

# An Overview of Information Structure in three Amazonian Languages

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## 1. Introduction<sup>1</sup>

Information structure has become a central topic in linguistic theory and description over the past two decades, with much of the initial work focused on familiar Indo-European languages and much studied non-Indo-European languages like Hungarian, Japanese and Mandarin Chinese. This paper summarizes the main results of a project in which information structure was investigated in three unrelated Amazonian languages: Banawá (Reinbold 2004, 2007), Wari' (Turner 2006), and Karitiâna (C. Everett 2008). Data were collected on morphosyntactic and prosodic aspects of information structure and, importantly, their interaction. Most of the data discussed in these papers is available in the form of sound files on the project website, as well as additional data.

In this paper I will present an overview of the information structural phenomena in these three languages and will compare them with each other. In this first section, I will lay out some of the relevant descriptive and theoretical concepts that are employed in the analyses. In the second, I will give brief typological sketches of the languages, and in the third section the comparative discussion will be given, organized in terms of information

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structure phenomena.<sup>2</sup> The conclusion will include a comparison table summarizing the similarities and differences across the three languages.

The basic conception of clause structure assumed in these discussions is taken from Role and Reference Grammar [RRG] (Van Valin & LaPolla 1997, Van Valin 2005). Clause structure is represented in a semantically-based model known as the ‘layered structure of the clause’. The essential components of this model of the clause are (i) the NUCLEUS, which contains the predicate, (ii) the CORE, which contains the nucleus plus the arguments of the predicate in the nucleus, and (iii) a PERIPHERY for each layer, which contains adjunct modifiers. These aspects of the layered structure are universal. The structure of a simple English clause is given in Figure 1. The structure in Figure 1 is the constituent projection of the clause; grammatical categories like tense and modality are represented in a separate projection, which is not included here.

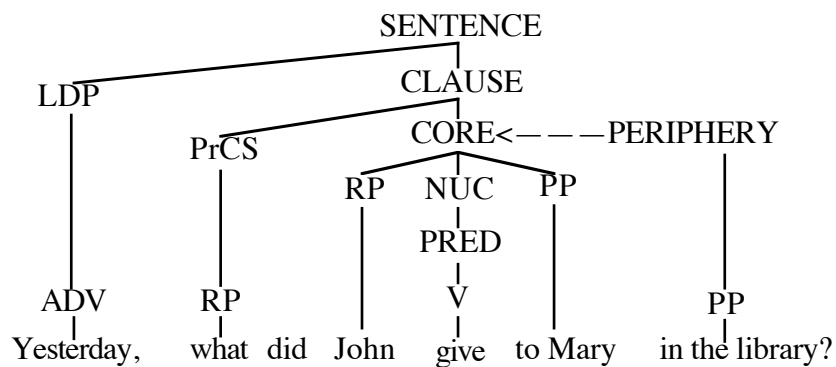


Figure 1: The layered structure of the clause<sup>3</sup>

<sup>2</sup> Additional text materials and sound files for all three of the languages can be found on the Information structure in Amazonian languages website:

<http://wings.buffalo.edu/linguistics/people/faculty/vanvalin/infostructure/Site/Intro.html>.

<sup>3</sup> Abbreviations: ABS ‘absolutive’, AUX ‘auxiliary’, CNTR ‘contrastive’, COLL ‘collective’, COP ‘copula’, DEC ‘declarative’, EPIS.EVID ‘epistemic evidential’, EQU ‘equative’, F ‘feminine’, FUT ‘future tense’, IU ‘information unit’, LDP ‘left-detached position’, M ‘masculine’, N ‘neuter’, NFUT ‘non-future tense’, NSAP ‘non-speech act participant’, NUC ‘nucleus’, O ‘object’, OFC ‘object-focus construction’, POSS ‘possessive’, PrCS ‘precore slot’, PRED ‘predicate’, PROX ‘proximate’, PSA ‘privileged syntactic argument’, Q ‘question’,

In addition to the universal layers of the clause, there are two additional structures that are important for this discussion, the precore slot [PrCS] and the left-detached position [LDP]. They are not universal, in the sense that some languages have them and others do not. The PrCS is prototypically the location of displaced WH-expressions, although non-WH-expressions may also occur in it, e.g. *That book I wouldn't buy*. The LDP is the location of dislocated topic expressions, set off from the following clause by an intonation break; if the element in the LDP is an argument of the verb, then there is typically a resumptive pronoun in the core, e.g. *As for John, I haven't see him in two weeks*. Some languages have a postcore slot, e.g. Japanese, and some have a right-detached position for right-dislocated expressions.

