PHRASE STRUCTURE, CLAUSES, AND WORD ORDER IN WAIMIRI ATROARI¹ (CARIB FAMILY)

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ABSTRACT: Like most languages of the Carib family, Waimiri Atroari is a chronically underdescribed language. There are few linguistic studies about it, most of them being phonological sketches (Hill and Hill 1994, Lacerda 1991, Bruno 1995, 1999, 2000, and 2003). Taking this situation into consideration, this article provides a first preliminary account of the phrase structure (noun, postposition, and verb) and the word order in Waimiri Atroari under the X-Bar Theory framework. In addition, this paper provides a brief description of some kinds of subordinated clauses in this language.

KEYWORDS: Waimiri Atroari, Phrase structure, Word Order.

INTRODUCTION

This article describes and analyzes the phrase structure and word order in Waimiri Atroari under the framework of X-Bar Theory (Jackendoff 1977, Chomsky 1970). The questions that I address here are: (i) how does X-Bar Theory account for the phrase structure and word order in Waimiri Atroari?; (ii) on what criteria is the notion of ‘basic order’ based?; and (iii) what kinds of movement does this language allow in order to get OVS and OSV order (assuming, as I do in this paper, that the basic order is SOV).

In this analysis, I argue that Waimiri Atroari is a head-right (or head final) language. However, there are cases in which the head is apparently allowed to have variable position (either left or right side). As I intend to show, all these examples seem to involve the

¹ Waimiri Atroari is a Carib language spoken by approximately 1000 speakers (December 2003), in several villages in an area to the North of the state of Amazonas and the South of the state of Roraima, Brazil. The data for the present analysis were collected during several field trips between 1991 and 2000. My main consultants were Damixiri (from the village of Kerepi Syna) and Ewepe (from Iawara), both males now in their late twenties. There are slight dialectal differences, which are not relevant for the present paper’s topic. This paper has benefited greatly from discussions with a number of people. I would like to thank the Kinja ‘people’ (Waimiri Atroari self-denomination) for their confidence and friendship.

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presence of *adjuncts*—such as noun phrases containing adjectives, adverbial quantifiers, and numeral words. It has been observed that adjuncts are different from complements in that they have a higher degree of positional freedom so that, this apparent ‘mobility’ of the head could be rather explained as a result of the positional fluctuation of the adjunct. Moreover, as already observed by Vieira (1995: 701) in Asuriní (Tupi-Guarani family), in Waimiri Atroari quantifiers such as *all, many, and two* do not belong to the functional category of determiners. Therefore, the similarities of the distribution of the head among the phrases containing adjectives adverbial quantifiers and numeral words lead me define Waimiri Atroari as a head-right language.

As I have already mentioned, I claim that SOV is the basic constituent, based on statistical, descriptive simplicity, and pragmatic factors. However, different kinds of order are also attested, such as OVS, SVO, and OSV. Again, the occurrence of word orders such as SVO seems to constitute a counterexample to the claim that Waimiri Atroari is a head-right language. Although I will not be dealing with such examples in this paper, I suggest that a possible explanation could be related to the influence of Portuguese in the speech of the younger speakers. The OSV and OVS word orders will be analyzed as being the result respectively of the movement of the object and the whole VP to a topic position.

The organization of this paper is as follows. Section 1 discusses the choice of X-Bar Theory and deals with the position of specifiers, heads, complements, and adjuncts in this language. Section 2 analyzes the different kinds of constituents. In section 3, I provide a brief description of some Waimiri Atroari’s subordinated clauses. Finally, a conclusion is presented in section 4. In an appendix, I provide two mythological texts to show the frequency of some constituent orders, with examples of topicalization, and newsworthiness (Mithun and Payne 1992).

1. **Phrase Structure in Waimiri Atroari**

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 *Noun* (N), *Verb* (V), or *Agent* (A). Second, I assume that there are 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”³ (Travis 1989: 264) on the position of heads,

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³ According to Travis (1989: 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
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 modifiers 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: 39).

In Waimiri Atroari, the head of the phrases occurs predominately at the right edge of the constituent in noun, verb, and postposition phrases. However, in the cases 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 this kind of phrases is probably related to the fact that numerals, adverbial quantifiers, and adjectives are adjuncts, and, as such, can occupy variable positions.

1.1 NOUN PHRASES

In Waimiri Atroari, the simplest case of noun phrases can have a single noun (1) or a pronoun (2). The clearest cases of NPs involving two nouns are examples of possessive phrases, which present the order possessor-possessed (3-8):

(1) mabaia ‘a/the papaya(s)’
(2) amyry ‘you’
(3) mydy  i-apremy
   house REL-owner
   ‘the owner of the house’
(4) Ewepe pyruwa
   Ewepe arrow
   ‘Ewepe’s arrow’
(5) maryba  i-apremy
   song/festivity REL-owner
   ‘owner of the song or of the party’
(6) lawaramydy
   lawara house/village
   ‘the village of lawara’

Moreover, the examples involving noun phrases seem to have examples of both adjunction and complements. In the trees below (7b and 8b), the SPEC N is a possessor and the head is the N’. In Waimiri Atroari it is the possessed noun that receives morphological indication of the genitive relationship (head marking). Moreover, in cases such as example 6

4 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’.
above, the noun-noun construction can be ambiguously interpreted as a typical possessive phrase (i.e., ‘the village that belongs to Lawara’) or a ‘naming’ construction (‘the village whose name is Lawara’). Moreover, possessives will be always on the left because they will be either complement or specifier (Comp for inalienable and Spec for alienable).

