

Warlpiri *Wh*-Scope Marking

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*Abstract.* This article analyses the *wh*-scope-marking construction in Warlpiri. The literature on *wh*-scope-marking constructions in other languages debates the relative merits of two types of analyses—the direct-dependency account, which posits covert movement of an embedded *wh*-phrase to replace a matrix expletive, and the indirect-dependency account, which treats the embedded question as the restriction of a matrix *wh*-phrase. I argue that an explanation of the Warlpiri data can only be achieved through a variant of the indirect-dependency approach.

## 1. Introduction

In 1976 the following construction was recorded in the Survey of Warlpiri Grammar:<sup>1</sup>

- (1) a. Nyarra-ngku yimi-ngarru-rmu Jakamarra-rlu kuja-ka  
 how-2SG.OBJ speech-tell-PAST Jakamarra-ERG DECL.C-PRES.IMPF  
 nyarra-para-kurra ya-ni Jampijinpa?  
 where-ALL leave-NPAST Jampijinpa  
 ‘Where did Jakamarra tell you Jampijinpa is going?’
- b. Jampijinpa ka ya-ni kurli-rra.  
 Jampijinpa PRES.IMPF go-NPAST south-ALL  
 ‘Jampijinpa is going south.’
- c. Ngarru-rmu-ju kuja-ka kurli-rra ya-ni.  
 tell-PAST-1SG.OBJ DECL.C-PRES.IMPF south-ALL go-NPAST  
 ‘He told me that he’s going south.’ (Granites, Hale & Odling-Smee 1976)

This paper has a long history, beginning as Legate 1999, and appearing in an early form in Legate 2002a and Legate 2002b; relevant literature that has appeared in the interim has been added as appropriate. Thank you to Noam Chomsky, Kai von Stechow, Suzanne Flynn, Ken Hale, Irene Heim, Sabine Iatridou, Mary Laughren, Howard Lasnik, the audience at NELS 33, and two anonymous *Syntax* reviewers. This research was supported by a Ken Hale Fellowship for Linguistic Field Research from MIT and an International Research Award from the University of Delaware. I am especially grateful to my Warlpiri consultants: Maggie Napangardi Collins, Carol Napangardi Gallagarr, Helen Napurrula Morton, Nancy Napurrula Oldfield, Bess Nungarrayi Price, Teresa Napurrula Ross, Christine Nungarrayi Spencer, Ena Napaljarri Spencer, and Ruth Napaljarri Stewart. Thank you.

<sup>1</sup> Glosses used in the paper are as follows: ALL = allative; ANAPH = anaphoric; C = complementizer; CAUS = cause; DAT = dative; DECL = declarative; DUAL = dual; EL = elative; ERG = ergative; EXCL = exclusive; FUT = future; IMPER = imperative; IMPF = imperfective; INCHO = inchoative; INCL = inclusive; INFIN = infinitive; IRREALIS = irrealis; LOC = locative; NEG = negative; NFACT = nonfact; NPAST = nonpast; OBJ = object; OBV = obviative; PART = particle; PAST = past; PL = plural; POSS = possessive; PREP = preparatory; PRES = present; PURP = purposive; Q = question; REL = relational; SG = singular; SUBJ = subject; TOP = topic.

Examples from my consultant work are marked for record (E1 or T1, and page number when appropriate), speaker (using a pseudonym code), and approximate level of spoken English: B(ilingual), P(artial knowledge)/L(imited knowledge). In examples from this and other sources, glosses have been added or regularized, and the spelling system used in older works has been modernized to assist the reader. Third-person-singular agreement, perfective aspect, and absolutive case in Warlpiri are all phonologically null and are not included in the glosses.

Over a decade later, the counterparts of this *wh*-scope-marking construction in German, Romani, Hindi, Hungarian, and, later, other languages as well began to generate considerable interest (see especially McDaniel 1989, Dayal 1994, Horvath 1997, and the papers in Lutz, Müller & von Stechow 2000); however, the Warlpiri case largely escaped attention.

This article examines the Warlpiri case in detail, demonstrating that it holds considerable interest for the crosslinguistic analysis of the construction. Section 1 presents the properties of the Warlpiri case that must be explained. Section 2 introduces the two leading approaches to *wh*-scope-marking constructions: the direct-dependency approach, which involves covert movement of the embedded *wh*-phrase, and the indirect-dependency approach, whereby the embedded clause serves as a semantic restriction on the matrix *wh*-phrase. The direct-dependency approach demonstrably fails to account for the Warlpiri case. En route to an indirect-dependency analysis, section 3 sets in place some background on Warlpiri syntax: *wh*-movement, dependent clauses, and *wh*-phrases. Finally, section 4 demonstrates that the properties of the Warlpiri *wh*-scope-marking construction are explained through an indirect-dependency analysis. Section 5 concludes.

## 2. Warlpiri *Wh*-Scope Marking

The *wh*-scope-marking construction is illustrated in (2) for Warlpiri and in (3) for German and Hindi.<sup>2</sup>

- (2) Nyarrpa-ngku yimi-ngarru-rnu Jakamarra-rlu [kuja nyiya pantu-rnu  
how-2SG.OBJ speech-tell-PAST Jakamarra-ERG DECL.C what spear-PAST  
Japanangka-rlu]?

Japanangka-ERG

‘What did Jakamarra tell you Japanangka speared?’

(Granites, Hale & Odling-Smee 1976)

- (3) a. Was denkst du [wen sie mag?]

what think you who she likes

‘Who do you think she likes?’

(Lit. ‘what do you think who she likes?’)

- b. Siitaa-ne kyaa socaa [ki ravii-ne kis-ko dekhaa?]

Sita-ERG what thought that Ravi-ERG who saw

‘Who did Sita think Ravi saw?’

(Lit. ‘what did Sita think who Ravi saw?’)

(Lutz, Müller & von Stechow 2000)

Several properties of the construction have attracted attention. The matrix verb does not select for an embedded question, and yet it combines with an embedded question.

<sup>2</sup> Note that *yimi* here is an optional preverb, indicating the manner of communication (*ngarrirni* is also used in the sense of ‘indicate’). See Nash 1982 for discussion of preverbs in Warlpiri.

Furthermore, in that the interpretation is quite close to a long-distance *wh*-question, the matrix *wh*-phrase appears to be uninterpreted, and the embedded *wh*-phrase appears to take matrix scope.

The interpretation is also quite close to a sequence of questions: compare *What did Jakamarra tell you? What did Japanangka spear?* with (2). Thus, we must ensure that the Warlpiri construction does consist of a single question, rather than sequence of questions. Notice that the complementizer *kuja* ‘that’ introduces the dependent clause in (2). This complementizer has an extremely limited distribution in matrix questions, appearing if the *wh*-phrase is clefted, (4a), and in marked questions like (4b).

- (4) a. Wayipurru-rnu-lpa-lu miyi yawakiyi. Nyiya-kurra  
gather-PAST-PAST.IMPF-3PL.SUBJ fruit wild.currant what-ALL  
kuja-lu ma-nu?  
DECL.C-3PL.SUBJ get-PAST  
‘They gathered up the wild currants. What was it that they gathered them into?’
- b. Nyarrpara-rlu kuja panti-rni?  
How-ERG DECL.C spear-NPAST  
‘How to spear it?’ (Warlpiri Dictionary Project 1993)

Even in these cases, the *wh*-phrase precedes the complementizer *kuja*, whereas in (2) the *wh*-phrase follows *kuja*. Thus the dependent clause in (2) is not interpretable as an independent question:

- (5) \*Kuja nyiya pantu-rnu Japanangka-rlu?  
DECL.C what spear-PAST Japanangka-ERG  
‘What did Japanangka spear?’

