On the constructed middle in Marori

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The paper will discuss middle constructions in Marori (Isolate, TNG; Indonesian Merauke), providing empirical evidence as to the intriguing characteristics of how middle meanings are expressed cross-linguistically (Kemmer 1993) and also contributing to the theoretical debate as to the best approach to middles (and related phenomena such as reflexivisation): lexical (e.g., Fagan 1992), syntactic (e.g., Hoekstra and Roberts 1993), constructional (e.g.,Iwata 1999), or a parametric combination of these (Marelj 2004). Marori data on middles shows that the ultimate valence and transitivity of a middle structure is constructed in syntax. However, certain lexical aspectual properties of the predicate (e.g. inherent reflexivity and genericity) are important. It is demonstrated that LFG's parallel structure model is well suited to handle the properties of middles in Marori. Drawing insights from earlier LFG works on reflexives/reciprocals (Alsina 1996, Dalrymple et al. 1998, Rákosi 2008), I propose a lexical-constructional analysis in LFG to account for middle expressions in Marori.

Basic Data. The basic clause structure in Marori is shown in (1). It is verb-final; the lexical predicate (X) is followed by an inflected AUX(iliary) bearing complex morphology showing TAM agreement. The prefix of the AUX is the transitive OBJ, or intransitive SUBJ, whereas the verbal suffix is the SUBJ. A middle meaning is expressed in two ways. The first (Type 1 Middle) is by having both SUBJ and OBJ prefixes referentially co-indexed, exemplified by the grooming verb 'comb' in (2). The prefix *i-* '1SG' and suffix *-du* '1SG.PRES' cross-refer to the subject *na*, providing morphological evidence for an argument binding/unification analysis in inherent reflexives (Alsina 1996, Rákosi 2008, Hurst 2010). The non-middle counterpart has a different AUX form with distinct OBJ and SUBJ affixes (2b).

(1). NP* X:PRED [PREF -AUX - SUFF]$_{\text{INFLECTED.VERB}}$
GF SUB/OBJ:U SUBJ:A

(2). a. *Na pu tpab i-ngg-ra-du*
1SG hair comb 1SG-AUX-DUR-1SG.PRES
'I am combing my hair.'

b. *Maria=i na pu tpab ∅-pnda-mon*
Maria=U 1SG hair comb 3-3AUX-1SG.PST
'I combed Maria's hair'

Type 2 Middle in Marori makes use the prefix *n-*, occupying the same morphological slot as the OBJ prefix, exemplified in (3a). The non-middle counterpart is given in (3b), where distinct OBJ and SUBJ affixes are used.

(3). a. *Pake=na tifa=**n**-ngg-ra-**mon***
there=1SG hide=MID-AUX-1SG.DUR.NrPST
'I was hiding (myself) there.'

b. *John na=i tirfa=ri-ngg-ra-m*
John 1SG=U hide=1SG-AUX-DUR-3SG.NrPST
'John hid me.'

The AUX selection of a predicate is determined by the lexical-aspectual property of the predicate; e.g. a dynamic predicate selects the AUX root *ngg* or *pnda* as in (2)-(3) whereas a stative predicate selects a stative auxiliary *te* 'be' (not exemplified here). In addition, in the case of middles, whether a predicate goes with type 1 or type 2 AUX marking is also lexically determined by the lexical predicate; e.g. certain psychological predicates belong to Type 1 Middle, e.g. 'forget', 'angry' and 'afraid' whereas others such as 'remember' belong to Type 2 Middle. Self-affected/indulgence activities are either Type 1 Middle (e.g. 'work', 'cough', 'dive', 'squat' and 'play') or Type 2 (e.g. 'hide'). In short, there is lexical idiosyncrasy in the selection of middle types. Any analysis of middles in Marori must capture this lexical selectional constraint.

LFG analysis. The proposed analysis captures the salient facts about Marori middle alternations: parasitic middle marking (i.e. exploiting the verbal agreement marking), lexical-analytic constraints in the selection of AUX and Middle types, and transitivity mismatches. As noted, while the lexical predicate determines the choice of middle type, the morphology showing that type shows up not on the predicate itself but on the AUX. This can be straightforwardly captured in LFG by means of (constraint) equations, e.g. (↑ AUX.FORM)=c *ngg* and (↑VALENCE-TYPE)= MIDDLE-TYPE.2 for 'hide' in (3). For certain other predicates that allow more than one selection, the application of the constraints can be set as a disjunctive or conditional 'if-then' constraint, e.g. for *tpab* 'comb', if it is middle then it selects *ngg*, otherwise *pnda*.

