1. Introduction. Multi-verb constructions are a cross-linguistically widespread phenomenon. They include serial verb constructions, complex predicates, phrasal verbs, auxiliary constructions, and others. They share certain features, but also display systematic differences, the natures of which have been discussed widely (Amberber et al., 2007; Aikhenvald, 2006; Bow-ern, 2014; Crowley, 2002; Durie, 1997; Foley and Olsen, 1985; Schultze-Berndt, 2000). MalakMalak and Matngele, two free-word order, polysynthetic non-Pama-Nyungan Daly languages of Northern Australia provide an opportunity to investigate several multi-verb constructions, specifically, complex predicates (CPs), serial coverb constructions (SCCs), and compound coverbs (CCs), within a single language. In this paper I systematically test for negation, nominalization, prosodic word status, subordination, semantic compositionality, and syntactic constituency to reveal distinguishing and confounding features of these multi-verb constructions.

As a special type of multi-verb constructions, complex predicates are a widespread phenomenon among Australian languages. It has been argued that this type of CP constitutes an areal feature structurally distinct from other CPs such as light verb constructions (McGregor, 2002; Schultze-Berndt, 2000). They consist of an uninflecting open-class coverb (ngak) in (1a) and an inflecting verb (IV) (yida) belonging to a closed class. The construction in MalakMalak and Matngele is unique in productively producing CPs consisting of more than one coverb in a serial (1b) or compound construction (1c). The only other language displaying somewhat similar productive behavior is the neighboring language Kamu (now extinct) (Harvey, 1989). Additionally, Wagiman (Wilson, 2006) and Jaminjung (Schultze-Berndt, 2000) allow for some coverb serialization, however, the constructions are functionally limited.

(1) MalakMalak (Hoffmann, 2015)
      [ngak-ma] yida
      eat.vegetable-CONT 3SG.go/be.PST
      ‘he ate’
   b. (2012) Serial coverb
      [kubuk-karrarr] [dat-tyed] yuyu
      swim-move.up look-stand 3SG.M.stand.PST
      ‘he crossed the river and looked’

1Unless otherwise indicated, all examples are from original fieldwork on MalakMalak and Matngele (Hoffmann, 2015). The year in brackets indicates the year the data was collected.
[wukuty-tyrurru-murrum-wat] yiminy-wurrul-wundut
throw.away-go.down-dance/trod-send 3SG.M.do.PUNCT-3PL.OBJ-DU
‘he (the deer) violently jerks his head forward and throws them both down’

The three multi-verb constructions are highly productive. About 58% of predicates in Malak-
Malak discourse\(^2\) are complex. Of those, 23% are serial or compound coverb constructions
either as complex predicates or semi-independent predicates. This distribution pattern is similar
to what Crowley (2002, 21-22) observes for Paamese discourse where 25% of verbs in ordinary
speech appear in one or another type of serial verb construction. On the other hand, strongly
serializing languages such as Kalam predicates, employ up to to 90% serial expressions (Paw-
ley, 1993, 87-88).

All three types of multi-verb constructions are generally defined as being monoclausal without
a linking element (Amberber et al., 2007) (Aikhenvald, 2006; Bowern, 2010; Butt, 1997, 2003).
I argue that only SCCs may combine more than one constituent and multiple arguments, while
CPs and CCs always form single constituents. SCCs may only consist of multiple constituents,
if they describe a series of subevents occurring either simultaneously or in direct succession.
SCCs and CCs perform serial verb functions such as co-lexicalization, causation, tense-aspect
and case-role marking (Givón, 1991). CCs exclusively form lexicalized expressions and always
share arguments. Additionally a number of monosyllabic CV coverbs do not form independent
prosodic words and may only form part of a CC or a CP construction, but do not occur as inde-
pendent parts of SCCs.

Furthermore, somewhat similar to what has been observed for compound verbs in Japanese
(Tamaoka et al., 2004), SCCs can be formally and functionally distinguished from CCs. While
CCs (1b) construct semantically conventional meanings, follow a hierarchically fixed word or-
der and all either precede or follow the IV, SCCs (1a) show semantically transparent meaning
and may surround the IV in iconic ordering.

