

# The configurational structure of a nonconfigurational language\*

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In this article, I present evidence for hierarchy and movement in Warlpiri, the proto-typical nonconfigurational language. Within the verb phrase, I identify both a symmetric and an asymmetric applicative construction, show that these are problematic for an LFG-style account that claims Warlpiri has a flat syntactic structure, and outline an account of the symmetric/asymmetric applicative distinction based on a hierarchical syntactic structure. Above the verb phrase, I establish syntactic hierarchy through ordering restrictions of adverbs, and ordering of topics, *wh*-phrases, and focused phrases in the left periphery. Finally, I present evidence that placement of phrases in the left periphery is accomplished through movement, with new data that show island and Weak Crossover effects.

**Keywords:** nonconfigurationality, Warlpiri, applicatives, left periphery, topic, focus, adverbs

## 1. Introduction

Warlpiri is a Pauma-Nyungan language spoken in Northern Territory, Australia, by over 3000 people. A number of properties of this language that made it appear typologically unusual were examined in Hale's (1983) seminal paper, which brought both Warlpiri and "nonconfigurationality" to the forefront of generative linguists. These properties included free word order, possible *pro*-drop of all arguments and adjuncts, and discontinuous noun phrases; these subsequently became the hallmarks of nonconfigurational languages.

Beginning with Hale (1983), Warlpiri has been seen to require adding additional parameters into the typological space of human language. In this paper, I suggest that such a move is unnecessary, and hence undesirable.

Warlpiri syntax may be analysed using a hierarchical structure, consisting of crosslinguistically-motivated projections, in combination with movement operations familiar from other languages.

In Section 2, I outline the “flat-structure” approach to Warlpiri syntax, originally due to Hale (1983), and recently revived by Austin & Bresnan (1996) and Bresnan (2000). The remainder of the paper reveals difficulties with such an approach, by presenting evidence for a hierarchical syntactic structure in Warlpiri. Section 3 considers the verb phrase, arguing on the basis of double object and ethical dative constructions for a hierarchically-organized verb phrase in Warlpiri. Section 4 examines the clause structure above the verb phrase. First, I demonstrate that Cinque’s (1999) hierarchy of functional projections that introduce adverbs into the syntax applies equally to Warlpiri, and discuss the difficulties this raises for the flat-structure approach. Next, I examine the left periphery (Rizzi 1997) of Warlpiri, demonstrating the existence of distinct and hierarchically ordered projections specialized for two types of topics and two types of foci. Further, I provide evidence that the placement of (*wh*-)phrases in the left periphery is the result of movement rather than base-generation.

The following section begins, with an outline of the flat-structure approach to Warlpiri syntax.

## 2. Approaches

In this section, I review a number of well-known properties of Warlpiri syntax and outline the flat structure analysis of these data. The analysis of Warlpiri is complex in that certain aspects of the syntax exhibit asymmetries among and between arguments and adjuncts, while others systematically fail to. As mentioned above, word order, the possibility for pro-drop, and the ability for noun phrases to appear discontinuously grant the same freedom to all arguments and adjuncts. Asymmetries between arguments cannot be found in Weak Crossover effects, or Condition C data either, in that WCO effects do not appear in object *wh*-questions, and Condition C behaves as though subjects and objects stand in a relationship of mutual c-command:<sup>1</sup>

(1) WCO

- a. *Ngana-ngku kurdu nyanungu-nyangu paka-rnu?*  
 who-ERG child 3-POSS hit-NPST  
 “Who<sub>i</sub> hit his<sub>j</sub> child?”

- b. *Ngana ka nyanungu-nyangu maliki-rli wajili-pi-nyī?*  
 who PRES.IMPF he-POSS dog-ERG chase-NPST  
 “Who<sub>i</sub> is his<sub>i</sub> dog chasing?” (Hale et al. 1995: 1447)

(2) *Condition C*

- a. *Nyanungu-rlu\*<sub>ij</sub> maliki Jakamarra<sub>i</sub>-kurlangu paka-rnu*  
 3-ERG dog Jakamarra-POSS hit-PST  
 “He\*<sub>ij</sub> hit Jakamarra<sub>i</sub>’s dog”
- b. *Jakamarra<sub>i</sub>-kurlangu maliki-rli nyanungu\*<sub>ij</sub> paji-rni*  
 Jakamarra-POSS dog-ERG 3 bite-PST  
 “Jakamarra<sub>i</sub>’s dog bit him\*<sub>ij</sub>” (Laughren 1991: 14)

In contrast, Condition A behaves as though the subject asymmetrically c-commands the object, and Condition B distinguishes objects from adjuncts.

(3) *Condition A*

- a. *Purlka-jarra-rlu ka-pala-nyanu nya-nyī*  
 old.man-DUAL-ERG PRES.IMPF-3DUAL-REFLEX see-NPST  
 “The two old men are looking at each other” (Simpson 1991: 163)
- b. \**Purlka-jarra ka-nyanu-palangu nya-nyī*  
 old.man-DUAL PRES.IMPF-REFLEX-3DUAL.OBJ see-NPST  
 Lit: “Each other are looking at the old men.”

(4) *Condition B*

- a. \**Jakamarra-rlu ka-(nyanu) nyanungu paka-rni*  
 Jakamarra-ERG PRES.IMPF-(REFLEX) 3 hit-NPST  
 “Jupurrurla<sub>i</sub> is hitting him<sub>i</sub>” (Simpson 1991: 170)}
- b. *Japanangka-rlu-nyanu yirra-rnu mulukunpa nyanungu-wana*  
 Japanangka-ERG-REFLEX put-NPST bottle 3-PERL  
 “Japanangka<sub>i</sub> set the bottle down beside him<sub>i</sub>.” (Simpson 1991: 171)

Furthermore, Warlpiri shows suppletion of infinitival complementizers, sensitive to the grammatical function of the controller of the PRO subject. Thus, *-karra* indicates control of the embedded subject by the matrix subject, *-kurra* indicates control by the matrix object, and *-rlarni* is the default, used for control by a matrix adjunct or when the embedded clause has an overt subject.

(5) *Embedded complementizers*

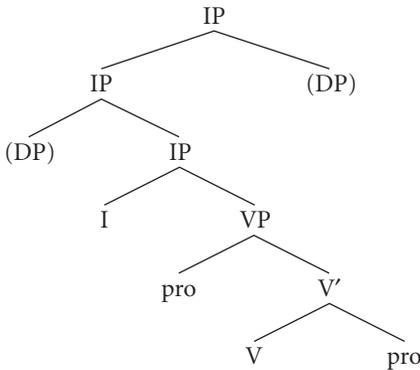
- a. *Karnta ka-ju wangka-mi [yarla karla-nja-karra]*  
 woman PRES.IMPF-1SG speak-NONPST yam dig-INF-SUBJC  
 “The woman is speaking to me while digging yams” (Hale 1983: 21)

- b. *Purda-nya-nyi ka-rna-ngku [wangka-nja-kurra]*  
 aural-perceive-NONPST PRES.IMPFF-1SG-2SG speak-INF-OBVC  
 “I hear you speaking” (Hale 1983:20)
- c. *Wati-rla jurnta-ya-nu karnta-ku [jarda-nguna-nja-rlarni]*  
 man-3SG.DAT away-go-PST woman-DAT sleep-lie-INF-OBVC  
 “The man went away from the woman while she was sleeping”  
 (Hale et al. 1995:1442)

Such a bifurcation of behaviours is not unique to Warlpiri, but is attested in a number of “nonconfigurational languages” (see, for example, the papers in Marácz & Muysken 1989).

One previous approach to the conflicting data found in nonconfigurational languages like Warlpiri I will term the *pronominal argument approach* (PA); two instantiations of this approach can be found in Jelinek (1984), and Baker (1996). According to the PA, either all argument positions are filled by clitics, the overt DPs being adjuncts (Jelinek 1984); or the argument positions are filled by *pro*'s, the overt NPs being licensed by agreement morphology on the verb and appearing in a clitic left dislocation-type structure (Baker 1996).

(6) *Pronominal Argument Approach*



This approach has initial plausibility in allowing a simple, single explanation for the complete range of data in nonconfigurational languages. However, subsequent research has determined that the various data do not seem to have a single source. Austin & Bresnan (1996) (henceforth A&B) examine Australian languages related to Warlpiri and carefully demonstrate that the nonconfigurational properties found in Warlpiri do not consistently co-occur, nor do these properties consistently co-occur with agreement-pronominal clitics, as required by the PA. Thus, a single parametric explanation for the full range of data found

in Warlpiri does not seem appropriate, since the same phenomena in related languages cannot be so explained. Furthermore, A&B present a number of difficulties with the hypothesis within Warlpiri itself: several interpretive differences between arguments and adjuncts that would be unexpected on a theory in which all overt DPs are adjuncts; case marking on overt DPs based on lexical idiosyncrasies of particular verbs; the existence of DPs not linked to any agreement/pronominal clitic, and the ability of these DPs to undergo pro-drop. The reader is referred to A&B for details. Given these difficulties with the PA approach for Warlpiri, I will not consider it further.

