

# Verbs as Spatial Deixis Markers in Jingulu<sup>1</sup>

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*Contrary to the common pattern of spatial terms being metaphorically extended to location in time, the Australian language Jingulu shows an unusual extension of temporal markers to indicate location in space. Light verbs, which typically encode tense, aspect, mood and associated motion, are occasionally found on nouns to indicate the relative location of the referent with respect to the speaker. It is hypothesised that this pattern resulted from the reduction of verbal clauses used as relative modifiers to the nouns in question.*

Key terms: deixis, Jingulu, relative clause, nominal tense

## Introduction

In Jingulu discourse and narrative, nominals sometimes bear suffixes, apparently marking location in space, which are identical to light verbs. In §1, a brief description of Jingulu syntax shows that light verbs are bound morphemes which form the morpho-syntactic core of verbal predicate words. Light verbs, which typically encode tense, aspect, mood, and associated motion, are the only obligatorily overt part of a verb. Section 2 focuses on the appearance of a set of markers on nominal words, whose functions are best translated by phrases such as ‘here, up ahead, back there’ and so forth - in other words markers of spatial deixis. These markers are homophonous with certain of the light verbs discussed in §1, and so §3 examines the relationship between light verbs and these morphemes. Here it is shown that, despite full homophony between light verbs and deixis markers attached to nominals, the latter

<sup>1</sup> Abbreviations used in glosses:

DEM, P, D.....	demonstrative, preposition, determiner (parts of speech)
Kr .....	Kriol
m, f, n, v .....	masculine, feminine, neuter, vegetable (genders)
ERG, ACC, DAT, GEN ..	Ergative, Accusative, Dative, Genitive (case)
LOC, ALL .....	Locative, Allative (case)
FOC.....	focus (identificational or contrastive), discourse prominence
EMPH.....	emphatic
1, 2, 3.....	first, second, third (persons)
sg, dl, pl.....	singular, dual, plural (numbers)
anim.....	animate
Inc, Exc .....	inclusive, exclusive reference (for non-singular first persons)
S, O.....	subject, object (agreement)
do, did, FUT, DIST .....	motion neutral light verb present, past, future, distant past
HAB.....	light verb habitual aspect
PST, NPST.....	past, non-past (tense)
IMPV, IRR.....	Imperative, Irrealis (mood)
go, went, will.go .....	motion away light verb present, past, future
come, came, will.come ..	motion towards light verb present, past, future
NEG.....	negative, negation
Q.....	interrogative particle

do not reflect verbal/inflectional properties of the clause. Possible origins of the spatial deixis markers are entertained in §4, with the hypothesis advanced that it may have arisen from the reduction of subordinate (relative) clauses. The case is made that while deixis markers developed from the light verbs with which they are still homophonous, they should not be viewed synchronically as verbal elements. Section 5 searches for similar phenomena in other languages, examining tense marking occurring on nominals independently of clausal tense. While such phenomena are found in other languages, these typically mark temporal rather than spatial deixis.

## 1. A brief introduction to Jingulu

This necessarily brief overview of the structure of Jingulu clauses focuses on those aspects which are directly relevant to this article. For a full description, readers are referred to Pensalfini 2003 and Chadwick 1975.

Jingulu is a non-Pama-Nyungan language of the Barkly Tableland in Australia's Northern Territory. The traditional territory of Jingulu speakers centres on what is now Beetaloo Station and the Newcastle watercourse. The languages most closely related to Jingulu are Ngarnka (extinct) and Wambaya, which in turn are more distantly related to the Yirram languages (Jaminjung, Ngaliwurru, and Nungali). Together all of these languages are generally held to form the Mindi group (Chadwick 1984).

Jingulu is nonconfigurational in the sense that word order is extremely free, multiple non-adjacent co-referent nominals within a clause (so-called 'discontinuous NPs') are very common, there is extensive null anaphora such that an inflected verb can function alone as a sentence, and there is no evidence for asymmetric structural relations between full NPs construed with subject versus object functions. For a full discussion of Jingulu's nonconfigurationality, see Pensalfini (2004).

### 1.1 Nominals

Jingulu has three lexical parts of speech: verb, nominal, and adverb. Adverbs will not be discussed further here, but are discussed in chapter 3 of Pensalfini 2003. The nominal category comprises words which translate into English for the most part as nouns and adjectives. Nominals minimally consist of a root plus a gender marker, there being four morphosyntactic genders in Jingulu:

(1)	a.	masculine:	<i>wawa</i> 'boy'	<i>jamankula</i> 'blanket lizard'	<i>jabarrka</i> 'liver'	<i>bardakurra</i> 'good (m)'
	b.	feminine:	<i>wiwirni</i> 'girl'	<i>lirrikbirni</i> 'cockatoo'	<i>dardawurni</i> 'axe'	<i>bardakurrirni</i> 'good (f)'
	c.	neuter:	<i>yurrku</i> 'flower'	<i>karalu</i> 'ground'	<i>ngabarangkurru</i> 'blood'	<i>bardakurru</i> 'good (n)'
	d.	vegetable:	<i>milakurrmi</i> 'wild potato'	<i>ngijinmi</i> 'tail'	<i>kingmi</i> 'rainbow'	<i>bardakurrimi</i> 'good (v)'

The bimorphemic nature of bare nominals is most evident from the behaviour of 'adjectival' roots like /bardakurr-/ *good*, which combine with any of the four gender endings to form word. as illustrated in (1). but it can also be seen from the behaviour of certain 'noun' roots such as /waw-/ *child*, which take different endings depending on reference (1a-b).<sup>2</sup> For ease of exposition, no morpheme break is written between a

<sup>2</sup> Note that the feminine form of *wawa* is *wiwirni*. The feminine and vegetable gender markers (like the non-singular subject agreement markers in verbal words) trigger a regressive height

root and its gender marker.

All nominal words therefore minimally consist of a root plus a gender marker, and can be further inflected for number and animacy, syntactic (core) or semantic (peripheral/adpositional) case, discourse prominence, and deixis. For example, the word *bininja-ala-rni-rni-nu*, which would be the ergative and focused form of *men*, consists of a masculine nominal *bininja*, followed by the animate plural marker /-(b)ala/, the Ergative /-rni/, the focus marker /-rni/, and the deictic /nu/ (each of these morphemes is discussed in detail in chapter 5 of Pensafini 2003, except for the deictic, which is the subject of the current article).

## 1.2 Verbs

Jingulu verb words typically consist of a root followed by agreement markers (subject before object) and then a final element which encodes a combination of tense, aspect, and associated motion (TAMM):

- (2) a. *Jama-bili-rni-rni ngiji-wunyu-nyu-ju nganku.*  
that(m)-dl.anim-ERG-FOC see-3dl-2O-do 2sg.ACC  
'Those two can see you.'
- b. *Banybila-nga-nu ibilka karrinbiyi.*  
find-1sg-did water tree.water  
'I found tree-water.'