The ordering in which the *wh*-phrase follows the complementizer is rather that found in nonmatrix questions:

- (6) Jakamarra-rlu-ju payu-rnu, kuja nyiya pantu-rnu Japanangka-rlu.  
Jakamarra-ERG-1SG.OBJ ask-PAST DECL.C what spear-PAST Japanangka-ERG  
‘Jakamarra asked me the identity of what Jakamarra speared.’  
(Granites, Hale & Odling-Smee 1976)

Additionally, native-speaker intuitions support treating the construction as a single sentence, rather than a sequence of questions. One speaker that I consulted commented:<sup>3</sup>

<sup>3</sup> As suggested by this quote, the construction appears to be rare. The Warlpiri Dictionary does not contain examples, and Ken Hale (p.c.) did not recall hearing tokens in natural discourse, but rather came across the construction when asking for a translation of long-distance questions. However, speakers accept the construction without hesitation when presented with examples (this notably includes those of my consultants who have only limited knowledge of English, as well as Ken Hale’s son Ezra Hale, who spoke Warlpiri until he began to attend school) and speakers appear to have clear and consistent judgments on it.

“[Such] examples are correct, but we would use a couple of simpler sentences instead of the one long and complex one. Old people would use sentences like this. I would make a series of short statements with *mayi* tagged on as a question marker.” (Bess Nungarrayi Price, p.c.)

The use of *mayi* in questions is illustrated in (7).

- (7) a. Nyarrpara-kurra ka-npa ya-ni?  
 where-ALL PRES.IMPf-2SG.SUBJ go-NPAST  
 Jinnardi-puraji-kirlangu-kurra mayi?  
 mother-2SG-POSS-ALL Q.PART  
 ‘Where are you going? To your mother’s place?’
- b. Ngana-ku-jangkardu mayi? Kurlarda-kurlu-rlu kapu ngana mayi  
 who-DAT-opposing Q.PART spear-having-ERG FUT.C who Q.PART  
 panti-rmi?  
 spear-NPAST  
 ‘Who is he after? Who is he going to spear?’

(Warlpiri Dictionary Project 1993)

A notable property of the Warlpiri construction from a crosslinguistic perspective is that the *wh*-phrase that appears in the matrix clause is *nyarrpa* ‘how’, whereas the matrix *wh*-phrase typically found in *wh*-scope-marking constructions is ‘what’; see (3) above. This will be important in the analysis of the construction.

In the following section I consider the two leading approaches to *wh*-scope marking.

### 2.1 Direct Dependency

Analyses of the *wh*-scope-marking construction fall into two classes, which Dayal (1994) terms the *direct-dependency* and *indirect-dependency* approaches.<sup>4</sup>

The direct-dependency approach was proposed in van Riemsdijk 1982 and more fully articulated in McDaniel 1989, McDaniel, Chiu & Maxfield 1995, and subsequent work. This type of approach is characterized by the idea that the *wh*-phrase in the matrix clause and the *wh*-phrase in the embedded clause form a single *wh*-chain. The matrix *wh*-phrase is the default or unmarked *wh*-phrase of the language, used as a *wh*-expletive, and is replaced at LF by the embedded *wh*-phrase. Thus, the matrix

<sup>4</sup> Mahajan (2000) develops an apparently mixed approach that, upon further inspection, reduces to the direct-dependency approach (see Dayal 2000 and von Stechow 2000).

Bruening (2004) argues that Passamaquoddy exhibits two types of *wh*-scope marking, one appropriately analyzed by the direct-dependency approach and the other appropriately analyzed by the indirect-dependency approach. His analysis of the construction involving the indirect-dependency approach is entirely compatible with the analysis of the Warlpiri construction developed in Legate 1999 and here. His analysis of the other construction, on the other hand, which he claims involves direct dependency, is not compatible with this analysis. However, his arguments regarding this construction focus on demonstrating movement from the embedded clause to the matrix clause. The arguments do not address an alternative whereby the movement is overt rather than covert; that is the matrix *wh*-word moves overtly from the embedded clause to the matrix clause and is pronounced in both positions—on its own in the matrix clause, and with its restriction in the embedded clause. As Bruening shows, Passamaquoddy, like Warlpiri, allows *wh*-phrases to be discontinuous. Further discussion of Passamaquoddy is beyond the scope of this article.

*wh*-phrase is inserted directly into the matrix specifier of CP, to mark the scope of the embedded *wh*-phrase, to type the clause, or to check the *wh*-feature of C, depending on terminology. The embedded *wh*-phrase undergoes movement to the specifier of the embedded CP overtly, only raising to the specifier of the matrix CP covertly (thus, the alternative name for the construction “partial *wh*-movement”). The similarity between the *wh*-scope-marking constructions and full movement constructions is thus maximized.

Although initially appealing, this approach encounters significant obstacles in explaining the Warlpiri instantiation. Consider the use of *nyarrpa* ‘how’ as the matrix *wh*-phrase. The direct-dependency approach claims that the matrix *wh*-phrase is a default *wh*-phrase used as an expletive. However, the most plausible candidate for a default *wh*-phrase in Warlpiri is not *nyarrpa* ‘how’, but *nyarrpara* ‘where’,<sup>5</sup> which is also used for ‘where’, ‘how’, ‘what’, ‘who’, ‘which’, and ‘why not’:

- (8) **Nyarrpara** nyuntu-nyangu kurlarda-ji?  
**where** you-POSS spear-TOP  
 ‘Where are your spears?’ (Warlpiri Dictionary Project 1993)

- (9) **Nyarrpara-ku** ka-npa-rla ngarrka-ku piirr-pardi-mi?  
**which-DAT** PRES.IMPF-2SG.SUBJ-3DAT.OBJ man-DAT wait.for-NPAST  
 — Yangka-ku ka-rna-rla ngarrka-ku piirr-pardi-mi  
 that-DAT PRES.IMPF-1SG.SUBJ-3DAT.OBJ man-DAT wait.for-NPAST  
 ngula-ji paka-rnu.  
 that-1SG.OBJ hit-PAST  
 ‘Which man are you waiting for?’ ‘I am waiting for that man who hit me.’  
 (Warlpiri Dictionary Project 1993)

- (10) **Nyarrpara-rlu** kuja panti-rni yali? Japa-rna panti-rni?  
**how-ERG** DECL.C spear-NPAST that.yonder Q-1SG.SUBJ spear-NPAST  
 Kari yampi-mi-rni-rna yalumpu-juku.  
 evident leave.alone-NPAST-hither-1SG.SUBJ there-still  
 ‘How to spear that one? Can I spear it? I think I’ll leave it there just as it is.’  
 (Warlpiri Dictionary Project 1993)

In contrast, the distribution of *nyarrpa* ‘how’ is quite limited. Its basic use is as a manner adverb:

- (11) **Nyarrpa-rlu** ka-nkulu yiri-ma-ni? — Kala palya-ngku  
**how-ERG** PRES.IMPF-2PL.SUBJ sharp-CAUS-NPAST well adze-ERG  
 ka-rnalu yiri-ma-ni.  
 PRES.IMPF-1PL.EXCL.SUBJ sharp-CAUS-NPAST  
 ‘How do you sharpen it?’ ‘Well, we sharpen it with an adze.’  
 (Warlpiri Dictionary Project 1993)

<sup>5</sup> A reviewer suggests that *nyarrpara* may be derived from *nyarrpa*; this is unlikely (at least synchronically) because *-ra* does not elsewhere appear as a suffix in the language.