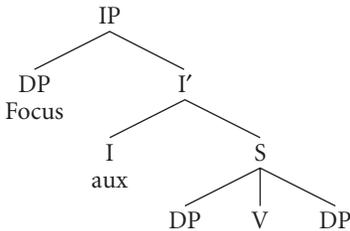
The alternative approach proposed by A&B has its roots in Hale's (1983) original proposal for the structure of Warlpiri, and Simpson's (1991) related proposal. This approach claims that the syntactic structure of Warlpiri is n-ary branching, overt elements freely base-generated in any order. To account for the hierarchical properties of Warlpiri discussed above, such an approach must posit an additional level of representation which encodes asymmetries between subjects, objects, and adjuncts. A&B thus embed their approach within the framework of Lexical Functional Grammar (LFG), which allows for multiple levels of representation, including: f(unctional)-structure, which encodes grammatical relations, and c(onstituent)-structure, which consists of the surface syntactic tree.<sup>2</sup> Indeed, Bresnan (2000) presents Warlpiri as a primary motivation for the multi-level framework of LFG. Under the flat-structure approach, the asymmetric properties of Warlpiri are attributed to asymmetries among grammatical relations in the f-structure, while the symmetric properties of Warlpiri are attributed to a c-structure consisting of an n-ary branching S, a constituent which lacks a head and does not project. A&B also posit an IP projection above S, the head of which contains the auxiliary complex and the specifier of which hosts a focused constituent.

(7) *Flat Structure Approach*

**f-structure:**

PRED	‘verb <{(fSUBJ) (fOBJ)}>’
SUBJ	[“DP”]
OBJ	[“DP”]

c-structure:



The discussion in this paper concentrates on two aspects of A&B’s account: the claim that Warlpiri phrase structure is flat, and the claim that it is characterized by free base-generation of elements in any order within the clause. I do not address the symmetric properties of Warlpiri directly, but note that these may be analysed as the result of UG-defined choices familiar from other languages. Thus, DP-splitting from Slavic and Germanic (see van Riemsdijk 1989; Krifka 1998; Ćavar & Fanselow 2000), *pro*-drop, ubiquitous throughout the world’s languages; and scrambling that repairs WCO violations, perhaps best studied in German, Hindi (esp. Mahajan 1990), and Japanese (esp. Saito 1989, Miyagawa 1997). The Condition C data, although not unique to Warlpiri (see, for example Marácz & Muysken (1989) for Hungarian), remains mysterious.

The next section examines syntax within the verb phrase in Warlpiri, arguing for hierarchy on the basis of double object and ethical dative constructions.

### 3. Within the Verb Phrase

In this section, I examine double object and ethical dative constructions in Warlpiri, first demonstrating that these represent two types of applicative constructions. Next, I discuss the LFG account of applicatives presented in Bresnan & Moshi (1990), and show that the Warlpiri data raises difficulties for such an account. Finally, I present an analysis of applicative constructions that assumes a hierarchical verb phrase, and show that the Warlpiri data may be accommodated within such an analysis. To begin, I outline some crosslinguistic generalizations regarding applicative constructions.

Two types of applicatives have been identified crosslinguistically (see esp. Baker 1988, Bresnan & Moshi 1990), which are traditionally called “asymmetric” and “symmetric”. As the names suggest, asymmetric applicatives are characterized by asymmetric behaviour between the verbal object (VO) and the

applicative object (AO): only the AO shows primary object properties. In contrast, in symmetric applicatives both the AO and VO show primary object properties. Glossing over some interesting complications that arise within particular languages, the cluster of properties of symmetric and asymmetric applicatives are summarized in the following table.

(8) *Types of Applicatives Crosslinguistically*

Asymmetric	Symmetric
AO shows object properties (agreement, passives, scope, ...)	AO, VO show object properties (agreement, passives, scope, ...)
transitivity restriction on verb	no transitivity restriction on verb
animacy restriction on AO	no animacy restriction on AO
AO semantically related to VO	AO semantically related to event

In Legate (2001), I demonstrated that Warlpiri has both types of applicative constructions. Thus, a class of ditransitive verbs are asymmetric applicatives and the ethical dative construction is a symmetric applicative. In the next section I begin with the ditransitives.

### 3.1 Ditransitives

Warlpiri has a class of verbs with an ERG-DAT-ABS case frame, that is the subject displays ergative case, the indirect object displays dative case, and the direct object shows absolutive case. An example of such a verb is *yi-nyi* ‘give’:

- (9) *Warnapari-rli ka-rla kurdu-ku ngapurlu yi-nyi.*  
 dingo-ERG PRES.IMPF-3DAT child-DAT milk give-NPST  
 ‘The dingo gives milk to the little one.’

I argue that this is not a PP-dative construction, as the translation suggests, but rather an asymmetric applicative construction, akin to the English double object construction: *The dingo gives the little one milk.*

First, the dative AO shows primary object properties for agreement and control (Simpson 1991). Thus, the dative AO triggers object agreement rather than the absolutive VO:

- (10) *Ngajulu-rlu kapi-rna-ngku karli-patu yi-nyi nyuntu-ku*  
 I-ERG FUT.C-1SG.S-2SG.O boomerang-pauc give-NPST you-DAT  
 ‘I will give you (the) (several) boomerangs’ (Hale et al. 1995: 1432)

Furthermore, recall that Warlpiri embedded infinitival complementizers supplete according to the grammatical function of the controller of their PRO subject, see (5) above. When the dative AO controls a PRO infinitival subject, the embedded complementizer *-kurra* is used, registering control by a matrix object. This complementizer cannot be used when the absolutive VO controls the embedded subject.

- (11) a. *Karnta-ngku ka-ju kurdu miliki-yirra-rni*  
 woman-ERG PRES.IMPV-1SG.O child show-put-NPST  
*nguna-nja-kurra-(ku)*  
 lie-**INFIN-OBJ.C**-(DAT)  
 “The woman is showing the child to me while I am lying down”  
 (Simpson 1991:342)
- b. <sup>??</sup>*Yu-ngu-rna-rla kurdu parraja-rla ngunga-nja-kurra*  
 give-PST-1SG.S-3DAT child coolamon-LOC sleep-**INFIN-OBJ.C**  
*yali-ki*  
 that-DAT  
 “I gave the child which was sleeping in the coolamon to that one”  
 (Simpson 1991:341)}

Furthermore, **ERG-DAT-ABS** verbs fall into the familiar crosslinguistic classes of double object verbs (see Levin 1993, Pesetsky 1995).

- (12) *Double Object Verb Classes:*
- inherently signify act of giving: *yi-nyi* “give”
  - inherently signify act of taking: *punta-rni* “take away from”, *jurnta-ma-ni* “take away from”, *jurnta-marda-rni* “take away from”, *punta-punta-yirra-rni* “take away from”, ...
  - instantaneous causation of ballistic motion: *kiji-rni* “throw” (cf. not *rarra-ma-ni* “drag”)
  - sending: *yilya-mi* “send/throw to”
  - communicated message: *ngarri-rni* “tell”, *payi-rni* “ask”, *japi-rni* “ask”, *milki-yirra-rni* “show” (cf. not *wangka-mi* “speak/say”, *jaaly(a)-wangkami* “whisper”)
  - continuous causation of accompanied motion in some manner: *ka-nyi* “carry, bring, take”

Also, there exists an alternation in Warlpiri between the **ERG-DAT-ABS** and an **ERG-ABS-ALL(ative)** ditransitive, an alternation comparable to the double object versus PP-dative alternation. In the **ERG-ABS-ALL** variant, it is the **ABS** that controls object agreement:

(13) *The Allative Variant*

*Yu-ngu-ju-lu*                      *Jakamarra-kurra*  
 give-PST-1SG.O-3PL.S Jakamarra-ALL  
 “They gave me to Jakamarra” (Laughren 1985)

In addition, asymmetric applicatives crosslinguistically display a characteristic semantics, in which the AO is interpreted as a (potential) possessor of the VO. The dative AO of ERG-DAT-ABS verbs receives this interpretation, whereas the allative of the ERG-ABS-ALL variant does not. Thus, of the pair in (14),

- (14) a. *Ngarrka-ngku ka-rla*                      *kurdu-ku japujapu kiji-rni*  
 man-ERG        PRES.IMPf-3DAT child-DAT ball        throw-NPST  
 “The man is throwing the child the ball”
- b. *Ngarrka-ngku ka*                      *japujapu kurdu-kurra kiji-rni*  
 man-ERG        PRES.IMPf ball        child-ALL        throw-NPST  
 “The man is throwing the ball to the child” (Hale 1982:253)

Hale (1982) remarks that “[the] dative in [(14a)] implies that the child is the recipient of the ball, not merely the endpoint of motion. The allative in [(14b)], on the other hand, implies that the child — or the child’s location — is merely the end-point of the trajectory traversed by the ball.” (Hale 1982:253)

Finally, related to the possessive semantics, crosslinguistically we find an animacy restriction on the goal (AO) of asymmetric applicatives. This animacy restriction is also found on the dative AO of ERG-DAT-ABS verbs; if the AO is inanimate, the absolutive-allative variant must be used instead.

- (15) a. *Purturlu kala-rla*                      *yilya-ja*.  
 backbone PST.C-3DAT send-PST  
 “He sent her the backbone”
- b. *Marnkurrpa-rna yilya-ja Yalijipiringi-kirra*  
 three-1SG.S        send-PST Alice.Springs-ALL  
 “I sent three to Alice Springs”

Thus, I conclude that ditransitive verbs which display the ERG-DAT-ABS case frame should be identified as asymmetric applicatives.

In the next section we consider a second applicative construction in Warlpiri, the ethical dative construction.

### 3.2 Ethical datives

The Warlpiri ethical dative construction involves the addition of a dative DP, without an overt morpheme to indicate how the additional DP is to be interpreted. An example of this is given in (16):

- (16) *Karli yinga-rla paka-rni jinta-kari-rli nyanungu-ku*  
 boomerang REAS.C-3DAT chop-NPST one-other-ERG he-DAT  
 “Because the other one will chop a boomerang for him”  
 (Simpson 1991: 381)

This construction proved problematic for previous analyses of Warlpiri lexical structure, notably the detailed LFG account of Simpson (1991). Simpson is forced to posit a new grammatical function for ethical datives, which she calls “EXTERNAL OBJECT”, in addition to an optional process promoting ethical datives to the “OBJECT” function.