The theory of information structure assumed in these analysis is that presented in Lambrecht (1994), as adapted in RRG. Lambrecht proposes that there are recurring patterns of the organization of information across languages, which he calls 'focus types'. The three main types are presented in (1), with data from English and Italian; focal stress is indicated by small caps.

(1) Focus structure in English and Italian (Lambrecht 1994, Bentley 2008)

- |                                   |                 |
|-----------------------------------|-----------------|
| a. Q:What happened to your car?   | Predicate Focus |
| A: i. My car/It broke DOWN.       | English         |
| ii. (La mia macchina) si è ROTTA. | Italian         |
|                                   |                 |
| b. Q:What happened?               | Sentence Focus  |
| A: i. My CAR broke down.          | English         |

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RF 'realis future', RP 'reference phrase', RP/P 'realis past & present tense', S 'subject', SAP 'speech act participant', TRANS 'transitive', VFC 'verb-focus construction', VIC 'verbal inflectional clitic'.

ii. Mi si è rotta la MACCHINA.	Italian
c. Q: I heard your motorcycle broke down.	Narrow Focus
A: i. My CAR broke down./	English
It's my car that broke down.	
ii. Si è rotta la mia MACCHINA./	Italian (Lit: 'broke down
È la mia MACCHINA che si è rotta.	my car'/'it's my car
	that broke down')

Predicate focus corresponds to the traditional topic-comment distinction, with a topical subject RP and a focal predicate phrase which receives the focal stress. It is universally the least marked or default focus structure. In English, the subject would most likely be an unstressed pronoun, while in Italian it would most likely not occur at all; if it were overt, it would be preverbal in Italian. Sentence focus is a topicless construction in which the entire sentence is focal. In English, the subject receives the focal stress, while in Italian the subject appears postverbally and with focal stress. Narrow focus involves focus on a single constituent, in these examples, the subject. In English this is signaled by focal stress on the element or by a cleft, and Italian likewise has two options: postposing the subject, when it is the focused element, or a cleft.

There is an important distinction between unmarked and marked narrow focus. All languages have an unmarked focus position in the clause; in English it is the last constituent of the core, whereas in verb-final languages it is the position immediately before the verb. Consider the following English sentence with different focal stress options.

(2) a. Dana sent the package to LESLIE yesterday.

- b. Dana sent the package to Leslie YESTERDAY.
- c. Dana sent THE PACKAGE to Leslie yesterday.
- d. Dana SENT the package to Leslie yesterday.
- e. DANA sent the package to Leslie yesterday.

Focal stress on *Leslie* in (a) is a case of unmarked narrow focus, while focal stress on any other constituent of the clause, as in (b)-(e), yields marked narrow focus. The most marked narrow focus is on the subject, as in (e).

There is a further component to the RRG account of information structure, which is not part of Lambrecht's original account, namely, the contrast between the actual focus domain and the potential focus domain. Languages differ as to constraints on where the actual focus domain can be in a clause. In some like English, it can fall on any word or phrase, as (2) shows. In others, e.g. Italian, it is excluded from the preverbal core position and can only include the nucleus and what follows (see Van Valin & LaPolla 1997, §5.4, Van Valin 1999, Bentley 2008 for detailed discussion). The potential focus domain is a feature of the grammar of the language, while the actual focus domain is contextually determined. In a sentence like the one in Figure 1, the LDP element is outside of the potential focus domain, while the WH-expression in the PrCS is within the potential focus domain and is the actual focus domain, in this case, a type of narrow focus.

## 2. Basic typological features

Banawá (Arawan family) is a verb-final language, but it is not strictly verb-final; adjuncts and indirect objects may follow the verb. The privileged syntactic argument [PSA] ('subject') normally occurs initially, but not necessarily. Nouns fall into two gender classes,

masculine and feminine, and this is important for agreement both within the RP and with the verb or auxiliary. One of the most striking features of Banawá syntax is the contrast between what Dixon (2000) (with respect to the closely related language Jarawara) calls ‘A-constructions’ and ‘O-constructions’. In the A-construction, the actor is the PSA and normally occurs in initial position in the core; the optional mood marker agrees with it in gender. In the O-construction, on the other hand, the undergoer is the PSA; it is signalled by the third-person prefix on the verb or auxiliary. This is illustrated in (3).