It is also used with the inchoative verb formative *jarrimi*:

(12) **Nyarrpa-jarri-rlipa?**

**how-INCHO.NPAST-1PL.INCL.SUBJ**

‘What will we become?’

(Warlpiri Dictionary Project 1993)

The key to understanding the use of *nyarrpa* in *wh*-scope marking constructions is in its final use—to question the content of a communicated message, with predicates like *ngarrirni* ‘tell’:

(13) **Nyarrpa-rlu-ngku-pala yarda ngarru-rnu-rnu?**

**how-ERG-2OBJ-DUAL again tell-PAST-HITHER**

‘Then what else did he tell you two?’

(Warlpiri Dictionary Project 1993)

However, under the direct-dependency approach, the choice of *nyarrpa* as the *wh*-expletive in the *wh*-scope-marking construction cannot be related to the use of *nyarrpa* to question the object of *ngarrirni*. The *wh*-expletive has no relationship with the matrix verb in the *wh*-scope-marking construction. It is inserted into the specifier of the matrix CP and is replaced by the embedded *wh*-phrase (which also has no relationship with the matrix verb) at LF. The inability of the direct-dependency approach to relate the use of *nyarrpa* in the *wh*-scope-marking construction with its use to question the communicated message of *ngarrirni* is a serious defect of the approach.

Indeed, positing the existence of a *wh*-expletive at all, regardless of its identity, would be questionable for Warlpiri, given that the language does not otherwise exhibit (overt) expletives. Warlpiri is strongly *pro*-drop: none of the arguments of the verb need be expressed, and neither existentials nor meteorological expressions employ nonthematic elements (see Hale 1982):

## (14) a. Purra-nja-rla                      nga-rnu.

cook-INFIN-PRIOR.C eat-PAST

‘Having cooked (it), (he/she/it) ate (it).’

(Laughren 1989:326)

## b. Ngawarra                      yangka kuja-ka                      nguna,...

water.on.ground like DECL.C-PRES.IMPF lie.NPAST

‘When there’s water lying on the ground, ...’

(Warlpiri Dictionary Project 1993)

## c. Jampa                      ka                      mirnimpa wirnpirli.

kurdaitcha PRES.IMPF near.by whistle.NPAST

‘There’s a kurdaitcha whistling around here somewhere.’

(Warlpiri Dictionary Project 1993)

## d. Ngapa ka                      wanti-mi.

water PRES.IMPF fall-NPAST

‘It’s raining.’

(Warlpiri Dictionary Project 1993)

## e. Munga-jarri-mi-lki                      ka.

dark-INCHO-NPAST-now PRES.IMPF

‘It’s getting dark now.’

(Hale 1982:231)

Furthermore, the direct-dependency approach posits LF movement of the embedded *wh*-phrase to replace the matrix expletive. However, finite clauses are islands in Warlpiri. Overt movement from a finite clause is strictly impossible; (15) illustrates this for *wh*-movement. Although it is possible that covert movement is different in this regard, we have no independent evidence from the language that this is the case.<sup>6</sup>

- (15) Ngana-ngkajinta-ngku yimi-ngarru-rnu Jakamarra-rlu, kuja ya-nu  
 who-with-2SG.OBJ speech-tell-PAST Jakamarra-ERG DECL.C go-PAST  
 wirlinyi Jangala?  
 hunting Jangala  
 'Who did Jakamarra tell you with that Jangala went hunting?  
 \*'Who did Jakamarra tell you that Jangala went hunting with?'

(Granites, Hale & Odling-Smee 1976)

I conclude that the direct-dependency approach cannot provide an adequate account of the Warlpiri *wh*-scope-marking construction.

In the following section, I present the indirect-dependency approach.

<sup>6</sup> A possible additional argument against the direct-dependency approach raised by Dayal (1994) for Hindi is the grammaticality of an embedded yes/no question:

- (i) Ravi-ne kyaa kahaa [ki anu aayegii yaa nahiiN]?  
 Ravi-E what say-P that Anu come-F or not  
 'What did Ravi say, will Anu come or not?'

(Dayal 2000:118, (22a))

The potential problem for the direct dependency is that the embedded clause does not provide a *wh*-phrase to undergo covert movement and replace the *wh*-expletive at LF. This leads to a violation of Full Interpretation (Chomsky 1986), which prohibits elements without a semantic interpretation from persisting to LF, and may lead to a violation of the selectional requirements of the matrix verb, because the embedded clause is a question.

A possible solution would be *wh*-movement of 'whether'. Beck & Berman (2000) argue against this solution on semantic grounds; they demonstrate that such movement fails to produce the desired reading and produces a nonexistent reading. For example, (iib) is the desired answer set, and (iic) is the predicted answer set:

- (ii) a. Peter-ne kayaa kahaa ki merii party-par thii yaa nahiiN?  
 Peter what said that Mary party was or not  
 'What did Peter say about whether Mary was at the party?'  
 b. {Peter said that Mary was at the party, Peter said that Mary wasn't at the party}  
 c. {Peter said that Mary was at the party, Peter didn't say that Mary was at the party}

(Beck & Berman 2000:81, (44))

If 'whether' is a quantifier that leaves a trace under movement this problem would be circumvented, although a reviewer notes that 'whether' does not behave like a quantifier for multiple *wh*-phrases, long-distance questions, or scope interactions.

This variant of the *wh*-scope-marking construction also appears to be possible in Warlpiri:

- (iii) Nyarrpa-ngku wati-ji wangka-ja [marlu-japa pantu-rnu]?  
 how-ERG man-TOP say-PAST kangaroo-Q spear-PAST  
 'Was it a kangaroo that the man said he speared?'

(T1:32, CP/L)

However, the second clause would also be grammatical as an independent question, which makes it difficult to verify whether this involves *wh*-scope marking.

## 2.2 Indirect Dependency

The indirect-dependency approach was proposed by Dayal (1994) largely based on data from Hindi and has been adopted and modified in much subsequent work. The core idea of the approach is that the matrix *wh*-phrase is not an expletive, but rather the object of the matrix verb. The embedded question serves as the semantic restriction of the matrix *wh*-phrase.

I develop a version of the analysis related to Herburger's (1994) approach to German *wh*-scope marking, whereby the matrix *wh*-word and the dependent clause are merged as a constituent in the matrix clause, in the same structural position as the matrix *wh*-phrase alone.<sup>7</sup> Subsequently, the dependent clause is extraposed and the matrix *wh*-phrase undergoes *wh*-movement.

This version of the analysis differs from Dayal (1994) in that Dayal proposed that the dependent clause is merged into the sentence adjoined at the CP level and related to the matrix *wh*-word through semantic mechanisms, whereas here the dependent clause is merged into the sentence forming a constituent with the matrix *wh*-phrase. One piece of evidence for the present version of the analysis comes from a much-discussed distinction between *wh*-scope-marking constructions and long-distance *wh*-movement: the latter but not the former allows the presence of negation in the matrix clause. This is illustrated here for German:

- (16) a. \*Was glaubst du nicht, mit wem Maria gesprochen hat?  
           what believe you not with whom Maria talked has  
       b. Mit wem glaubst du nicht, dass Maria gesprochen hat?  
           with whom believe you not that Maria talked has  
           'Who don't you think Mary talked to?'

(Beck & Berman 2000:63)

Although Dayal (1994) proposes an analysis of this contrast, Beck & Berman (2000) demonstrate that it is untenable (see the authors cited for details).

