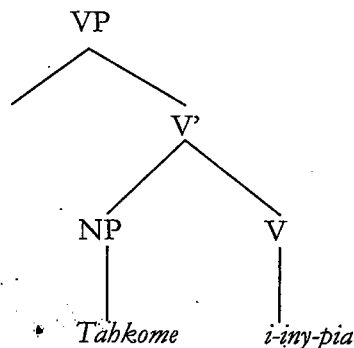
3 VERB PHRASES

In Waimiri Atroari⁷, a VP can be constituted of a verb alone (27) or a verb preceded by a NP (28). The VP can move to a position before the subject NP through topicalization (28) and cannot have its components separated, except in the OSV context when the object moves alone to a topic position as will be discussed below (29). In Waimiri Atroari there is a second position particle, *ram*, which can be used as a criterion to test the constituency of a given phrase. The particle *ram* can never intervene between two elements of the same phrase (26c). Furthermore, since *ram* is a second position particle, it can be useful in determining which elements in a given sentence were moved, such as in example (26a) below.

(26) a. *tabkome i-iny-pia ram Irikwa*
 elders REL-eat-IM 2PART Irikwa
 'Irikwa (a mythological entity) ate the elders.'

⁷Waimiri Atroari has a SOV basic word order.

b.



- c.*[*tabkome ram i-iny-pia*] *Irikwa*.
 elders 2PART REL-eat-IM Irikwa
 "Irikwa (a mythological entity) ate the elders."

(27) *ka-ky!*

speak-IMPER
 'Speak!'

(28) *babinja maia kynk-E*
 children knife break-T/A
 'The children break the knife.'

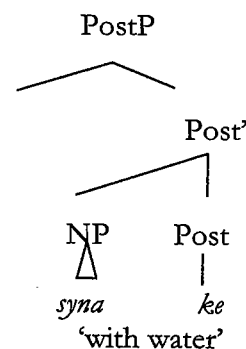
(29) *woky i-eky kra h-ee-ia*
 banana REL-juice 1PRO 1-drink-T/A
 'I drink the banana juice.'

Example (29) above illustrates the only context where the VP is separated by the subject, when the object undergoes topicalization. Generally, in more 'unmarked' situations nothing can intervene between the object and the verb.

4 POSTPOSITIONAL PHRASES

In Waimiri Atroari, some postpositions can inflect for person, taking the same series of markers used to indicate the possessor on nouns and the object on transitive verbs. The syntactic link between a postposition and its noun phrase object is as strong as that between the elements of the noun and verb phrases: nothing can intervene between them.

(30)



The tree above demonstrates that the head is always to the right in postpositional phrases, exactly as it happens with noun and verb phrases. The examples below reinforce my claim that nothing can separate the postpositions from their complements.

(31) *iakypa a'a ny-dykia-pa tapinja*
 then 1+3PRO 1+3S-squeeze-REM sieve
 LOC
 'Then, we squeezed (the manioc) in the sieve.'

(32) *samka tyhnaka*
 hammock over
 'over the hammock'

- (33) *iakypa a'a minja pítxi-pia*
maia ke
 After 1+3PRO manioc peel-IM
 knife INSTR
 'Then we peeled the manioc with the knife.'
- (34) *aa ram xiba b-yry-piaka inaka*
 1PRO 2PART fish 1-give-IM 3PRO DAT
 'I gave fish to him.'
- (35) *amyra ram aa=inaka xiba m-yry-pia*
 2PRO 2PART 1=DAT fish 2S-give-IM
 'You gave fish to me.'
- (36) *paruwe aa=i-ry-py-pia, woky yry-ky*
 Paruwe 1=REL-tell-CAUS-IM banana give-IMP
 mahta *inaka*
 Marta DAT
 'Paruwe told me: "Give banana to Marta."'

5 CONCLUSION

In this article, I have provided a preliminary analysis of the Waimiri Atroari phrase structure. Based on the different types of phrases showed above, I argue that Waimiri Atroari is a head-right language. In verb phrases, possessive noun phrases, and postpositional phrases, Waimiri Atroari presents a typical case of head right. However, in phrases with adjuncts, such as noun phrases containing adjectives, adverbial quantifiers, and numeral words, the relative position of the head seems to vary depending on the kind of information that the speaker intends to convey, such as specificity and definiteness (adverbial quantifiers and numeral words), or whether it is modifying a noun or a verb (adverbial quantification phrases).

REFERENCES

- BRUNO, A. C.. The Causative Construction in Waimiri Atroari. *LLAMES* n.6, p.101-108.2006.
- BRUNO, A. C. Waimiri Atroari Pronominal System. In Stella Telles (org.) *Coletânea Axéwryru*. Recife: Editora Universitária UFPE. 2005.
- BRUNO, A. C. Reduplicação em Waimiri Atroari. *Ameríndie*. IRD.Vol. Especial sobre Línguas Carib. 2004.
- BRUNO, A. C. Waimiri Atroari Grammar: Some Phonological, Morphological, and Syntactic Aspects. PhD Thesis. Tucson: The University of Arizona. 2003.
- BRUNO, A. C. Person subject and object marking in Waimiri Atroari. Unpublished manuscript. 1995.
- CARNIE, A. *Syntax*. Oxford: Blackwell Publishers. 2001.
- DERBYSHIRE, D. *Hixkaryana and Linguistic Typology*. Texas: Summer Institute of Linguistics and University of Texas. 1985.
- DIESING, M. *Indefinites*. Cambridge: MIT Press. 1992.
- DIESING, M and JELINEK, E. Distributing arguments. *Natural Languages Semantics*, V.3, p.123-176. 1995.
- GILDEA, S. *On Reconstructing Grammar: Comparative Cariban Morphosyntax*. Oxford Studies in Anthropological Linguistics 18. Oxford University Press. 1998.
- GREENBERG, J.H. *Universals of languages*. MIT Press: Cambridge, MA. 1963.
- HALPERN, A. and ZWICKY, A. *Approaching Second: Second Position Clitics and Related Phenomena*. Stanford: CSLI Publications. 1986.
- HILL, J.; HILL, T. Phonological sketch of Waimiri Atroari (Cariban). Unpublished manuscript. Missão Evangélica da Amazônia. 1985.
- LACERDA, E. M. N. Waimiri Atroari: Observações linguísticas. Unpublished manuscript. Manaus, Brazil: Programa Waimiri Atroari. 1991.
- RADFORD, A. *Transformational Grammar*. Cambridge: Cambridge University Press. 1988.
- RODRIGUES, A. Grammatical affinities among Tupí, Carib, and Macro-Jê. Unpublished manuscript. Brasília: Universidade de Brasília. 1994.
- TRAVIS, LISA. Parameters of phrase structure. In: Baltin, Mark and Kroch, Anthony (editors), *Alternative Conceptions of Phrase Structure*. Chicago: Chicago University Press: 1989.

ABBREVIATIONS

AL	'allative'	IMP	'imperative'
CAUS	'causative'	INSTR	'instrumental'
DAT	'dative'	LOC	'locative'
DEV	'devaluative'	2PART	'second-position particle'
IM	'immediate past'	POS	'possession'
PRO	'pronoun'	REC	'recent past'
REDUP	'reduplication'	REM	'remote past'
T/A	'tense/aspect'		