Introduction

In Jingulu discourse and narrative, nominals sometimes bear suffixes which are identical to light verbs. As discussed in section 1, light verbs are bound morphemes which form the syntactic core of verbal predicate words, and typically encode tense, aspect, mood, and associated motion. The appearance of these morphemes on nominals is discussed in section 2, where it is shown that, in the nominal context, these morphemes do not reflect any verbal/inflectional properties of the clause, but rather serve as markers of definiteness or deixis. In this function, the morphemes are best translated by phrases such as ‘here, up ahead, back there’ and so forth. Possible origins of this phenomenon are entertained in section 3, with the hypothesis advanced that it may have arisen from the reduction of subordinate clauses. A question remains as to whether these ‘tense-marked nominals’ should be analysed synchronically as clauses or noun phrases. Section 4 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. Light verbs in Jingulu

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

    that(m)-FOC dog-ERG bite-3mS.1O-did
    ‘That dog bit me.’
b.  *Banybila-nga-nu  ibilka  karrinbiyi.*

find-1sg-did water tree.water

‘I found tree-water.’

c.  *Jimi-rna  ngunya-ana-ngku  ngayarni.*

that(n)-FOC give-1O-will.come 1sg.ERG

‘I’ll come to share this amongst us all.’

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

(2) a.  *Ya-ngku  ngurrarrungka.*

3sg-will.come tomorrow

‘He’ll come tomorrow.’

b.  *Nga-rruku  idajku.*

1sg-went yesterday

‘I went (there) yesterday.’

c.  *Yukulurrubi  ya-marri  nginimbili.*

grass.species 3sg-DIST here

‘There used to be *yukulurrubi* grass here.’

The initial root can also be ‘dropped’ if its meaning can be inferred from context:

(3) 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.’

Different analyses of the structure of Jingulu verb words has been proposed. Chadwick (1975), following largely semantic criteria, calls the initial root the ‘verb stem’, unless there is no root (as in (2-3) above), in which case the final TAMM morpheme is the stem. Pensalfini (1997, In press a, b), on the other hand, appealing to the distribution of the elements 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 syntax of the clause.

This article is concerned with the final obligatory element of the Jingulu verb, and follows the latter of the above approaches in calling these morphemes ‘light verbs’.

1.1 The three series of light verbs

There are three series of light verbs in Jingulu, divided according to associated motion, plus a small set of irrealis and imperfective markers. As discussed above, light verbs are bound morphemes, phonologically suffixes, which must be preceded by overt agreement marking and/or a co-verbal root (third person singular subject agreement is typically null, but in the absence of a co-verbal root surfaces as /ka-/ if it follows an adverb or /ya-/ elsewhere (5b)).
out in (4) and demonstrated in (5).

<table>
<thead>
<tr>
<th></th>
<th>tense</th>
<th>gloss</th>
<th>morpheme</th>
<th>allomorphs</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>'go'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>present</td>
<td>go</td>
<td>/-ardu/</td>
<td>[-(w)ardu], [-ardu], [-arda]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>past</td>
<td>went</td>
<td>/-rruku/</td>
<td>[-rruku], [-rraku], [-rriki]</td>
</tr>
<tr>
<td></td>
<td>future</td>
<td>will.go</td>
<td>/-wa/</td>
<td>[-wa], [-rriyi]</td>
</tr>
</tbody>
</table>


carry-1sg-go stone

'I’m carrying a stone.'


under 3sg-go house-ALL under inside 3sg-go house-ALL

'It's gone under the house, right underneath the house.'


up 1sg-go hill-ALL

'I'm climbing the hill.'


1sg-went hunting boomerang-INST spear-INST

'I went out hunting with a boomerang and spear.'

e. *Mindi-rruku* jalyangku-ma Warranganku-ngka.

1dl.Inc-went today-EMPH Beetaloo-ALL

'Today we went to Beetaloo.'
f. *Nyinda-rna nganga juwirri-mindu-wa yunku.*
DE(M)-DAT meat follow-1O-inc-will-go foot
‘We must follow the animal’s tracks.’

g. *Burdba-nga-rruku mijuwulmi ngaya-rni angkurla nga-rryi.*
send-1Sg-went tobacco 1Sg.NOM-FOC NEG 1Sg-will-go
‘I sent you tobacco, but I didn’t go myself.’