Beck & Berman, pursuing a direct-dependency analysis, propose that the ungrammaticality of (16a) should fall under a generalization discovered by Beck (1996) that negation forms a barrier to covert but not overt movement, under the assumption that in-situ *wh*-phrases in multiple *wh*-questions must move covertly and that the stranded restriction of a *wh*-word must also move covertly.

- (17) a. ??Wen hat niemand wo gesehen?  
           whom has nobody-NOM where seen  
           'Where did nobody see whom?'  
       b. Wen hat Luise wo gesehen?  
           whom has Luise where seen  
           'Who did Luise see where?'

(Beck & Berman 2000:78)

<sup>7</sup> See Lahiri 2002 for semantic arguments that the matrix *wh*-phrase and the dependent clause form a constituent at some stage in the derivation.

- (18) a. ??Wen hat keine Studentin von den Musikern getroffen?  
 whom has no student-FEM.NOM of the musicians met  
 ‘Which of the musicians did no student meet?’  
 b. Wen hat Luise von den Musikern getroffen?  
 whom has Luise of the musicians met  
 ‘Which of the musicians did Luise meet?’ (Beck & Berman 2000:78)

The ungrammaticality of (16a) follows from this generalization under a direct-dependency account in that the embedded *wh*-phrase must undergo covert movement to replace the matrix *wh*-expletive. The negation in (16a) forms a barrier to this movement. Example (16b), on the other hand, involves overt movement, and thus the negation does not form a barrier to this movement.

On the type of indirect-dependency analysis pursued here, according to which the matrix *wh*-item and the dependent clause are generated as a constituent and then separated, this analysis carries over (see Beck 1996, Beck & Berman 2000:79, n. 12 for this suggestion). The ungrammaticality of (16a) is equivalent to the ungrammaticality of (18a), given that they both involve the separation of a *wh*-word from its restriction with negation intervening between the two.

The issue cannot be clearly formulated in Warlpiri in that it disallows clausal negation in *wh*-questions altogether:<sup>8</sup>

- (19) Kula-ka-rna nyarrpara-kurra ya-ni.  
 NEG-PRES.IMPF-1SG.SUBJ where-ALL go-NPAST  
 ‘I’m not going anywhere.’  
 \*‘Where aren’t I going?’ (Laughren 2002:(33b))

Assuming Hamblin’s (1973) semantics of questions, whereby a question denotes the set of possible answers, the resulting meaning for the scope-marking construction:

- (20) Nyarrpa-ngku yimi-ngarru-rnu Jakamarra-rlu [kuja nyiya pantu-rnu  
 how-2SG.OBJ speech-tell-PAST Jakamarra-ERG DECL.C what spear-PAST  
 Japanangka-rlu]?  
 Japanangka-ERG  
 ‘What did Jakamarra tell you Japanangka speared?’  
 (Granites, Hale & Odling-Smee 1976)

is rendered as “what proposition in the set ‘what did Japanangka spear’ did Jakamarra tell you?”<sup>9</sup>

<sup>8</sup> A reviewer wonders if this is an intervention effect, caused by negation c-commanding the *wh*-phrase. The alternative order, with the *wh*-phrase above negation is also ungrammatical. This forms part of a larger generalization that focus cannot precede *kula* in Warlpiri (see Laughren 2002).

<sup>9</sup> One issue with this analysis is that the matrix *wh*-phrase and the dependent clause cannot appear on the surface as a constituent. This fact is clearly related to the impossibility of the constituent *it* + CP in the *it* extraposition construction (Stowell 1981), and an explanation of one should carry over to the other. The issue is avoided for independent reasons in Warlpiri; see section 4.

The application of such an analysis to Warlpiri must face a number of issues, examined in the following section. The first issue is that Warlpiri is standardly assumed not to exhibit *wh*-movement (see, e.g., Hale 1994, Bresnan 2000). Legate (2002a, 2003) argued on the basis of island constraints and Weak Crossover effects that Warlpiri does have *wh*-movement. These arguments are reviewed in section 3.1. The second is the status of finite dependent clauses in Warlpiri, which is examined in section 3.2. Finally, the uses of *nyarrpa* ‘how’ are discussed in 3.3.

### 3. Warlpiri Background

#### 3.1 Wh-Movement

Although Warlpiri is known for its flexible word order, *wh*-phrases must appear in a left-peripheral position. *Wh*-phrases lower in the clause are interpreted as indefinites.

- (21) **Nyiya karli** ka-pala paka-rni?  
**what boomerang** PRES.IMPF-3DUAL.SUBJ chop-NPAST  
 ‘What (sort of) boomerang are they chopping?’  
 (Warlpiri Dictionary Project 1993)

- (22) a. Ngaju ka-rna jaaljaal-jarri-mi **nyiya-kurra**.  
 I PRES.IMPF-1SG.SUBJ feeling-INCHO-NPAST **what-ALL**  
 ‘I have a feeling about something.’  
 b. Kaji-lpa-ngku wanti-yarla **nyiya-rlangu** milpa-kurra...  
 NFACT.C-PAST.IMPF-2SG.OBJ fall-IRREALIS **what-e.g.** eye-ALL  
 ‘If something were to fall into your eyes...’  
 (Warlpiri Dictionary Project 1993)

Legate (2002a, 2003) argues that this positioning of *wh*-phrases is a result of movement, based on island effects and Weak Crossover effects. I review these arguments here. First, Legate notes that a *wh*-phrase may appear external to a nonfinite complement clause:

- (23) **Nyiya-kurra** ka-npa wawirri nya-nyi [*e* nga-rninja-kurra]?  
**what-OBJ.C** PRES.IMPF-2SG.SUBJ kangaroo see-NPAST eat-INFIN-OBJ.C  
 ‘What do you see a kangaroo eating?’

However, a *wh*-phrase may not appear external to a nonfinite adjunct clause:<sup>10</sup>

<sup>10</sup> The relationship of the adjunct to the main clause is encoded in the nonmatrix complementizer. For example, *-kungarni* indicates that the clause is prior to, in preparation for the main clause (translated as ‘before’ in (25) and ‘in order to’ in (26)).

- (24) a. Kurdu-ngku ka jarntu warru-wajili-pi-nyi karnta-ku, [miyi  
child-ERG PRES.IMPF dog around-chase-NPAST woman-DAT food  
purra-nja-rlarni].  
cook-INFIN-OBV.C  
'The child is chasing the woman's dog around while she is cooking food.'  
(Hale, Laughren & Simpson 1995:1439–1440)
- b. \***Nyiya-rlarni** ka kurdu-ngku jarntu warru-wajili-pi-nyi  
**what-OBV.C** PRES.IMPF child-ERG dog around-chase-NPAST  
karnta-ku, [*e* purra-nja-rlarni]?  
woman-DAT cook-INFIN-OBV.C  
'What is the child chasing the woman's dog around while she is cooking?'
- (25) a. Wati-ngki-nyanu jurnarrpa ma-nu, [wurna ya-ninja-kungarnti-rli].  
man-ERG-ANAPH belongings get-PAST travel go-INFIN-PREP.C-ERG  
'The man picked up his things before going on a trip.'  
(Hale, Laughren & Simpson 1995:1443)
- b. \***Nyarrpara-kungarnti-rli-nyanu** wati-ngki jurnarrpa ma-nu,  
**where-PREP.C-ERG-ANAPH** man-ERG belongings get-PAST  
[*e* ya-ninja-kungarnti-rli]?  
go-INFIN-PREP.C-ERG  
'Where did the man pick up his things before going?'
- (26) a. Karnta-ngku warlu yarrpu-rnu [kuyu purra-nja-kungarnti].  
woman-ERG fire light-PAST meat cook-INFIN-PREP.C  
'The woman lit the fire in order to cook meat.'
- b. \***Nyiya-kungarnti** karnta-ngku warlu yarrpu-rnu [*e* purra-nja-kungarnti].  
**what-PREP.C** woman-ERG fire light-PAST cook-INFIN-PREP.C  
'What did the woman light the fire in order to cook?'