However, the word-initial root is not obligatory. In many instances, where the verb indicates generic movement or action ('come, go, do'), there is no root used, and the verb word consists of the agreement marker(s) and final TAMM morpheme alone:

- (3) a. *Ya-ngku ngurrarrungka.*  
3sg-will.come tomorrow  
'He'll come tomorrow.'
- b. *Nga-rruku idajku.*  
1sg-went yesterday  
'I went (there) yesterday.'

The initial root can also be omitted if its meaning can be inferred from context:

- (4) a. *Ngindimbili nga-nu.*  
here 1sg-did  
'I did it here.'
- b. *Kurrubardi-rni kurdkulyu-kaji ngirri-marriyimi.*  
boomerang-FOC mucus-through 1pl.Exc-DIST  
'We'd do [cut through] the innards with a boomerang.'
- c. *Kuwarrku. Ibilka-rni-mbili wurru-wardi.*  
nothing water-FOC-LOC 3pl-HAB  
'Not at all. They just do drink [beer].'

With two particular TAMM morphemes, one indicating a negative imperative and the other an imperative implying motion, agreement is not permitted at all:

harmony, such that strings of the low vowel /a/ change to the high /i/ at the right edge of roots to which these markers attach. Jingulu vowel harmony is described and analysed in detail in Pensafini 2002, with a description alone in Chapter 2 of Pensafini 2003.

- (5) a. \**Nguny-ana-ji!* vs *Ngunyi-ji!*  
 give-1O-NEG.IMPV give-NEG.IMPV  
 'Don't give it to me!' 'Don't give it!'
- b. \**Miji-wunyu-yirri!* vs *Miji-yirri!*  
 get-2dl-go.IMPV get-go.IMPV  
 'You two go get it!' 'Go get it!'

These morphemes can only ever occur with initial roots, as the TAMM morphemes are all phonologically suffixes. Most TAMM markers, therefore, minimally require only agreement morphemes to attach to. The morphemes shown in (5), however, being unable to appear with (overt) agreement marking, must be hosted by a root. All in all, the only morpheme that is always present in a verb is the TAMM marker.

There are three series of TAMM markers in Jingulu, categorised by associated motion, plus a small set of irrealis and imperative markers. Following Pensalfini 2003, the 'motion away' markers are all glossed with an appropriately tensed form of *go* (6a-b) the 'motion towards' markers with a form of *come* (6c-d), and the motion-neutral markers with a variety of abbreviations set out in the first footnote(6e-h).

- (6) a. *Mindi-rruku jalyangku-ma Warranganku-ngka.*  
 1dl.Inc-went today-EMPH Beetaloo-ALL  
 'Today we went to Beetaloo.'
- b. *Nyinda-rna ngangga juwirri-mindu-wa yunku.*  
 DEM(m)-DAT meat follow-1dl.Inc-will.go<sup>3</sup> foot  
 'We must follow the animal's tracks.'
- c. *Wilinja ya-jiyimi jamaniki-rni.*  
 countryman 3sg-come this(m)-FOC  
 'Our countryman is coming.'
- d. *Jama-bili-rna birri-wunya-ana-miki marluka-yili-rni.*  
 that-dl.anim-FOC visit-3dl-1O-came old.man-dl-ERG  
 'Those two old people came to see me yesterday.'
- e. *Kakuyi ya-ju, jurruku-mbili kakuyi ya-ju dardu.*  
 fish 3sg-do far.from.shore-LOC fish 3sg-do many  
 'There are fish, there's lots of fish out in the middle.'
- f. *Ngindi-nama wumbuma-yi ngangga-rni wurraka-na ya-yi.*  
 this(m)-time cook-FUT meat-FOC 3pl.GEN-m 3sg-FUT  
 'Then he'll cook the meat for these people, he will.'
- g. *Kiranguju-nu darra-ardi buliki-rni dimana-rni.*  
 melon.species-did eat-HAB<sup>4</sup> cow-ERG horse-ERG  
 'Cows and horses eat this melon.'
- h. *Jama-rni warrijki ya-aka ngini-mbili.*  
 that(m)-FOC spirit 3sg-PST.HAB this-LOC  
 'The spirit used to be here.'

<sup>3</sup> The morpheme /-wa/ has two prosodically-determined allomorphs, with [-rriyi] attaching to monomorphemic stems, and [-wa] occurring elsewhere.

<sup>4</sup> One *ALL* reviewer asked why there is no subject agreement (3pl is expected) here. It is actually common for number (dual or plural) to be omitted from agreement marking, which would render this form equivalent to 3sg, which has zero-marking.

In addition to the three series of light verbs discussed above, there are three TAMM forms which indicate irrealis/imperative mood. The special imperative forms /-ji/ and /-yirri/ were shown in (5), and the general imperative and irrealis marker /-mi/ is shown in (7).

- (7) a. *Jama-rni wilwili-kaji ya-ju karningka wirrkiyi-mi.*  
 that-FOC hang-through 3sg-do possibly fall-IRR  
 'It's hanging, swinging, might fall.'
- b. *Nyurrun baka-mi!*  
 slither-IRR<sup>5</sup>  
 'Slide on over!'
- c. *Warnu-ngkujbi, warnu ngunya-ana-mi!*  
 tobacco-HAVING(m) tobacco give-1O-IRR  
 'You with the tobacco, give me a cigarette!'
- d. *Kabija-anyu-mi!*  
 smile-2dl-IRR  
 'Smile, you two!'

As (7c-d) show, /-mi/, unlike /-ji/ or /-yirri/, is compatible with agreement marking.

The Jingulu verb is discussed in much more detail in chapter 6 of Pensalfini 2003.

Different analyses of the structure of Jingulu verb words have been proposed in published literature. Chadwick (1975), following largely semantic criteria, calls the initial root the 'verb stem', unless there is no root (as in (3-4) above), in which case the final TAMM morpheme is the stem. Pensalfini (2003, 2004), on the other hand, appealing to the distribution of the elements (including the surprising fact that roots are typically ambivalent with respect to subcategorisation<sup>6</sup>) along with phonological phenomena such as vowel harmony (see Pensalfini 2002), considers the final TAMM morpheme to be a 'light verb' and the true verbal head of the word, with the initial co-verbal root, when it appears, being a category-less but semantically rich element which does not directly contribute to the deep syntax of the clause.

This article calls the TAMM marker a 'light verb', but this is not crucial to the generalisations or analyses presented here. The notion of a category-less root is instrumental to the development of the analysis of nonconfigurationality proposed by Pensalfini (2004), which in turn underlies some of the discussion in §4.2, however this is not a central part of the argument.