(3) a. A-construction

Biri karabowa mowa-na-ka  
 name.M blowgun.F make-AUX-DEC.M  
 ‘Biri is making a blowgun.’

b. O-construction

Karabowa o-ka abi mowa hi-na-ni ama-ke  
 blowgun.F 1sg-POSS father.M make 3sg-AUX-? EQU-DEC.F  
 ‘My father made the blowgun.’

Dixon (2000) argues that the choice of construction in Jarawara is influenced by discourse, in that the PSA is the most topical argument; consequently, according to Dixon, the A-construction is used when the actor is the primary topical participant, while the O-construction is used when the undergoer is more topical. Reinbold investigates Dixon’s claim for the corresponding construction in Banawá.

Wari’ (Chapakuran family; D. Everett & Kern 1999) is verb-initial and PSA-final, i.e. V (PP) (RP) RP. There is no case marking on RPs. The nucleus is immediately followed by a clitic complex (the ‘verbal inflectional clitic’[VIC]) which expresses the person, number and

gender features of the direct core arguments, as well as tense-aspect. Wari' is a head-marking language, as the nucleus plus VIC alone can constitute a complete utterance.

(4) a. Mi' non-on con hwam hwijima' mon tarama'.

give 3plS.RP/P-3plO.M PREP.3sgM fish children COLL man

'The men gave the children fish.'

b. Mi' non-on.

give 3plS.RP/P-3plO.M

'They gave them something.'

Wari' exhibits a secondary object pattern, as the recipient is the undergoer in (4a) and the theme an oblique core argument.

Karitiâna (Tupi) is verb-medial, with the unmarked order in transitive clauses being actor (PSA)-nucleus-undergoer; the single argument of an intransitive verb can occur before or after it. This is illustrated in (5).

(5) a. Irip naka-i-j kojpa

tapir NSAP-eat.TRANS-FUT pineapple

'The tapir will eat the pineapple.'

b. Taso na-aŋgar-i

man NSAP -stand.up-FUT

'The man will stand up.'

b'. Na-aŋgar-i taso.

NSAP -stand.up-FUT man

'The man will stand up.'

Karitiâna is a head-marking language with no case marking on RPs.

### 3. Aspects of information structure in Banawá, Wari' and Karitiâna

#### 3.1. Banawá

The focus structure contrasts introduced in (1) are signalled in Banawá by prosody and morphosyntactic devices. In predicate focus, the subject can be a clitic pronoun, as in the sequence of clauses in (Reinbold 2004:56-7, lines 28-30), an unstressed RP, as in (6a), or is omitted altogether, as in (6b, c).

(6) a. Yumai-ba tonwiyei matamona. (Reinbold 2007:13)

jaguar-FUT change.M PST.REP.M

'The jaguar changed a long time ago.'

b. Yama yete-nei to-kei.

thing hunt-AUX.M away-go.M

'He went away hunting.'

c. Kamai kobo-na-mai mowei matamona.

come.M arrive-AUX-MOT.M do.M PST.REP.M

'He came back. He returned.'

In (6a) the subject 'jaguar' has lower pitch relative to the following predicate complex and it functions as the topic expression for this sentence and the two following, in which it is



omitted and indicated only by the masculine agreement on the predicate complexes. In all of these sentences is the predicate accented. In sentence focus, every word in the sentence is accented, as shown by the pitch-track of (7) in Reinbold (2007), unlike in English and many other languages, in which only the subject is accented.

(7) Enemedede nafi-rei yamakabani-ya to-kei. (Reinbold 2007:12)

child big-NEG.M jungle-LOC away-go.M

‘A little boy went to the jungle.’

In both broad focus types the predicate expression is accented, with the subject accented in sentence focus and unaccented (if expressed) in predicate focus.

It was mentioned above that Dixon (2000) claims that the choice of the privileged argument (‘pivot’ in Dixon’s terms) is influenced by information structure in that when the actor is more topical, then the A-construction is used, and when the undergoer is more topical, the O-construction is used. While Reinbold (2007) finds general support for this view, there are clear exceptions as well. The ‘pivot’ is focal in the sentence-focus construction in (7). Furthermore she gives examples of yes-no questions with the focus on the ‘pivot’, e.g. [26a,b], pp. 19-20. Hence the core-initial RP ‘pivot’ in both A- and O-constructions may, but need not be, topical. Overt topics, both RPs and PPs, may occur in the left-detached position.