Examining the construction, we discover that it exhibits distinct behaviour from the double objects considered above. First, both the ethical dative (AO) and the object of the verb (VO) trigger object agreement. Due to a morphophonological restriction against both dative and absolutive agreement in the auxiliary (Simpson 1991), this agreement pattern is visible only when the object of the verb is also dative. In such a case, both datives are obligatorily registered in the auxiliary. Thus, in (17), *warri-rni* “seek” selects a dative object, and the auxiliary agrees with both this VO object and the dative AO.

- (17) *Ngarrka-ngku ka-ju-rla ngaju-ku karli-ki*  
 man-ERG PRES.IMPF-1SG.O-3DAT me-DAT boomerang-DAT  
*warri-rni*  
 seek-NPST  
 “The man is looking for a boomerang for me” (Hale 1982: 255)

In addition, when either the VO or the AO control an embedded PRO subject, the *-kurra* complementizer appears, indicating control by a matrix object.

- (18) *Control by DAT*  
 a. *Kamina-rlu ka-rla mangarri purra ngati-nyanu-ku*  
 girl-ERG PRES.IMPF-3DAT food cook.NPST mother-self-DAT  
*nguna-nja-kurra-ku*  
 lie-*INFIN-OBJ.C-DAT*  
 “The girl is cooking food for her mother who is lying down.”  
 (Simpson 1991: 385)

b. *Control by ABS*

*Maliki-rna ramparl-luwa-rnu Jakamarra-ku parnka-nja-kurra*  
 dog-1SG accident-hit-PST Jakamarra-DAT run-*INFIN-OBJC*  
 ‘‘I accidentally hit Jakamarra’s dog while it was running.’’ (EID)

Furthermore, unlike asymmetric applicatives (see the table in (8)), there is no transitivity restriction on the ethical dative construction.

(19) a. *Karnta ka-rla kurdu-ku parnka-mi*

woman PRES.*IMPF* child-DAT run-NPST  
 ‘‘The woman is running for the sake of the child’’  
 (Simpson 1991:381)

b. *Nantuwu ka-rla Japanangka-ku mata-jarri-mi*

horse PRES.*IMPF*-3DAT Japanangka-DAT tired-INCH-NPST  
 ‘‘The horse is tiring on Japanangka’’ (Hale 1982:254)

Finally, we do not find the possessive semantics characteristic of asymmetric applicatives in the ethical dative construction. Instead, interpretation of the dative AO ‘‘embrac[es] a considerable range of possible semantic connections which may hold between an entity and an event or process’’ (Hale 1982:254), including at least benefactive, malefactive, and possessive:

(20) a. *Nantuwu ka-rla Japanangka-ku mata-jarri-mi*

horse PRES.*IMPF*-3DAT Japanangka-DAT tired-INCH-NPST  
 ‘‘The horse is tiring on Japanangka’’  
 ‘‘Japanangka’s horse is tiring’’

b. *Ngarrka-ngku ka-rla kurdu-ku karli jarnti-rni*

man-ERG PRES.*IMPF*-3DAT child-DAT boomerang trim-NPST  
 ‘‘The man is trimming the boomerang for the child’’  
 ‘‘The man is trimming the child’s boomerang’’ (Hale 1982:254)

In sum, the properties displayed by the Warlpiri ethical datives are those of a symmetric applicative construction. I conclude that Warlpiri has both an asymmetric and a symmetric applicative. In the next section, we discover that this conclusion poses difficulties for an LFG account of applicatives.

### 3.3 Implications

Bresnan & Moshi (1990) (B&M) present an LFG account of the symmetric/asymmetric applicative distinction, which I summarize briefly here. They employ two features [ $\pm$ r(estricted)] and [ $\pm$ o(bject)], which define four grammatical functions:

(21) *Four Grammatical Functions*

$$\begin{array}{l} \left[ \begin{array}{cc} -r & +r \\ -o \text{ SUBJ} & -o \end{array} \right] \text{OBL}_{\theta} \\ \left[ \begin{array}{cc} -r & +r \\ +o \text{ OBJ} & +o \end{array} \right] \text{OBJ}_{\theta} \end{array}$$

Of these only restricted object  $\text{OBJ}_{\theta}$  is unfamiliar — this is defined as an object which may not appear in subject position and which has a fixed semantic role, like an oblique.

B&M claim that certain feature values are intrinsically (dis)associated with certain theta roles crosslinguistically, while others are added by rule, subject to certain constraints. However, feature values do not need to be fully specified for the final determination of grammatical roles; the roles are assigned based on compatibility with the feature values specified. B&M make use of these roles in proposing their *Asymmetrical Object Parameter*, reproduced here in (22).

(22) *Asymmetrical Object Parameter*

$$\begin{array}{ccc} * & \theta & \dots & \theta \\ & | & & | \\ & [-r] & & [-r] \end{array}$$

Combined with a universal restriction against benefactives and recipients bearing the feature [+o], this parameter has as a result that (for languages in which it is set as an active constraint), a theme can never bear the OBJ function in a sentence which also contains a benefactive or recipient (AO).

It is important to recognize that under B&M's analysis, symmetric and asymmetric applicatives do not differ with respect to the grammatical functions assigned to each nominal; the agent corresponds to the SUBJ function, the AO to the OBJ function, and the theme to the  $\text{OBJ}_{\theta}$ . By Function-Argument Biuniqueness (which B&M attribute to Bresnan 1980), two nominals in a clause cannot bear the same function.

(23) *Function-Argument Biuniqueness*

Each expressed lexical role must be associated with a unique function, and conversely.

The two types of languages differ only with respect to the results of applying a lexical rule. For example, in a symmetrical object language, if a lexical rule applies to suppress the agent (i.e. the passive), the benefactive (universally [-r]) may become the SUBJ, freeing up the OBJ function for the theme. However, in

an asymmetrical object language, the theme cannot bear the feature  $[-r]$  in the presence of a (necessarily  $[-r]$ ) benefactive, and thus can never bear the OBJ function (see (21) above).

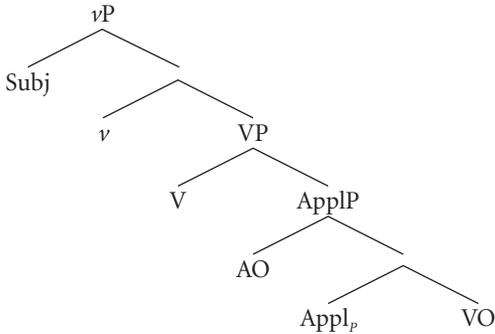
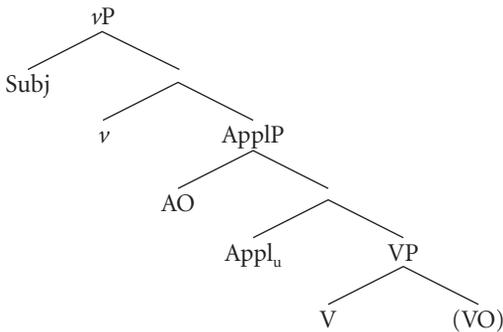
Warlpiri is problematic for this analysis in two respects. First, B&M posit a distinction between asymmetric and symmetric *languages*, whereas we have just seen that Warlpiri has both asymmetric and symmetric applicatives. No simple adjustment to their theory could accommodate such a language. Second, B&M cannot capture the symmetric behaviour between the AO and VO we find in Warlpiri. Embedded complementizers showing control by a matrix object are found for both AO and VO control, without the application of a lexical rule. Furthermore, B&M describe object agreement differences between symmetric and asymmetric languages as both OBJ and OBJ<sub>θ</sub> triggering object agreement in symmetric languages, whereas only OBJ triggers object agreement in asymmetric languages. However, this description cannot carry over to Warlpiri, since OBJ<sub>θ</sub> triggers agreement in symmetric applicatives in Warlpiri but not in asymmetric applicatives. Thus, the agreement data cannot be traced to a language-specific choice on the type of object that triggers agreement. I conclude that B&M's LFG account of applicative constructions cannot carry over to Warlpiri.

On the other hand, if we adopt a hierarchical verb phrase for Warlpiri, then the applicative data presented here may be assimilated to structural accounts of applicatives in other languages. I sketch one such account in the following section.

### 3.4 A structural account

The analysis of applicative constructions I present here is a modification of McGinnis (2000). I adopt the insights of her proposal, while eliminating some of the technology by exploiting categorial differences between the applicative head that appears in symmetric applicatives and the applicative head that appears in asymmetric applicatives.

Under this approach, symmetric and asymmetric applicatives differ structurally:

(24) *Asymmetric Applicative* (cf. Pesetsky 1995)(25) *Symmetric Applicative* (cf. Marantz 1993):

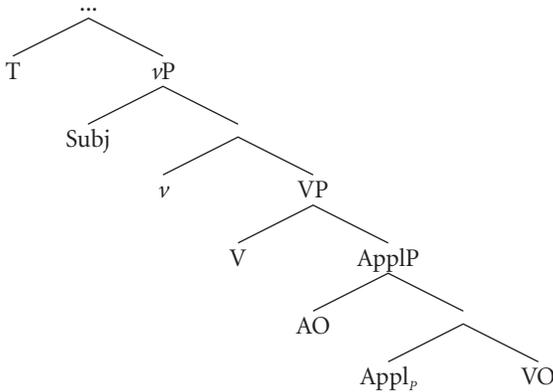
In the asymmetric applicative, the phrase headed by the applicative morpheme appears as the complement to the verb. I assume it is therefore prepositional in nature. This applicative preposition relates the  $AO$ , in its specifier, to the  $VO$  in its complement, establishing the semantic relationship of (potential) possession between them. The structure therefore captures the inability of asymmetric applicatives to appear with intransitive verbs, as well as the characteristic semantic interpretation of the  $AO$  as a potential possessor.