## 2. Spatial Deixis Markers on Jingulu Nominals

As briefly mentioned in §1.1, nominal words are sometimes marked, with an element which appears to indicate something about the referent's location in space. The use of these markers is entirely optional, and follows all nominal marking including

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<sup>5</sup> Compound roots such as /nyurrun bak-/ are presented as two Jingulu words which have as their gloss a single English word. Phonotactics and vowel harmony show these to be clearly separate words in Jingulu, and therefore they are written as such.

<sup>6</sup> Which is to say that a root can be interpreted as either transitive or intransitive depending on the agreement and nominal elements they occur with. The compound root /ngaruk bak-/ can mean either *drown* (intransitive) or *submerge* (transitive), depending on the context. Thus Jingulu appears to be a counter-example to the tendency of Australian languages to categorise verb roots as either transitive or intransitive (Dixon 1980).

case and role.<sup>7</sup>

The appearance of the morpheme /-nu/ in this context indicates that the referent is at hand, either visible or recently visible or recently prominent in the discussion (8), and translates as ‘this/that X here’. The second translation following the sentences in (8) is the translation that the sentence would have had if it did not bear the marker /-nu/ in the places where it appears in bold type.

- (8) a. *Nyini-**nu** ngarri-**nu** ngarru-**nu** ngawu nyininiki-**nu** bilyingbiyaku*  
DEM(n)-NU 1sg.GEN-n 1sg.GEN-n home this(n)-NU red(n)  
*karalu.*  
ground  
‘My home is the red earth here.’  
(versus ‘My home is the red earth.’)
- b. *Ngayirni babi-rni ngiji-nginya-**nu** kujkarrarna,*  
1sg.ERG older.brother-ERG see-1dl.Exc-did two  
*yaminju-**nu** nyu-rruku nyinawarra.*  
shooting.star-NU 2sg-went this.way  
‘My brother and I saw two shooting stars as soon as you’d gone.’  
(versus ‘My brother and I saw two shooting stars when you were gone.’)
- c. *Ajuwa ila-nga-**nu** ngarru bundurru-**nu**?*  
where put-1sg-did 1sg.ACC food-NU  
‘Where did I put that food of mine?’  
(versus ‘Where did I put my food?’)
- d. *Ngini-rni yurlaminku-**nu** ngaja-mi!*  
DEM(n)-FOC eucalyptus.sp.-NU see-IRR  
‘Look at that there *Yurlaminku* tree!’  
(versus ‘Look at that *Yurlaminku* tree.’)
- e. *Jama-rni-ma jalkalu-**nu** ngarri-na kula*  
that-FOC-EMPH teenage.boy-NU 1sg.GEN-m nephew  
*ngamula-kaji.*  
big(m)-through  
‘That there boy is my nephew, the big one.’  
(versus ‘That boy is my nephew, the big one.’)
- f. *Ngaba-nga-rriyi dardu larnku karningka nyinda-**nu** wawa*  
have-1sg-will.go many clothes LEST DEM(m)-NU child  
*wurrajkalu-jiyimi.*  
cold-come  
‘I’ll take lots of clothes in case the boy here gets cold.’  
(versus ‘I’ll take lots of clothes in case the boy gets cold.’)
- g. *Kirankuju-**nu** darra-ardi buliki-rni dimana-rni.*  
melon.species-NU eat-HAB cow-ERG horse-ERG  
‘Cows and horses eat this here *Kirankuju* melon.’  
(versus ‘Cows and horses eat the *Kirankuju* melon.’)

The use of /-nu/ in (8b) does not quite fit the characterisation given above, but it does give the idea that the event happened almost immediately the hearers had left

<sup>7</sup> In fact, it is next to impossible to elicit this kind of marking, and when questioned about it, speakers typically re-stated what they had said without these markers. This makes it necessary to make such unsatisfyingly non-committal statements about this marking such as that it “appears to indicate something about the referent’s location in space.” As evident from the translations with and without these markers in subsequent examples, the semantic effect of this marking are subtle.

the vicinity. In this instance, /-nu/ could be argued to be marking location in time (temporal deixis). This important matter will be returned to in §3.

The morpheme /-ju/ in this context indicates proximity of the referent to the speaker, but usually spread out over an area:

- (9) a. *Dimbu-mbili madayi-ju.*  
 sky-LOC cloud-JU  
 ‘The sky here (above) is cloudy.’  
 (versus ‘The sky is cloudy.’)
- b. *Kujarrarni walanja-ju ngaja-rdu, karrila..*  
 two goanna-JU see-go leave.IRR  
 ‘We saw two goannas by us as we were going, but we left them alone.’  
 (versus ‘We saw two goannas as we were going, but we left them alone.’<sup>8</sup>)

The morpheme /-ardi/ similarly indicates proximity and distribution over an area, but seems to further imply that the referent of the marked nominal somehow surrounds or envelops the speech act participants:

- (10) a. *Jamaniki-rni ibilka-ardi nyambala kurranjiyaji.*  
 this(m)-FOC water-ARDI DEM(n) shallow  
 ‘This water all around us is shallow.’  
 (versus ‘This water is shallow.’)
- b. *Wuliyija-nga-ardi langa ngaja-nga-ju kanjalawurri-darra dardu.*  
 sun-ERG-ARDI P(Kr) see-1sg-do male.red.kangaroo-pl many  
 ‘When the sun sets on me I can see many kangaroos.’  
 (versus ‘At sunset one can see many kangaroos.’)

When /-yi/ appears on nominals in this fashion, it conveys a sense of ‘up there’ or ‘up ahead’:

- (11) a. *Ngunu janbara-yi jimi-rna darrangku-mbili.*  
 DEM(n) nest-YI this-FOC tree-LOC  
 ‘There’s a nest up in that tree.’  
 (versus ‘There’s a nest in that tree.’)
- b. *Nguni-yi janbara-mbili nyambala marrkulu-darra wurru-ju,*  
 DEM(n)-YI nest-LOC DEM(n) egg-pl 3pl-do  
*kujkarrarna-kujkarrarna.*  
 two-RED  
 ‘There are four eggs up in that nest.’  
 (versus ‘There are four eggs in that nest.’)

The morpheme /-rriyi/ also conveys a sense of ‘up there/ahead’, but further implies that the referent is moving:

- (12) *Jama-baja-rriyi malkirrankuj-bala dirri-wurru-ju ibilka.*  
 that-pl-RRIYI bachelor-pl.anim eat-3pl-do water/drink  
 ‘Those bachelors up there are going about drinking.’  
 (versus ‘Those bachelors are drinking.’)

The morpheme /-ka/ indicates that the referent is out of sight, usually ‘behind’ the speaker in terms of location, at a place previously visited by the speaker:

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<sup>8</sup> The variant with /-ju/ implies that the goannas were seen one at a time, while the variant without /-ju/ may either mean the same, or that the goannas were together.