The above all involve motion away from either the speaker or some salient referent.
The ‘come’ or ‘motion towards’ series, on the other hand, are used to indicate motion
towards the speaker or some other salient referent. These are set out in (6) and
demonstrated in (7).

(6) ‘come’: tense gloss morpheme allomorphs

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>present</td>
<td>come</td>
<td>/-jiyimi/</td>
<td>[-jiyimi], [-jimi], [jima]</td>
</tr>
<tr>
<td>past</td>
<td>came</td>
<td>/-miki/</td>
<td>[-miki], [-mika]</td>
</tr>
<tr>
<td>future</td>
<td>will.come</td>
<td>/-ngku/</td>
<td>[-(a)ngku], [-angki]</td>
</tr>
</tbody>
</table>

nulla-nulla pull-IRR 1sg.ACC fight-3pl-come that(m)-pl
‘Let’s get our clubs, they’ve come to fight.’

b. *Wilinja ya-jiyimi jamaniki-rni.*
countryman 3sg-come this(m)-FOC
‘Our countryman is coming.’

that-dl.anim-FOC visit-3dl-1O-came old.man-dl-ERG
‘Those two old people came to see me yesterday.’
d. *Nginyu-rruku jungkali, lurrbu-nama nginya-miki.*

1dl.Exc-went far return-time 1dl.Exc-came

‘We went afar, and then came back.’

e. *Mindu-wa nginiwa, nya-angku.*

1dl.Inc-will.go this.way 2sg-will.come

‘We’re going for a walk, come along.’

f. *Jangka-nama nga-ardu ngirriki-nama lurrbu nga-angku.*

another-time 1sg-go hunting-time return 1sg-will.come

‘I’m going hunting again and then coming back.’

All remaining light verbs can be described as ‘motion-neutral’. These elements, set out in (8) and demonstrated in (9), do not imply that there is no motion, but rather they do not inherently specify any motion. In addition to the past, present, and future forms which correspond to those in the ‘come’ and ‘go’ series, distant past and habitual forms are listed here.

(8) ‘do/be’:

<table>
<thead>
<tr>
<th>tense/aspect</th>
<th>gloss</th>
<th>morpheme</th>
<th>allomorphs</th>
</tr>
</thead>
<tbody>
<tr>
<td>present</td>
<td>do</td>
<td>/-ju/</td>
<td>[-ju], [-ja]</td>
</tr>
<tr>
<td>past</td>
<td>did</td>
<td>/-nu/</td>
<td>[-nu], [-na], [-rnu], [-rna], [-nyi]</td>
</tr>
<tr>
<td>future</td>
<td>FUT</td>
<td>/-yi/</td>
<td>[-yi], [-ya]</td>
</tr>
<tr>
<td>distant past</td>
<td>DIST</td>
<td>/-marri/</td>
<td>[-marri], [-marra], [-marriyimi]</td>
</tr>
<tr>
<td>habitual</td>
<td>HAB</td>
<td>/-ardi/</td>
<td>[-(w)ardi], [rdi], [bardi]</td>
</tr>
<tr>
<td>past habitual</td>
<td>PST.HAB</td>
<td>/-ka/</td>
<td>[-(a)ka], [-(a)ki]</td>
</tr>
</tbody>
</table>

(9) a. *Angkula ngaja-nga-ju, jundurru ngaba-nga-ju ngabaru-mbili.*

NEG see-1sg-do dust have-1sg-do eye-LOC

‘I can’t see, I have dust in my eyes.’
   fish 3sg-do far.from.shore-LOC fish 3sg-do many
   ‘There are fish, there’s lots of fish out in the middle.’

c. Kulyi-wunyu-nu, kulyu-wunyu-nu karnarrinyku.
   spear-3dl-did spear-3dl-did spear
   ‘They got it with a spear.’

d. Dibij nga-nu jiminiki darrangku-ngka.
   out 1sg-did this(n) tree-ALL
   ‘I came out right along the trees.’