In the symmetric applicative, on the other hand, the phrase headed by the applicative morpheme dominates the verb phrase. I assume that it is therefore a type of light verb, or  $v$ . Since the  $AO$  is related directly to the  $VP$ , this structure captures the lack of transitivity restriction on symmetric applicatives, as well as the interpretation of the  $AO$  as being related to the event.

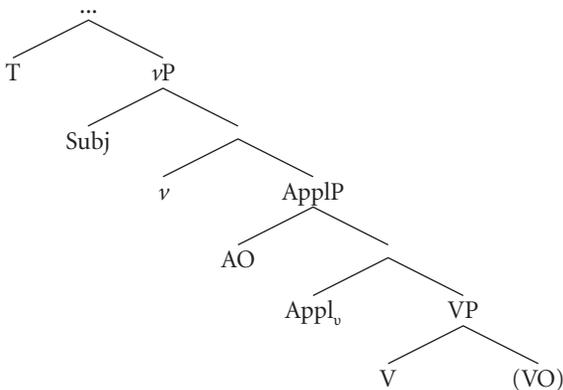
I argue that the distinction between the nature of the applicative morphemes, prepositional for asymmetric applicatives and verbal for symmetric applicatives, has significant repercussions throughout the syntax of the constructions. In the asymmetric applicative, the applicative preposition assigns

case to the VO in its complement, and the AO raises to check case and agreement with the  $\nu$  that introduces the subject.<sup>3</sup> In the symmetric applicative, the VO raises to check case with the applicative  $\nu$ , and the AO raises to check case with the  $\nu$  that introduces the subject. This results in the following configurations (before subject raising and verb movement):

(26) *Asymmetric Applicative*



(27) *Symmetric Applicative:*



These structures allow us to understand the differing behaviour of VOs between symmetric and asymmetric applicatives. In symmetric applicatives, both the AO and the VO enter an agreement relationship with a  $\nu$  head, and thus both exhibit behaviour as objects. In asymmetric applicatives, on the other hand, only the AO agrees with a  $\nu$  head, the VO being the object of a preposition, and therefore, only AO behaves as a direct object. One direct consequence of this agreement relationship is that in symmetric applicative constructions, both the

AO and the VO may trigger object agreement morphology, since both agree with a *v*, an extended projection of the verb. This is illustrated in (28) with data from Kichaga. In asymmetric applicative constructions, only the AO triggers object agreement morphology, since only the AO agrees with a *v*; the VO is assigned case by a preposition. This is shown in (29) for Chicheŵa.

- (28) a. *N-ä-ï-m-lyì-í-à* *k-èlyá.*  
 FOC-1S-PRES-1O-eat-APPL-FV 7-food  
 “He/she is eating food for/on him/her.”
- b. *N-ä-ï-kì-lyì-í-à* *m-kà.*  
 FOC-1S-PRES-7O-eat-APPL-FV 1-wife  
 “He/she is eating it for/on the wife.”
- c. *N-ä-ï-kì-m-lyì-í-à*  
 FOC-1S-PRES-7O-1O-eat-APPL-FV  
 “He/she is eating it for/on him/her.”  
 (Bresnan & Moishi 1990: 150–151)
- (29) a. *Amayi a-ku-mu-umb-ir-a* *mtsuko.*  
 woman SP-PRES-OP-mold-APPL-ASP waterpot  
 “The woman moulded the waterpot for him.”
- b. \**Amayi a-na-u-umb-ir-a* *mwana.*  
 woman SP-PST-OP-mold-APPL-ASP child  
 “The woman is moulding it for the child.” (Baker 1988:247)}

In further illustration of the proposal, consider the ability of primary objects to raise to subject position in passives. In symmetric applicatives either the AO or VO may raise to subject position in the passive; this is illustrated by the Kichaga examples in (30). In asymmetric applicatives, on the other hand, only the AO may become the subject, as illustrated by the Chicheŵa examples in (31).

- (30) a. *M-kà n-ä-ï-lyì-í-ò* *k-èlyá*  
 1-wife FOC-1S-PRES-eat-APPL-PASS 7-food  
 “The wife is being benefited/adversely affected by someone eating the food.”
- b. *K-èlyá k-ï-lyì-í-ò* *m-kà*  
 7-food 7S-PRES-eat-APPL-PASS 1-wife  
 “The food is being eaten for/on the wife.”  
 (Bresnan & Moshi 1990: 150)
- (31) a. *Mbidzi zi-na-gul-ir-idw-a* *nsapato (ndi kalulu)*  
 zebras SP-PST-buy-APPL-PASS-ASP shoes by hare  
 “The zebras were bought shoes by the hare.”

- b. \**Nsapato zi-na-gul-ir-idw-a*                      *mbidzi (ndi kalulu)*  
 shoes SP-PST-buy-APPL-PASS-ASP zebras by hare  
 “Shoes were bought for the zebras by the hare.” (Baker 1988: 248)}

The passive is standardly understood to involve  $\nu$  losing its ability to check case. If we make the minimal assumption that this can affect either  $\nu$  head in the symmetric applicative, we predict that either object may raise to subject position. Thus, if the  $\nu$  that introduces the external argument cannot check case, the AO will raise to subject position; if instead the applicative  $\nu$  cannot check case, the VO will raise to subject position. In contrast, the asymmetric applicative has only a single  $\nu$  head to be affected in the passive, resulting in movement of the AO to subject position. The applicative head, as a preposition, cannot lose its case assigning ability through passivization, and thus the VO will never raise to subject position.<sup>4</sup>

Returning to Warlpiri, recall that object agreement is triggered by both the AO and the VO in symmetric applicatives, but only the VO in asymmetric applicatives. Although overt nominals in Warlpiri inflect on an ergative-absolutive pattern, agreement morphology shows a nominative-accusative paradigm, requiring a dissociation between case and agreement in the language. Thus, agreement relations in Warlpiri may pattern identically to the case-agreement relationships discussed with respect to the applicative structures above. In the symmetric applicatives, both AO and VO agree with a  $\nu$  head, and thus both trigger object agreement morphology. In the asymmetric applicatives, however, only the AO agrees with a  $\nu$  head (the VO agreeing with the applicative preposition), and so only the AO controls object agreement.

In addition, embedded infinitival complementizers in Warlpiri register object control when either the AO or VO of a symmetric applicative control the PRO subject of the embedded clause, but only when the AO of an asymmetric applicative controls the subject of the embedded clause. The examples are repeated below:

- (32) a. *Kamina-rlu ka-rla*                      *mangarri purra*                      *ngati-nyanu-ku*  
 girl-ERG    PRES.IMPF-3DAT food                      cook.NPST mother-self-DAT  
*nguna-nja-kurra-ku*  
 lie-INFIN-OBJ.C-DAT  
 “The girl is cooking food for her mother who is lying down.”  
 (Simpson 1991: 385)
- b. *Maliki-rna ramparl-luwa-rnu Jakamarra-ku*                      *parnka-nja-kurra*  
 dog-1SG accident-hit-PST Jakamarra-DAT run-INFIN-OBJC  
 “I accidentally hit Jakamarra’s dog while it was running.” (EID)

- (33) a. *Karnta-ngku ka-ju kurdu miliki-yirra-rni*  
 woman-ERG PRES.IMPFF-1SG.O child show-put-NPST  
*nguna-nja-kurra-(ku)*  
 lie-*INFIN-OBJ.C*-(DAT)  
 “The woman is showing the child to me while I am lying down.”  
 (Simpson 1991: 342)
- b. <sup>??</sup> *Yu-ngu-rna-rla kurdu parraja-rla ngunga-nja-kurra*  
 give-PST-1SG.S-3DAT child coolamon-LOC sleep-*INFIN-OBJ.C*  
*yali-ki*  
 that-DAT  
 “I gave the child which was sleeping in the coolamon to that one.”  
 (Simpson 1991: 341)}

The verb phrase structures proposed above allow a simple characterization of this data. Control by a nominal within the *vP* domain registers as object control, whereas control by a nominal (in an A-position) above the *vP* registers as subject agreement, and control by a nominal within the VP triggers the default complementizer. This generalization may be technically implemented in a number of ways, the choice among which seems immaterial here.

To conclude this section, I have demonstrated that Warlpiri exhibits both a symmetric and an asymmetric applicative construction. I showed that the Warlpiri applicative data is problematic for an LFG analysis of applicatives (Bresnan & Moishi 1990), which uses a-structure and f-structure to account for the differing behaviour of noun phrases in applicatives, rather than using syntactic structure. Since a flat-structure analysis of Warlpiri requires differences in the behaviour of noun phrases to be encoded at a-structure/f-structure (by hypothesis no asymmetries between noun phrases are present in the syntactic structure), the applicative data is problematic for a flat-structure analysis of Warlpiri. Finally, I outlined a crosslinguistic analysis of applicative constructions which attributes the differing behaviour of noun phrases to a hierarchical syntactic structure, and showed that the Warlpiri data are compatible with such an analysis.

This section, then, has argued for a hierarchical syntactic verb phrase in Warlpiri. In the following section, I argue for a hierarchical syntactic structure above the verb phrase, examining the placement of adverbs and the ordering of elements in the left periphery.

## 4. Above the Verb Phrase

### 4.1 Adverbs

In this section, I examine the placement of adverbs in Warlpiri. According to a flat-structure account of Warlpiri syntax in which elements are freely base-generated in any order, we expect to find no restrictions on the placement of adverbs within the clause. However, I demonstrate that systematic restrictions on adverb placement do exist, and that they follow crosslinguistic patterns. I begin the discussion with Cinque's (1999) description and analysis of universal adverb placement patterns.