(7) a. Temere i-ee
    jaguar REL-tooth
    ‘The jaguar’s tooth.’

(8) a. Kaina i-yhia
    Kaina REL-hair
    ‘Kaina’s hair.’

(i) a. Ewepe i-eba
    Ewepe REL-eye
    1+2-eye
    ‘Ewepe’s eye’

b. k-eba
    ‘our eyes’

   2=REL-eye

   ‘your eye’

c. a=i-eba
   ‘Ewepe’s ear’

(ii) bahinja n-itxi-pia
    child 3-go-IN
    mydy i-akyna-se
    house REL-sweep-in.order.to
    ‘The child went to sweep the house.’

(iii) a. Ewepe pana
    Ewepe ear
    1+2-ear
    ‘our ears’

b. ky-pana
    ‘your ear’

   2=ear

c. a=pana
   ‘Ewepe’s ear’

(iv) Kynetxiri ram Irie pana xiky-pia maia ke
    Kynetxiri 2PART Irie ear cut-IN knife INSTR
    ‘Kynetxiri cut Irie’s ear with a knife.’

Similar morphological alternations are also found in other Carib languages, such as Hixkaryana. Although Derbyshire (1985: 200) describes the i- prefix of Hixkaryana as a 3rd person marker, his analysis is probably not totally accurate, since, as in Waimiri Atroari, the prefix y- can also co-occur with 2nd person possessive prefixes (a-i-owanu[2=REL-chest] ‘your chest’). In the examples below, I reinterpret Derbyshire’s data, analyzing i- as a relational prefix.

**Hixkaryana** (Derbyshire 1985: 5)

(v) a. Haname y-aworu
    Haname REL-uncle
    ‘Haname’s uncle.’

b. ò-aworu
    3-uncle

    ‘his/her uncle’

Furthermore, Derbyshire (op. cit., 26-27) presents a clear ‘minimal pair’ that shows that y- cannot be analyzed as a merely epenthetic vowel. As he puts it, the difference between the constructions in (a) and (b) below is the fact that, in (a), “anaro is the possessor and ywto the possessed item,” while in (b) “anaro is a preposed modifier and owto the (nonpossessed) N nucleus of the phrase.”

(vi) a. anaro i-owto
    another REL-village
    ‘another’s village’

b. anaro owto
    another village
    ‘another village’

Following a well-established tradition in South American linguistics, I term i- a relational prefix. Relational prefixes are also found in languages of the Tupi and Macro-Jê stocks, a fact that has been pointed out as evidence for the genetic relationship between Carib and those two language groupings (Rodrigues 1994).
1.1.1 Noun Phrases Containing Adjectives

As illustrated in the trees below, adjectives are adjuncts—or, in X-Bar terminology, sisters of an N’ and daughters of an N’. Because adjuncts can be more flexible in their distribution, in a noun phrase containing adjectives, the adjectives can be either at the left or at the right to 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 ‘beautiful house’
   beautiful house
b. mydy xiwia ‘house beautiful’
   house beautiful
c. AdjP N’
   ‘beautiful’
d. AdjP N’
   ‘house’

5 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 as 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 –pa (e.g. tamkwa-pa ‘very short’). On the other hand, it is not clear whether one can use the second position particle ram as a boundary constituent in phrases of the type <Adj N>, I have to do more tests because it is not always the case that the Waimiri Atroari consultants allow this kind of construction:

a. *kyrywy xiwia ram mixopa
   snake red 2PART long
   ‘The long red snake’
b. wykyry sehe ram waryna wu-se txi-pia ipaikypa weri tamkwa
   man tall 2PART paca kill-in.order.to go-im after woman short
   kyry i-eky i-akymy-se.
   bacaba REL-juice REL-make-in.order.to

   ‘The tall man went to kill paca (a kind of rodent) and the short woman went to prepare bacaba fruit juice.’

(10)  a. **taha** kyrywy  
    big/large  
    snake  
    ‘big snake’

   b. Kyrywy **taha**
    snake  big/large  
    ‘big snake’

(11)  pana  a’a  n-itxi-piany  **[taha] kanuwa**  ta
    yesterday  1+3  1+3-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).’

1.1.2 **Noun Phrases Containing Quantifiers Words**

As with noun phrases containing adjectives, noun phrases containing quantifiers also present a certain degree of positional variation. 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
    many  fish
    ‘many fish’

   b. xiba  **waha**
    fish  many
    ‘many fish’

   c.  
    \[\begin{array}{c}
    \text{XP} \\
    \begin{array}{c}
    X' \\
    \text{AdvP} \\
    \begin{array}{c}
    waha \\
    ‘many’ \\
    xiba \\
    ‘fish’
    \end{array}
    \end{array}
    \end{array}\]

   d.  
    \[\begin{array}{c}
    \text{XP} \\
    \begin{array}{c}
    X' \\
    \text{AdvP} \\
    \begin{array}{c}
    waha \\
    ‘many’ \\
    xiba \\
    ‘fish’
    \end{array}
    \end{array}
    \end{array}\]

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

   b. **kinja**  **wapy**  wyty  ipo-piany
    people  many  meat  look.for-REC
    ‘Many people hunted.’
(15)  tahkome  wapy  n-oosa-pa  kamakaxi  taka  
      elders  many  3-climb-REM  tree (sp.)  AL  

    xirikikibaka-paikey  
    parakeet  kill-T/A  
    ‘Many elders climbed trees to kill parakeets.’ (txt)

(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+3  1+3-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+3  1+3-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 waha ‘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). Waimiri Atroari lacks determiners that correspond to each, every, most, and some, a fact that suggests the absence of a class of D-quantifiers in this language. As mentioned at the introduction, in Waimiri Atroari quantifiers such as all, many, and two do not belong to the functional category of determiner; therefore, I prefer to think of them as adverbs.