e. Durd maya-nga-yi lurrurnmi.
   kick-1sg-FUT testicles
   ‘I’ll kick him in the balls.’

   this(m)-time cook-FUT meat-FOC 3pl.GEN-m 3sg-FUT
   ‘Then he’ll cook the meat for these people, he will.’

g. Ngindaniki jurdumajurduma-rni, jalyangku-nama-kaji angkula
   this(m) finch-FOC now-time-through NEG
   ngaja-marri marlarlukarni-rni.
     see-DIST old.men-ERG
   ‘We never see the gouldian finch now as we did in the old days.’

h. Nyamba wawa boorn nga-marri Warranganku-mbili.
   DEM(m) child born(Kr) 1sg-DIST Beetaloo-LOC
   ‘I was born at Beetaloo.’
1.2 Irrealis and Imperative moods

In addition to the three series of light verbs discussed in the previous section, there are three forms which indicate irrealis/imperative mood, and which are used in place of light verbs from the three motion-related series. Some of these have special syntax, and each is discussed here in turn.

The morpheme /-mi/ has two distinct uses. It appears most commonly as an imperative marker (10), but is also used in non-imperative clauses where it indicates irrealis mood (11).

(10) a. *Nyurrun baka-mi!*
    slither-IRR
    ‘Slide on over!’

b. *Narnangaja-nku-mi!*
    close_look-REFL-IRR
    ‘Watch yourself!’
As (10b-d) show, /-mi/, like the other light verbs seen thus far, is compatible with agreement marking.

The morpheme /-yirri/ is also used in imperatives, but it has the added task of indicating that motion is involved. Such /-yirri/ imperatives, illustrated in (12), are typically translated by “go and…”.

(12) a. **Ngabarnda ngibi-yirri!**
    shoulder have-go.IMPV
    ‘Carry him on your shoulders.’

b. **Ngunu buba miji-yirri!**
    DEM(n) fire get-go.IMPV
    ‘Go get some firewood!’
Finally, the negative imperative /-ji/ is used to issue a negative command. As illustrated in (13), /-ji/ clauses typically translate as “Don’t…”.

(13) a. Dakarni! Dunjumi-ji, mankiya-mi dunjumi-ji!

leave.it(IMPV) poke-NEG.IMPV sit-IRR poke-NEG.IMPV

‘Leave me alone! Stop poking me, be still and don’t poke me!’

b. Warrijmajka jamaniki-rni juwirri-ji!

killer this(m)-ERG follow-NEG.IMPV

‘He’s a killer, don’t follow him!’

Unlike the Irrealis/Imperative /-mi/, verbs with /-yirri/ and /-ji/ cannot contain agreement marking:

(14) a. *Nguny-ana-ji!

give-1O-NEG.IMPV

‘Don’t give it to me!’

b. *Maja-wanyu-yirri!

get-2dl-go.IMPV

‘You two go get it!’

2. Light verbs as deictic/definiteness markers

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. It is not uncommon to find certain light verbs on nominal words in Jingulu (examples in (15-22)). The tense marked on the nominal need not agree or even be compatible with that of the matrix.
Not all possible light verbs are found on nominals, but typically only one of the present, past, future or habitual verbs (most commonly /-ju/ ‘do’, /-nu/ ‘did’, /-ka/ ‘PST.HAB’ or /-yi/ ‘FUT’). These morphemes appear to be functioning in these environments as spatial deixis markers, with distinctions according to location in space with respect to the speaker.

The motion-neutral markers are usually used unless some movement of the marked item is also implied. This marking is entirely optional, and follows all nominal marking including case and role.

The use of the past-tense motion-neutral light verb /-nu/ indicates the referent is at hand, either visible or recently visible or recently prominent in the discussion (15), and translates as ‘this/that X here’:

(15) a. *Nyini-nu ngarri-nu ngarru-nu ngawu nyininiki-nu bilyingbiyaku*

DEM(n)-did 1sg.GEN-n 1sg.GEN-n home this(n)-did red(n)

\[ karalu. \]

ground

‘My home is the red earth here.’