The ungrammaticality of (24b), (25b), and (26b) appears to represent standard adjunct-island effects.<sup>11</sup>

Additionally, placement of *wh*-phrases in Warlpiri displays Complex-NP-island effects:

- (27) a. Jakamarra-rlu kapu maliki luwa-rni, kuja Japalyi yarlku-rnu.  
Jakamarra-ERG FUT.C dog shoot-NPAST DECL.C Japalyi bite-PAST  
'Jakamarra will shoot the dog that bit Japalyi.'
- b. \***Ngana** kapu Jakamarra-rlu maliki luwa-rni, kuja yarlku-rnu?  
**who** FUT.C Jakamarra-ERG dog shoot-NPAST DECL.C bite-PAST  
'Who<sub>i</sub> will Jakamarra shoot the dog that bit *t<sub>i</sub>*?'  
(Granites, Hale & Odling-Smee 1976)

<sup>11</sup> In the following section I adopt Hale's (1994) suggestion that the ungrammaticality of extraction from a finite clause in Warlpiri is also explained as an adjunct-island effect.

Second, consider Weak Crossover effects. Warlpiri does not show the effects of Weak Crossover in short-distance questions:

- (28) Ngana ka nyanungu-nyangu maliki-rli wajili-pi-nyi?  
 who PRES.IMPV he-POSS dog-ERG chase-NPAST  
 ‘Who<sub>i</sub> is his<sub>i</sub> dog chasing?’  
 (Hale, Laughren & Simpson 1995:1447)

However, Legate (2002a, 2003) demonstrates that Weak Crossover effects reappear in long-distance questions:

- (29) \*Ngana<sub>i</sub>-kurra-npa nyanungu<sub>i</sub>-nyangu maliki nya-ngu [*e paji-rninja-kurra*?  
**who<sub>i</sub>-OBJ.C-2SG.SUBJ 3<sub>i</sub>-POSS dog see-PAST bite-*INFIN-OBJ.C***  
 ‘Who<sub>i</sub> did you see his<sub>i</sub> own dog biting?’  
 (OK without coreference: ‘Who<sub>i</sub> did you see his<sub>j</sub> dog biting?’)

Instead, a short-distance question plus adjoined relative clause is used:

- (30) Ngana<sub>i</sub>-npa nya-ngu [kuja-lpa maliki nyanungu<sub>i</sub>-nyangu-rlu  
**who<sub>i</sub>-2SG.SUBJ see-PAST DECL.C-PAST.IMPV dog 3<sub>i</sub>-POSS-ERG**  
 paju-rnu]  
 bite-PAST  
 ‘Who did you see that his dog was biting him?’ (Mary Laughren, p.c.)

Legate analyzes this pattern as analogous to the Weak Crossover patterns found in scrambling languages like German and Hindi. Short-distance A-scrambling allows the obviation of WCO violations in short-distance questions. This strategy is unavailable for long-distance questions, and therefore WCO effects reappear. For relevant discussion of scrambling, see, for example, Mahajan 1990, Webelhuth 1989, and McGinnis 2004; see Legate 2002a, 2003 for details on the Warlpiri case.

In sum, it is reasonable to assume that Warlpiri does exhibit *wh*-movement.

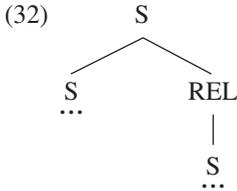
### 3.2 *Dependent Clauses*

In this section, we consider dependent finite clauses in Warlpiri, given that such clauses are crucially involved in the *wh*-scope-marking construction. Warlpiri is claimed to lack embedded finite clauses (e.g., Hale 1994; Hale, Laughren &

Simpson 1995).<sup>12</sup> The origin of this claim is Hale's influential 1976 article, which examined the "adjoined relative clause" construction. In this construction, a finite clause on the right/left periphery of the main clause is interpreted as modifying either a DP or the temporal specification of the clause. This is illustrated in (31).

- (31) Ngajulu-rlu-rna yankiri pantu-rnu, kuja-lpa ngapa nga-rnu.  
 I-ERG-1SG.SUBJ emu spear-PAST DECL.C-PAST.IMPF water drink-PAST  
 'I speared the emu which was drinking water.'  
 or 'I speared the emu while it was drinking water.' (Hale 1976:78)

Hale notes that such clauses are never found clause-internally and are typically intonationally dislocated. He proposes a structure whereby the relative is adjoined to the matrix clause:



<sup>12</sup> This issue has gained additional significance in connection with the recent debate on recursion in Pirahã (see Everett 2005 and Nevins, Pesetsky & Rodrigues 2009). Note that the issue of whether Warlpiri has embedded clauses is limited to finite clauses. Hale (1982) and Hale, Laughren & Simpson (1995) argue convincingly that Warlpiri does have embedded nonfinite clauses; these exhibit obligatory control, where the controller of the embedded PRO is predictable—the matrix subject of an intransitive clause or the matrix object of transitive clause. Regarding the following examples, Hale states that the verbs "select jussive infinitival complements" (Hale 1982:282, emphasis original).

- (i) a. Ngarka-ngku ka-palangu kurdu-jarra ngarri-mi [maliki yampi-nja-ku].  
 man-ERG PRES.IMPF-3DUAL.OBJ child-DUAL tell-NPAST dog leave-*INFIN-PURP*  
 'The man is telling the two children to leave the dog alone.'  
 b. Jakamarra-rlu-ju jinjinyi-ma-nu warlu yarrpi-rninja-ku.  
 Jakamarra-ERG-1SG.OBJ force-CAUS-PAST fire kindle-*INFIN-PURP*  
 'Jakamarra ordered me to build a fire.' (Hale 1982:282)

These verbs of "linguistic communication," Hale notes, also appear with a different type of nonfinite clause that show nonobligatory control, or even an overt subject:

- (ii) a. Napurrula-rlu-jarrangu ngarru-rnu [pina-mi ya-ninja-ku], ngaka nganta  
 Napurrula-ERG-IDUAL.EXCL.OBJ tell-PAST back-hither go-*INFIN-PURP* anon supposedly  
 kapi ya-ni-mi.  
 FUT.C go-NPAST-hither  
 'Napurrula told us about coming back, i.e., (that) she will, according to her, come soon.'  
 b. Yalumpu-rlu-ju ngarru-rnu pirarni-rli, [ngapa wanti-nja-ku nganta].  
 that-ERG-1SG.OBJ tell-PAST yesterday-ERG water fall-*INFIN-PURP* supposedly  
 'That person (nearby) told me yesterday that it was supposed to rain.' (Hale 1982:290)

These he considers to be adjuncts rather than complements.

However, Hale (1976) does not consider finite clauses associated with matrix verbs like *ngarrirni* ‘tell’,<sup>13</sup> *wangkami* ‘say’, *japirni* ‘ask’, or *payirni* ‘ask’, nor have I been able to find any treatment of such clauses in the literature. Hale (1994) briefly states that such clauses are adjoined and that this explains their status as syntactic islands, but that work provides no further evidence or discussion. In this section, I provide some background on verbs of communicated message and associated dependent clauses.