To account for transitivity mismatches and role-unification in middle alternations, I adopt an a-str based analysis where an AUX verb in Marori is a light verb carrying a 3-place predicate with its own a-str signifying affectedness represented in (4) for the AUX *nggV*. This is in line with previous work on transitivity and causativisation/applicativisation (Jackendoff 1990, Alsina 1992, Butt 1995). Central to the middle analysis here is the argument fusion of second argument of AFFECT ([2:U]) with that of the embedded PRED ([A⇔U]). This is to capture the general semantics of middles (Kemmer 1993): one-participant event conceptions with the participant being affected to a certain degree. ([A⇔U] represents an argument with different degrees of mixed agentitivity/affectedness). The lexical entries carry specifications that the verbs select certain AUX forms, e.g. for *tpab* 'comb', *eni* 'play' and *abon* 'steal' shown in (5) they select *nggV* (if used in MIDDLE-TYPE.1). Independent function mapping principles framed in (G)PFM (Generalised Paradigm Function Morphology)(Stump 2001, Spencer 2010) (not shown here) regulate the mapping of roles A/U to the GFs SUBJ/OBJ.

(4). *nggV* **SUBJ**
(↑PRED)= 'AFFECT<[ ] , [2], 'PRED < [ ] >'>' (MIDDLE: AGENTIVE/PATIENTIVE)
U {[A⇔U]}

(5). *a. tpab*
(↑PRED)= 'comb<A:agt ([ ])>'
{ (↑AUX-FORM)=c *ngg*
(↑VAL-TYPE)= MIDDLE-TYPE.1
| (↑AUX-FORM)=c *pnd*
(↑VAL-TYPE)= ACTIVE }

b. *eni*
(↑PRED)= 'play< A:agt , ([ ])>'
(↑AUX-FORM)=c *ngg*
(↑VAL-TYPE)= MIDDLE-TYPE.1

abon
(↑PRED)= 'steal< A:agt , ([ ])>'
(↑AUX-FORM)=c *ngg*
(↑VAL-TYPE)= MIDDLE-TYPE.1

Given the lexical entries as shown in (5) and the function mapping mechanism, we can account for a puzzling morphology-syntax mismatch of the type exemplified by the verb 'steal' in (6). As seen, the AUX shows intransitive Type 1 Middle morphological marking whereas the syntax is possibly transitive with its OBJ marked by U marking *=i* but without object agreement on the AUX. Curiously the SUBJ *na* '1SG' is also marked by =i. The kinds of morphology-syntax and semantic-syntax mismatches in a grammatical system that makes use of constructive strategies with multiple exponents and underspeficication in marking also found in other languages (e.g., Evans, Gaby, and Nordlinger 2007) call for a theory with a sophisticated semantics-syntax-morphology interface. LFG with its parallel structure design can naturally handle this phenomenon. In the proposed analysis, the AUX morphologically constructs an intransitive middle a-str, and when combined with the verb *abon* 'steal', the two predicates fuse resulting in the structure shown in (6)b. Crucially, the AUX says nothing about thing stolen because it is morphologically intransitive. Since the fused argument *na* is lexically specified as U (precisely A=Recipient), it can therefore be marked by *=i*, accounts for what appears to a puzzle. (A non-middle A SUBJ cannot take *=i*.) The morphology is largely blind to syntax, as evidence from the fact that the intransitive verb allows an OBJ to be present without being indexed on the AUX but is marked on the dependent by *=i*. The outcome structure of transitive middle in (6) is therefore constructed morpholoexically (by combining prefix and suffix agreement exponents) and syntactically (i.e. licensed by NP=*i* marking outside the lexicon). The f-str in (6c) shows the outcome of the constructed transitive middle sentence shown in (6a).

(6). a. *na=i (bosik=i) abon yu-nggo-ru*
1SG=U pig=U steal 1SG-AUX-1SG.FUT
'I will steal pigs.'

b. SUB
'AFFECT<[ ] , [2], 'steal <[**A**:agt=**U**:rec], ([]) >'>'
U '1SG'

c.

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PRED 'AFFECT<(SUBJ:U) 'steal<[A=U](OBJ:U)>'>'

SUBJ   [ PRED  'pro'
         PERS  1
         NUM   SG
         ROLE  U ]

OBJ      [ PRED 'pig' ]
TENSE    FUT
VAL-TYPE MIDDLE-TYPE.1
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