

Affix Ordering and the Morphosyntax of Object Marking in Moro

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In the extensive literature on polytransitive predicates, inclusive of ditransitives, some of the major issues have concerned the *alignment* of semantic roles with grammatical functions and the surface expression of these elements. For example, does the recipient (R) or the theme (T) in ditransitives pattern like the patient (P) of monotransitives with respect to syntactic behaviors? Additionally, what is the linear order of lexical NPs bearing these relations to the verb, and in those languages with multiple object markers (OMs) appearing in the verb, what is their order relative to the root and relative to each other? Whereas some research has focused on alignment between OMs with R (recipient) and T (theme) concerning their linear order relative to the verb root (Gensler 2003; Lutz et. al. 2007; Siewierska & Bakker 2007), and considerable research has focused on the relevance of person hierarchies for pronominal and agreement verbal encoding, little literature has examined phenomena whereby a person hierarchy determines a fixed verbal affix order for OMs that yields ambiguous semantic role interpretation (Hyman & Duranti 1982).

We present new data from a dialect of Moro, a Kordofanian language of Sudan, documenting this interaction between fixed OM order and semantic role ambiguity: their relative position within the verb is generally not determined by semantic/syntactic role but by i) a person/number hierarchy, ii) verbal aspect, and iii) the phonological size of the OM. In addition, we provide evidence that Moro polytransitive predicates are symmetrical (Bresnan and Moshi 1990) and that some adjuncts appear to have the status of grammatical objects.

Moro transitive verbs display a *construction split*: lexical NP objects appear immediately after the verb, but pronominals appear as affixes within the verb. Monotransitive verbs in Moro contain purely pronominal OMs which are either prefixes or suffixes of the root, depending on both Person/Number features and values for Aspect/Mood features. For example, consider (1) and (2):

	Perfective:		Imperfective:
(1)	k-a-vələð- ǝ - ɲé	(2)	k-a- ɲǝ -vələð-a
	CM.SG-MAIN-pull-PFV-1SG.OM		CM.SG-MAIN-1SG.OM-pull-IMPV
	‘He pulled me’		‘He is about to pull me’

While all OMs in perfective aspect are suffixes, most OMs in imperfective aspect are prefixes.

Moro possesses polytransitive simple predicates that are intrinsically triadic as well as derived triadic predicates containing a valence increasing applicative marker. As with monotransitives, there is a *construction split* with respect to the encoding of lexical NPs versus pronominals: bare lexical NP objects follow the verb in a fixed order based on semantic role, (i.e. Verb–OBJECT_{recipient}–OBJECT_{theme}), while pronominals are indexed on the verb.

It is well known that person/number hierarchy-governed conditions on the arrangement of pronominal/agreement markers and clitics are attested in numerous languages (Foley 1991; Kibrik 2003; Siewierska 2004; McGinnis 2005; Corbett 2006): they also obtain in Moro. In particular, pronominal OMs of triadic predicates are linearly ordered according to the cross-

linguistically common hierarchy of person $1_{\text{sing}} > 2_{\text{sing}} > 3$, with variable ordering for any combination of 1st and 2nd, when either is plural. In all cases of multiple OMs, the first object (in terms of linear order) has the same form and position as a singly-occurring OM, while others are always suffixes that can show some variation in form. This basic pattern is exemplified for imperfectives in (3):

- (3) k-a-**ᵐ**-natʃ-a-**ᵐ**
 CM.SG-MAIN-1SG.OM-give-IMPFV-3SG.OM
 ‘He is about to give *me to him*’
 ‘He is about to give *him to me*’

As indicated in the gloss for (3), the fixed linear order $1_{\text{sing}} > 2_{\text{sing}} > 3$ of markers is associated with ambiguity of semantic roles for the OMs (see McKay & Trechsel 2008; Beck 2006 for similar phenomena in various dialects of Totonac). Moro polytransitive predicates provide evidence for symmetrical grammatical function assignment to both recipient and theme (Bresnan & Moshi 1990; Alsina 1996; Donohue 1996; McGinnis 2001; Kibort 2008): either object can passivize, while the other can appear as an OM. Moreover, in active clauses neither OM can occur with a coreferring lexical NP: this is the same complementary distribution observed between OMs and lexical NP objects with monotransitives.

Finally, there is an additional class of NPs in Moro that exhibits all relevant object properties, but raises an issue concerning the adequacy of assuming lexically conditioned determination of grammatical function assignment. This differs from the challenge posed to verb determined mapping by animacy and discourse factors identified in Bresnan and Nikitina (to appear). In particular, locative NPs are inflected with a prefix and instrumental NPs are inflected with a suffix: both of these can co-occur with verbs that do not carry dedicated markers for locative or instrumental valence increase, as exemplified in (4).

- (4) umiə k-a-ndr-ó í-ð-ádí ləvərðja-**la**
 boy CM.SG-MAIN-sleep-PFV LOC-crevice blanket-CM.INSTR
 ‘the boy slept in the crevice with the blanket’

As is evident in (5), the instrumental is passivizable, but the verb is inflected with a suffix to reflect the role of the instrumental subject, while the locative can also be indexed on the verb (with the suffix –u) and is associated with a pronominal interpretation (no pronominal object marking occurs in this example as non-human singular objects are null):

- (5) ləvərðja l-Λ-ndr-ən-í-j^Λ-**u**
 blanket CM.PL-MAIN-sleep-PASS-PFV-INSTR-LOC
 ‘the blanket was slept with in it.’

The inflected locative and instrumental NPs are in complementary distribution with their pronominal variants, as are OMs more generally: the main difference is that the semantic role of the former OMs are specified by an accompanying verbal affix, as in (5), rather than being ambiguous as with recipients and themes. Thus, certain NPs in Moro that would appear to be adjuncts i.e., they are not indexed on the verb when realized as inflected NPs, nor

semantically entailed by co-occurring predicates, nor syntactically obligatory, nonetheless function as syntactic objects behaviorally. In sum, Moro appears to be a language in which several co-occurring lexical NPS and pronominals need to be distinguished in terms of thematic role and surface encoding, but all appear to be grammatical objects. Beyond reporting ongoing research from an underdocumented language, it is our intention to suggest the value of focusing on rare and apparently anomalous data for understanding the range of variability in natural language and, accordingly, the types of conceptual and theoretical assumptions required to address it.

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