(8) a. FUNASA me FUNAI me fa, ere me keye fora okune (Reinbold 2004:38, 56)

3pl 3pl ? 1plO 3pls lie often ?

‘FUNASA and FUNAI people, they often lie to us.’

b. Pirei-ya meketima, me yama-me daani moa... (Reinbold 2004:56)

River.Pirei-LOC upstream 3pl things-PL sell do

‘On the river Pirei, they used to sell things...’

In (8a) there is a left-detached topic expression set off by an intonation break and followed by a clause in which there is a clitic pronoun (*me* ‘3pl’) serving as a resumptive pronoun, whereas in (8b) there is an initial locative PP set off by an intonation break. Thus, there seems to be clear evidence that Banawá has a LDP for dislocated topic expressions.

There also seems to be clear evidence for a PrCS position as well. There is a strong preference for WH-expressions to occur clause-initially (Reinbold 2007:16-17), although there are a few examples of in situ WH-expressions as well. The following question-answer pair illustrates that not only does the WH-expression occur in the PrCS, but the focus of the answer may, too.

(9) a. Hikei badue tao-hi-kanei-no yamakabani-ya? (Reinbold 2007:18)

who deer.M shoot-3sg-AUX.M-IP jungle-LOC

‘Who shot the deer in the jungle?’

b. Batao badue tao-hi-kanei-no yamakabani-ya.

Batao.M deer.M shoot-3sg-AUX.M-IP jungle-LOC

‘Batao shot the deer in the jungle.’

The pronominal prefix *hi-* ‘3sg’ signals that these are both O-constructions, and therefore *badue* ‘deer’ is the undergoer ‘pivot’ in core-initial position. In (9a) *hikei* ‘who’ occurs in the PrCS, before the core-initial ‘pivot’, and likewise in (9b) the answer *Batao*, the completive focus, is in the same clause-initial position. Hence focal expressions, both WH-expressions and non-WH RPs, can occur in the PrCS. (See also Reinbold 2004:57, lines 30-32.) It is not

necessary for the completive focus to occur in the PrCS; [21b] in Reinbold (2007: 18) exemplifies post-verbal completive focus in an adjunct question.

Completive focus is a type of narrow focus; another important type is contrastive focus. There is a contrastive focus particle *taa* which can mark contrasting phrases in any grammatical function. Reinbold (2007) has an extensive discussion of it; only one example will be given here.

(10) Yifari    *taa*    nofi maditowei kaira    *taa*    non-nofa-ra    manei.

banana.F CNTR like very.M    guava CNTR RED-like-NEG AUX.M

‘Bananas he likes a lot, but guava he doesn’t like a lot.’    (Reinbold 2007:23)

It is not clear in this example whether the RPs marked by *taa* are in the PrCS or not, since there is no overt core-initial ‘pivot’ RP, but there are clear examples of core-internal RPs marked by *taa*, e.g. [32] and [36] on p. 23. There are other morphosyntactic devices, as well as prosody, which are used to signal contrast.

To sum up, Banawá distinguishes all three major focus constructions via prosody, although not in the same way as English and many other languages do. In predicate focus, the subject, if overt, is not accented, while the predicate is. In sentence focus, every word in the clause is accented, not just the subject. Reinbold notes that “it is sometimes difficult to distinguish predicate focus from the other focus structures in the language, as the predicate is also accented in other focus structures”(2007:13). In narrow focus, the focus constituent is accented, as is the predicate. In addition to prosody, there are morphosyntactic means for signalling information structure contrasts: a LDP for dislocated topic expressions, a PrCS for WH-expressions, completive foci, and possibly contrastive foci, and a contrastive marker *taa* for indicating contrastive focus.

## 3.2. Wari'

Turner (2006) presents an investigation of information structure and intonation in Wari', building on the earlier description of the language in D. Everett & Kern (1999). As mentioned in §2, Wari' is a head-marking language, with the direct core arguments coded on the clitic cluster (VIC) immediately following the nucleus. Hence a highly activated referent need not be coded by an independent RP, nominal or pronominal, and therefore in predicate focus the nucleus + VIC would normally constitute the whole clause. This can be seen clearly in the 'How to make a basket' text. The second line is (11) below, which includes a left-detached topic expression 'the(se) women' (Turner 2006:73); for additional examples of left-detached topic expressions, see D. Everett & Kern (1999: 212-14).

