Bardi complex predicates as a challenge to monotonicity

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Abstract

Bardi (Nyulnyulan, Australian) has both simple and complex predicates and extensive morphological marking on the inflecting verb for agreement and valency. While in simple predicates valency marking is straightforward, in complex predicates there is a mismatch, a 'missing' argument which is marked in the verb but is not subcategorised for in the argument structure. It appears that the coverb modifies the f-structure introduced by the light verb – if so, this is a clear violation of monotonicity.

1 Introduction

Bardi is a Nyulnyulan language, a member of one of the Non-Pama-Nyungan Indigenous Australian language families spoken in Australia's North. It is morphologically complex, and displays multiple agreement, not only for subject and direct object, but also for adjuncts in various semantic roles. The language has both simple and complex predication (Bowern 2004a) and overt marking in the verb of tense, aspect, and valency in addition to agreement properties. For more information on these topics, see Bowern (2004a, 2006b) for Bardi, and Bowern (2006a), McGregor (2002), Schultze-Berndt (2000), Wilson (1999) for more information on Northern Australian complex predicates more generally.

This paper concerns an interesting feature of the interaction between complex predication and transitivity/valency marking. Here I describe a mismatch between morphological marking and syntax and the problems it causes for analysis.

2 Valency marking in the Bardi simple predicates

In simple predicates, there is a prefix of the form *n-* ∼ *a-*, which is used with simple predicates which introduce a direct object.[1] The prefix is *n-* when the subject of the verb is singular, and *a-* when it is plural. Verbs which do not subcategorise for a direct object have no such prefix. Some examples of verbs which alternate in transitivity and can appear with or without this prefix are given in (1). (In Bowern (2004a) this marker is glossed as TR and this practice is followed here.)

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[1]Several people have suggested to me in conversation that this marker could be a vestige of Nyulnyulan third person object prefixal marking, and therefore cognate with other *n-* object prefix markers in other Northern Australian languages. This is possible, but there is no evidence within Nyulnyulan to suggest it (object marking in all Nyulnyulan languages is enclitic or suffixal to the verb) and given the very small number of cognates between Nyulnyulan and surrounding languages (Bowern 2004b), there is no direct evidence for it and it does not add to the argument to claim it. After all, Bardi has many morphemes of the form *-n(V)*, and the form of the valency marker is only *n-* when the subject is singular.

(1)				
	imarran	it's cooking	***in****marran*	(s)he's cooking it
	imbarndigal	it got covered	***in****ambarndigal*	(s)he covered it
			in*argal*	(s)he spears it (lice)
			in*kajan*	(s)he brings it

Approximately thirty verbs may appear with or without the prefix, and in that case they exhibit variable argument structure configurations (the forms with *n-* $\sim$ *a-* being transitive, and those without intransitive). The majority of the 250 simple verb roots in Bardi do not alternate, and the morpheme is either consistently present or consistently absent.

There is good evidence in Bardi for saying that *n-* is associated with verbs which take two arguments, and that the absence of this marker is found with one-argument verbs. Specifically (and more correctly), the prefix is associated with verbs which subscategorise for a direct object.[2] Therefore, the lexical entry for the morpheme would look something like this:

(2) a. /n-/ : (↑ GF) = OBJ
(↑ SUBJ NUM) = SG

b. /a-/ : (↑ GF) = OBJ
(↑ SUBJ NUM) = PL

I assume that a verb like *inamarragalirr* 'she/he is cooking them' would have the following partial f-structure:[3]