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-did 2sg-went this.way

‘My brother and I saw two shooting stars when you’d gone.’

c. *Ajuwa ila-nga-nu ngarru bundurru-nu?*

where put-1sg-did 1sg.ACC food-did

‘Where did I put that food of mine?’

d. *Ngini-rni yurlaminku-nu ngaja-mi!*

DEM(n) FOC eucalyptus sp. did see IRR
e. *Jama-rni-ma jajkalu-nu ngarri-na kula*
   that-FOC-EMPH teenage.boy-did 1sg.GEN-m nephew
   ngamula-kaji.
   big(m)-through
   ‘That boy is my nephew, the big one.’

   DEM(f)-FOC-did good-f-through 3sg-do
   ‘She’s well now.’

g. *Ngaba-nga-rryi dardu larnku karningka nyinda-nu wawa*
   have-1sg-will.go many clothes LEST DEM(m)-did child
   wurrajkalu-jiyimi.
   cold-come
   ‘I’ll take lots of clothes in case the boy gets cold.’

h. *Kirangkuju-nu darra-ardi buliki-rni dimana-rni.*
   melon.species-did eat-HAB cow-ERG horse-ERG
   ‘Cows and horses eat this here melon.’

Present tense light verbs indicate proximity of the referent to the speaker, but
usually spread out over an area:

   sky-LOC cloud-do
   ‘The sky is cloudy’

b. *Kujarrarni walanja-ju ngaja-rdu karrila, ngawu nyaku ngunu.*
   two goanna do, see go, leave IBP home 3dl.GEN DEM(p)
c. Jamaniki-rni ibilka-\textit{rdi} nyambala kurranjya-j.  
\begin{flushleft}
\small
this(m)-FOC water-HAB DEM(n) shallow
\end{flushleft}

‘This water is shallow.’

d. Wuliyija-nga-\textit{rdi} langa ngaja-nga-ju kanjalawurri-darra dardu.  
\begin{flushleft}
\small
sun-ERG-HAB P(Kr) see-1sg-do male.red.kangaroo-pl many
\end{flushleft}

‘At sunset one can see many kangaroos.’

\begin{flushleft}
\small
crossed
\end{flushleft}

‘One road goes straight. Another crosses it.’

Sentences (16c–d) show the use of the present habitual verb to denote a persistence of the referent of the marked nominal, while sentence (16e) shows how one of the directional verbs can be used when the definite nominal referent is singled out as moving or going, as does (17c). Otherwise the motion-neutral present tense /-ju/ is used.

Light verbs appearing on nominals in this fashion follow all other inflection, as (16d) demonstrates.

Future tense light verbs on nominals convey a sense of ‘up there’ or ‘up ahead’:  

\begin{flushleft}
\small
DEM(n) nest-FUT this-FOC tree-LOC
\end{flushleft}

‘There’s a nest up in that tree.’
b. Nguni-\textit{yi} janbara-\textit{mbili} nyambala marrkulu-darra wurru-\textit{ju},
DEM(n)-FUT nest-LOC DEM(n) egg-pl 3pl-do
\textit{kujkarrarna-kujkarrarna}.
two-RED
‘There are four eggs in that nest.’

c. Jama-baja-\textit{rriyi} malkirrankuj-bala dirri-wurru-\textit{ju} ibilka.
that-pl-will.go bachelor-pl.anim eat-3pl-do water/drink
‘Those bachelors up there are going about drinking.’

The past habitual marker /-\textit{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:

(18) \begin{align*}
a. \textit{Ngurr}u-\text{\textit{wa}} & \textit{ ngini-\text{\textit{ka}}} \quad \textit{bardakurr}u-\text{\textit{ngka}} \quad \textit{banybili-\text{\textit{ngurri-yi}}} \\
1\text{pl.Inc-will.go} & \text{this(n)-PST.HAB} \quad \text{good(n)-ALL} \quad \text{find-1pl.Inc-FUT} \\
\textit{bardakurr}u & \textit{kurrindi-\text{\textit{ngurri-yi}}} \quad \textit{ngawu-r}n\text{a}. \\
\text{good(n)} & \text{camp-1pl.Inc-FUT} \quad \text{camp-DAT} \\
‘\text{We’ll find a good place (back there) to set up camp.’}
\end{align*}

b. \textit{Kilyirri-\text{\textit{nginyi-ju}}} \textit{ngarri-\text{\textit{ni-nga}}} \quad \textit{bardarda-\text{\textit{ka}}} \quad \textit{babirdimi}.
dig.up-1dl.Exc-do 1sg.GEN-f-ERG younger.brother-PST.HAB yam
‘My little sister back there and I are digging up yams.’

