Applicativizing complex predicates: a case study from Murrinh-Patha

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Murrinh-Patha, a polysynthetic language from the Northern Territory of Australia, is like many northern Australian languages in having a bipartite verbal system, in which one of a limited set of classifier stems combines with a lexical stem to form a complex predicate (see e.g Wilson 1999, Schultze-Berndt 2000, McGregor 2002, Bowern 2004 for discussion of related phenomena in other Australian languages). In this paper we present an analysis of these complex predicates within LFG that both accounts for the patterns of combination found in the data, and the interaction of these complex predicates with derivational processes such as applicativization and reflexive/reciprocal constructions. While there is a significant body of work investigating the analysis of complex predicates in LFG (see for example, Mohanan 1994, Butt 1995, Alsina 1996, Alsina et al 1997, Andrews and Manning 1999, Wilson 1999), very little of this work has dealt with polysynthetic languages like Murrinh-Patha and the interaction of complex predicates with other valency-changing morphological processes. This research thus brings new data into the discussion of complex predicates in LFG, and extends this discussion into a new typological domain.

Examples of Murrinh-Patha complex predicates are given in (1), in which we see the classifier stem (traditionally glossed with a number) followed by the lexical stem.[1] Each of these stem types can independently form other combinations – (1a) and (1b) show the same classifier stem (BE(4)) co-occurring with two different lexical stems, and (1c) and (1d) show the same lexical stem combining with two different classifier stems. A minority of classifier stems can function alone as a clausal predicate, all other classifier stems must always combine with a lexical stems. Lexical stems can never occur as the sole clausal predicate, and are only ever found in combination with a classifier stem.

(1a) *kanam-kaykay*
3sS.BE(4).nFut-call_out
'he continually calls out'

(1b) *nganam-kut*
1sS.BE(4).nFut-collect
'I collected (the money).'

(1c) *mam-kurrk*
1sS.HANDS(8).nFut-scratch
'I scratched something.'

(1d) *mem-kurrk*
1sS.HANDS:RR(10).nFut-scratch
'I scratched myself.'

Such data is interesting theoretically since the argument structure (and semantics) of the complex predicate as a whole is derived from the composition of its component parts, and accurately capturing how this composition works systematically is not always straightforward. In Murrinh-Patha, the problem becomes more interesting since these complex predicates also combine with various other types of verbal morphology that also affect argument structure. The examples in (2) illustrate the applicative *-ma-* which promotes a source to the function of direct object (as evidenced by the object agreement on the verb):

(2a) *nganam-**nhi-ma**-kut*
1sS.BE(4).nFut-**2sO-APPL**-collect
'I collected (the money) from you.'

(2b) *mangan-**nhi-ma**-art* *kura*
1sS.SNATCH(9).nFut-**2sO-APPL**-get water
'I got (some) water from you.'

Since applicativization is a valency-changing process, such examples have significant implications for an analysis of Murrinh-Patha complex predicates: namely, over what part of the complex predicate does the applicativization process apply?

On our analysis, both classifier stems and lexical stems contribute (partial) argument structures that combine to produce the argument structure for the complex predicate as a whole. Classifier stems are either intransitive (1a), transitive (1c) or reflexive/reciprocal (1d). Their argument structures specify argument slots, but are underspecified for thematic roles. Lexical stems, on the other hand, contribute the thematic roles and are either intransitive (1a) or transitive (1b, c, d).

A sketch of the analysis of some simple cases (for examples (1)) is presented in (3):

(3a) BE(4) <x>
kaykay, 'call out'<agent>
=> BE-*kaykay* <agent>

(3b) BE(4) <x>
kut, 'collect' <agent, theme>
=>BE-*kut* <agent, theme>

(3c) HANDS(8) <x, y>
kurrk, 'scratch' <agent, theme>
=> HANDS(8)-*kurrk* <agent, theme>

(3d) HANDS:RR(10) <x_1, y_1>
kurrk, 'scratch' <agent, theme>
=> HANDS:RR(10)-*kurrk* <agent_1, theme_1>

While we find transitivity matching in most cases, intransitive classifier stems can also combine with transitive lexical stems in which the intransitive classifier stem provides information about the posture of the agent and/or tense and aspect.

[1] Unless otherwise specified, examples are taken from author(s) unpublished fieldnotes.