This paper thus provides a systematic analysis of several multiverb constructions using data
from unpublished sources (Zandvoort, 1999), original fieldwork (Hoffmann, 2015), and newly
annotated historical recordings (Birk, 1974; Crocombe, 2010).

2. The Languages. MalakMalak and Matngele are neighboring languages spoken in the Daly
River area of Northern Australia. MalakMalak has nine elderly speakers. It is an ergative-
absolutive language with constituent order mainly determined by information structure and
prosody, but syntactically free. Marking of core-cases is optional. The language is dependent-
and double-marking and employs a limited nominal classification system based on definiteness,
persistence, and prominence in discourse.

Mantgele is also severely endangered and today has only six fluent and semi-speakers. Many
of its grammatical and typological features closely mirror those of MalakMalak and the lan-
guages share 27% of core vocabulary. However, these similarities are more likely the result of
prolonged and intensive language contact than genetic affiliation (Harvey, 2003). In this paper,
the majority of the data comes from MalakMalak with occasional reference to Matngele.

\(^2\)These percentages are the result of a small representative discourse search with a total of 480 predicate con-
structions in five recorded narratives from (Birk, 1974) and (Hoffmann, 2015).
3. Multiverb Constructions in MalakMalak and Matngele.

3.1. ORDERING CONSTRAINTS. MalakMalak and Matngele are syntactically free word order languages. The order of constituents in the clause is subject to prosodic and information structure constraints. In simple CP constructions, the coverb usually precedes the IV as in (2a), but may also follow with no observable meaning difference.

(2) MalakMalak (2015) Simple complex predicate
   a. pi yida ngak-ma yida
      move 3SG.M.go/be.PST eat.vegetable-CONT 3SG.M.go/be.PST
      ‘he went and (then) he ate’
   b. ngak yida, pi yida: ‘he ate and went/left’

However, there are semantic constraints on the order of coverbs in SCCs and CCs. Changing the order of the coverbs also changes the construction’s meaning or makes it ungrammatical. Serial coverb constructions may encode a single event (3) or a succession of multiple related sub-events (4). For single event readings, the order of coverbs in the construction is fixed. For multiple event readings on the other hand, the order is iconically fixed to encode the order of events.

   a. ngak-ma pi yida: ‘he ate while walking’
   b. *pi ngak-ma yida: intended: ‘he ate while walking OR he went and ate’

(4) MalakMalak (2015) Serial coverb: Two sub-events
   a. pi yida ngak: ‘he went and ate’
   b. ngak-ma yida pi: ‘he ate and went/left’

Compound coverbs may only denote single events and the order is always fixed. They are used to encode directionality (5), causation (6), and tense-aspect (7) with the functional coverb always occurring at the rightmost edge of the compound.
   a. tity-pi yida
go.out-move 3SG.M.go/be.PST
   ‘he went out’ (compound -single event)
   b. *pi-tity yida: intended: ‘he went out’

   a. niwerr-ang denek-nung
frighten-give 3SG.do.PRS-3SG.OBJ
   ‘he frightens him/her’
   b. *ang-niwerr denek-nung

(7) MalakMalak (2013): Compound coverb: Tense-aspect marking (Durative)
   a. yunu 3SG.M.sit.PST tyin-ang-pak
bottom-give-sit
   ‘he stayed forever’
   b. *ynu pak-tyin-ang

In summary, while CCs construct semantically conventional meanings, follow a hierarchically fixed word order and all either precede or follow the IV, SCCs show semantically transparent meaning and may surround the IV in iconic ordering.

3.2. NEGATION. Negation may act as a reliable test to determine constituency status since constituents cannot be negated individually (Bowern, 2010, 48-51). In MalakMalak, a negator particle cannot interfere between a single coverb and an IV in a CP construction, and always has scope over the entire event (8).

(8) MalakMalak (2015)
   a. akana pi yida
   NEG move 3SG.M.go/be.PST
   ‘he is not going’
   b. pi yida akana
   c. *pi akana yida

Similarly, in CCs, the negation marker has scope over the entire predicate and may not interfere between the coverbs or the coverbs and the IV (9).