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6 According to Partee et al. (1987), D-quantifier is associated with determiner-like elements where the scope is restricted to NPs, in specific positions.
1.1.3 NOUN PHRASES CONTAINING NUMERALS

The native lexicon of Waimiri Atroari has only three numeral words, 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 Kinja 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, 26), after a noun (24, 26), or by itself, after a verb (25).

(21) typytyna karyka
two chicken
‘two chickens’

(22) awynihe petxi Kwawura i-arya-pa ty-kydatohnaka
one pig Kwawura REL-put-REM 3REFL-back over
‘One wild pig put Kwawura on his own back.’

(23) takynyna pahky kaminja n-apynaka.
three only non-native 3-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 apyt hy
other people seventeen behind

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

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7 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.

8 This sentence was taken from a text narrating a fight between the Kinja people and the non-natives. The three non-Indian characters mentioned in this sentence have already been introduced in an earlier passage of this text. Therefore, the noun phrase takynynapa pahky kaminyapa ‘only [the] three White man’ is clearly definite in this context, as shown by the English translation provided above.
It is not totally clear what motivates this variation in the position of the numeral words. In some languages, such variation is conditioned by variables such as definiteness or specificity. According to Diesing (1992) and Diesing and Jelinek (1995), languages always have mappings between argument structure and information structure (the latter defined as “the organization of the clause with respect to presuppositional (familiar) information vs. Information new to the discourse” (Diesing 1992: 58). It may be that ‘new’ or ‘already known’ referents occupy certain positions in a Waimiri-Atroari clause, and that this might explain. This is certainly the case for argument topicalization in Waimiri-Atroari (topicalized arguments are shifted to sentence-initial position), and may also be the case for the order variation observed with respect to numeral words. When in specific and definite contexts, the numeral word seems to prefer the left side of the noun (21-23, 26), but in unspecified context the numeral word is positioned either post-verbally (25) or at the right side of the noun (24, 26). In this sense, the numeral words in (24) and (26) behave 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.

### 1.2 Verb Phrase

In Waimiri Atroari, a VP can be constituted of a verb alone (28) or a verb preceded by a NP (27). The VP can move to before the subject NP through topicalization (27) 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 (30). In Waimiri Atroari there is a second position particle,\(^9\) *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 (27c). 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 (27a) below.

\(^9\) This is an example of reduplication in Waimiri Atroari. Reduplication in this language is bimoraic, occurring with verb stems to indicate repetition or continuation (Bruno 2000).

\(^{10}\) According to the syntactic framework I am adopting here, based on Halpern & Zwicky (1996), the first element is the first immediate constituent of the clause, such as a complement or argument of the verb, an adverbial modifier, or other clausal constituent.
(27)  a.  tahkome  *-iny-pia  ram  Irikwa
    elders  REL-eat-IM  2PART Irikwa
    ‘Irikwa (a mythological entity) ate the elders.’

        VP
        /
  V'

        NP
        |
        tahkome  i-iny-pia

    b.  *[tahkome  ram  i-iny-pia]  Irikwa.
    elders  2PART REL-eat-IM  Irikwa
    ‘Irikwa (a mythological entity) ate the elders.’

(28)  ka-ky!
    speak-IMPER
    ‘Speak!’

(29)  bahinja  maia  kynk-E
    children  knife  break-T/A
    ‘The children break the knife.’

(30)  woky  i-eky  kra  h-ee-ia
    banana  REL-juice  1PRO  1-drink-T/A
    ‘I drink the banana juice.’

Example (30) above illustrates the only context where the VP is separated by the subject, when the object undergoes topicalization. (For more details, see the section 2.1 on topicalization). Generally, in more ‘unmarked’ situations nothing can intervene between the object and the verb.

1.3 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 as listed in Table 111.