[2]There are three apparent exceptions. One is lateral-initial roots, such as *-laba-* 'hold' and *-(a)rli-* 'eat', where the *n-* of the transitive prefix is deleted. This is a regular morphophonemic rule and such verbs are otherwise regular. There are some semi-transitive verbs, which have ergative subjects and oblique objects, but they do not take transitivity markers. If we specify that the prefix occurs only with verbs with direct objects (and not those sub-categorised for oblique arguments), such verbs are not an exception at all. The second is the verb *-kal-* 'visit, travel, wander', which is ambitransitive but appears to always appear with the transitivity marker. Finally, I should also note that according to Bill McGregor (pc), this analysis would not apply to Bardi's closest neighbour, Nyulnyul, where no function can be attributed to the cognate morpheme *n-* and there is considerable irregularity in which verbs appear with the prefix. McGregor (1996) glosses it as an epenthetic nasal without function. The same problems in interpretation appear to hold (to greater or lesser degrees) for a number of other Nyulnyulan languages; in Nyikina (Stokes 1982), for example, the prefixal material is cognate but functionally rather different, as a result of extensive internal paradigm reorganisation. See Bowern (2007) for more information. In Yawuru Hosokawa (1991) describes conjugation classes for which the morpheme is present, absent or optional.

[3]Bardi agreement markers introduce a PRED feature. Bardi is non-configurational; for the moment, I treat all agreement between verbal person/number affixes and free noun phrases as anaphoric, although that is clearly an oversimplification. It is not relevant for this problem, however.

(3)
$$\begin{bmatrix} \text{PRED} & \text{cook} < \text{SUBJ, OBJ} > \\ \text{SUBJ} & \begin{bmatrix} \text{PERS} & 3 \\ \text{NUM} & \text{SG} \\ \text{PRED} & \text{PRO} \end{bmatrix} \\ \text{OBJ} & \begin{bmatrix} \text{PERS} & 3 \\ \text{NUM} & \text{PL} \\ \text{PRED} & \text{PRO} \end{bmatrix} \\ \text{TENSE} & \text{RECENT PAST} \end{bmatrix}$$

3 Complex predicates

The analysis in (2) above applies only to simple predicates. Bardi also has an extensive array of complex predicate structures (Bowern 2004a). Complex predicates in this language comprise an uninflecting preverb[4] and an inflecting light verb (which inflects for the same categories as verbs in simple predicates, with one difference to be discussed below). (4) below gives some examples. Tests for complex predication (including the tests used by Butt (1995) for Urdu) are given in Bowern (2004a:Ch.9). For some comparative discussion with other Australian languages, see Bowern (2006a).

(4) a. *Iila* ***daag i-n-da-n***.
dog sleep 3-TR-do-CONT
'The dog is sleeping.'

b. *Baawa-nim moodiga* ***wajim i-ng-arr-a-ma-gal***.
child-ERG car wash 3-PST-PL-TR-put-REC.PST
'The kids were washing the car.'

There are approximately ten common light verbs, and another twelve which appear sporadically in complex predicate constructions (including *-jarrmi-* 'rise', as in (5a) below). Both monovalent and bivalent simple verbs are represented in complex predicates. There are some patterns of preverb/light verb use. All stative complex predicates, for example, use the light verb *-ni-* 'sit, be in a place' (as in (5b) below), and many resultatives (anti-causatives) use *-jiidi-* 'go', as illustrated in (5c).

(5) a. *wirr i- ny- jarrmi -n*
get.up 3- PAST rise CONT
'She got up.'

b. *garnka i- ni -n*
raw 3- sit -CONT
'It's raw.'

[4] In the literature on complex predicates, preverbs are also known as coverbs.

c. *lambard i- ny- jiid -ij*
open 3- PAST- go -MID.PERF
'It opened.'

All the monovalent light verbs form intransitive (that is, single argument) complex predicates. This includes not only the non-compositional complex predicates such as *birrbad -ganyi-* 'ricochet' (involving an unidentifiable initial element and the light verb meaning 'climb') but also those productively formed from adjectives (such as the stative predicates illustrated in (5b) above). This is expected.

However, light verbs with the marker *n-* ∼ *a-* have a rather different pattern. There is no transitivity restriction on complex predicates formed with formally transitive light verbs. While a verb such as *-ar-* 'spear (lice), pierce' is always transitive when occurring as a simple predicate, there is no such restriction on the complex predicates which may be formed with *-ar-*. (6a) shows an impersonal predicate, (6b) an intransitive one, and (6c) a transitive one. In all these examples, the light verbs are marked with the valency marker *n-* ∼ *a-* irrespective of whether a direct object is present in the predicate.