(9) MalakMalak (Birk, 1974)
   a. yenggi akana men-wiyuk dae
   1SG.incl NEG stomach-be.loose meat/animal
   ‘you and me are not hungry (for meat) any more’
   b. *men-akana-wiyuk

In serial coverb constructions comprising of a series of subevents, the negation marker *akana has scope over either an entire series of subevents (10a), or individual subevents (10b), depending on its location in the serial coverb construction either preceding the entire construction or
just one part of it. To only negate the first part of such a construction, separate CPs are needed (10c).

(10) MalakMalak (2015)
   a. [akana pi ada pak]
   NEG move 1SG.go/be.PST sit
   ‘I didn’t go and sit down’
   b. [pi ada] [akana pak]
   move 1SG.go/be.PST NEG sit
   ‘I went and did not sit down’
   c. [akana pi ada] [pak anu]
   NEG move 1SG.go/be.PST sit 1SG.sit.PST
   ‘I did not move, I sat down’

In serial verb constructions encoding one single event, the negation marker may intervene between the different parts of the serial construction. However, this is restricted to such cases where the parts of the serial verb construction are near-synonyms (11). If they are not, the negation marker must precede the entire serial coverb CP construction as in (12).

(11) MalakMalak (2012)
   a. werr-ma yida, [ngurrgut akana yur]
   cry-CONT 3SG.M.go.PST sleep NEG lie
   ‘he cries out, (that) he cannot sleep’

(12) MalakMalak (2013)
   a. akana wanyarra-ma tyagad yida
   NEG be.slow-CONT run 3SG.M.go/be.PST
   ‘he didn’t run slowly’
   b. *wanyarra-ma akana tyagad yida

Adjectives (of which MalakMalak only has two antonymous pairs) may form part of a CP and allow the negation marker to interfere between the adjective and the coverb in a serial construction (13). This, however, is not possible for constructions involving adverbs (14). This makes adverbs functionally more similar to coverbs than adjectives.

(13) MalakMalak (2015)
   a. [wunpayin akana warrad ma ede]
   good.N(ADJ) NEG walk-CONT 1SG.go/be.PRS
   ‘I don’t walk well’
   b. [akana wunpayin warrad ma ede]

(14) MalakMalak (2015)
   a. akana anda warradma ede
   NEG well walk-CONT 1SG.go/be.PRS
   ‘I don’t walk well’
b. *anda **akana** warrad-ma ede

In conclusion, in MalakMalak CPs and CCs always form single constituents. Serial coverb constructions, on the other hand, form single constituents when denoting an individual event. Even when the negation marker interferes - rarely - it still has scope over the entire event. Additionally, such cases are restricted to near-synonymous coverb constructions. A series of subevents, however, constitutes separate constituents which allow negation markers to interfere between parts of the construction having scope over only one part of it.

3.3. NOMINALIZATION. While nominalization is very rare in MalakMalak and Matngele, the languages allow complex predicates to be nominalized by adding case-markers to coverbs (15a) or IVs (15b) within simple and compound coverb complex predicates. SCCs do not allow nominalization.

(15) MalakMalak (2012)

a. pud ki-nen [dat-many wudyu] chest PROX-DIR look-ABL 3PL.stand.PRS
   ‘facing here, (they are) looking from there’

b. [taty-tyalk-wat wirrminy-many] throw-go.down-send 3.PLD.PUNCT-ABL
   ‘having knocked it down, they ...’

As a result, CC and CP constructions form constituents, while SCCs do not.

PROSODIC WORD STATUS. In MalakMalak, usually coverbs and IVs are independent phonological words receiving their own stress. However, monosyllabic CV coverbs might cliticize to synonymous IVs (16a) in free variation with CPs (16b).