- (13) a. *Ngurru-wa ngini-ka bardakurru-ngka banybili-ngurri-yi*  
 1pl.Inc-will.go this(n)-KA good(n)-ALL find-1pl.Inc-FUT  
*bardakurru kurrindi-ngurri-yi ngawu-rna.*  
 good(n) camp-1pl.Inc-FUT camp-DAT  
 ‘We’ll find a good place back there to set up camp.’  
 (versus ‘We’ll find a good place to set up camp.’)
- b. *Kilyirri-nginyi-ju ngarri-ni-nga bardarda-ka babirdimi.*  
 dig.up-1dl.Exc-do 1sg.GEN-f-ERG younger.brother-KA yam  
 ‘My little sister back there and I are digging up yams.’<sup>9</sup>  
 (versus ‘My little sister and I are digging up yams.’)
- c. *Jamaniki-rni karnanganja-nga baya-ka yurnukurdukurdu-warndi*  
 this(m)-FOC emu-ERG.f man-KA foot-INST  
*maya-nu.*  
 hit-did  
 ‘This fellow back there got kicked by an emu.’  
 (versus ‘This fellow got kicked by an emu.’)
- d. *Ngindi-nama wumbuma-yi ngangarri-rni walanja-rni,*  
 this(m)-time cook-FUT meat-FOC goanna-FOC  
*wurraka-na-ka ya-yi.*  
 3pl.GEN-m-KA 3sg-FUT  
 ‘Then he’ll cook the goanna meat, for those folks back there, he will.’  
 (versus ‘Then he’ll cook the goanna meat, for them, he will.’)

Less common than any of the above morphemes, /-mi/ appears on a nominal to indicate that the reference of the nominal is inferred or expected, though not incontrovertibly instantiated:

- (14) a. *Ngunu ngaja-mi mayamba-kaji-mi nginda.*  
 DEM see-IRR whirlwind-through-MI DEM(m)  
 ‘Look, I think that’s really a whirlwind.’  
 (versus ‘Look, that’s really a whirlwind.’)
- b. *Ngininiki-rni ngarru-nu kiyala-rni miji-ngurru-nu ngarru*  
 this(n)-FOC 1sg.GEN-n nose.bone-FOC get-1pl.Inc-did 1sg.GEN  
*junma-rni-rna-mi, junma kardakarda.*  
 wallaby-FOC-DAT-MI wallaby bone  
 ‘We got my nose bone here from a wallaby skeleton.’  
 (same meaning without /-mi/, but see below)

The appearance of /-mi/ on ‘wallaby’ in (14b) indicates that the wallaby itself was not encountered and slaughtered, and is thus uninstantiated. Rather the bone was found and presumed to have come from a wallaby.

Words referring to words or languages are often marked in this way, and in these cases it is always the morpheme /-nu/ that is used:

- (15) a. *Waja nyama-rni liyijku-nu?*  
 what 2sg.NOM-FOC name-NU  
 ‘What’s your name?’

<sup>9</sup> The context made clear that it was the speaker’s sister, and not brother, who was being referred to, yet the masculine form of the noun appears. This kind of ‘disagreement’ is common in contemporary Jingulu, and is discussed in Pensalfini 2003 and analysed at length in Pensalfini 2000.



- b. *Anuku nya-mi liyijku-nu?*  
 how 2sg-IRR name-NU  
 'What's your name?'
- c. *Nyamba ambaya-nya-ju jimi-rna marrinju-nu?*  
 what speak-2sg-do that(n)-FOC word-NU  
*Angkula larrinka-nga-ju nganku.*  
 NEG understand-1sg-do 2sg.ACC  
 'What was that word you said? I didn't understand you.'
- d. *Ayinji-nama dirri-ngurri-yi, waja baka-ngurri-ngku*  
 little.while-time eat-1pl.Inc-FUT loosen-1pl.Inc-will.come  
*marrinju-nu.*  
 language-NU  
 'Wait a little while we drink, then we'll talk language [Jingulu].'

It is not clear that the translation would be any different without /-nu/, and words referring to words and language usually occur with /-nu/. The reason for this is unclear. One might imagine that names, words, languages are always spatially 'present' with the speaker/named, but this seems to be drawing a rather long bow.

So far, all of the morphemes discussed in this section as deictic markers on nominals could be argued to also be marking definiteness or specificity. That is, in no instance is the marked nominal's reference non-specific and indefinite. Interestingly, this marking may even occur on nominals with unique referents, which are already inherently definite:

- (16) *Ngawu-nu maja-nya-yi-kaji, nyamirni-kaji ngawu-nu*  
 home-did get-2sg-FUT-through 2sg.ERG-through home-did  
*maja-nya-yi, Kirnbininku-nu.*  
 get-2sg-FUT Kirnbininku-NU  
 'You will come to know this here camp properly now, you'll really get a hold of it, this Kirnbininku.'

This could be redundant marking of definiteness (both inherent to the nominal itself and further iterated by the use of /-nu/). On the other hand, it could be that the morphemes under consideration are only marking location in space, and that the implication of definiteness/specificity follows in most cases from this location.

### 3. The Relationship Between Deixis Markers and Light Verbs

The astute reader will have already noticed that the morphemes described as markers of spatial deixis in §2 are homophonous with some of the light verbs presented in §1.2. This homophony is striking, and too thorough to be accidental. All of the deixis markers discussed in §2 are precisely homophonous with light verbs (including sharing the same morphophonological properties such as stress and allomorphy), and it will be argued in this section that their semantics is similar enough to argue that the phenomenon has arisen from an extension of light verbs into the nominal domain.

While it is not controversial to describe tense on verbs as deictic with respect to time (Comrie 1985), it has not been widely suggested that this might extend to spatial deixis. Yet this appears to be possible in Jingulu. Let us re-examine the markers discussed in §2 with reference to their homophonous light verbs.

First of all, while all of the markers discussed in §2 are homophonous with light verbs, not all light verbs in the language are found on nominals with this deictic usage. The morpheme /-nu/ (8) is the motion-neutral past tense verb, /-ju/ (9) is the motion-neutral present tense verb, /-ardi/ (10) is the habitual marker, /-yi/ (11) is the motion-neutral future tense verb, /-ka/ (13) is the past habitual, and /-mi/ (14)

is the irrealis/imperative marker. These are the most commonly found deictic markers on nominals. All of these morphemes, in their use as light verbs, are motion-neutral. Nominal markers homophonous with light verbs that imply associated motion are rare, and are only ever used if movement of the referent is involved (as in (12), where /-rriyi/ is homophonous with the future form of the light verb meaning *go*.<sup>10</sup>

It is important to note that tense apparently marked on the nominal (if these deictic markers are seen as their homophonous light verb counterparts) need not agree or even be compatible with that of the matrix verb. Sentence (12) provides a clear example of this, with /-rriyi/ in its verbal form bearing future tense, while the clause in (12) is in the present. Another stark example is provided by sentence (13c), where the past habitual /-ka/ appears on the nominal. The man was kicked but once, he is not someone who made a habit of being kicked by emus.