Dependent finite clauses associated with verbs of linguistic communication can be direct quotes, (33a), but may also be reported speech, (33b) and (33c). Notice that in (33b), a direct quote “I intend to come” would have required the first singular subject clitic *-rna* instead of the phonologically null third singular subject clitic. Such pronoun alternations can be observed throughout the examples in this section.<sup>14</sup>

- (33) a. Ngurra-ngka kaji-ka yitirli nyina.  
 camp-LOC NFACT.C-PRES.IMPF outside sit.NPAST  
 Kaji-ka-lu-rla yapa-kari wangka,  
 NFACT.C-PRES.IMPF-3PL.SUBJ-3DAT.OBJ person-other say.NPAST  
 “Nyiya-ku ka-npa nyina yali-rla-ju, nganyngurlu?”  
 what-DAT PRES.IMPF-2SG.SUBJ sit.NPAST there-LOC-TOP apart  
 ‘One might sit apart in the camp and others would say to that person,  
 “Why are you sitting over there, apart?”’
- b. Ngaju-ku-pirdangka-rlu-ju ngarru-rnu yungu-nganta  
 I-DAT-brother-ERG-TOP tell-PAST REL.C-supposedly  
 ya-ntarla-rni; wali lawa-juku ka-rla karri.  
 go-IRREALIS-hither well nothing-still PRES.IMPF-3DAT.OBJ stand.NPAST  
 ‘My brother said that he intended to come, but he is still not here.’
- c. Junga ka-rna-nyarra wangka-mi nyampu-ju kankarlarra  
 true PRES.IMPF-1SG.SUBJ-2PL.OBJ say-NPAST this-TOP up  
 wiri-wiri ka nguru-ngka-ji nyina-mi mangkurdu-ju milpirri-patu.  
 big-big PRES.IMPF sky-LOC-TOP sit-NPAST cloud-TOP cloud-PL  
 ‘I’m telling you truly that there is a lot of cloud up in the sky, rain-clouds.’  
 (Warlpiri Dictionary Project 1993)

The complementizers that introduce dependent finite clauses in Warlpiri are of two types. First, we often find the relational complementizers *yi*, *yinga*, *yingi*, or *yungu*:

- (34) a. Ngarri-rni ka-pala-nyanu munga-ngka-kungarnti,  
 tell-NPAST PRES.IMPF-3DUAL.SUBJ-ANAPH night-LOC-preparation  
**yinga**-pala munga-ngka jinta-jarri.  
 REL.C-3DUAL.SUBJ night-LOC one-INCHO.NPAST  
 ‘They tell each other the plan for the night, that they will meet up.’

<sup>13</sup> *Ngarrirni* is also used to mean ‘call’ and has extended meanings similar, but not identical, to *say* and *tell* in English, including ‘indicate’ and ‘swear at’.

<sup>14</sup> A reviewer asks about changes in tense in reported speech in Warlpiri. I have not found any evidence for sequence-of-tense phenomena in the language.

- b. Ngarri-rinja-ya-nta-jana ngangkayi-kirli **yungu**-lu ya-ni-rni.  
 tell-*INFIN-go-IMPER-3PL.OBJ* medicine.man *REL.C-3PL go-NPAST-hither*  
 ‘Go and tell the medicine men to come.’

(Warlpiri Dictionary Project 1993)

Dependent clauses introduced by these complementizers are not limited to appearing with speech verbs and are associated with a range of interpretations, commonly ‘in order to’ and ‘because’:

- (35) a. Kinki-ji yakarra-pardi-ja-lku **yungu**-palangu kurlarda  
 monster-TOP wake-rise-PAST-then *REL.C-3DUAL.OBJ* spear  
 jangkardu-ma-nu.  
 attack-*CAUS-PAST*  
 ‘The monster got up then to get his spear to attack those two.’
- b. Maliki, warna-jangka pali-ja, **yinga** warna-ngku paju-rnu.  
 dog snake-from die-PAST *REL.C* snake-*ERG* bite-PAST  
 ‘The dog died from a snake (bite), because a snake bit him.’
- c. Nyuntu pirtirri-kirra warrka-ka; **yinga**-npa-rla  
 you tree.top-*ALL* climb-*IMPER REL.C-2SG.SUBJ-3DAT.OBJ*  
 pirtirri-ngirli nya-nyi.  
 tree.top-*EL* see-*NPAST*  
 ‘You climb up the tree, so you can look out for him from the top.’

(Warlpiri Dictionary Project 1993)

Additionally, dependent clauses may also be introduced by the general declarative complementizer *kuja* ‘that’, as well as its variants based on tense and mood, including the future *kapu* found in (36).<sup>15</sup> (These complementizers also introduce the adjoined relative clause.)

- (36) a. Jakamarra-rlu-ju yimi-ngarru-rnu **kuja** Japanangka-rlu  
 Jakamarra-*ERG-1SG.OBJ* speech-tell-PAST *DECL.C* Japanangka-*ERG*  
 marlu pantu-rnu  
 kangaroo spear-PAST  
 ‘Jakamarra told me that Japanangka speared a kangaroo.’
- b. Ngarrka-ngku-rla karnta-ku yimi-ngarru-rnu **kapu** nganta  
 man-*ERG-3DAT.OBJ* woman-*DAT* speech-tell-PAST *FUT.C* supposedly  
 ngapa wanti-mi  
 water fall-*NPAST*  
 ‘The man told the woman that it was going to rain.’

<sup>15</sup> A reviewer notes the interesting homophony between the manner pro-form *kuja* ‘thus’, which is often found with direct quotation, and the declarative complementizer *kuja* ‘that’. As noted in the main text, the latter, but not the former, alternates with other complementizers. Also, as the reviewer points out, the complementizer can host the second-position clitic cluster in the dependent clause, whereas the manner pro-form cannot (because it belongs to the main clause). It would be interesting to investigate the historical relationship between these two synchronically distinct items.

- c. Ngaju-rna purda-nya-ngu **kuja** Japanangka wanti-ja nantuwu-ngurlu  
 I-1SG.SUBJ aural-see-PAST DECL.C Japanangka fall-PAST horse-EL  
 'I heard that Japanangka fell off the horse.'

(Granites, Hale & Odling-Smee 1976)

Like relative clauses, the dependent clauses introduced by both of these types of complementizers are found only clause-peripherally, as may be verified with the examples throughout. This suggests that the clauses are adjoined, at least in their surface position. And indeed, Granites, Hale & Odling-Smee (1976) report that the dependent clause is presupposed true by the speaker, unless specifically marked otherwise, which again suggests that the dependent clause is outside of the scope of the matrix intensional predicate:

- (37) a. Jakamarra-rlu-ju yimi-ngarru-rnu kuja Japanangka-rlu  
 Jakamarra-ERG-1SG.OBJ speech-tell-PAST DECL.C Japanangka-ERG  
 marlu pantu-rnu  
 kangaroo spear-PAST  
 'Jakamarra told me that Japanangka speared a kangaroo.'  
 → speaker presupposes that "Japanangka speared a kangaroo" is true
- b. Jakamarra-rlu-ju yimi-ngarru-rnu kuja nganta  
 Jakamarra-ERG-1SG.OBJ speech-tell-PAST DECL.C supposedly  
 Japanangka-rlu marlu pantu-rnu  
 Japanangka-ERG kangaroo spear-PAST  
 'Jakamarra told me that Japanangka supposedly speared a kangaroo.'  
 → speaker does not presuppose that "Japanangka speared a kangaroo" is true  
 (Granites, Hale & Odling-Smee 1976)
- (38) a. Ngarrka-ngku-rla karnta-ku yimi-ngarru-rnu, kupa-ka  
 man-ERG-3DAT.OBJ woman-DAT speech-tell-PAST DECL.C-PRES.IMPF  
 Japanangka ya-ni Yalijipiringi-kirra  
 Japanangka go-NPAST Alice.Springs-ALL  
 'The man told the woman that Japanangka is going to Alice Springs.'  
 → speaker presupposes that "Japanangka is going to Alice Springs" is true
- b. Ngarrka-ngku-rla karnta-ku yimi-ngarru-rnu, Japanangka  
 man-ERG-3DAT.OBJ woman-DAT speech-tell-PAST Japanangka  
 nganta ka ya-ni Yalijipiringi-kirra  
 supposedly PRES.IMPF go-NPAST Alice.Springs-ALL  
 'The man told the woman that Japanangka is supposedly going to Alice Springs.'  
 → speaker does not presuppose that "Japanangka is going to Alice Springs" is true  
 (Granites, Hale & Odling-Smee 1976)

However, there is phonological and semantic evidence that dependent clauses need not be adjoined outside the scope of the matrix predicate. First, it appears that

the dependent clause may provide a host for the second-position clitic cluster. In (39), the dependent clause *wurdungu yungu nyinalku* ‘he must be silent’ is peripheral but fills the initial position providing a host for the second-position clitic cluster *karlipa*.