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11 Considering Gildea’s classification (1998), based on morphosyntactic properties of verbal systems of several Carib languages, Waimiri Atroari is classified in the ‘set I system (nominative or inverse/splits)’. Bruno (1995; 2000) argues that Waimiri Atroari has a typical nominative/accusative system when when considering verb agreement patterns.
Intransitive Subjects | Transitive Subjects | Objects | Possessive
---|---|---|---
1\textsuperscript{st} sing. w/-/wywu- | w/-/wy/-/wu-, h/-/hy/-/hu- | aa= | aa=
2\textsuperscript{nd} m/-/my/-/mu- | m/-/my/-/mu- | a=, k-, ky, ku- | a=
3\textsuperscript{rd} n/-/ny/-/nu- | n/-/ny/-/nu- | kyy=/ ty=(reflexive) |
1+2 (incl.)h/-/hy/-/hu- | h/-/hy/hu- | k/-/ky/-/ku- | k/-/ky-
1+3 (excl.)n/-/ny/-/nu- | n/-/ny/-/nu- | ay= | ay=

**Table 1: Personal clitics and prefixes**

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.

\[ (31) \]  
\[
\text{PostP} \\
\downarrow \\
\text{Post'} \\
\downarrow \\
\text{NP} \\
\downarrow \\
\text{Post} \\
\downarrow \\
\text{syna} \quad \text{ke} \\
\text{‘with water’}
\]

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.

\[ (32) \]  
\[
\text{iakypa} \quad \text{a’a} \quad \text{ny-dykia-pa} \quad \text{tapinjata} \\
\text{then} \quad 1+3 \quad 1+3\text{-squeeze-REM} \quad \text{sieve LOC} \\
\text{‘Then, we squeezed (the manioc) in the sieve.’}
\]

\[ (33) \]  
\[
\text{samka} \quad \text{tyhnaka} \\
\text{hammock over} \\
\text{‘over the hammock’}
\]

\[ (34) \]  
\[
\text{impa} \quad \text{a’a} \quad \text{n-ikeia-pa} \quad \text{meie} \quad \text{impar} \quad \text{axyjaty} \quad \text{tyhnaka} \\
\text{then} \quad 1+3\text{PRO} \quad 1+3\text{-bake-REM} \quad \text{beiju then oven over} \\
\text{‘Then we baked the beiju (kind of manioc tortilla) over the oven.’}
\]

\[ (35) \]  
\[
\text{iakypa} \quad \text{a’a} \quad \text{minja} \quad \text{pitxi-pia} \quad \text{maia} \quad \text{ke} \\
\text{After} \quad 1+3\text{PRO} \quad \text{manioc peel-IM} \quad \text{knife INSTR} \\
\text{‘Then we peeled the manioc with the knife.’}
\]

\[ (36) \]  
\[
\text{aa} \quad \text{ram} \quad \text{xiba} \quad \text{h-yry-pia} \quad \text{ka} \quad \text{inaka} \\
\text{1PRO} \quad 2\text{PART} \quad \text{fish} \quad 1\text{-give-IM} \quad 3\text{PRO} \quad \text{DAT} \\
\text{‘I gave fish to him.’}
\]

\[ (37) \]  
\[
\text{amyra} \quad \text{ram} \quad \text{aa=inaka} \quad \text{xiba} \quad \text{m-yry-pia} \\
\text{2PRO} \quad 2\text{PART} \quad 1\text{=DAT} \quad \text{fish} \quad 2\text{-give-IM} \\
\text{‘You gave fish to me.’}
\]
Based on the different types of phrases showed above, I argue that Waimiri Atroari is a head-right language. In verb phrases, noun phrases with possessive, and postposition 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)\textsuperscript{12}, or whether it is modifying a noun or a verb (adverbial quantification phrases).

2. **Waimiri Atroari Clausal Order**

I have shown in the first section of this paper that Waimiri Atroari is a head-right language. In this section, I intend to extend the analysis to show that this language is also ‘specifier-first’. According to Radford (1997: 90), “since although the notion specifier is central to much contemporary work in syntax, it is hard to identify any common set of properties which all specifiers share because of the disagreement among linguists of what is its function”. Here, I assume the view that “specifier position is used to mark a particular grammatical function, the subject function” (Chomsky 1991). As illustrated in the trees below, Waimiri Atroari allows different kinds of clausal order, such as SOV, SVO, SV, VS, OSV, and OVS. However as demonstrated in the trees in (39), in the majority of cases the head of the clause is at the right side and the specifier is in the first position.

\begin{align*}
\text{(39) a. } & \text{VP} \\
& \quad \text{Spec} \quad \text{V'} \\
& \quad \quad \text{V} \quad \text{Comp} \\
\text{b. } & \text{VP} \\
& \quad \text{Spec} \quad \text{V'} \\
& \quad \quad \text{Comp} \quad \text{V} \\
\text{c. } & \text{VP} \\
& \quad \text{Spec} \quad \text{V'} \\
& \quad \quad \quad \text{V} \\
\end{align*}

\textsuperscript{12} In relation to this issue, I have to do more tests and collect more data to check this hypothesis.
Similar to English, Waimiri Atroari is a ‘specifier-first’ language, since the SPEC is mostly positioned before the head. The only exceptions are in the OSV and VS orders. In the OSV context, topicalization destroys the order of the SPEC in relation to the head, leaving a trace behind. However, at this point of the analysis, it is not clear to me what motivates the VS order\textsuperscript{13}. I assume that it may be motivated by verbal topics; however, I do not have evidence now to support this assumption.