Cinque (1999) shows that the placement of adverbs across languages is predictable; furthermore, he demonstrates that this ordering of adverbs corresponds to an ordering of functional heads of the same semantic classes. Therefore, he proposes to account for these orderings through a universal hierarchy of functional projections, adverbs appearing in the specifiers of these projections. In this section, I present Cinque's hierarchy, and provide evidence that Warlpiri adverbs are ordered according to this hierarchy.

At the top of Cinque's hierarchy are functional projections within the CP domain, which introduce adverbs from the following classes: mood<sub>speech act</sub> (*frankly, honestly*) > mood<sub>evaluative</sub> (*fortunately, happily*) > mood<sub>evidential</sub> (*allegedly, evidently*) > mood<sub>epistemic</sub> (*probably, presumably*). Evidentials are present in Warlpiri, and include *kari* "asserted fact, based on personal experience", *kari-nganta* "fact", and *kula-nganta* "counterfactual belief". Cinque's hierarchy thus predicts that these should appear leftmost in the clause. This prediction is borne out: Laughren (to appear) notes that *kari*, *kari-nganta*, and *kula-nganta* must appear initially, preceding topicalized or focused constituents, complementizers, and second position clitics;<sup>5</sup> any other ordering is ungrammatical.<sup>6</sup>

- (34) a. *Kari ka-lu*                      *wangka-mi*  
 fact PRES.IMPF-3PL speak-NPST  
 "I can see/hear that they are speaking." (Laughren, to appear: 28)
- b. *Kula-nganta kaji-npa*      *nyuntu pantu-rnu*  
 CF                      NFACT.C-2SG you    spear-PST  
 "I thought (wrongly) that you must have speared it."  
 (Laughren, to appear: 29b)

- c. *Kari-nganta miyi-wangu ka-rnalū-jana yarnunjuku*  
 FACT food-without PRES.IMPF-1PL.EXCL-3PL.OBJ hungry  
*nyina*  
 sit.NPST  
 “Isn’t it obvious that we are waiting for them (here) hungry without  
 any food.” (Laughren, to appear: 29d)

The next subgroup of functional projections in Cinque’s hierarchy appear in the IP domain, and include temporal (*now, then*), mood<sub>irrealis</sub> (*perhaps*), mood<sub>necessity</sub> (*necessarily*), and mood<sub>possibility</sub> (*possibly*). Warlpiri *-lku* “now, then” is a candidate for a temporal adverb, however care must be taken to distinguish two uses of this clitic. In one use, *-lku* may be suffixed onto a phrase, and take scope only over that phrase; if the phrase is discontinuous, *-lku* will appear on all elements construed as part of that phrase (similarly to case suffixes). In this use, illustrated in (35), *-lku* does not function as a sentential temporal adverb.

- (35) a. *ngula-jangka kaji-lpa payi-lki yarnka-yarlarni*  
 after.that NFACT.C-PST.IMPF wind-then start.out-hereabouts  
*warlpa-lku*  
 wind-then  
 “then a cool wind comes up”
- b. *Walyka-lku ka ngurrju wangka-mi-rni payi-lki*  
 cold-now PRES.IMPF good blow-NPST-hither wind-now  
 “a nice cool breeze is now blowing my way”
- c. *context:*  
*Jaaly-luwarni* is when the wind blows cool on us. If you are being  
 scorched by hot air and then a cool wind comes up you would say:  
 “Hurrah! The wind is now blowing cool on me, a nice cool breeze is  
 now blowing this way.

However, *-lku* seems to also have a use as a sentential adverb.

- (36) a. *Yarla-lku kala-lu jaala-karla-ja wini-wini*  
 yams-then PST.C-3PL back.and.forth-dig-PST burnt.off.country  
*karlarrā-purda.*  
 west-towards  
 “Then they went all over the burnt off country towards the west  
 digging up yams.”

- b. *Ngapa-wangu-rla-lku-rnalu pina-rni kulpa-ja*  
 water-without-PREC.C-then-1 PL.EXCL back-hither return-PST  
*Liirlpari-kirra.*  
 Liirlpari-ALL  
 “When the water ran out we would then go back to Liirlpari.”
- c. *warlu-lku ka-rnalu wiri-wiri yirra-rni*  
 firewood-then PRES.IMPF-1 PL.EXCL big-big place-NPST  
 “then we put down big pieces of fire-wood”

In these examples, *-lku* appears between the initial topic and the auxiliary. This is therefore lower than the evidential CP adverbs considered above, and within the IP domain (since it appears above the aspectual and agreement clitic cluster), as expected. Unlike in the examples considered in (35) above, in which *-lku* appeared as a nominal suffix, *-lku* is not repeated on each segment of a discontinuous constituent when used as a sentential adverb. This can be observed in (36c), for the discontinuous noun phrase *warlu ... wiri-wiri*. The examples in (37) exemplify the ordering of Mood<sub>evidential</sub> > Temporal. In these examples, the second position clitic cluster has raised to adjoin to *kari*; therefore the focused phrase appears after the clitic cluster, and *-lku* immediately follows the focused phrase (see the following section for discussion of the positioning of focused phrases and movement of the clitic cluster).

- (37) a. *Kari ka-rna maju-lku nyina.*  
 FACT PRES-1SG bad-now be.NPST  
 “I know that I’m now very ill”.
- b. *Kari ka ngurrju-lku nyina nyurnu-jangka-ju.*  
 FACT PRES.IMPF good-now be.NPST sick-after-TOP  
 “I see that he’s well now after being sick.”

Warlpiri also has an adverb from the irrealis class: *marda* “perhaps”. As expected, this adverb also appears after an initial topicalized or focused constituent and before the auxiliary.<sup>7</sup> This positioning is particularly striking in that it results in the second position clitic cluster appearing in third position in the clause.

- (38) a. *Nyarrpara-rna yani-rra? Wurnturu-juku marda kapu-rna*  
 where-1SG go-thither far-continue perhaps FUT.C-1SG  
*pi-nyi.*  
 kill-NPST  
 “Where will I go? If I go really far perhaps I will kill (some).”

- b. *Bore marda kaji ka panti-rni yapa-kurlangu*  
 bore **perhaps** NFACT.C PRES.IMPV pierce-NPST people-POSS  
*nyina-nja-ku-rlangu.*  
 be-INFIN-PURP.C-for.example  
 “Maybe he can sink a bore for Aboriginal people to live from.”
- c. *Nyuntu-ku marda kapu-ngku turaki-ji yi-nyi.*  
 you-DAT **perhaps** FUT.C-2SG.O car-TOP give  
 “To you perhaps he will give the car.”

Furthermore, when both *-lku* and *marda* appear in the same clause, *-lku* precedes *marda*, as predicted by Cinque’s hierarchy: temporal > irrealis.

- (39) *Ngurrju-ngku-lku marda ka-ju*  
 good-ERG-now **perhaps** PRES.IMPV-1SG.O  
*yarnirnpa-wangu-rlu-lku marda nya-nyi-rni.*  
 unwilling-without-ERG-now **maybe** look-NPST-hither  
 “She’s looking my way perhaps approvingly now, perhaps not unwilling  
 (to have me) now.” [approvingly perhaps now, not unwillingly perhaps  
 now, she’s looking my way]

Cinque’s final grouping of adverbs is the largest, and consists of functional projections between IP and the verb phrase. Predictions are complicated by the fact that several of the adverbs in this group may appear in two distinct positions within the clause, with subtle meaning distinctions (scope over the event versus scope over the verb). Furthermore, adverbs in this class in Warlpiri almost exclusively belong to the class of preverbs. This places them in the expected position within the clause; however it limits our ability to test the ordering among these adverbs. I have not been able to find, or elicit, examples containing multiple adverbial preverbs. Preverbs in this grouping in Warlpiri include *yarda* “again” and *pina* “back, again” (Aspect<sub>repetitive</sub>), *panuku* “often” (Aspect<sub>frequentive</sub>), *warrarda* “always” (Aspect<sub>perfect</sub>), *muku* “completely, all” (Aspect<sub>completive</sub>).

- (40) a. *Ngayi-lpa-rnalu pina-rra ya-nu munga-ngka.*  
 only-PST.IMPV-1PL.EXCL **again**-thither go-PST night-LOC  
 “We were just going back again at night.”
- b. *Mala-marri kala-lu nyina-ja jarlu-patu kuja-lpa-lu kuyu*  
 hunter PST.C-3PL be-PST old-PAUC that-PST.IMPV-3PL animal  
*warrarda pu-ngu.*  
 always kill-PST  
 “The old people used to be expert hunters who always caught game.”

- c. *Ngula-jangkaju — yi-rlipa-nyanu yarda wari-rninja-ya-ni*  
 after.that-TOP REL.C-1PL.INCL-REFLEX again tie-INF-go-NPST  
*mirriji-rla kaji-ngalpa-rla rurruny-ya-ni.*  
 leg-LOC NFACT.C-1PL.INCL.OBJ-DAT off-go-NPST  
 “Then, if the decorations come off, we’ll tie them on us again.”