- (11) Oro narima cwa 'ara nana-in wao.  
 COLL woman this.M/F make 3plRP/P-3N basket  
 'The women, they make baskets'

In subsequent clauses in the text, neither the women nor baskets are mentioned explicitly again; they are coded as the third-person plural subject and third neuter object on the VIC. Examples of subsequent clauses are given in (12). (*Wao* is both the word for 'basket' and the name of the plant which is the source of the leaves for weaving baskets.)

- (12) a. Mama nana-in mi noro ci' nana-in wao.  
 go.pl 3plRP/P-3N jungle look pull/take 3plRP/P-3N leaves.of.wao.palm  
 'They went to the jungle, to pull the leaves of the wao palm out'

- b. Wiritik pin            nana-in            pixi    nein  
 pull.out completely 3plRP/P-3N    spines 3sgN  
 ‘They pulled its spines completely out’
- c. Ten    cira            nana-in.  
 dry.out put.in.sun 3plRP/P-3N  
 ‘They dry them out in the sun.’

In (12a) there are predicate focus constructions, the two clauses having the topical subject ‘the women’ coded on the VIC only with the focal object of the second clause explicitly mentioned, since a different sense of the word *wao* is intended here. In (12b) there is likewise a predicate focus construction, with the object RP ‘its spines’ and the verbal complex in focus. Finally, in (12c) the core arguments are expressed only in the VIC, and hence this is an instance of narrow focus on the nucleus, which consists of two verbs.

According to D. Everett & Kern (1999), the primary sentence accent falls on the last syllable of the predicate expression in the nucleus, and other words are stressed on their final syllable and count as secondary sentence accents; Turner confirms this. This rigidity of stress pattern suggests that prosody could not be the primary indicator of focus, and Turner makes exactly this point: “prosody is not a sufficient indicator alone to indicate focus”(2006:85). Given that Wari’ is head-marking, as shown in (11) and (12), activated referents are normally expressed by clitic pronouns in the VIC, and consequently the expression of a referent as an overt RP is in itself an indicator that it is focal. Focal RPs can occur in the normal post-nuclear positions, as in (11) and (12) with object RPs. An example with a subject RP is given in (13), from Turner 2006:85-6).

- (13) a. Ma                            wari’ co            cao na-on            hwam?

that.PROX.HEARER person M/F.RP/P eat 3sgRP/P-3sgM fish

‘Who ate (the) fish?’

b. Cao na-on Elizeu.

eat 3sgRP/P-3sgM

‘Elizeu ate it.’

In the question in (13a), ‘who’ is expressed by a deictic element + the word for ‘person’; it occurs in the PrCS and is followed by a kind of ‘pre-VIC’ which agrees with the RP in the PrCS in gender and expresses tense/aspect. In the answer in (13b) the subject *Elizeu* is the completive focus, and it occurs in a core-internal, post-nuclear position.

Contrastive focus may be expressed prosodically, by a focus particle, or by putting the focal RP together with an emphatic pronoun in the PrCS, according to D. Everett & Kern 1999:205-6, 303). Contrastive focal stress, indicated by italics, is illustrated in (14).

(14) a. *To*’ ‘ina xe.

hit 1sgRP/P firewood

‘I *chopped* firewood.’

b. *To*’ ‘ina xe.

hit 1sgRP/P firewood

‘I chopped *firewood*.’

c. \**To*’ ‘*ina* xe.

hit 1sgRP/P firewood

‘*I* chopped firewood.’

In (14a) the contrastive stress is on the verb, while in (14b) it is on the object RP. For subject emphasis, however, it is not possible to stress the VIC. Rather, the particle *pan* must be used, and no special prosody is involved..

- (15) a. To' pan 'ina xe.  
hit CNTR 1sgRP/P firewood  
'I chopped firewood.'
- b. Pi' pan nana hwijima'.  
dance CNTR 3plRP/P children  
'The *children* danced.'

The PrCS option involving an emphatic pronoun is illustrated in (16), from D. Everett & Kern 1999:206-7, 303).

- (16) a. Wirico Xijam co 'oin' na mapac.  
EMPH.3sgM M/F.RP/P plant 3sgRP/P corn  
'It was Xijam who planted corn.'
- b. Wata' tara co tomi' na.  
EMPH.1sg 3sgRF M/F.RP/P speak 3sgRP/P  
'It shall be I who speaks.'