In this paper, I claim that SOV is the basic order based on three factors: statistical frequency, descriptive simplicity\textsuperscript{14}; and pragmatic aspects (such as distinctions between old and new information, etc.). Waimiri Atroari tends to put old information in the left side of the sentence. Waimiri Atroari shows what Mithun and Payne (1992: 31) call “newsworthiness” even when both arguments (subjects and objects) are equally provided at the same time or both are new, none of them was presented in previous discourse or context, the speakers of Waimiri Atroari tend to prefer the subject first. (See texts in appendix)

Looking at a corpus of eleven texts of different kinds (mythological, technical, reported stories, and others), I analyzed all sentences, which presented both one- and two-place predicates with overt non-pronominal arguments and pronominal arguments. From a limited sample of ninety-five sentences, the proportion of word order variation found was the one presented in Table 2 below:

<table>
<thead>
<tr>
<th>Clausal Order</th>
<th>Frequency</th>
</tr>
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<tbody>
<tr>
<td>SOV</td>
<td>42</td>
</tr>
<tr>
<td>SV</td>
<td>25</td>
</tr>
<tr>
<td>OVS</td>
<td>10</td>
</tr>
<tr>
<td>SVO</td>
<td>8</td>
</tr>
<tr>
<td>OSV</td>
<td>5</td>
</tr>
<tr>
<td>VS</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 2: Frequency of occurrence of each clausal order

Taking the position of the specifier in relation to the head, even with the possibilities of OVS and VS (fifteen occurrences), the majority of the cases (eighty occurrences) reinforce

\textsuperscript{13} In transitive sentences, Waimiri Atroari does not allow verb-initial orders.

\textsuperscript{14} Chomsky (1965, 127) shows that the preferred order for potentially ambiguous clauses can generally be considered the most neutral one. As he states it, “simple, declarative, active clauses with no complex verbs or noun phrases” seem to exhibit a neutral order.
the ‘specifier-first’ analysis. Although statistical predominance may not be sufficient to
establish the basic word order of a language, as pointed out by Derbyshire (1977), this
criterion is also corroborated by other facts of the Waimiri Atroari language. Here, I
demonstrate that at surface structure the basic word order appears in different types of
constructions reinforcing the assumption that SOV shows the ‘descriptive simplicity’ pointed
out by Chomsky (1965). The examples below also show the preference for ‘SPEC-first’ and
head-right constructions.

Transitive context

(40)  
\[\text{aa ram ka h-ini-pia}\]
\[1 \text{PART} 2 \text{PART} 3 \text{1-see-IM}\]
‘I saw him.’

(41)  
\[\text{ka ram aa=i-ini-pia}\]
\[3 \text{2PART} 1=\text{REL-see-IM}\]
‘He saw me.’

(42)  
\[\text{kipety wiwe pyrykia-pa waha}\]
wind tree bring.down-REM many
‘The wind brought down many trees.’

(43)  
\[\text{warakaxi myryky ram kixinja i-mah-pa}\]
Warakaxi son 2PART sand rel-throw-REM
\[\text{Kamiahara myryk-eme i-eba taka}\]
Kamiahara son-DEV REL-eyes AL
‘Warakaxi’s son threw sand on the eyes of Kamiahara’s son.’

As you can observe, these examples (40) to (43) that were taken from elicitation data
and from stories, they show the preference for SOV,

stative predicates (with copula)

(44)  
\[\text{Anaruwa-beme ram ietry-pa na}\]
bird (sp.)-DEV 2PART sick-emph cop
‘Anaruwa is sick.’

quotative context

(45)  
\[\text{mawa njy i-EE-pa, n-oortxi-pa kE-pa, apia myre?}\]
Mawa noise rel-hear-REM 3-go.down-REM say-REM what that
‘Mawa heard a noise, waited and said: “What’s that?”’

Since X-Bar Theory does not allow or cannot generate sentences of the type ‘OSV’
inasmuch as the SPEC of IP cannot intervene between the verb (head) and the complement
object, in this paper I show that the OSV and OVS orders are respectively resulted of the Object and the VP movement to a topic position.

2.1 **TOPICALIZATION**

According to Payne (1997: 270), “*topic is what the sentence is about, it is the old, given, or known information.*” In Waimiri Atroari topical elements tend to appear in initial position, a fact that is very common cross-linguistically. The topic construction in Waimiri Atroari is used to turn the attention to a definite object in order to avoid being focused and interpreted as new information, such as predicted by Diesing (1992).\(^{15}\)

Aissen (1992: 43), analyzing the position of topic and focus in Mayan, claims that sentences with two NPs before the verb (SOV) and (OSV) involve the focus of one NP and the topicalization of the other. She shows that while SOV represents subject topicalization and object focus (topic is S-initial), OSV order must represent object topicalization and subject focus (focus position is preverbal). Taking part of this approach into consideration, I claim that the OVS order in Waimiri Atroari results from a left movement of the VP in order to reach topic position, and alike Mayan, the OSV order results from the leftward movement of the object alone.

2.1.1 **OVS ORDER (MOVEMENT OF THE WHOLE VP)**

Unlike Hixkaryana (Derbyshire 1977: 595), an OVS language of the same family, which moves the subject to the initial position in order to express topic, in Waimiri Atroari OVS is not neutral. Instead, it is a marked order where what is moved to the topic position is the whole VP. In this paper, I argue that the element to be topicalized moves into the Spec position within a TopP (Topic Phrase) constituent headed by a topic head. The text fragments below illustrate cases of topicalization:

\[
\begin{align*}
\text{(46) a.} & & \text{tapEsa} & & \text{kixinja} & & \text{weiaky} & & \text{tyiyry} & & \text{n-o'm-pa} \\
& & \text{shallow} & & \text{beach} & & \text{when?} & & \text{Tyiyry} & & \text{3-dive-REM} \\
& & \text{tapiwutapE} & & \text{ta} & & \text{n-o'm-pa}. \\
& & \text{Tapiwutape} & & \text{LOC} & & \text{3-dive-REM} \\
& & & & & & & & & & \\
& & & & & & & & & & & \text{‘In the shallow beach of the Tapiwutape lake Tyiyry dived.’} \\
\end{align*}
\]

\[
\begin{align*}
\text{b.} & & \text{tyiyry} & & \text{i-yhia} & & \text{i-erekyty-pa} & & \text{xiriminja} \\
& & \text{Tyiyry REL-hair} & & \text{REL-cut-REM} & & \text{Xiriminja} \\
& & & & & & & & & & \text{‘Xiriminja cut Tyiyry’s hair.’} \\
\end{align*}
\]