(16) MalakMalak (Birk, 1974)

a. endi nga muta p-enung-ga THEN 1SG later/afterwards move-1SG.go.be.FUT-PROX.DIR
   ‘I’ll go later’

b. warrad pi enung-ga walk move 1SG.go.be.FUT-DIST.DIR
   ‘I want to go away/go walkabout’

Monosyllabic CV coverbs encode common concepts, such as *ka/pi ‘come/go’ and cannot occur without a suffix in imperative constructions (17).


a. ka-nggi!
   come-PROX.DIR
   ‘come here!’

b. *ka!: intended: ‘come here!’

Furthermore, they often form parts of compound coverbs to encode directionality (18) or transitivity (19). I analyze these types of predicates as CCs, because the order within the construction (unlike for serial coverbs) is fixed.
(18) MalakMalak (2015) CCs
   a. yi-pi: leave+move = ‘leave’
   b. *pi-yi
   c. yukuty-pi: move.away+move = ‘leave’
   d. *pi-yukuty
   e. wa-pi: get+move = ‘take (there)’
   f. *pi-wa
   g. wa-ka: get+come = ‘bring (here)’
   h. *ka-wa

(19) MalakMalak (2013, 2015) CCs
   a. tap-wa-pak-katy: touch+get+sit+throw = ‘turn over’
   b. *wa-tap-pak-katy
   c. wa-payi-wat get+change.location+send = ‘empty completely’
   d. *payi-wat-wa

Finally, these monosyllabic CV coverbs may also form parts of serial coverb constructions as in (2) above where their order is also fixed. In conclusion, CV coverbs are not independent prosodic words and always form single constituents as part of CP, SCC and CC constructions. Their existence underlines the status of all three multi-verb constructions as (mostly) single constituents which allows specialized treatment for non-prosodic words.

3.5. SUBORDINATION. Subordinate clauses cannot part of any multi-verb constructions. Instead, they are separated from the main clause as semi-independent predicates (20a) or complex predicate constructions when the agents (20b) differ.

(20) MalakMalak (2015)
   a. tyagad enung-ga [watyurr piny-nue]
      run 1SG.go.FUT-DIST.DIR quickly get-BEN
      ‘I will run to get help quickly’
   b. [tyerriyen ede] [pak-ma nukute]
      know 1SG.go/be.PRS sit-CONT 2PL.go/be.PRS
      ‘I know (where) you (all) live’

In conclusion, SCCs and CCs cannot include subordinate clauses within themselves. For this, separate CPs or semi-independent predicates are needed.

3.6. SYNTACTIC CONSTITUENCY OF SERIAL COVERB CONSTRUCTIONS. In MalakMalak and Matngele simple complex predicate constructions 0-roles can be assigned either by the choice of IV (many coverbs can take more than one IV) as in (21) or by the choice of coverb (22). Thus, as observed for Bardi (Bowern, 2010, 53), “0-role assignment can be determined by several parts of the predicate.”
(21) MalakMalak (2013)
   a. tyurrk yiminy
      be.inside 3SG.M.do.PUNCT
      ‘he buries X (transitive)’
   b. tyurrk yida
      be.inside 3SG.M.go/be.PRS
      ‘he enters (intransitive)’

(22) MalakMalak (2015)
   a. katy yiminy
      throw 3SG.M.do.PUNCT
      ‘he throws X (transitive)’
   b. pi yiminy
      move 3SG.M.do.PUNCT
      ‘he is gone (intransitive)’

On the other hand, in serial and compound coverb constructions, the IV never contributes to 0-role assignment (23). The valence-changing coverb occurs alway on the (right- or leftmost) edge of the serial construction.

(23) MalakMalak (2015)
   a. warri [katy-yi-pi ada]
      basket throw-leave-move 1SG.go/be.PST
      ‘I forgot the basket (unintentionally) - transitive’
   b. warri [tyed-yi-pi ada]
      basket stand-leave-move 1SG.go/be.PST
      ‘I left the basket/departed (from) the basket (intentionally) - intransitive’

These observations show that in simple complex predicates, the head of the CP can be the IV or the coverb. However, in serial and compound coverb constructions, this task is solely performed by transitivising (such as katy ‘throw’) and detransitivising (tyed ‘stand’) coverbs. These then take the function of head of the CP and further support the single constituency status of multi-verb constructions.