This construction seems to be parallel to the one in (13a), and the proper name *Xijam* receives a contrastive interpretation in (16a).

To sum up, Wari' seems to use morphosyntactic devices as the primary means of indicating information structural contrasts. Highly activated, i.e. topical, referents are

normally expressed by means of clitic pronouns on the VIC, and the expression of a referent by a full RP is normally indicative of focus. Prosody seems to play at best a secondary role in signaling focus and seems to be most important for contrastive focus. There is a LDP for dislocated topic expressions, and there is a PrCS in which WH-expressions in questions occur and in which non-WH RPs may occur to signal contrastive focus.

### 3.3. Karitiâna

C. Everett (2008) presents an analysis of constituent focus in Karitiâna, building on his earlier description of the language (C. Everett 2006). Karitiâna is a verb-medial language and seems to make primary use of morphosyntactic devices to signal information structural contrasts, rather than prosody; in this regard it seems to be more like Wari' than Banawá. In a predicate focus construction, there is a pronominal subject, realized either as a prefix on the verb, as in (15a) or as an unstressed independent pronoun, as in (15b), and the object follows the verb. The examples in (17) are from C. Everett (2008:15-16).

- (17) a. i-ta-piso-t                      epešap-asok.  
           1sgABS-SAP-take-NFUT leaf-OBL.CONTACT  
           'I took the leaf.'
- b. ãn naka-pidn-aj      mãŋga.  
           1sg NSAP-kick-FUT mango  
           'I will kick the mango.'

The intonation in both sentences is flat, with a fall on the last syllable of the last word. In discussions of focus structure in English, it is often suggested that an SVO sentence with



falling intonation on the object is ambiguous between predicate focus and (unmarked) narrow focus on the object RP. This does not seem to be the case in Karitiâna, however, as there is a special object-focus construction which involves occurrence of the object in the PrCS and an ‘object focus’ prefix (*ti-*) on the verb. This is illustrated in (18), from C. Everett (2008:29).

(18) Kojpa an-ti-okẽj-Ø.

pineapple 2sg-OFC-cut-NFUT

‘You cut a pineapple’, ‘A pineapple you cut’ or ‘It was a pineapple you cut.’

Everett argues that this is an instance of unmarked narrow focus on the object, unlike the structurally analogous English translations. This construction is also used in WH-questions when the question word is an object; this is illustrated in (19b), from C. Everett (2008:28). It is not found in (19a), a subject WH-question, from C. Everett (2006:374).

(19) a. Mõrãmõn a-ta-pisok-Ø (an-o) (hĩ)?

what/who 2sgABS-SAP-pierce/stab-NFUT 2sg-Q.NOM Q

‘Who stabbed you?’

b. Mõrãmõn sopãm ti-mʔa-tĩjã-t (hĩ)?

what/who OFC-make-PROG-NFUT Q

‘What is Sopãm [person’s name] making?’

Example (19b) is significant, for two reasons. First, it shows that WH-expressions occur in the same initial position and take the same object focus marking (when they are objects) that non-WH RPs do. Second, the occurrence of the overt subject *Sopã,m* between the WH-

expression and the verb shows that the WH-expression is in the PrCS, not in a core-internal position, since the prenuclear core-internal position is occupied by the subject RP. The answers to WH-questions also occur in the PrCS, which supports Everett's conclusion that in Karitiâna a focal element in the PrCS represents unmarked narrow focus.

- (20) a. Mõĩãmõn a-ti-hĩĩã? (C. Everett 2006:325)  
 what 2sgABS-OFC-smell  
 'What did you smell?'  
 b. Eposi:d ĩn ti-ti-hĩĩã-t.  
 flower 1sg OFC-smell-NFUT  
 'I smelled a flower.' ('A flower I smelled.')

Everett notes that the intonation pattern on this construction is basically the same as that on the predicate focus examples in (17), i.e. flat with a fall on the final syllable. He comments:

Karitiâna clauses with unmarked or default narrow constituent focus, like clauses with broad predicate focus, are consistent prosodically. They may vary syntactically, in that some constituents such as question words and objects may be placed in the precore slot, and may also vary morphologically via the presence or absence of a focus marker. Their pitch, however, is remarkably consistent. The clauses we have observed, taken from Karitiâna discourse and from elicitation sessions, display generally flat intonation during the majority of the clause (though there is sometimes an increase in

pitch on question words, followed by a noticeable fall in pitch of the final syllable of the clause.(2008:30).