Adverbs in this grouping which are not preverbs include *yaruju*, *yarujaruju*, *purru*, *rarringki*, *kapanku*, *paja-paja*, *kilji* “quickly” (Aspect<sub>celerative</sub>), and *nyurru* “already, previously” (Tense<sub>anterior</sub>).<sup>8</sup> Either ordering of celerative and anterior adverbs would be predicted by Cinque’s hierarchy, thus their relative order is not revealing. However, these adverbs also must appear in the lower section of the clause, following the auxiliary, as predicted by the hierarchy.<sup>9</sup>

- (41) a. *Yaruju, ngulaji yangka kujaka ya-ni yapa*  
*yaruju that-TOP that.one FACT.C-PRES.IMPF go-NPST person*  
*kapanku manu kilji ngurra nyanungu-nyangu-kurra*  
 quickly and quickly home he-POSS-ALL  
 “Yaruju is like when a person goes along rapidly and quickly to his place”
- b. *Ngula-lu yaruju karri-nja-pardi-ja yarnka-ja.*  
 that-3PL quickly stand-INF-rise.up-PST depart-PST  
 “Then they got up straightaway and set off.”
- c. *Ngaju-ju-rna nyurru yarrpu-rnu.*  
 I-TOP-1SG already set.kindling.for.a.fire-PST  
 “I have already set the kindling in place.”

In sum, in this section we have uncovered evidence in Warlpiri for Cinque’s (1999) universal hierarchy of functional projections introducing adverbs into the clause structure. Specifically, we have found evidence for the following aspects of the hierarchy in Warlpiri:

- (42) Mood<sub>Evidential</sub> > Temporal > Mood<sub>Irrealis</sub> > Asp<sub>Celerative</sub>  
*kari, kari-nganta, -lku marda yaruju, kapanku, paja-paja,*  
*kula-nganta kilji yarujaruju, purru, rarringki*  
 T<sub>Anterior</sub>, Asp<sub>Perfect</sub>, Asp<sub>Completive</sub>, Asp<sub>Repetitive</sub>, Asp<sub>Frequentive</sub>  
*nyurru warrarda muku yarda, pina panuku*

In the following section we turn to the left periphery in Warlpiri, arguing that Warlpiri displays two hierarchically ordered topic projections as well as two hierarchically ordered focus.

## 4.2 The Left Periphery

Rizzi (1997) argues for an articulated left periphery in which CP is divided into a number of distinct projections, following Pollock's (1989) division of IP into distinct projections. Rizzi's (1997) proposed structure is the following:

- (43) [ForceP [TopP\* [FocP [TopP\* [FinP]]]]]

where ForceP specifies the clause type (declarative, interrogative, adverbial, etc), TopP hosts topics, FocP hosts foci and *wh*-phrases, TopP hosts additional topics, and FinP marks finiteness. Subsequent research proposed certain modifications to this structure and uncovered a certain amount of cross-linguistic variation, however, the general picture remains.

In this section, I examine the left periphery in Warlpiri, arguing that word order in Warlpiri is not freely base-generated, but rather determined by movement to hierarchically organized projections located in the left periphery of the clause.

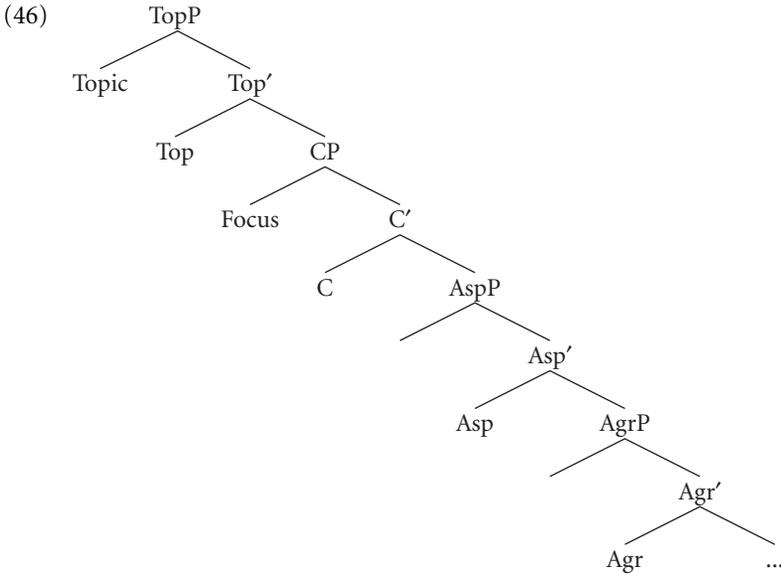
The Warlpiri literature identifies the initial position in the clause, before the second position clitic cluster, as a focus position. Indeed, *wh*-phrases typically appear in this position, as do the phrases that replace them in the answer:

- (44) a. *Nyiya ngapa-ngka nyampirl-wanti-ja?*  
 what water-LOC splash-fall?  
 "What fell with a splash into the water?"  
 b. *Kurdu marda ngapakurra wantija.*  
 child perhaps water-LOC fall-PST  
 "The child probably fell into the water."

However, in two quantitative and descriptive studies of Warlpiri discourse, Swartz (1988) and Shopen (2001) refer to the initial position in Warlpiri as hosting topics. Laughren (to appear) presents the insight that the pre-auxiliary position in Warlpiri is not unique. Rather it represents the specifier of a topic projection or a focus projection, with the second position clitic cluster raising to occupy the head of the highest (active) functional projection. Laughren illustrates that both positions may be filled, in which case the topic precedes the focus, and the second position clitic appears immediately after the topic:

- (45) *Pikirri-ji-npa nyarrparla-rla warungka-ma-nu-rnu?*  
 spearthrower-TOP-2SG where-LOC forget-CAUSE-PST-hither  
 "Where did you forget the spearthrower on your way here?"  
 (Laughren, to appear: (27))

Thus, (modulo minor terminological differences), she proposes the following structure for Warlpiri:



in which the agreement clitics are generated in Agr, the aspectual clitics are generated in Asp, and the complementizer particles are generated in C. Agr raises to Asp which in turn raises to C. C may further raise to Top, and indeed must do so if the specifier of TopP is filled.

In the following sections, I propose further refinements to this structure, and provide evidence that the specifier positions of these functional projections are filled through movement rather than free base-generation.

#### 4.2.1 *Focus and movement*

In this section we consider the positioning of focused phrases and *wh*-phrases in Warlpiri. I suggest that *wh*-phrases and focused phrases occupy distinct projections, and argue that *wh*-phrases move to their surface positions.

Recall that *wh*-phrases in Warlpiri appear in a left-peripheral position, as do the focused phrases which replace them in the answer. Additional examples are provided in (47).

- (47) a. *Ngana-patu ka-lu*                      *wangka-mi?*  
 who-PL        PRES.IMPf-3PL speak-NPST  
 “Which ones are speaking?”

- b. *Yurntumu-wardingki-patu ka-lu*                      *wangka-mi*  
 Yuendumu-habitant-PL    PRES.IMPF-3PL speak-NPST  
 “Yuendumu people are speaking”
- c. *Nyarrpa-jarri-mi ka-lu*                      *Yurntumu-wardingki-patu?*  
 how-INCH-NPST    PRES.IMPF Yuendumu-habitant-PL  
 “What are the Yuendumu people doing?”
- d. *Wangka-mi ka-lu*                      *Yurntumu-wardingki-patu*  
 speak-NPST    PRES.IMPF-3PL Yuendumu-habitant-PL  
 “The Yuendumu people are speaking” (Laughren to appear)

Notice that in (47d), the verb occupies the focus position. In Legate (2001) I argued on the basis of co-occurrence restrictions between overt complementizers and focused heads (verbs and preverbs), that this surface string results from two possible derivations: movement of the verb phrase to the specifier of the focus projection, or movement of the verb to the head of focus.

*Wh*-phrases are not in complementary distribution with focused phrases in Warlpiri (unlike, for example, Italian (Rizzi 1997) and Hungarian (Puskas 2000)). When they do co-occur, focus must precede *wh*:

- (48) (I don't care where the children were playing. ...)  
*Ya-nu-pala nyarrpara-kurra kurdu-jarra?*  
 go-PST-DUAL where-to                      child-DUAL  
 “Where did the children go?” (EID)

This suggests that Warlpiri has a focus projection distinct from and dominating the projection that hosts *wh*-phrases.

Turning to the placement of *wh*-phrases in this position, we note that a *wh*-phrase from an embedded clause cannot appear in the matrix CP to form a matrix question. Thus, (49) is grammatical only under a reading in which the *wh*-phrase originates in the matrix clause, despite the fact that this reading is pragmatically less favourable.

- (49) *Ngana-ngkajinta-ngku yimi-ngarru-rnu Jakamarra-rlu, kuja ya-nu*  
 who-with-2SG.OBJ    speech-tell-PST    Jakamarra-ERG C.FACT go-PST  
*wirlinyi Jangala*  
 hunting Jangala  
 “Who did Jakamarra tell you with that Jangala went hunting?”  
 (Granites et al. 1976)  
 (\*“Who did Jakamarra tell you that Jangala went hunting with?”)

Instead a scope-marking strategy must be used for long-distance questions (see Legate, under review, for an analysis of scope-marking constructions in Warlpiri):

- (50) *Nyarrpa-ngku yimi-ngarru-rnu Jakamarra-rlu [kuja nyarrpara-kurra how-2SG.OBJ speech-tell-PST Jakamarra-ERG C.FACT where-ALL Jampijinpa ya-nu]?*  
*Jampijinpa go-PST*  
 “Where did Jakamarra tell you Japanangka went?” (EID)

In contrast, a *wh*-phrase from an embedded infinitival clause can appear in the matrix focus position, forming a long-distance question.

- (51) a. *Marna-kurra ka-rna wawirri nya-nyi nga-rninja-kurra*  
 grass-OBJ.C PRES.IMPF-1SG kangaroo see-NPST eat-INFIN-OBJ.C  
 “I see a kangaroo eating grass” (Hale et al. 1995: 1434)
- b. *Nyiya-kurra ka-npa wawirri nya-nyi nga-rninja-kurra*  
 what-OBJ.C PRES.IMPF-2SG kangaroo see-NPST eat-INFIN-OBJ.C  
 “What do you see a kangaroo eating?” (EID)

How does the dual-structure approach account for these data? Simpson (1991) argues that infinitival clauses are nominal in some sense. Therefore, just as the elements of a noun phrase may be base-generated in distinct positions throughout the clause, (52), the sub-constituents of an infinitival may also be base-generated in discontinuous parts.