3.6. SEMANTIC COMPOSITIONALITY. Serial and compound coverb constructions in Malak-Malak and Matngele can mostly be decomposed semantically in an easy way. A good example are compounds involving the coverb karr ‘poke’. Several combinations are listed in (24). The order of these compounds is fixed.

(24) MalakMalak (2015) CCs
   a. karr: poke = ‘poke’
   b. karr-ma: poke+CONT = ‘knit’
   c. karr-karr: RDP+poke = ‘prod ground (with yam stick)’
   d. karr-katy: poke+throw = ‘punt’
   e. karr-nguyet: poke+ cook = ‘light (pipe, cigarette, fire)’
While their underlying compositional meanings are clear, many of these verbs have become highly lexicalized (e.g. karr-ma encoding the specific activity of ‘knitting’ by adding the highly productive continuous suffix -ma). As a result, they must be listed phrasally and provide yet another piece of evidence for analyzing compound coverb constructions as forming one constituent. Serial coverb constructions are always semantically decomposable. However, when encoding single events, they always form single constituents as well.

Since both MalakMalak and Matngele only have six inflecting verbs in total, CPs are not always easily semantically decomposed. Example (25) shows the three IVs that may combine with the coverb muk ‘ask’. There is no meaning difference between (25a) and (25b) and the IV yiminy in (25c) acts as transitivity marker. Generally, all IVs are only semantically fully transparent as simple predicates when they encode ‘sitting’, ‘standing’, ‘lying’ or ‘moving’.

   a. muk yide
      ask 3SG.M.go/be.PRS
      ‘he asks’
   b. muk yuyu
      ask 3SG.M.stand/lie.PRS
      ‘he asks’
   c. muk yiminy
      ask 3SG.M.do.PUNCT
      ‘he asks someone’

In conclusion, all three types of multi-verb constructions form close-knit semantic units. Serial coverb constructions are most easily semantically decomposed, while CPs are less transparent. Overall, the semantic bond ensures their interpretation as single constituents.

4. Conclusions. This paper provided a systematic analysis of the semantic and morphosyntactic properties of different types of multi-verb constructions from the perspective of two understudied languages.

While complex predicate and compound coverb constructions always constitute single constituents, serial coverbs may form separate constituents. This, however, is limited to events perceived as a series of simultaneous or quick-succession sub-events. Concerning ordering constraints, serial and compound constructions have fixed word orders. Simple CPs, on the other hand, are flexible while showing strong preference for the coverb preceding the IV. With regards to negation, the negative marker akana cannot interfere between the coverb and the IV in CP constructions or between coverbs in single-event SCCs and compounds. However, in such serial constructions encoding successive or simultaneous sub-events, the marker may interfere between separate parts of the construction then having scope over only one sub-event.
Interfering negation markers in single-event SCCs always have scope over the entire event and are limited to near-synonymous coverb constructions. Nominalization is only allowed in compound and CP constructions, but not in SCCs. Furthermore, monosyllabic CV coverbs which may never form independent prosodic words can form part of all three multi-verb constructions forming single constituents. Subordination is not allowed within any of the multi-verb constructions. Therefore, separate constituents form separate constructions. With regards to θ-role assignment, simple CPs function differently from CCs and SCCs. While in the former the θ-role can be determined by either the IV or the coverb, the latter two only allow for a coverb on the edge of the construction to act as head. Finally, an analysis of semantic compositionality within the multi-verb constructions reveals a close-knit semantic bond between all members of the construction where the CPs are least easily decomposed.

In conclusion, while all three multi-verb constructions have a strong inclination towards single constituency status of all its members, serial coverb constructions may allow for more than one constituent in specialized meanings. This sets it apart from CP and compound coverb constructions.

Future studies may include a detailed investigation into the connection between ‘light’ and ‘heavy’ uses of stance coverbs in MalakMalak and Matngele. Additionally, the need to consider the full typological range of language structures in the analysis of verb serialization cross-linguistically has been pointed out (Nordlinger, 2014; Pawley and Lane, 1998) and the languages described here offer an ideal case-study to add to this literature.

References