We assume the following basic argument structure for the applicative in which the applicative adds a source argument to the already existing argument structure of the verb. In contrast to other applicative constructions, e.g. the Indonesian applicative *-i* (Arka et al 2009), no evidence for a co-indexing of the arguments is present in Murrinh-Patha.

$$\text{V - Appl} < \text{V} < \theta_{1,\ldots}\theta_{n} > \ \ \text{Appl} < \text{source} >>$$

This basic argument structure accounts straightforwardly for the examples in (2) by assuming that the applicative operates over the complex predicate as a whole. It is clear that the applicative cannot operate on the classifier stem alone since, in a case like (2a), the intransitive classifier would first be made transitive, as in (4). However, as we have seen above, the combination of a transitive classifier with a transitive lexical stem results in a 2-place predicate (as in 1c), not the 3-place predicate we find in the applicative construction:

(4) BE(4) – Appl <x, y(source)>
kut, 'collect' <agent, theme>

Our analysis also extends naturally to account for examples such as (5), in which the applicative combines with a reflexive/reciprocal classifier:

(5a) *ngennham*
nhem-nham
1sS.POKE:RR.nFut-fear
'I'm afraid.'

(5b) *ngennhimanham*
nhem-**nhi-ma**-nham
1sS.POKE:RR.nFut-**2sO-Appl**-fear
'I'm afraid of you.'

As pointed out above, RR classifier stems specify a co-indexing of two arguments provided by the lexical stem. In (5b) the theme argument is co-indexed with the experiencer while the source remains unindexed. In order to ensure the correct co-indexing, the applicative must operate on the combined complex predicate (6).

(6) POKE:RR-*nham*<experiencer$_1$, theme$_1$>
=> POKE:RR-*nham*-Appl<experiencer$_1$, theme$_1$, source>

This applicativized complex predicate can also undergo a second reflexive/reciprocal process, marked by the RR marker -*nu*-, as shown in (7):

(7a) *them-**nu**-**ma**-nham*
1incS.POKE:**RR**(21).nFut-**RR-APPL**-fear.
'We're (inclusive) frightened of each other.'

(7b) POKE:RR(21)-*nham*<experiencer$_1$, theme$_1$>
=> POKE:RR(21)-*nham*-Appl<experiencer$_1$, theme$_1$, source>
=> POKE:RR(21)-*nham*-Appl-RR<experiencer$_1$, theme$_1$, source$_1$>

Thus, the argument structure approach presented can explain the applicativising process in Murrinh-Patha and its interaction with complex predicate formation and reflexivisation/reciprocalisation. Note that, in contrast to other applicative constructions like e.g. the Chicheŵa applicative (Lam 2007), the linear order does not reflect the order in which the valency-changing processes apply.

Building on Alsina & Mchombo's (1993) account of applicatives in Chicheŵa, and following Butt (2006) in applying [+o] to non-agent theta roles, we show how our approach provides a unified analysis of the full range of complex predicates in Murrinh-Patha, and especially their interactions with other valency-changing processes. Thus we extend the research on complex predicates into the domain of polysynthetic languages, and showcase the strengths of the LFG framework in analysing typological diversity.

References

Alsina, Alex. 1996. The Role of Argument Structure in Grammar. Stanford: CSLI Publications.

Alsina, Alex and Sam Mchombo. 1993. Object asymmetries and the Chicheŵa applicative construction. In Mchombo, Sam (ed). *Theoretical Aspects of Bantu Grammar.* Stanford: CSLI Publications, 1-44.

Arka, I Wayan, Mary Dalrymple, Meladel Mistica, Suriel Mofu, Avery Andrews and Jane Simpson. 2009. A linguistic and computational morphosyntactic analysis for the applicative *-i* in Indonesian. In M. Butt and T.H. King, eds., *LFG Online-Proceedings of the 2009 Lexical-Functional Grammar Conference, Cambridge.*

Alsina, Alex, Joan Bresnan and Peter Sells (eds). 1997. *Complex Predicates*. Stanford: CSLI Publications.

Andrews, Avery D. and Christopher D. Manning. 1999. *Complex Predicates and Information Spreading in LFG*. Stanford: CSLI Publications.

Bowern, Claire. 2004. *Bardi Verbal Morphology in Historical Perspective*. Ph.D. Thesis, Harvard University.

Butt, Miriam. 2006. *Theories of Case*. Cambridge: Cambridge University Press.

Lam, Olivia. 2007. The applicative affix and morpheme ordering in Chicheŵa. In M. Butt and T.H. King, eds., *LFG Online-Proceedings of the 2007 Lexical-Functional Grammar Conference, Stanford.*

Mohanan, Tara. 1994. *Argument Structure in Hindi.* Stanford: CSLI Publications.

Schultze-Berndt, Eva. 2000. *Simple and Complex Predicates in Jaminjung*. Nijmegen: University of Nijmegen.

Wilson, Stephen. 1999. *Coverbs and Complex Predicates in Wagiman.* Stanford: CSLI Publications.