\(^{15}\text{See texts in the Appendix.}\)
In example (46b), the VP *tyiyry i-yhia i-erektya-pa* ‘tyiyry’s hair cut’ is topicalized probably because it contains old information - that is, the noun *tyiyry* ‘Tyiyry’, introduced earlier in the text (46a). As a result of the topicalization of the VP, the subject NP *xiriminja* ‘mythological entity’, which is new information, is introduced at the end of the sentence.

A similar case occurs in the examples in (47) below. In (47a), the subject NP *ianana* ‘Ianana’ and the object NP *tahkome* ‘elder(s)’ are both introduced for the first time in the unmarked, SOV order. In (47b), the NP *tahkome* occurs again as the subject of an intransitive verb. In the following two sentences, (47c) and (47d), the NP *tahkome* is already considered old information; therefore, the VP in which it occurs is topicalized. This situation is represented in (48) below.

(47) a. *ianana tahkome bakE-pa iskixki Xirikiki pyky*
    Ianana elders shoot/kill-REM parakeet parakeet because
    ‘Ianana killed the elders because of the parakeets.’

b. *tahkome wapy n-oo-sa-pa kamakaxi taka*
    elders many 3-climb-rem kamakaxi.tree AL
    *xirikiki baka-pai*ky
    parakeet shoot/kill-T/A
    ‘Many elders climbed the kamakaxi tree in order to kill the parakeet.’

c. *impa tahkome ipia-pa ianana xirikiki baka taka*
    then elders find-REM Ianana parakeet shoot/kill AL
    ‘Then Ianana found the elders killing parakeets.’

d. *impa tahkome bakE-pa ianana ebapy tapary*
    then elders shoot/kill-REM Ianana eye LOC
    ‘Then Ianana shoot the elder’s, at their eyes.’
2.1.2 OSV ORDER (MOVEMENT OF THE OBJECT)

As X-bar theory cannot deal with OSV order, I claim that this order results from the dislocation of the object to topic position. Diesing (1995, 126) claims that in many languages object shift depends on information structure, in particular something like the contrast between specific (definite) and non-specific (indefinite) information. As a result, objects move for configurationality or interpretational reasons rather than for case checking. According to my Waimiri Atroari consultants, this order happens ‘when they want to emphasize who did the action.’ Therefore, as proposed by Diesing (1995), I assume that in the OSV order, the object undergoes topicalization. The subject position in this order is restricted to 1st (taking only the kra ~ kara form) and 2nd person pronouns.\(^{16}\) The only exception for this restriction happens with quotative sentences where the subject can be a proper noun.

\(^{16}\) Free pronouns in Waimiri Atroari
1st singular awy, kara~kara,
2nd singular/plural amyry, amy
3rd singular/plural ka, iry, mykyky, mykykaya, byby
1+2 plural inclusive kyky
1+3 plural exclusive a’a

* Imka typotxe a=wutoty m-ityirikw-ypa ipaikypa ram tymeri a=w-iapa  
  if fast 2=run 2-stop-T/A after 2PART jaguar 2=kill-T/A
  ‘If you stop running fast, the jaguar will catch you.’
I leave aside these quotative sentences since they are well known for exhibiting a marked order (Branigan and Collins 1993). I assume that OSV order in the standard case can be best explained by Wackernagel’s Law, which claims that clitics, particles, and pronouns must appear in second position in a clause (Halpern and Zwicky 1996). According to Kaisse (1981), recent research on clitics shows that languages may vary with respect to their definition of second-position particle. Waimiri Atroari is one of those languages, such as Bulgarian, Luiseño, and Serbo-Croatian, that allow either the first word or the first constituent of the clause to define ‘second position’ (see footnote 9).  

As illustrated above in examples 50 and 51, the pronoun indicating first person singular kra can occur after a word or a constituent. On the other hand, ram ‘second position particle’ not only can appear after a word and a constituent, but also after a whole clause.
3. **ADVERBIAL SUBORDINATED CLAUSES**

According to Payne (1997: 316) and Thompson and Longacre (1985: 171) adverbial clauses are those that serve an ‘adverbial function.’ They modify a verb phrase or a whole clause. Adverbial subordinated clauses behave as adjuncts inasmuch as they simply add some extra information to the clauses. Thompson and Longacre (1985: 172) explain that there are three types of subordinated clauses: those which function as noun phrases (complements), those which function as modifiers of nouns (relative clauses); and those which function as modifiers of verb phrases or entire propositions (adverbial clauses).