- (52) *Discontinuous DPs*  
*Maliki-rli-ji yarlku-rnu wiri-ngki*  
 dog-ERG-1SG.OBJ bite-PST big-ERG  
 “A big dog bit me.” (Hale et al. 1995: 1434)

The alternative approach advocated here, in contrast, attributes the contrast between (49) and (51) to constraints on movement. Thus, extraction from finite clauses is impossible or difficult in many languages, whereas extraction from nonfinite clauses (and subjunctives) greatly improves.

Support for the movement-based approach comes from adjunct infinitivals. Since adjunct noun phrases may be discontinuous in Warlpiri, identically to argument noun phrases, the dual-structure approach predicts that *wh*-phrases from an adjunct infinitival should also be able to appear in the matrix clause. This prediction is not borne out. In the following, the (a) examples are grammatical sentences containing an adjunct infinitival; the (b) examples are ungrammatical attempts to extract from the adjunct.

- (53) a. *Kurdu-ngku ka jarntu warru-wajili-pi-nyi karnta-ku,*  
 child-ERG PRES.IMPFF dog around-chase-NPST woman-DAT  
*[miyi purra-nja-rlarni].*  
 food cook-INF-OBV.C  
 “The child is chasing the woman’s dog around while she is cooking  
 food” (Hale et al. 1995: 1439–1440)
- b. \**Nyiya-rlarni ka kurdu-ngku jarntu warru-wajili-pi-nyi*  
 what-OBV.C PRES.IMPFF child-ERG dog around-chase-NPST  
*karnta-ku, [purra-nja-rlarni]?*  
 woman-DAT cook-INF-OBV.C  
 “What is the child chasing the woman’s dog around while she is  
 cooking?” (EID)}
- (54) a. *Wati-ngki-nyanu jurnarrpa ma-nu, [wurna ya-ninja-kungarnti-rli].*  
 man-ERG-REFLEX belongings get-PST travel go-INF-PREP.C-ERG  
 “The man picked up his things before going on a trip.”  
 (Hale et al. 1995: 1443)
- b. \**Nyarrpara-kungarnti-nyanu wati-ngki jurnarrpa ma-nu,*  
 where-PREP.C-REFLEX man-ERG belongings get-PST  
*[ya-ninja-kungarnti]?*  
 go-INF-PREP.C-ERG  
 “Where did the man pick up his things before going?” (EID)}
- (55) a. *Karnta-ngku warlu yarrpu-rnu [kuyu purra-nja-kungarnti].*  
 woman-ERG fire light-PST meat cook-INF-PREP.C  
 “The woman lit the fire in order to cook meat.”
- b. \**Nyiya-kungarnti karnta-ngku warlu yarrpu-rnu*  
 what-PREP.C woman-ERG fire light-PST  
*[purra-nja-kungarnti].*  
 cook-INF-PREP.C  
 “What did the woman light the fire in order to cook?” (EID)

The data in (53), (54), and (55) thus pose a significant challenge to the dual-structure account, which claims that word order variations in Warlpiri are derived through free base-generation. Furthermore, they suggest that the restrictions on *wh*-positioning we observe in Warlpiri should be attributed to constraints on movement: finite clauses and adjunct non-finite clauses being more resistant to extraction than argument non-finite clauses.

In this section, we have seen evidence that the focus projection in Warlpiri dominates an additional focus projection specialized for *wh*-words. Furthermore, the placement of *wh*-phrases in this projection appears to be accomplished

through movement rather than free base-generation, contra the flat-structure approach.

The following section turns to topics in Warlpiri, arguing for two separate topic projections, associated with distinct semantic interpretations.

#### 4.2.2 *Topic*

In addition to topicalization, which was illustrated in (45) above and repeated in (56), Warlpiri displays hanging topic left dislocation (HTLD), illustrated in (57).

- (56) *Pikirri-ji-npa nyarrparla-rla warungka-ma-nu-rnu?*  
 spearthrower-TOP-2SG where-LOC forget-CAUSE-PST-hither  
 “Where did you forget the spearthrower on your way here?”  
 (Laughren, to appear: (27))

- (57) *Wawirri, ngula ka nyina walya-ngka-jala.*  
 kangaroo that PRES.IMPF be.NPST ground-LOC-actually  
 “The kangaroo, it lives on the ground.”

The two types of topicalization differ in a number of ways, as can be observed in (56) and (57), as well as (58) below. HTLD is intonationally set off from the remainder of the clause, and correspondingly cannot serve as a host for the second position clitic cluster. A topicalized phrase, on the other hand, must host the clitic cluster, when present. Furthermore, hanging topics, but not topicalized phrases, are related to a resumptive element within the clause, typically *ngula* “that”. Indeed, the resumptive in HTLD constructions must itself be topicalized. Finally, HTLD is only possible in matrix clauses, whereas topicalization freely occurs in embedded contexts. The Warlpiri data thus follows crosslinguistic patterns in these respects (see the papers in Anagnostopoulou et al. 1997 for comprehensive discussion of these phenomena).

The two constructions in Warlpiri also display differing semantic interpretations, again in line with crosslinguistic generalizations. Rodman (1997) argues that HTLD may be used to introduce a new topic into the discourse, whereas topicalization cannot (see also Puskas 2000 for Hungarian).<sup>10</sup> This distinction is also found in Warlpiri.

The HTLD construction is well represented in the Warlpiri Dictionary (Warlpiri Dictionary Project 1993), due to a particular elicitation strategy used by Kenneth Hale. Kenneth Hale would ask the consultant to explain the meaning of a word in Warlpiri, as if the addressee spoke Warlpiri but didn’t happen to know the word in question. Thus, a great many entries in the

dictionary begin with the establishment of the word in question as the topic for the discourse, through HTLD. Characteristic examples are provided in (58).

- (58) a. *Jalyirrrpa, ngula-ji parla watiya-jangka manu pinkirrrpa*  
*jalyirrrpa* that-TOP leaf tree-from or feather  
*jurlpu-kurlangu.*  
 bird-POSSESSIVE  
 “*Jalyirrrpa* is a leaf from a tree or a bird’s feather.”
- b. *Yalypilyi ngula-ju pama kuja-ka nguna*  
*yalypilyi* that-TOP delicacy FACT.C-PRES.IMPf lie-NPST  
*manja-ngawurrrpa.*  
 mulga-belonging.to  
 “*Yalypilyi* is a sweet scale found on mulga trees.”
- c. *Jalangu, ngula-ji yangka parra jukurrawangu manu*  
*jalangu* that-TOP that day tomorrow-without and  
*pirrarniwangu*  
 yesterday-without  
 “*Jalangu* is a day which is not tomorrow or not yesterday.”
- d. *Jamalya ngula-ju watiya rdilyki paji-rninja-warnu — linji.*  
*jamalya* that-TOP tree broken cut-INF-from dead  
 “*Jamalya* is a tree which has been broken off and which is dead.”

Continued reference to the established topic is then accomplished through topicalization rather than dislocation.

- (59) a. *Initial reference through HTLD*  
*Jaalypa, jaalypa yangka kaji-ka kanunju wangka*  
*jaalypa* whisper that NFACT.C-PRES.IMPf down speak-NPST  
*jaalypa-nyayirni.*  
 whisper-really  
 “*Jaalypa* is like when one speaks in a low voice, very low.”
- b. *Subsequent reference through topicalization*  
*Ngula-ju marda yi-ka-lu-rla kulurlangu*  
 that-TOP maybe REL.C-PRES.IMPf-3PL-DAT anger-for.eg  
*jangkardu-wangka yangka kanunju kuja-ka-lu*  
 opposing-speak.NPST that down FACT.C-PRES.IMPf-3PL  
*jaaly-ma-ni — jaalypa kuja-ka-lu wangka-mi.*  
 plot-NPST soft FACT.C-PRES.IMPf-3PL speak-NPST  
 “It is perhaps as when angry people are speaking against someone  
 like in a low voice when they are plotting — when they speak softly.”

Therefore, it seems that Warlpiri exhibits crosslinguistically familiar topicalization and hanging topic left dislocation constructions. Based on analyses of the constructions in other languages (see for example the papers in Anagnostopoulou et al. (2000)), I assume that the topicalization construction involves movement whereas HTLD involves base-generation. Furthermore, we have seen the targets of HTLD and topicalization are distinct. Hanging topics clearly appear above the projection which hosts topicalized phrases; indeed the locus of HTLD seems to be the highest projection in the clause, as not even evidential adverbs may appear to the left of hanging topics.<sup>11</sup>

In sum, this section has motivated the following projections in Warlpiri:

- (60) [TopP<sub>HTLD</sub> [TopP [FocP [FocP<sub>wh</sub> [CP]]]]]

#### 4.3 Summary of projections above the verb phrase

In the previous two sections, I argued for a number of functional projections in Warlpiri, and showed that such projections are well motivated on crosslinguistic grounds. Here I incorporate the results of the two sections into a partial syntactic structure for Warlpiri. First, however, I would like to address an additional issue, the nature of the head I have up to this point called C, which introduces the complementizer particles. The complementizers in Warlpiri mark finiteness, possibility, future, (ir)realis mood, and past habitual aspect:<sup>12</sup>

- (61) *(Finite) Complementizers in Warlpiri*
- |                         |               |
|-------------------------|---------------|
| <i>kuja, ngula</i>      | Fact          |
| <i>kapu, ngarra</i>     | Future        |
| <i>kaji</i>             | Nonfact       |
| <i>kala</i>             | Past habitual |
| <i>kala</i>             | Potential     |
| <i>yungu, yinga, yi</i> | Cause/Reason  |

Thus it appears that a number of functional projections which may be distinguished in (at least some) other languages combine into a single projection in Warlpiri. These functional projections include Rizzi's Finite head and a (coherent) subsection of Cinque's adverb hierarchy: T(Past) > T(Future) > Mood<sub>irrealis</sub> > Mod<sub>possibility</sub> > Asp<sub>habitual</sub>. It is not clear, however, that these projections can simply be fused into a single head. Recall that we have seen evidence for temporal adverbs in Warlpiri, preceding adverbs of irrealis mood, preceding the C head. Thus, at least T and Mood<sub>irrealis</sub> must be separate projections,

related to the complementizers in C in some manner (e.g. agreement, movement). For now, I leave the issue open.