The use of these markers on nominals comes closest to the homophonous verbal uses in (8b) and the examples of /-mi/ on nominals in (14). In (14), spatial deixis is only indicated to the extent to which absence can be considered a spatial location. Lack of instantiation is closer to Irrealis mood in the sense in which it occurs on verbs. In (8b), /-nu/ seems to be indicating the proximity of the event of shooting stars to the event of the hearer departing, and this seems like a distinctly verbal usage, though not at all the typical use of /-nu/ as a light verb.

However, even in the remaining examples, where the morphemes in question clearly indicate location in space, rather than time, the choice of a particular morpheme over another shows some semantic connection to the homophonous light verb. The fact that elements homophonous with verbs implying associated motion (such as /-rriyi/ in (12)) are used only when the referent is in motion, for instance, suggests a link between these elements that goes beyond accidental homophony.

The use of the past (habitual) /-ka/ in (13) to indicate a referent that is 'behind', the present forms /-ju/ (9) and /-ardi/ (10) to indicate something that is immediately around, and the future /-yi/ (11) and /-rriyi/ (12) to indicate something that is 'ahead' all show a pattern that is common cross-linguistically, that is the metaphorical relationship between past time and retrograde direction/location, present time and immediate surrounds, and future time and forward direction/location. What is odd, in the Jingulu case, is that it seems that the temporal markers have been metaphorically extended into the spatial domain, rather than vice versa.

Even the distinction between the use of /-ju/ (9) and /-ardi/ (10), where the latter indicates that the referent surrounds or envelopes the speech act participants (or other relevant reference point), could be explained by appealing to the difference in the semantics of these elements when used as verbs: the light verb /-ardi/, being a marker of habitual aspect, suggests that the subject is steeped in the action, repeating it over and over on a habitual basis, while the motion-neutral present /-ju/ merely indicates co-presence of subject and action - the subject is surrounded by or co-located with the action, but not steeped in it in a habitual way.

The remaining mystery is /-nu/ (8), which in its verbal use is the motion-neutral past tense form, but seems to be the default spatial deixis marker, and does not imply any retrograde direction or location. This is by far the most common of the spatial deictics, and as shown in (15), is really the only option when marking words whose reference are words and languages (I wonder whether this extends to non-concrete or abstract referents in general, but do not have the data to determine this). Readers are warned that the following argument is weak, if somewhat attractive. It has long been noted that verbs meaning *have* are used as auxiliaries in perfectives in many languages, and that the auxiliary and lexical use of these elements share some semantics. A subject can be seen to be 'in possession of' all states and events in its past. Extending this notion to the Jingulu /-nu/, it could be argued that the verbal

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<sup>10</sup> One *AJL* reviewer asked why this could not be analysed with *jamabaja* as the subject of the main verb *rriyi*. As explained in section 1.2, this is not possible, as /-rriyi/ cannot stand alone without either a co-verbal root or an agreement marker. As a verb this would have to be *wurrirriyi* (3pl-will\_go), or with singular agreement *yarrriyi*.

past marks events and states that are ‘with’ a subject at the time of utterance (in simple sentences) - and that in the nominal domain this translates to entities that are immediately present, in the vicinity.

In summary, there are some important similarities and differences between the behaviour of deictic markers on nominals and their homophonous verbal counterparts. The similarities include identical forms, and some semantic similarities as discussed above. The differences primarily revolve around the fact that, in most cases, deictic markers are not tied to the clause’s temporal structure in any way. From this point on in this article, the deictic markers in question will be given the same gloss as their light verb counterparts.

#### 4. The Origin of Spatial Deixis Markers in Jingulu

There is no doubt in my mind that the deictic markers are related to light verbs diachronically - the similarities, as discussed in §3, are simply too great for this to be accidental homophony. In §4.1 I will present an account of how the nominal usage might have developed from a simplification/reduction of multi-clause sentences. Two possible synchronic analyses are examined in §4.2, and it is argued that these deictic markers are to be analysed synchronically as independent nominal inflections, and not as verbal elements.

##### 4.1 How did the Jingulu situation come about?

It is conceivable that the use of light verbs as deictic markers on nominals developed from the use of full verbal clauses in adjoined positions (as relative clauses). Note from the above examples that the referents of nominals marked with deictic tense are always third person. Words like *ibilkardi* in (10a) might have once been expressed as the clause *ibilka ya-ardi* (‘there is (usually) water’, *bardardaka* in (13b) from *bardarda ya-ka* (‘my younger sibling was (there)’), and *marrinjku* in (15d etc.) from *marrinjku ya-nu* (‘the word did (get said)’).<sup>11</sup>

According to Pensalfini (2003), the tense features of light verbs in subordinate structures (including relative clauses) are interpreted as relative to the tense features of the main clause verb:

- (17) *Wilijird ngaja-nga-nu jama juwarra-rnana-jiyimi.*  
 look.back-1sg-did that(m) follow-3S.1O-come  
 ‘I looked back at the guy who was following me.’

The relative clause (in bold) in (17) is marked with present tense, despite the fact that the event depicted happened in the past. This is because the event in the subordinate clause happened at the same time as the event depicted in the main clause. In the case of third person relative clauses, then, the tense marker in the relative clause need not agree with the tense marker in the main clause.

Dropping of the third person singular subject marker /ya-/ would have resulted in the core verb (phonologically a suffix) attaching to the free nominal. These one-word reduced relative clauses could then have been re-analysed as nominals marked with deictic tense.

This same process would be historically responsible for the existence of co-verbal roots ending in /y/ that have equivalent nominal forms, such as those in (18).

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<sup>11</sup>The morpheme /ya-/ in these examples is the third person singular subject agreement marker. As explained in chapter 6 of Pensalfini 2003, third person singular subject agreement is null when it occurs between a co-verbal root and a light verb, but when there is no co-verbal root it is realised as /ka-/ following an adverb or /ya-/ elsewhere.

- |      |                                    |   |
|------|------------------------------------|---|
| (18) | <i>bardakurra</i> (good)           | <i>bardakurriy-</i> (be good/make well) |
|      | <i>milyamilya</i> (late, slow),    | <i>milyamilyay-</i> (be slow)           |
|      | <i>jamurri</i> (cool),             | <i>jamurriy-</i> (be cold)              |
|      | <i>kuwarrku</i> (nothing),         | <i>kuwardjiy-</i> (have nothing)        |
|      | <i>bujarrima</i> (sulky, selfish), | <i>bujarriy-</i> (sulk)                 |
|      | <i>mabu</i> (shame),               | <i>mabuy-</i> (be ashamed)              |
|      | <i>ngirriki</i> (the hunt),        | <i>ngirrikiy-</i> (to hunt)             |
|      | <i>burdalyi</i> (cooked, ripe),    | <i>burdalyiy-</i> (cook, burn)          |

That is a clause consisting of N + V such as *bardakurra ya-ju* ('s/he is good' or 's/he makes [something] well') with overt third person singular agreement might have been re-analysed as the verb word *bardakurriya-ju* with an overt co-verbal root and therefore null third person singular subject agreement. The newly analysed co-verbal root /*bardakurriy-*/ could then be used with other subjects, as in *bardakurriyanga-ju* ('I am good' / 'I make [it] well').