- (39) [Wurdungu yungu nyina-lku] ka-rlipa  
 silent REL.C sit.NPAST-now PRES.IMPF-1PL.INCL.SUBJ  
 pututu-ngarri-rni.  
 warning-tell-NPAST  
 ‘We tell him that he must be silent.’ (Warlpiri Dictionary Project 1993)

This contrasts with adjoined relative clauses, which do not provide a host for the clitic cluster, here *rna*:

- (40) [Yankiri-rli kuja-lpa ngapa nga-rnu], ngajulu-rlu-rna  
 emu-ERG DECL.C-PAST.IMPF water consume-PAST I-ERG-1SG.SUBJ  
 pantu-rnu.  
 spear-PAST  
 ‘The emu which was drinking water, I speared it.’ (Hale 1976:78)

Second, it appears that the dependent clause can unambiguously take scope under the matrix intensional predicate. We must be careful, though, because in many examples, the dependent clause is marked as nonfactive through use of the irrealis verbal suffix, (33b), evidentials, or adverbs. For example, although (41) appears in a context in which the dependent clause is explicitly denied (continuing with *Yampiyalu yiiki-nyinajawangurlu ngurrrpa kuluwangu* ‘Don’t tell him such things as he’s got nothing to do with the fight’), we cannot conclude that the dependent clause *kapili pakarni nganta yapangku* ‘that the people will hit him’ is in the scope of the matrix verb, given that the dependent clause is marked as nonfactual with the adverb *nganta* ‘supposedly’.

- (41) Yiiki-nyina-mi kuja-ka-nkulu-rla  
 predicting.worst-sit.NPAST DECL.C-PRES.IMPF-2PL.SUBJ-3DAT.OBJ  
 ngaju-nyangu-ku kurdu-ku kapi-li paka-rni nganta  
 I-POSS-DAT child-DAT FUT.C-3PL.SUBJ hit-NPAST supposedly  
 yapa-ngku.  
 person-ERG  
 ‘There you are telling my child that the people will hit him.’  
 (Warlpiri Dictionary Project 1993)

However, examples do exist in which the dependent clause appears in the scope of the matrix intensional predicate. Consider the following sentence in which the matrix

predicate *kapuru-nyiyami* ‘disbelieve’ takes scope over the dependent clause *kujaka yani wirlinyi* ‘that he is going hunting’.<sup>16</sup>

- (42) Kapuru-nyina-mi ka-lu-rla-jinta wati-ki  
 disbelieve-sit-NPAST PRES.IMPFF-3PL.SUBJ-3DAT.OBJ-3DAT.OBJ man-DAT  
 yali-ki [kuja-ka ya-ni wirlinyi].  
 that-DAT DECL.C-PRES.IMPFF go-NPAST hunting  
 ‘They don’t believe that man is really going out hunting.’  
 (Warlpiri Dictionary Project 1993)

Notice that the dependent clause is not marked in any way as nonfactive, so if it were outside the scope of the matrix intensional verb the dependent clause would be taken as true. However, in that case, the disbelief in the matrix clause should have been marked as mistaken (using the counterfactual evidential *kulanganta*), and indeed the continuation argues against such an interpretation: *Yaliji wati ka yanirra malamarri mayi? — Lawa ngarra. Karntakupurda ka kutu ngayi warruparnkami. Yuurrkupaturla ka karrimirni. — Nganangku-wiyirla kuyu marlaja ngarnu ngulakuju purruparduku?* ‘So that man’s a great game-hunter who is heading off there, is he?’ ‘Not at all! He just runs around looking for women. He hangs around in the bushes.’ ‘Whoever ate meat thanks to that lame duck?’ Thus, we must conclude that the dependent clause originates as embedded under the matrix intensional verb.<sup>17</sup>

Determining the exact initial position of the dependent clause, however—for example, as a complement to the matrix verb, or as a modifier of a matrix nominal—is difficult, and undoubtedly varies with the matrix predicate. For example, the above verb *kapurunyinami* ‘disbelieve’ occurs with double dative marking in the auxiliary, which raises the possibility of a null matrix dative nominal (‘about it’) that is modified by the dependent clause.<sup>18</sup>

For other predicates, there is no semantically appropriate matrix argument to be modified by the dependent clause, which suggests that the dependent clause may be merged as a complement of the verb before being extraposed. We cannot rule out the possibility of a null matrix absolutive modified by the dependent clause for the subset of verbs that allow absolutive “about” objects (e.g., *ngarrirni* ‘tell’), because such an object would not trigger agreement (third-singular absolutive agreement is phonologically null). The following illustrates an overt absolutive “about” DPs with the predicate *ngarrirni*:

<sup>16</sup> The translation given from the Warlpiri Dictionary Project is not exact, in that ‘that man’ is translated as the subject of the embedded clause. An anonymous reviewer notes that in another version of the dictionary, the translation was ‘People don’t really believe it when that man says he is going out hunting’, which has both the problem of ‘that man’ as the subject, and an additional clause with an added intensional predicate ‘that man says...’ The translation may be more appropriately ‘They don’t believe that man that he is going out hunting.’

<sup>17</sup> And thus, that Warlpiri does have finite clausal recursion.

<sup>18</sup> Note, however, that double dative marking does not unambiguously indicate an additional dative argument; see Hale 1982.

- (43) Pina-ngku-jala ka-rna ngarri-rni ngamirli-ji  
 knowledgeable-ERG-actually PRES.IMPV-1SG.SUBJ tell-NPAST curlew-TOP  
 wita-juku yi-ka nyina.  
 small-still REL.C-PRES.IMPV sit.NPAST  
 ‘The fact is that I know what I’m saying about the curlew which is the small one.’  
 (Warlpiri Dictionary Project 1993)

However, several other verbs do not occur with absolutive “about” objects (including, e.g., *japirni* ‘ask’, *payirni* ‘ask’, *wangkami* ‘say’, *purda-nyanyi* ‘hear’), which suggests that the associated dependent clause may indeed originate as the complement of these matrix verbs. Such examples presented to this point include (33c) and (36c); an additional example follows:

- (44) Ngula-jangka-ju, yurrkunyuru-rlu kuja-lu purda-nya-ngu  
 that-from-TOP police-ERG DECL.C-3PL.SUBJ aural-see-PAST  
 walypali Harry Henty nyurnu-lku, kuja Harry Henty luwa-rnu  
 white.person Harry Henty dead-now DECL.C Harry Henty shoot-PAST  
 yapa-ngku, ngula-jangka-lu-rla  
 aboriginal.person-ERG that-after-3PL.SUBJ-3DAT.OBJ  
 jangkardu-turnu-jarri-ja.  
 opposing-group-INCHO-PAST  
 ‘After that, when the police heard that the white man Harry Henty was dead, that an aboriginal had shot him, then they came together to go after him.’  
 (Warlpiri Dictionary Project 1993)

As the resolution of this issue is not required for the current discussion, I leave it open.