c. \textit{Jamaniki-\textit{rni}} \textit{karnanganja-\textit{nga}} \textit{baya-\textit{ka}} \quad \textit{yurnukurdukurdu-warndi}.
this(m)-FOC emu-ERG.f man-PST.HAB foot-INST
‘This fellow (back there) got kicked by an emu.’
d. *Ngindi-nama wumbuma-yi nganga-rni walanja-rni,*
   
   this(m)-time cook-FUT meat-FOC goanna-FOC
   
   *wurraka-na-ka ya-yi.*
   
   3pl.GEN-m-PST.HAB 3sg-FUT

   ‘Then he’ll cook the goanna meat, for those folks back there, he will.’

There are a small number of clear example of the Irrealis marker /-mi/ occurring on a nominal (19). This morpheme seems to indicate that the reference of the nominal is inferred or expected, though not incontrovertibly instantiated:

(19) a. *Ngunu ngaja-mi mayamba-kaji-mi nginda.*
   
   DEM see-IRR whirlwind-through-IRR DEM(m)

   ‘Look, I think that’s really a whirlwind.’

b. *Ngininiki-rni ngarru-nu kiyala-rni miji-ngurru-nu ngarru junma-rni-rna-mi, junma kardakarda.*
   
   this(n)-FOC 1sg.GEN-n nose.bone-FOC get-1pl.Inc-did 1sg.GEN wallaby-FOC-DAT-IRR wallaby bone

   ‘We got my nose bone here from a wallaby skeleton.’

The appearance of /-mi/ on ‘wallaby’ in (19b), for example, indicates 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.

When words referring to words or languages are marked as definite, the past marker /-nu/ is always used:

(20) a. *Waja nyama-rni liyiju
   
   what 2sg.NOM-FOCname-did

   ‘What’s your name?’*
b. *Anuku nya-mi liyijku-nu?*  
how 2sg-IRR name-did  
‘What’s your name?’

c. *Nyamba ambaya-nya-ju Jimi-rna marrinjku-nu?*  
what speak-2sg-do that(n)-FOC word-did  
*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 marrinjku-nu.*  
little.while-time eat-1pl.Inc-FUT loosen-1pl.Inc-will.come language-did  
‘Wait a little while we drink, then we’ll talk language [Jingulu].’

So far, all of the uses of light verbs as deictic markers on nominals could be argued to also be marking definiteness. That is, in all instances the marked nominal’s reference is definite, even if (as in (19)), the precise identity is indeterminate. Tense marking may even occur on nominals with unique referents, which are already inherently definite:

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

This could be redundant marking of definiteness (both inherent to the nominal itself and further iterated by the use of the light verb). On the other hand, it could be that light verbs are only marking location in space, and that the implication of
There are some instances of light verbs appearing on nominals denoting events in order to locate them in time with respect to other events:

(22)  *Banybili nakalanjku ibilkina-ну.*

find moss rain-did

‘Moss is found after the rain.’

This phenomenon is highly unusual, with spatial deixis being the more common function of light verbs suffixed to nouns. It is conceivable, therefore, that the spatial use of light verbs has been extended to temporal reference in examples such as (22). The metaphorical extension of spatial reference to time is 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 phenomenon discussed in this article is that the primary function of the morphemes is temporal (marking TAMM in verb words), so that their appearance on nominals is a metaphorical extension of temporal deixis (tense) to spatial. In cases like (22), then, we have a secondary and recidivistic metaphorical extension, back to marking location in time.