There are some very rare instances of some of these morphemes (notably /-nu/) appearing on nominals denoting events in order to locate them in time with respect to other events:

- |      |                                      |                   |                      |
|------|--------------------------------------|-------------------|----------------------|
| (19) | <i>Banybil-yii</i>                   | <i>nakalanjku</i> | <i>ibilkirni-nu.</i> |
|      | find-FUT                             | moss              | rain-did             |
|      | 'Moss will be found after the rain.' |                   |                      |

In (19) the host *ibilkirni* is clearly a nominal, and not a co-verbal root, as it bears the nominal gender inflection /-rni/ (which does not occur on co-verbal roots). The phenomenon exemplified in (19) is highly unusual, with spatial deixis being the more common function of /-nu/ on nominals (see, however, (8b)). It is conceivable that the spatial use of /-nu/ has been extended to temporal reference in examples such as these. The metaphorical extension of spatial reference to time is, after all, common cross-linguistically (consider how in English the future is commonly referred to as being *ahead* and the past *behind*). What is unusual about the Jingulu case is that these morphemes derive from a metaphorical extension of temporal deixis (TAMM markers/light verbs) to spatial deixis. In cases like (19), then, we may have a secondary and recidivistic metaphorical extension, back to marking location in time. Alternatively, as pointed out by Rachel Nordlinger (personal communication), the examples in (19), (8b), and the use of /-mi/ exemplified in (14) might represent a relic of an earlier (diachronic) stage where light verbs were used on nominals with temporal, rather than spatial, reference.

What is clear in either case is that the current use of elements homophonous with light verbs to indicate spatial deixis has involved a metaphorical extension of time to the realm of space, which (as previously mentioned) is the mirror image of the familiar extension of space terms to refer to location in time. There is no *a priori* reason why metaphorical extension should not proceed in this direction, however, and there do appear to be examples of this type. Eve Sweetser (personal communication to David Lee, though Sweetser notes the observation is originally due to Laura Michaelis) noted one such extension in English, where it is possible to say *Coolangatta is still in Queensland, but Tweed Heads is already in New South Wales*. David Lee (personal communication) also notes cases such as *There are villages every so often all along the coast* (or *There are villages every now and then along the coast* or *There are occasional villages along the coast*). An intermediate examples is found in common statements such as *We are three hours from Elliott* and *Just ten minutes (drive) from Marlinja*. In these latter examples, there is a clearly imagined path which takes time to traverse, and this time taken has come to be used as the expression of the spatial length of the path and thus of the distance between the points. Eve Sweetser (personal communication) considers these to be metonymic rather than metaphorical. Sweetser's and Lee's examples are more subtle instances of this metonymy, where travel along the path need not necessarily be implied. Sweetser suggests that time terms such as *still* and *already* are inherently scalar in the same way that distance terms are, and it

is not so much the case that time becomes a metaphor for space or vice versa, but rather that both are inherently scalar and we can see the scalarity in terms of either time or space (and of course modern physics tells us that the two are simply manifestations of the same basic property of matter). However, this does not explain why the use of spatial terms for time is far more common, cross-linguistically, than the use of temporal terms for space. A further example of use of temporal elements with spatial reference is found in the Somali data in (25).

#### 4.2 Synchronic Analyses

If we accept the hypothesis from the preceding section that the deixis markers under consideration in this article originated historically as light verbs, the questions remains as to whether these elements should be analysed as light verbs in the synchronic grammar, or whether they have become independent nominal inflections comparable to case or number marking.<sup>12</sup>

##### 4.2.1 The elements are verbal

Under this proposal, nominals marked with these deictic elements are reduced relative clauses, with overt agreement elided and the light verb, phonologically a suffix, attaches to the noun phrase. This approach argues that the diachronic process described in §4.1 is in fact the synchronic process operating to give rise to forms such as those in (8-16).

Such an analysis predicts that we should find nominal phrases of more than one word occurring with the tense marker appearing on any of the nominals. This is because a clause itself may contain multiple co-referent nominals ('discontinuous NPs'). Therefore, we might expect all of the following to be possible reductions:

- (20) a. *babirdimi bardakurrimi ya-nu* --> *babirdimi bardakurrimi-nu*  
yam good(v) 3sg-did yam good(v)-did  
'There was a good yam.' 'The good yam there.'
- b. *babirdimi ya-nu bardakurrimi* --> *babirdimi-nu bardakurrimi*  
yam 3sg-did good(v) yam-did good(v)  
'There was a good yam.' 'The good yam there.'
- c. *bardakurrimi babirdimi ya-nu* --> *bardakurrimi babirdimi-nu*
- d. *bardakurrimi ya-nu babirdimi* --> *bardakurrimi-nu babirdimi*

The existence of such tense-marked multi-word nominals is questionable. There are indeed many examples in this article which could be analysed as involving multi-word NPs where only one nominal is marked (e.g. (8a, c, d, e, f), (9b), (10a),

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<sup>12</sup> In fact, one version of this latter hypothesis, proposed by Alan Dench (pers. comm.), argues that 'light verbs', even in their verbal use, are not verbs at all, but rather (semantic) case-markers. The appearance of case-marking on verbs has been attested in many Australian languages (notably in switch reference and other reference tracking systems, as discussed by Austin (1981), among others). While this analysis may have promise, there are some immediate problems. Jinguu does have a switch-reference system (Pensalfini 2003, chapter 4), in which the LOC and ALL case markers are added to verbs. The deictic elements under consideration bear no resemblance to other case markers in either form or distribution. The subset relation between deictic markers and light verbs (all deictic markers are homophonous with light verbs and show the same morphophonological properties, but not vice versa) also argues that these elements are derived originally from verbal elements - that is the diachronic extension has been from verbal to nominal, and not vice versa. This analysis will not be considered further in this article.

(11), (12), (13a-c) and so forth). There appears to be no requirement that this be either the first of the last nominal. Sometimes the nominal bearing the tense inflection is a demonstrative (8a, f), and sometimes a pronoun (13d), but more often than not it is the semantic head of the string of nominals (that which on notional grounds we might want to call a ‘noun’). Nowhere, however, was a notional ‘adjective’ found to bear deictic tense marking, as in the hypothesised (20a, d) above. This could be construed as an accidental gap in the data, given that deictic tense is not an especially common strategy in the first place.

Also favouring this analysis is the fact that deictic tense was only ever found on elements with third person reference.<sup>13</sup> Of course, it might be argued that such marking on first and second person pronouns would be entirely redundant, given that the core participants in the speech act (speaker and hearer) can be assumed to be not only definite but their location known to the addressee. However, as we saw in (16), this marking has been found on nominals with unique reference.