(6) a. *Ool i- n- ar -n*
water 3- **tr** pierce -CONT
'It's raining.'

b. *Jool i- n- ar -n*
kneel 3- **tr** pierce -CONT
'She/he is kneeling.'

c. *jiin i- n- ar -n*
point 3- **tr** pierce -CONT
'she/he is pointing at something.'

All the common light verbs which can take the valency marker form both transitive and intransitive complex predicates.[5] Some further examples are given in (7) below:

(7) a. roowil i**n**nyagal '(s)he walked' (-nya- = 'catch')
b. jirrjirr i**n**nnyagal '(s)he was standing'
c. ngalar i**n**nyagal '(s)he's glowing'
d. daag i**n**joon '(s)he's sleeping' (-joo- = 'do/say')
e. joodoog i**n**agal '(s)he stumbled' (-ø- = 'give')
f. darr i**n**argal '(s)he came' (-ar- = 'spear (lice)')
g. maarr i**n**amboogal 'it bloomed' (-boo- = 'hit, poke')

[5] I have no evidence for positing a class of ditransitive verbs in Bardi. All the possible candidates have the syntax of simple transitive verbs.

The behaviour of these light verbs is a problem for our analysis of the morpheme *n-* ∼ *a-* above. If the morpheme's lexical entry includes a specification for a direct object, none of these items should be well-formed, for no object appears in the phrase. The light verb's f-structure would be introducing an OBJECT function which never receives a PRED feature. Thus either the preverb is deleting f-structure introduced by the light verb (in violation of monotonicity), or the transparent analysis advanced above is not correct.

4 Discussion

Transitivity mismatches in complex predication are not particularly unusual; however, those reported in the literature so far all appear to be cases where there is an 'extra' argument not licensed by the agreement in the light verb. That is, there are formally monovalent light verbs which nonetheless receive two arguments. Samek-Lodovici (2003) provides an analysis of restructuring predicates in Italian where the light verb appears to subcategorise for one fewer argument than appears in the predicate. In Wagiman (Wilson 1999), complex predicates with the verb 'go' are transitive with certain preverbs. The same is found in Worrorra (Clendon 1999).

In other cases, there is either strict agreement in valency with the light verb, or the light verbs appear to have an empty argument structure array which is filled by the preverb. An example of the former case is Warlpiri (Nash 1982, Simpson 1991), where monovalent light verbs form intransitive complex predicates, and bivalent light verbs form transitive ones. An example of the latter is Japanese, where the complex predicate can have one, two or three arguments (Grimshaw and Mester 1988) depending on the light verb.

The only other example to my knowledge of a case similar to Bardi is in the Australian language Jaminjung (Schultze-Berndt 2000), where some transitive verb roots appear without a direct object, despite taking transitive prefixes. (8) provides an example with the verb *-ma* 'hit', which takes transitive prefixes even when there is no direct object.

(8) *Ngayin=malang bul **gani**-ma bunyag.*
meat.animal=GIVEN emerge **3sg:3sg**-HIT.PST 3dl.OBL
'The animal came out to/for the two.' (Schultze-Berndt 2000:181)

Schultze-Berndt (2000) analyses such verbs as introducing a dummy argument and provides an account in construction grammar. Her solution works for the verbs with dummy object agreement, however it is too general, in that is cannot rule out verbs which should be ungrammatical with dummy arguments (i.e. regular intransitive verbs).

5 Conclusions

In summary, the Bardi data presented here are an interesting morphology-syntax mismatch. The facts from simple predicates and intransitive complex predicates lead us to a particular systematic interpretation of the prefix *n-* $\sim$ *a-*; however the complex predicates formed with bivalent light verbs challenge that interpretation.

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