The partial hierarchies motivated in the preceding two sections are repeated here in (62) and (63).

(62) Mood<sub>Evidential</sub> > Temporal > Mood<sub>Irrealis</sub> > Asp<sub>Celerative</sub>, T<sub>Anterior</sub>, Asp<sub>Perfect</sub>,  
Asp<sub>Completive</sub>, Asp<sub>Repetitive</sub>, Asp<sub>Frequentive</sub>

(63) [TopP<sub>HTLD</sub> [TopP [FocP [FocP<sub>wh</sub> [CP [AspP<sub>(im)perfective</sub> [AgrP]]]]]]]]]

Let us consider how these hierarchies are to be combined. As we have seen, hanging topics are possible only in root contexts, are intonationally dislocated from the clause, and may not host the second position clitic cluster. The evidentials, on the other hand, are not intonationally dislocated, and may (optionally) host the second position clitic cluster:

(64) *Kari ka-lu*                      *wangka-mi*  
fact PRES.IMPf-3PL speak-NPST  
“I can see/hear that they are speaking.” (Laughren, to appear: 28)

This suggests that TopP<sub>HTLD</sub> > MoodP<sub>evidential</sub>.

In the discussion of the temporal *-lku*, we noted that this suffix appears after focused constituents. For example, in (37), repeated in (65), the auxiliary clitic cluster has raised to cliticize onto the evidential *kari*, and *-lku* appears after the focused constituent which follows the auxiliary.

(65) a. *Kari ka-rna*    *maju-lku nyina*.  
fact PRES-1SG bad-now be.NPST  
“I know that I’m now very ill”.  
b. *Kari ka*                      *ngurrju-lku nyina*    *nyurnu-jangka-ju*.  
fact PRES.IMPf good-now be.NPST sick-after-TOP  
“I see that he’s well now after being sick.”

Therefore FocP > Temporal, and I will assume that FocP<sub>wh</sub> > temporal as well.

The irrealis *marda* was shown to appear before the auxiliary clitic cluster, which consists of the combination of C, AspP<sub>(im)perfective</sub>, and Agr. Therefore, Mood<sub>irrealis</sub> > C.

(66) *Nyuntu-ku marda kapu-ngku turaki-ji yi-nyi*.  
you-DAT perhaps FUT.C-2SG.O car-TOP give  
“To you perhaps he will give the car.”

Finally, we saw that the remaining adverbs necessarily followed the clitic cluster,

thus functional projections related to these adverbs must follow AgrP.

- (67) *Ngaju-ju-rna nyurru yarrpu-rnu.*  
 I-TOP-1SG    already set.kindling.for.a.fire-PST  
 “I have already set the kindling in place.”

Therefore, the syntactic structure above the verb phrase motivated for Warlpiri in this section is the following:

- (68) *The syntactic structure of Warlpiri*  
 TopP<sub>HTLD</sub> > MoodP<sub>evidential</sub> > TopP > FocP > FocP<sub>wh</sub> > TemporalP >  
 MoodP<sub>irrealis</sub> > CP > AspectP<sub>(im)perfective</sub> > AgrP > AspP<sub>celerative</sub> > TP<sub>anterior</sub>  
 > AspP<sub>perfect</sub> > AspP<sub>completive</sub> > AspP<sub>repetitive</sub> > AspP<sub>frequentive</sub> >  
 AspP<sub>frequentive</sub> > AspP<sub>repetitive</sub> > *v*P

## 5. Conclusion

This paper has examined the claim that Warlpiri requires allowing the option of a flat, unconstrained syntactic structure into the typological space. Substantial data were presented demonstrating that not only is flat structure unnecessary to account for Warlpiri, it is inadequate. Within the verb phrase, the differing behaviour of objects in applicative constructions was shown to have a syntactic, rather than lexical, source. Above the verb phrase, I uncovered evidence that adverbs in Warlpiri follow Cinque’s (1999) univocal hierarchy. In that Cinque argued that this hierarchy must be tied to functional projections, the data support the presence of these functional categories in Warlpiri as well. Finally, I demonstrated the existence of two distinct topic projections and two distinct focus projections in Warlpiri, and presented evidence that the placement of *wh*-phrases in focus is accomplished through movement. I conclude on this basis that Warlpiri is not characterized by a flat, unconstrained syntactic structure. Therefore, Warlpiri does not support the claim that flat syntactic structure forms part of the typology of human languages.

## Notes

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paper is dedicated to the memory of Ken Hale. The work was partially funded by a Ken Hale Fellowship for Linguistic Field Research, and SSHRC #752-87-2087. Unless otherwise noted, examples are from the Warlpiri Dictionary Project (1993). Data elicited during my own consultant work with Bess Nungarrayi Price, Teresa Napurrula Ross, and Christine Nungarrayi Spencer are indicated as ELD (Elicited Data). Glosses for examples from the Warlpiri Dictionary Project and examples from the Survey of Warlpiri Grammar (Granites et al. 1976) are my own, using the abbreviations below. To aid the reader, glosses in examples from other sources have been regularized to these abbreviations. Third person singular agreement, perfective aspect, and absolutive case in Warlpiri are all phonologically null, and are usually left out of glosses in the literature. This practice is continued here.

PRES	present	SG	singular	ERG	Ergative
PST	past	PL	plural	DAT	Dative
NPST	non-past	DU	dual	LOC	Locative
FUT	future	OBJ	object	TOP	Topic
IRR	irrealis	REFLEX	reflexive	ALL	Allative
IMPF	imperfective	EXCL	exclusive	EL	Elative
PERF	perfective	INCL	inclusive	NFACT	non-fact
INF	infinitival	POSS	possessive	FACT	fact
INCH	inchoative	1	first person	NEG	negation
IMPER	imperative	2	second person	CAUS	causal
C	complementizer	3	third person	OBV	obviative
PREC	preceding	CF	counterfactual belief		

2. In addition, the LFG framework assumed by A&B and Simpson (1991) posits an a(rgument)-structure level, which encodes the participants linked to a particular predicate. However, it is the f-structure/c-structure distinction that will be important in our discussion.

3. Naturally, in some languages, the checking relationship between AO and *v* may be accomplished through covert movement or in situ agreement. Such distinctions, although ultimately interesting, are not crucial to the discussion here.

4. The result will hold long as a pseudopassive derivation in which the preposition is reanalysed with the verb (e.g. *This bed has been slept in*) is not available.

5. To aid the reader, the second position clitic cluster is underlined in this section.

6. Note that *kula-nganta* has an additional use whereby it appears affixed to the constituent over which it has scope. This use is illustrated in (i):

- (i) *Ya-ninja-rla-lpa* *palka-yijala nyina-ja kamparru yapa-kari* *kula-nganta, kala*  
 go-INFIN-PREC.C-PST.IMPF body-too sit-PST ahead man-other CF but  
*nyanungu-yijala-lpa nyangu*  
 3-also-PST.IMPF POSS

“He came and was sitting up there ahead — what looked like another person to him — but it was the exact same fellow that he saw.”

7. As a free morpheme, *marda*, unlike *-lku*, may also be focused, and so appear in the initial focus position. We are concerned here with the neutral position of *marda* within the clausal hierarchy, and thus abstract away from such examples.

8. An interesting question is what underlies the distinction between adverbs that are free morphemes and those that are preverbs. One possibility is that the distinction is hierarchical. Thus, if it can be shown that the repetitive and frequentive preverbs in Warlpiri occupy the second of the two positions afforded for such adverbs in the hierarchy, then the lower adverbs in this section of the hierarchy (those just above the verb phrase) will be preverbs, whereas the adverbs closer to IP will be free morphemes:

- |   |  |   |
|---|--|---|
| (i) free morphemes  |  | preverbs  |
|  |  |  |
| Celerative, Anterior,   |  | Perfect Completive, Repetitive, Frequentive                                       |

An alternative explanation might be that the free morphemes are adverbs occupying the specifier of the appropriate functional projections, whereas the preverbs appear in the head of the appropriate projections. The resolution of this question must be left to further research.

9. These adverbs may also appear initially as focused elements. This positioning may be distinguished from the neutral positioning of CP adverbs before the auxiliary in that the second position clitic cluster appears in second position in such examples, indicating that the adverb occupies the focus position, rather than appearing in third position as we saw above with the CP-level adverbs *-lku* and *marda*:

- (i) *yaruju-rlu-rlupa majungurlu-nya-nyil!*  
 quickly-ERG-1PL.INCL hastily-see-NPST  
 “Let’s see it quickly!”

10. Contrastive topics are not “new” in this sense. See Büring (1997) for a thorough discussion of the semantics of topics.

11. If the projection for hanging topics appears outside of Rizzi’s ForceP, we have an explanation for the impossibility of HTLD in embedded clauses: a hanging topic would interfere with selectional relationship between the embedding head and ForceP.

12. In addition, *kula* is normally considered a negative complementizer. See Laughren, to appear, however, that it must be treated distinctly.

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