The strongest argument in favour of this analysis, however, comes from the fact that, unlike any other kind of nominal inflection, deictic tense only ever shows up on one of a string of co-referent nominals. Regular nominal inflection such as number or case, as shown in (21a-b), can surface on one or more (up to all) of a string of adjacent co-referent nominals.

- (21) a. *babirdimi-rdarra ngimaniki* OR *babirdimi-rdarra ngimaniki-rdarra*  
yam-pl this(v) yam-pl this(v)-pl
- OR *babirdimi ngimaniki-rdarra* (unusual)  
yam good(v)-pl
- b. *babirdimi-rna ngimaniki* OR *babirdimi ngimaniki-rna*  
yam-DAT this(v) yam this(v)-DAT
- OR *babirdimi-rna ngimaniki-rna*  
yam-DAT this(v)-DAT
- c. \**babirdimi-nu ngimaniki-nu*  
yam-did this(v)-did

As (21c) shows, such double-marking of deictic-tense is not found. This suggests that deictic tense on nominals should not be treated as parallel to other nominal inflections, as other inflections (for example gender, number, and case) can be marked on multiple co-referent nominals construed with the same function (see Pensalfini 2003).

#### 4.2.2 The nominal is inflected

Despite the arguments presented in the previous section, there are difficulties with interpreting deictic tense as synchronically marking clausal tense in a reduced relative clause. The biggest difficulty for such an analysis is in explaining why only a small subset of light verbs appear suffixed to nominals. If these constructions are simply reduced relative clauses, we would expect any light verb to potentially be

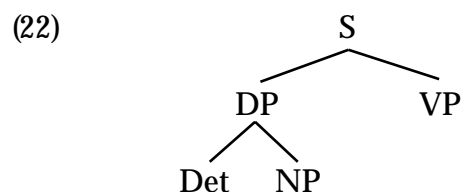
<sup>13</sup> As pointed out by an *AJL* reviewer, this requires the additional assumption that relative clauses cannot be formed on pronouns. I never found any examples of relative clauses being formed on pronouns in Jingulu, and attempts to make them were rejected and paraphrased by speakers. In English, too, relative clauses formed on first and second person pronouns in particular are highly marked and have an archaic feel (such as Shakespeare’s “You who stood upon the voice of occupation and the breath of garlic eaters.” - *Coriolanus* ). Several native English speakers whom I consulted accepted “The man who went swimming got sunburnt” and found “John/he who went swimming got sunburnt” marginal, but rejected “I/you who went swimming got sunburnt” outright.

suffixed to a nominal in this manner, as any light verb can appear in a relative clause. A further problem lies in explaining why the past tense marker in particular is the most widely used, even in cases where past tense marking would be inappropriate in a full subordinate clause. For instance, in (15d) the word *marrinjku* appears with the past light verb /-nu/, but the clausal equivalent, *marrinjku ya-nu* (language 3sg-did) would not be appropriate in this context. The speaking of language putatively referred to by this clause would be contemporaneous with, or immediately subsequent to, the action indicated by the main clause, and therefore either present or future tense would be expected on the light verb in the subordinate clause. This suggests that the interpretation of tense on nominals is not a straightforward ‘translation’ of verbal tense. Despite the fact that deictic tense does not show exactly the same distribution as other nominal inflection, we are led to seek an interpretation of tense on nominals that distinguishes it synchronically from clausal tense.

Work in formal semantics has suggested that all bare NPs are predicates (Williams 1981, Higginbotham 1985), and are therefore time-sensitive (Musan 1995). According to Higginbotham, bare NPs have an open position in their theta-grid which is saturated by a Determiner. The Determiner can specify the NPs location in time as well as in space. This analysis is clearly appropriate for Somali (described in §5.1), and also for the Wakashan languages described in §5.2. In these languages, the determiner seems to be sensitive to whether the referent of the NP is instantiated at the time of utterance or other reference time. The Wakashan languages, like Jingulu, use tense-marked verbal suffixes to indicate this.

Furthermore, Lecarme (1996), discussing nominal tense in Somali, implies a correlation between nominal tense and the ‘pronominal argument’ language type. In this type, first named by Jelinek (1984), the relationship of nominal phrases to the main clause has been held to be adjunctive (see Baker 1996, Baker 2001 for developments of this hypothesis). That is, overt NPs construed with subject and object functions do not occupy argument positions in these languages. Rather, the argument position is occupied by a formal element (either an overt or a null pronominal), with the overt NP adjoined and related by case or agreement through ‘secondary predication’.<sup>14</sup> The argument that Jingulu clauses are structured along the lines of the ‘pronominal argument hypothesis’ has been made by Pensalfini (2004). Thus, the relationship between the category of Determiners and NPs in languages like Jingulu is quite different from that in fully configurational languages like English.

It could be argued that DPs occupy argument positions in both languages - that DP is universally the only category that can be a syntactic argument. In configurational languages such as English, the Determiner which heads the argument typically selects an NP complement, satisfying both its own requirements as a head and the NP’s open time-sensitive slot:



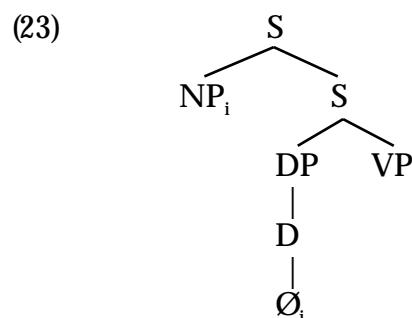
What (22) shows is that an argument in a configurational language consists of a DP which has the referential NP inside it.

In a language like Jingulu, on the other hand, NPs are not permitted in argument positions (Baker 2001, Pensalfini 2004).<sup>15</sup> Bare NPs occur adjoined to the clause, and

<sup>14</sup> The term is Baker’s, and readers are referred to Baker 1996, 2001 for an explanation of the mechanics, which are not important here. What is important is the notion that in some languages, DP arguments and referential NPs may not occur in the same maximal projection.

<sup>15</sup> The reason for this ban on NPs in argument positions is open to debate. Baker (2001) has suggested that it is because predicates in these languages are deficient in case-assigning/checking

thus do not have their open slot saturated by the D that heads the argument. This slot can therefore be saturated by a tense-bearing element such as a light verb. The diagram in (23) shows how referential NPs in pronominal argument languages are not within the maximal projection of the D that heads the argument with which they are construed.



According to Baker (2001) and Pensalfini (2004), many properties of Jingulu and similar languages follow from this arrangement, including free constituent order, multiple non-adjacent co-referent nominals construed with arguments ('discontinuous NPs'), and the collapse of 'nouns' and 'adjectives' into a single category of nominals. Further evidence for such the specific analysis proposed here comes from the lack of a distinct class of Determiners that combine with nominals in Jingulu.<sup>16</sup> The elements which, on notional grounds, one might want to call determiners, namely demonstratives, behave exactly like other free nominals in terms of inflection and distribution, and are therefore categorially indistinct from nouns.