Before returning to the *wh*-scope-marking construction, I consider in the next section the use of *nyarrpa* ‘how’ with verbs of communication.

### 3.3 *Nyarrpa*

As discussed in the previous section, the dependent clause associated with intensional verbs in Warlpiri appears to begin in the scope of the matrix predicate and to typically be extraposed on the surface. Here we consider why this clause is questioned with *nyarrpa* ‘how’, rather than, for example, *nyiya* ‘what’.

*Wh*-phrases in Warlpiri are general indefinites, also appearing in the scope of negation, and as existentials. The use of *nyarrpa* with *ngarrirni* ‘tell’ and similar verbs shows these indefinite usages as well:



- b. **Nyarrpa**-rlipa jarrayi? — Kari-nganta-rlipa ya-ni, nguru  
**how**-IPL.INCL.SUBJ result obvious-IPL.INCL.SUBJ go-NPAST country  
 ngalipa-nyangu-kurra.  
 IPL.INCL.POSS-ALL  
 ‘What will we do then?’ ‘We’ll go—to our own country.’
- c. **Nyarrpa**-rlipa ma-ni yalumpu-ju?  
**how**-IPL.INCL.SUBJ CAUS-NPAST that-TOP  
 ‘What shall we do to that one?’ (Warlpiri Dictionary Project 1993)

I propose that *nyarrpa* is also used to question propositions in Warlpiri, which accounts for its use with verbs of communication when the manner of speaking is not at issue. It is worth noting that Warlpiri is not unique in this respect—manner *wh*-phrases appear associated with propositions in a number of little-investigated constructions crosslinguistically. A few examples follow (all from Legate 2010):

- (48) They told me **how** the tooth fairy doesn’t really exist.<sup>19</sup> English  
 ‘They told me that the tooth fairy doesn’t really exist.’
- (49) Rose: Could you make a torpedo? English (excerpt from *The African Queen*, 1951)  
 Charlie: **How’s** that, Miss?  
 Rose: Could you make a torpedo?
- (50) A: (inaudible) Spanish  
 B: **Como** dices?  
**how** say.2SG.PRES  
 ‘What did you say?’
- (51) A: wǒ wèn Zhāngsān shéi pǎo de kuài. Mandarin  
 I ask Zhangsan who run DE fast  
 ‘I asked Zhangsan who runs fast.’  
 B: tā **zěnmē** shuō?  
 he **how** say  
 ‘What did he say?’  
 cf. B’: tā shuō shénme?  
 he say what  
 ‘What did he say?’

To summarize, the dependent clause associated with verbs of communicated message typically appears extraposed on the surface, after merging possibly as a modifier to a null absolutive or dative “about” DP or as a verbal complement. The clause is questioned with *nyarrpa* ‘how’, either through this indefinite’s use as a quantifier over manners or through its use as a quantifier over propositions.

<sup>19</sup> See Legate 2002b, 2010 for discussion of this construction, where it is argued that the embedded clause is nominalized. The construction also appears in at least Hebrew, French, and Greek.

Given this much background, we may now turn in the following section to the analysis of *wh*-scope-marking constructions in Warlpiri.

#### 4. Warlpiri *Wh*-Scope Marking

Recall the form of the *wh*-scope-marking construction in Warlpiri:

- (52) Nyarrpa-ngku yimi-ngarru-rnu Jakamarra-rlu kuja-ka  
 how-2SG.OBJ speech-tell-PAST Jakamarra-ERG DECL.C-PRES.IMPF  
 nyarrpara-kurra ya-ni Jampijinpa?  
 where-ALL leave-NPAST Jampijinpa  
 ‘Where did Jakamarra tell you Jampijinpa is going?’  
 (Granites, Hale & Odling-Smee 1976)

Following the background discussion of the previous section, a natural account of the construction is possible.

I propose an analysis of the *wh*-scope-marking construction in Warlpiri that relates the construction to established properties of the language. The clause-internal position is filled by *nyarrpa*; we have seen that *nyarrpa* is used with *ngarrirni* as a quantifier over propositions to question the communicated message. Thus, I propose that *nyarrpa* is serving the same function in the *wh*-scope-marking construction: questioning the communicated message of *ngarrirni*, and moving to the left peripheral position for *wh*-phrases.

Regarding the dependent clause, as a set of propositions, this question is of the appropriate type to serve as the restriction on *nyarrpa*; together they form a quantifier over propositions. As discussed before, like a finite relative clause, the dependent clause related with a verb of communication must appear peripherally. This also applies in the *wh*-scope-marking construction. Specifically, I encode the relationship between *nyarrpa* and the dependent clause through movement—the clause is generated as a constituent with *nyarrpa* and is extraposed.

The option for a *wh*-word to appear with or without an overt restriction is largely limited to *what* in English—*What did you read?* versus *What book did you read?* However, it is generally available in Warlpiri:

- (53) a. **Nyiya karli** ka-pala paka-rni?  
**what boomerang** PRES.IMPF-3DUAL.SUBJ chop-NPAST  
 ‘What (sort of) boomerang are they chopping?’  
 (Warlpiri Dictionary Project 1993)
- b. **Ngana-ku** ka-npa-rla **ngarrka-ku** piirr-pardi-mi?  
**who-DAT** PRES.IMPF-2SG.SUBJ-3DAT.OBJ **man-DAT** wait.for-NPAST  
 ‘Which man are you waiting for?’ (Mary Laughren, p.c.)
- c. **Nyarrpara-ngurlu** ka-npa wapa **kirri-ngirli-ji.**  
**where-EL** PRES.IMPF-2SG.SUBJ walk.NPAST **camp-EL-TOP**  
 ‘What camp are you from?’ (Warlpiri Dictionary Project 1993)

Thus, the ability of *nyarrpa* to appear with an overt restriction is entirely expected. These examples also illustrate that the separation of the *wh*-word from its restriction is not unique to the *wh*-scope-marking construction but is generally available in the language. One distinction remains between *nyarrpa* and other *wh*-words. The restriction of most *wh*-words may appear in a number of syntactic positions; for example, it may form a constituent with the *wh*-word, (53a), it may appear in a neutral position, (53b), or it may appear in the postverbal backgrounded position, (53c). The clausal restriction of *nyarrpa*, however, uniformly appears peripherally.<sup>20</sup> As discussed earlier, this follows from independent properties of the language. Dependent finite clauses do not appear clause-internally in Warlpiri, regardless of their syntactic function, for reasons that are yet unclear. Therefore, it is expected that when the dependent finite clause is merged as the restriction of a *wh*-phrase, it will also undergo obligatory extraposition.

## 5. Conclusion

In this article, I have examined the *wh*-scope-marking construction in Warlpiri. I argued that the direct-dependency account of *wh*-scope marking constructions cannot carry over to Warlpiri. Instead, I developed an indirect-dependency account according to which the dependent clause serves as the restriction of the matrix *wh*-word; the dependent clause extraposes and the matrix *wh*-word undergoes *wh*-movement. On this account, the construction becomes a natural property of the language. The Warlpiri instantiation thus provides additional support for the crosslinguistic validity of the indirect-dependency approach to *wh*-scope-marking constructions.

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