In this section, I briefly direct the analysis to two types of subordinated clauses: clauses that indicate time and location, and what Meira (1999) and Gildea (1998) call ‘nominalized clause.’ Here, I want to demonstrate that these clauses work exactly like the simple phrases illustrated above.

### 3.1 Temporal Subordinated Clauses\(^{18}\)

This type of clause can occur either at the beginning or at the end of the sentence. Thompson and Longacre (1985) claim that there are in the world’s languages typically three devices for marking subordinated clauses: subordinating morphemes, special verb forms, and word order. Waimiri Atroari only uses the first two devices. As shown in the example below,

\[^{18}\text{In this paper, as you note in the trees below, I am not dealing with INFL (I am not representing them in the trees).}\]
temporal adverbial clauses in Waimiri Atroari are introduced by the word *imka* ‘when, if’. As Thompson and Longacre (1985: 193) mention, there are several languages, such as Indonesian and certain languages of Papua New Guinea, which do not make a distinction between *if* clauses and *when* clauses. Waimiri Atroari seems to be one of these languages, since, as we have mentioned, *imka* can be either translated as ‘when’ or ‘if’ (see another example provided in footnote 16).

(54) a. [keme iki-pia naminja] impa ny-tam-pia
   3 bite-IM dog then 3-cry-IM
   “When the dog bit him, he cried.”

As you can observe, in the tree below, in the temporal adverbial clause, the VP undergoes topicalization, it does not show the basic order SOV, but the marked OVS. This example was given after I had asked about other examples *keme* ‘he’ is other information. Moreover, you can note that the C slot can be empty or fill by the word *imka* ‘if, when’.

b.
3.2 Locative Subordinated Clauses

Unlike temporal clauses, which can occur either at the beginning or at the end of a sentence, locative subordinate clauses, introduced by the construction *apiapy iaky* ~ *epiapy iaky*, can only occur at the end of the sentence, such as shown by examples (55) and (56) below:

(55) \( \text{ka mepr-eme wu-pa epiapy iaky mydy pahsapy na-ky} \)
\[3\text{ tapir-DEV kill-REM where house old COP-PAST}\]
‘He killed the tapir where the old village was.’

(56)

a. \( \text{ka ram ase mydy i-am-ia apiapy iaky temer-em e wu-pa} \)
\[3\text{ 2PART new house build-T/A where jaguar-DEV kill-REM}\]
‘He builds the new village where he killed the jaguar.’

b. [Diagram]

\[\text{IP}\]
\[\text{I'}\]
\[\text{NP} \quad \text{VP}\]
\[\text{ka}\]
\[\text{V'}\]
\[\text{V'} \quad \text{CP}\]
\[\text{NP} \quad \text{V}\]
\[\text{ase mydy} \quad \text{iamia}\]
\[\text{C'}\]
\[\text{C}\]
\[\text{apiapy iaky}\]
\[\text{IP}\]
\[\text{I'}\]
\[\text{NP} \quad \text{VP}\]
\[\text{temereme} \quad \text{V'}\]
\[\text{wupa}\]
3. NOMINALIZED CLAUSES

Nominalized clauses present the same parameter position of the head shown by the more typical NPs described above. As shown by examples (57) and (58) below, the head in these nominalized clauses is marked by the nominalizer suffix –o, while the NP corresponding to the subject of a transitive clause is marked by the particle ya. Unlike independent clauses, which may present word order variations due to phenomena such as topicalization, nominalized clauses present a strict SOV order, a fact that gives further support to the postulation of SOV as the basic word order in Waimiri Atroari.

(57)  ka ram aa=i-akyny ia woky i-akym-o i-ini-piany
3 2PART 1=REL-sister AG banana REL-make-NOM REL-see-REC
“He saw that my sister made banana porridge” or “he saw the making of banana porridge by my sister.”

(58)  a.  amyra ram aa=papa ia tymeri w-o19 m-ini-pa
2 2PART 1=father AG jaguar kill-NOM 2-see-REM
“You saw that my father killed the jaguar” or “you saw the killing of the jaguar by my father.”

b.  

4. CONCLUSION

In this article, I have provided an analysis of the Waimiri Atroari phrase structure and word order, as well as a brief overview of the distribution of the heads in some subordinated and nominalized clauses, accounting for the head and specifier parameter. I have argued that

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19 The root of the verb ‘to kill’ is -wu and the root of the verb ‘to make’ is -ak. The last vowel of the root is dropped with the suffixation of the nominalizer –o. The nominalizer -o is also observed in other Carib languages (Gildea 1998).
Waimiri Atroari belongs to a parametric class of languages that exhibits the following characteristic at spell out: (a) head-right when not involving adjuncts, (b) specifier-first and (c) topicalization-left based on pragmatic factors (distinction between old versus new information) that have grammatical consequences.

Less usual word orders, such as OVS and SOV, are accounted for by postulating a movement resulting in the topicalization of the whole VP or the object alone, respectively. Although I do not analyze cases of SV and SVO orders in this paper, I speculate that SVO order could be a result of Portuguese influence, inasmuch as its occurrence is very reduced, being more common among the younger male speakers, who present a higher degree of bilingualism than the elders and women. Therefore, this, as well as the factors underlying the occurrence of SV word order, is one of the hypothesis to be further investigated.