3. Analysis of the phenomenon

3.1 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 (16c) might have once been expressed as the clause *ibili ka ya-ardi* ('there is (usually) water', *bardardaka* in (18b) from *bardarda ya-ka* ('my younger sibling was (there)'), and *marrinjkunu* in (20d etc.) from *marrinjku ya nu* ('the word did (get said)'). The morpheme /ya/ in the foregoing is the third
According to Pensalfini (1997, In press a), the tense features of light verbs in subordinate structures are interpreted as relative to the tense features of the main clause verb.

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 (adjectives), such as those give in (23).

(23)  

<table>
<thead>
<tr>
<th>Adjective</th>
<th>Co-verbal Root</th>
</tr>
</thead>
<tbody>
<tr>
<td>bardakurra (good)</td>
<td>bardakurriya- (be good/make well)</td>
</tr>
<tr>
<td>milyamila (late, slow)</td>
<td>milyamilyay- (be slow)</td>
</tr>
<tr>
<td>jamurri (cool)</td>
<td>jamurriya- (be cold)</td>
</tr>
<tr>
<td>kuwarrku (nothing)</td>
<td>kuwardjiya- (have nothing)</td>
</tr>
<tr>
<td>bujarrima (sulky, selfish)</td>
<td>bujarriya- (sulk)</td>
</tr>
<tr>
<td>mabu (shame)</td>
<td>mabuy- (be ashamed)</td>
</tr>
<tr>
<td>ngirriki (the hunt)</td>
<td>ngirrika- (to hunt)</td>
</tr>
<tr>
<td>burdalyi (cooked, ripe)</td>
<td>burdalyya- (cook, burn)</td>
</tr>
</tbody>
</table>

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

Whether we accept the diachronic analysis in the previous section or not, there remains the question of how we should analyse light verbs appearing on nominals to mark spatial deixis in terms of synchronic grammar. One solution would view these elements as still being reduced relative clauses. Another proposal is to view the resulting construction (N+V) as nominal in category, with the light verb functioning as a kind of nominal inflection.1 We will consider each proposal in turn.

3.2.1 Relative clauses

This analysis is quite straightforward given the diachronic proposal in the preceding section. Under this proposal, tense-marked nominals are synchronically reduced relative clauses, with overt agreement gapped and the light verb enclitic to the head nominal.

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:

1 Yet another analysis was proposed by Alan Dench (pers. comm.). Dench suggests that we might view light verbs not as verbs at all, but rather as (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 some promise, the primary function of these morphemes is to mark TFORM on verbs, and it is in this use that they are most productive and, above all, obligatory. I therefore believe that these morphemes are primarily verbal, and in fact constitute the heads of verbal words. That is, their category is primarily verbal, and only nominal by extension, not vice versa.
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. (15a, c, d, e, g), (16b, c, e), (17), (18a, c) and so forth). There appears to be no requirement that this be either the first or the last nominal. Sometimes the nominal bearing the tense inflection is a demonstrative (15a, g), and sometimes a pronoun (18d), 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 an adjective found to bear deictic tense marking, as in the hypothesised (24a, 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. Of course, it might be argued that definite/deictic 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 known to the addressee. However, as we saw in (21), this marking has been found on nominals with inherently definite, indeed unique
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 (25a-b), can surface on one or more (up to all) of a string of adjacent co-referent nominals.

(25) a. babirdimi-rda ṅigimaniki OR babirdimi-rda ṅigimaniki-rda
     yam-pl this(v) yam-pl this(v)-pl

     OR babirdimi ṅigimaniki-rda (unusual)
     yam good(v)-pl

b. babirdimi-rna ṅigimaniki OR babirdimi ṅigimaniki-rna
     yam-DAT this(v) yam this(v)-DAT

     OR babirdimi-rna ṅigimaniki-rna
     yam-DAT this(v)-DAT

c. *babirdimi-nu ṅigimaniki-nu
     yam-did this(v)-did

As (25c) 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.

3.2.2 The nominal is inflected

Despite the argument presented in the previous section, there are difficulties with interpreting deictic tense as synchronically marking clausal tense in a reduced
past tense marker in particular is used most widely (as in (15) and (20)), in cases where past tense marking would be inappropriate in a full subordinate clause. For instance, in (20d) 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 section 4.1), and also for the Wakashan languages described in section 4.2 and 4.3. 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 verbal tense suffixes to indicate this.