Narrow focus on the verb is not signaled prosodically but rather by a special verb-focus construction, in which the verb is marked with a special prefix *piri-* and occurs obligatorily in clause-initial position. It is illustrated in (21), from C. Everett (2008:36).

(21) *Piri-tãm-ñn* pat.

VFC-fly-NFUT macaw

‘The macaw flew.’

Given that no elements within the clause can occur before the verb in this construction, Everett suggests that the verb occurs in the PrCS, just like the RPs in the object-focus construction. This is not unattested in other languages; in German, for example, it is possible for the verbal nucleus to occur in the PrCS, as in (22).

(22) Waschen muss Johannes jetzt das Auto.

wash must now the car

‘Johannes must wash the car now.’

Intonationally, the construction in (21) follows the pattern seen in the other examples, i.e. flat with a fall on the final syllable. In particular, the verb in the PrCS receives no special accentuation.

Contrastive narrow focus is expressed via a cleft construction. An example with contrastive focus on the subject is given in (23a), and on an adjunct, in (23b), from C. Everett (2008:41-2).

(23) a. Õwã na-aka-t piŋi-taktaŋ-ĩn i.

child NSAP-COP-NFUT VFC-swim-NFUT 3

‘It is the **child** that is swimming.’

b. Kiri di:p i-taka-tat-ason.

soon night 1sgABS-SAP-go-EPIS.EVID

‘It’s tonight I think I’m going.’

The first example involves a copula, the second one does not. Everett shows that in both the initial phrase (‘child + copula’ in (a) and ‘tonight’ in (b)) has a distinct intonation pattern (rise-fall-rise) independent of the following verbal expression, which has the typical ‘flat + final fall’ seen above in other constructions. He suggests that this is in fact a paratactic construction, in which both components are independently asserted. Evidence in favor of this interpretation comes from the fact that the verb in (23a) is itself focused, using the verb-focus construction.

Finally, detached topic expressions can be expressed in the LDP in Karitiãna, just as in the other two languages. The following example is from C. Everett (personal communication).

(24) Oni taso aka, i naka-ĩ-t pikõm.

DEM.DIST man DEF 3 NSAP-eat-NFUT wooly.monkey

‘That man over there, he ate the wooly monkey.’

The initial topic expression, ‘that man over there’, is set off by an intonation break, and there is a resumptive pronoun in the following clause referring to it.

To sum up, Karitiâna does not employ prosody as its primary means of signaling information structural contrasts; rather, it has special object-focus and verb-focus constructions to indicate narrow focus on the object or the verb; both involve the focussed constituent occurring in the PrCS. It also has a paratactic ‘cleft’ construction to signal contrastive focus. As in the other two languages, there is the possibility of left-dislocating topic expressions in the LDP.<sup>4</sup>

#### 4.0. Summary

The main properties of information structure in the three languages are summed up in Table 1.

	Banawá	Wari’	Karitiâna
Basic word order	Verb-final	Verb-initial	Verb-medial
Topic in LDP	Yes	Yes	Yes
PreCore Slot	Yes	Yes	Yes
–WH-elements	Yes	Yes	Yes

<sup>4</sup> Storto (2011) presents an analysis of information structure in Karitiâna within a generative framework. While her analysis differs from C. Everett’s on a number of points, she is in agreement with the existence of what in RRG terms is the PrCS and agrees that both RPs and nuclei can occur in it; furthermore, she also concludes that prosody is not used to signal focus.

	Banawá	Wari'	Karitiâna
–Non-WH-elements	Yes	Yes	Yes
–Focus only	Yes	Yes	Yes
–Answer to WH-Q in PrCS	Possible	No	Yes
Prosody as main cue for focus	Yes	Contrastive only	No
Special verb-focus construction	No	No	Yes

Table 1: Comparison of information structure properties of Banawá, Wari' and Karitiâna

The main differences among the three languages concern the last three properties. Banawá allows and Karitiâna seems to require the answer to WH-questions to occur in the PrCS. Prosody seems to play a much more important role in signaling focus in Banawá than in Wari' or Karitiâna, and Karitiâna has a special verb-focus construction that has no analog in the other two languages. From a theoretical perspective the data from these three languages support the cross-linguistic validity of the Lambrecht-based RRG approach to information structure.

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