REFERENCES


**ABBREVIATIONS**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADJ</td>
<td>‘adjective’</td>
</tr>
<tr>
<td>ADV</td>
<td>‘adverbs’</td>
</tr>
<tr>
<td>AG</td>
<td>‘agent marker’</td>
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<tr>
<td>AL</td>
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</tr>
<tr>
<td>2PART</td>
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</tr>
<tr>
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<td>‘possession’</td>
</tr>
<tr>
<td>REC</td>
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<td>‘reflexive’</td>
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<tr>
<td>REL</td>
<td>‘relational prefix’</td>
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<tr>
<td>REM</td>
<td>‘remote past’</td>
</tr>
<tr>
<td>T/A</td>
<td>‘tense/aspect’</td>
</tr>
</tbody>
</table>
APPENDIX²⁰

A. Tyiyrý ikaa
‘Tyiyrý’s story’

1. tapEsä kixinja weyakytiyrý n-o’m-pa
shallow beach when? Tyiyrý 3-dive-REM
tapiwutapE ta n-o’m-pa.
Tapiwutape LOC 3-dive-REM
‘In the shallow beach of the Tapiwutape lake Tyiyrý dived.’

2. syna y-apo’o tiyiry i-yhia i-erekyty-pa xiriminja
water REL-inside Tyiyrý REL-hair REL-cut-REM Xiriminja
‘Inside the river, Xiriminja cut Tyiyrý’s hair.’

3. aminjaky iakypa xiriminja ny-nypkwa-pa amehepie’ taka
later after Xiriminja 3-appear-REM Amehepie’ AL
‘Later on, Xiriminja appeared at the Amehepie’ village.’

4. njawa n-ympa waha kipety tarara many
rain REL-come-REM many/much wind thunder/lightening also
‘It rained a lot with thunder and light also.’

5. kipety wiwe pyrykia-pa waha
wind tree bring.down-REM many
‘The wind brought down many trees.’

6. kinja pyruwa ke n-ixikwa-pa
people arrow INSTR 3-shoot-REM
‘The persons shot with arrows.’

7. paryna xiriminja pykwa-pa iakypa mayahka n-ixikwa-pa,
Paryna Xiriminja shoot.arrows-REM after Maiahka 3-shoot-REM
ampa kinja many
other people also
‘After Paryna shot Xiriminja, Maiahka also shot, as well as other people.’

8. mayahka xiriminja i-yhy i-aa-paitxi taka
Maiahka Xiriminja REL-head REL-take-REM jungle AL
‘Maiahka took Xiriminja’s head to the jungle.’

9. tiyiry araky nyryná kyky ta na
Tyiyrý today alive under LOC COP
‘Today, Tyiyrý is alive under (the river).’

²⁰ These stories, traditional tales of the Kinja people, were narrated by Dauna, a male shaman and storyteller today in his late forties, in the village of Kaminjanity in 1991. Due to space limitations, the stories were considerably summarized.
B. Ianana ikaa

‘Ianana’s story’

1. *ianana tahkome bakE-pa iskixki xirikiki pyky*
   Ianana elders shoot/kill-REM parakeet (sp.) parakeet (sp.) because of the parakeets.

2. *tahkome wapy n-oo-sa-pa kamakaxi taka*
   elders many 3-climb-rem kamakaxi.tree AL

   *xirikikibaka-paiKy*
   parakeet shoot/kill-T/A
   ‘Many elders climbed the kamakaxi tree in order to kill the parakeet.’

3. *impa tahkome ipia-pa ianana xirikiki baka taka*
   then elders find-REM Ianana parakeet shoot/kill AL
   ‘Then Ianana found the elders killing parakeets.’

4. *impa tahkome bakE-pa ianana ebapy tapary*
   then elders shoot/kill-REM Ianana eye LOC
   ‘Then Ianana shoot the elders, at their eyes.’

5. *iakypa ianana wehe warykypa i-apremy i-amrysa-pa*
   later Ianana arrow luck REL-owner REL-miss-REM
   ‘Later on, Ianana’s arrow missed the lucky person.’

6. *impa tahkome ikehepy i-emya-pa iakypa*
   then elders dead REL-put.together-REM after

   *ny-mia-pa arawuta ike piempary*
   3-lash-rem monkey ? like
   ‘Then [Ianana] put together the dead elders and later lashed them as one lashes monkeys.’

7. *impa tahkome ikehepy i-aa-iaa-pa ty-mydy taka*
   then elders dead REL-take-REDUP-REM 3REFL-house AL
   “Then Ianana took the dead elders to his house.”

---

21 *Ianana* is a mythological entity, the owner of the forest. He has as a pet parakeet (*xirikiki* in Waimiri Atroari).

PALAVRAS CHAVES: Waimiri Atroari, estrutura da frase, ordem de palavras.

ABSTRACT: Like most languages of the Carib family, Waimiri Atroari is a chronically underdescribed language. There are few linguistic studies about it, most of them being phonological sketches (Hill and Hill 1994, Lacerda 1991, Bruno 1995, 1999, 2000, and 2003). Taking this situation into consideration, this article provides a first preliminary account of the phrase structure (noun, postposition, and verb) and the word order in Waimiri Atroari under the X-Bar Theory framework. In addition, this paper provides a brief description of some kinds of subordinated clauses in this language.

KEYWORDS: Waimiri Atroari, Phrase structure, Word Order.