Furthermore, Lecarme (1996), discussing nominal tense in Somali, implies a correlation between nominal tense and the ‘pronominal argument’ language type, wherein the relationship of nominal phrases to the main clause has been held to be adjunctive (Jelinek 1984, Baker 1996, Baker 2001, Pensalfini in press b). According to both Baker (2001) and Pensalfini (in press b), free nominal expressions in languages like Jingulu are not themselves arguments, but rather secondary NP predicates on the true arguments, which are essentially null determiners. 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.
in both languages. In fully configurational languages such as English, on the one hand, a Determiner typically selects an NP complement, satisfying both its own requirements as a head and the NP’s time-sensitive open slot:

(26) \[ S \]
    \[ \begin{array}{c}
        \text{DP} \\
        \text{VP} \\
        \text{Det} \\
        \text{NP}
    \end{array} \]

In a language like Jingulu, on the other hand, Determiners stand alone as arguments, and NPs are not permitted in argument positions. Bare NPs occur adjoined to the clause, and can have their time-sensitive slot saturated by a tense-bearing element such as a light verb. These adjoined NPs act like secondary predicates on the Determiner argument, and are thus co-indexed with it:

(27) \[ S \]
    \[ \begin{array}{c}
        \text{NP}_i \\
        \text{S} \\
        \text{DP} \\
        \text{VP} \\
        \text{D} \\
        \text{Ø}_i
    \end{array} \]

According to Baker (2001) and Pensalfini (to appear b), many properties of Jingulu

\[ ^2 \text{The reason for this ban on NPs in argument positions is open to debate. Baker (2001) has suggested that it is because predicates in these languages are deficient in case-assigning/checking} \]
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. 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.

4. 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).

It should be made clear that the phenomenon in question involves affixing a nominal with tense marking that is independent of the tense of the clause in which the nominal occurs. We therefore do not consider languages such as Kayardild (Evans 1996), in which all elements of the VP (including nominal complements of V) can be inflected in such a way that nominals can end up bearing tense-sensitive marking. 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.

4.1 Somali

According to Lecarme (1996, 1999), Somali DPs show a [+past] distinction which
definite article, which itself is suffixed to a nominal. The examples in (28) show clearly that the marked DP’s ‘time frame’ is independent of the time frame of the main clause:

(28) a. ardáy-d-a  wáy  joogan  
students-DET.f-NONPST  3pl.f  are.present  
‘The students are present.’

b. ardáy-d-ii  wáy  joogan  
students-DET.f-PST  3pl.f  are.present  
‘The students (I told you about) are present.’

c. bandhí-gg-a  máad  daawatay?  
exhibition-DET.m-NONPST  Q.2sg  saw  
‘Have you seen the exhibition.’

d. bandhí-gg-ii  máad  daawatay?  
exhibition-DET.m-PST  Q.2sg  saw  
‘Did you see the exhibition.’

In Somali this marking is obligatory, unlike in Jingulu. All of the examples in (28) show clearly that tense on nominals is deictic with respect to time (the contrast between (28c-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:

(29) a. búug-g-ii  waa  kan  
book-DET.m-PST  F  DEM.m  
‘Here is the book (distant/in mind).’
Unlike Jingulu, the markers of tense on nominals are unique to the nominal system, and not homophonous with verbal tense markers.

### 4.2 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.

(30) a.  
\[ x\text{wa`k!wena-}\text{L} \]
  canoe-FUT

  ‘a future canoe’

b.  
\[ \text{e}\text{o`mpe-w}\text{eL} \]
  father-REMT-PST

  ‘the late father’

c.  
\[ \text{e}\text{axe}\text{a`-seid} \]
  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’.
The related language Nootka shows similar properties (from Sapir 1921, by way of Comrie 1985):

\[(31)\]

\[
\text{inikw-ihl-’minih-’is-it-’i}
\]

fire-in\_house-pl-dimin-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.

5. Conclusion

The extension of the Jingulu verbal tense system to mark definiteness/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 here by Somali (§4.1) and the Wakashan languages Kwakiutl and Nootka (§4.2), 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 (§4.1) can be extended to spatial deixis (see (29)), 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.
References