When a light verb attaches to the higher NP in (23), it is satisfying the temporal slot of NP, and not of the clause. Therefore its features are not interpreted in terms of the clause as a whole, but rather in terms of the NP alone. This still leaves open the question of how it comes to have a spatial interpretation. Recall that Determiners can specify location in time or space, and that the light verb on a Jingulu nominal is filling the same slot as is filled by a Determiner in a configurational language. This would allow for a later metaphorical extension of the originally temporal element occupying the NP's open slot, resulting in a set of markers which are homophonous with temporal elements, but which now have independent uses as spatial markers.

## 5. Similar phenomena in other languages

The use of independent tense morphology on nominals was found in some other languages, discussed below. In all of these languages, however, quite unlike the Jingulu situation, the morphology in question locates the referent of the host nominal in **time**, not in space (though Somali does provide evidence for extension of this system to spatial deixis). Nordlinger and Sadler (2003) have published an excellent typological overview of nominal tense, and the languages discussed in this section fit into their categorisation neatly. The Jingulu phenomenon discussed in this article, however, does not fit their categorisation, and this section shows how it differs from some of the seminal cases of nominal tense discussed in the literature. What is different about Jingulu is the extension of the tense system to location in space. In

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properties. Pensalfini (in press), on the other hand, argues that there is a general ban on encyclopedic (real-world semantic, as distinct from purely computational) information in argument positions. Reasons for such a ban are explored in Pensalfini in press, but a general dissociation of encyclopedic properties from inflectional ones is not surprising - even children acquiring English typically go through a phase of overusing verbal periphrasis, wherein the encyclopedic verb is uninflected with inflection appearing only on auxiliaries, with rampant insertion of dummy *do*.

<sup>16</sup> Of course, this is only evidence if one proposes, along with Chomsky (e.g. Chomsky 1993, 1995) and Stephen Crain (personal communication) that Determiners are a universal linguistic category.



the languages discussed by Nordlinger and Sadler, nominal tense typically provides information about the temporal status of the NP's referent, and they do not discuss extension into the spatial domain at all.

It should be made clear that the phenomenon in question involves affixing a nominal with an apparently tense-bearing element that is independent of clausal tense. I therefore do not consider languages such as Kayardild (Evans 1995), in which all elements of the VP (including nominal complements of V, and also elements arguably outside of VP such as sentential adjuncts) can be inflected in such a way that nominals can end up bearing tense-sensitive marking (which Nordlinger and Sadler 2003 call 'propositional nominal tense'). Here the 'tense-marking' on nominals is a reflection of clausal tense rather than indicating independent properties of the nominal, and therefore this falls outside the scope of this discussion.

### 5.1 Somali

According to Lecarme (1996, 1999), Somali DPs show a [ $\pm$ past] distinction which is interpreted as deictic with respect to time. This tense-marking is suffixed to the definite article, which itself is suffixed to a nominal. The examples in (24) show clearly that the marked DP's 'time frame' is independent of the time frame of the main clause:

- (24) a. *ardáy-d-a wáy joogan*  
 students-D.f-NPST 3pl.f are.present  
 'The students are present.'
- b. *ardáy-d-ii wáy joogan*  
 students-D.f-PST 3pl.f are.present  
 'The students (I told you about) are present.'
- c. *bandhí-gg-a máad daawatay?*  
 exhibition-D.m-NPST Q.2sg saw  
 'Have you seen the exhibition.'
- d. *bandhí-gg-ii máad daawatay?*  
 exhibition-D.m-PST Q.2sg saw  
 'Did you see the exhibition.'

In Somali this marking is obligatory, unlike in Jingulu. All of the examples in (24) show clearly that tense on nominals is deictic with respect to time (the contrast between (24c-d) being the clearest). This is indeed the typical use of deictic tense in Somali. However, nominal tense can be extended to spatial deixis, which more closely resembles the Jingulu pattern:

- (25) a. *búug-g-ii waa kan*  
 book-D.m-PST F DEM.m  
 'Here is the book (distant/in mind).'
- b. *nimán-k-ii waa macallim'in*  
 men-D.m-PST F teachers  
 'The men (over there/in mind) are teachers.'

Unlike Jingulu, the markers of tense on nominals are unique to the nominal system, and not homophonous with verbal tense markers.

## 5.2 Wakashan languages

In the Wakashan language Kwakiutl, ‘tense is expressed both in the verb and the noun... When the noun expresses an object not yet in existence, it takes the future suffix’ (Boas 1947: 288-9). Unlike Somali, but like Jingulu, the exact same morphemes are used to mark nominal tense as are used for verbal tense.

- (26) a. *xwa:k!wena-L*  
canoe-FUT  
‘a future canoe’
- b. *’o:’mp’-w’L*  
father-REMOTE.PST  
‘the late father’
- c. *’ax’a:’-s’id*  
place-PST  
‘the place where [he] had been’

We cannot see from the above examples that nominal tense is independent of clausal tense, as Boas does not give complete sentence examples. However, by his description of the language it is clear that nouns form an independent ‘tense domain’ from the clause.

The related language Nootka shows similar properties (from Sapir 1921, by way of Comrie 1985):

- (27) *inikw-ihl-’minih-’is-it-’i*  
fire-in\_house-pl-diminutive-PST-nominal  
‘the former small fires in the house’

Tense on nominals in the Wakashan languages can therefore be seen as deictic, but it clearly locates the referent of the host nominal in time, not in space.

## **6. Conclusion**

The extension of the Jingulu verbal tense system to mark spatial deixis, manifesting as the appearance of light verbs on the end of nominal words, is unusual even among languages which allow tense-marking on nominals. The typical instance of nominal tense, demonstrated by Somali (§5.1) and the Wakashan languages Kwakiutl and Nootka (§5.2), locates the referent of the nominal in time. The Jingulu system, however, functions primarily to locate the referent of the nominal in space (§2). Such metaphorical extension of time reference to space is quite unusual, with the opposite being far more common (terms for location in space being extended to the temporal field). Somali nominal tense (§5.1) can be extended to spatial deixis (see (25)), but it is clear that the primary function of nominal tense in Somali is temporal deixis. The Jingulu use of nominal tense is primarily spatial.

The leading candidate for a diachronic analysis of the Jingulu phenomenon is that light verbs appearing on nominals developed from adjoined relative clauses in which the light verb formed part of an independent verb word, with the nominal as its subject. However, it is not clear whether the phenomenon should be analysed synchronically as a relative clause which has been morpho-phonologically reduced or as nominal inflection homophonous with some of the light verbs of Jingulu. The evidence presented in this article clearly favours the latter analysis, but questions remain as to the distribution of these elements, which differs from the behaviour of other nominal inflections.

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