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ABSTRACT

In many languages of northern Australia with coverb constructions, it is difficult to draw a distinction between predication and adverbial modification because coverbs appear to be both predicates and modifiers. We present evidence from Wagiman that a distinction between predication and modification can be drawn syntactically. We argue that Wagiman has two necessarily predicational positions and at least one adverbial position. One predicational position is obligatorily filled by the inflecting verb, the second can be filled by a coverb when it has a predicative function. The merger of this predicational coverb and the verb results in a complex predicate. A coverb can also be located in the adverbial position when it modifies the predicate. Using the minimalist framework, we test our proposal when two coverbs appear in the same clause, one adverbial and one predicational. This analysis has wider typological implications. We demonstrate that the novel adverbial analysis for clauses with two coverbs is also supported for other languages in the region.

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1. Introduction

Distinguishing predication from modification is not straightforward in many languages. Much depends on whether a formal part-of-speech distinction can be drawn between predicates and modifiers of predicates (hereafter termed ‘modifier’). As an example, we may consider *slow*, *fast* and *accelerate* in English.

- (1) a. *The car **slow**-ed.*
b. **The car **fast**-ed.*
c. *The car **accelerate**-d.*

- (2) a. *The car goes (rather) **slow**.*
b. *The car goes (rather) **fast**.*
c. **The car goes (rather) **accelerate**.*

In English, there are forms which can function as both predicates and modifiers, such as *slow*. They can be the sole predicate in a clause and take tense inflection directly, as in (1a): *slow-ed*. They can also co-occur with a predicate and themselves be modified, as in (2a): *(rather) slow*. However, the usual pattern is that forms function only as modifiers, like *fast* (2b), or only as predicates, like *accelerate* (1c). Therefore, there are formal motivations for

distinguishing ‘predicates’ from ‘modifiers’, or distinguishing ‘verbs’ from ‘adverbs’, in English.

These formal patterns are also important in evaluating syntactic analyses. The fact that **The car goes accelerate* is not possible is evidence that English does not have complex predicate constructions involving only non-derived forms. Complex predicates involve at least two predicational constituents within a clause (cf. §4). Consequently, a sequence such as *goes slow* is not analyzed as a complex predicate construction in English, but rather as a predicate (verb) + modifier (adverbial phrase) construction. The fact that the adverb can itself be modified, as in *rather slow*, is independent evidence for the verb + adverbial phrase analysis.

In many Australian languages of the Top End, there are no immediately evident formal criteria for distinguishing predicates from modifiers. Consider the elicited sentences in (3) from the northern Australian language Wagiman.

- (3) a. **Durdut-ta** *ng-a-ya-nggi*.
run-NPFV PST-1SG-go-PST¹
 ‘I ran / went running.’
- b. **Gabarn-a** *ng-a-ya-nggi*.
quick-NPFV PST-1SG-go-PST
 ‘I accelerated / went quickly.’
- c. **Wilh-ma** *ng-a-ya-nggi* **dikkurrh-ma**.
walk-NPFV PST-1SG-go-PST **be.lame-NPFV**
 ‘He was (walking) limping(ly) ~ in a lame way.’

The Wagiman constructions above involve two formally distinct parts-of-speech. One part-of-speech is verbs, which are roots that take inflections for tense/aspect/mood (TAM) and person, here *ngayanggi* ‘I went’. The class of verbs is closed and only has a small number of members in Wagiman. Verbs may constitute the sole predicate in the clause, and they quite commonly do so. The roots *durdut* ‘run’, *gabarn* ‘(be) quick’ and *dikkurrh* ‘be lame, limp’ belong to the second part-of-speech, which is open and non-finite. We use the term ‘coverb’ for this part-of-speech.²

Most verbal meanings in Wagiman cannot be expressed solely by a simple verb. Rather, their expression involves two constituents, a verb and a coverb. While more than one coverb can appear in the same clause, only one verb is permitted (cf. §6.1). This behaviour of verbs and coverbs is typical of the languages of north-central and north-western Australia (Baker & Harvey, 2010, pp. 14–17; Bower, 2006, pp. 18–20, 2014, pp. 270–274; Dixon, 2004, pp. 174–201; Schultze-Berndt, 2000, pp. 69–102, 2003, 2017; Wilson, 1999; Zandvoort, 1999, pp. 59–103). Underived coverbs cannot inflect for mood, tense or person. Therefore, it is ungrammatical to say something like **ng-a-durdut-yi* to mean ‘I ran’ or **ng-a-dikkurrh-yi* to mean ‘I was lame’ in Wagiman.³

¹ The following abbreviations deviate from the standard Leipzig glossing rules: AGT – agent; CONTR – contrastive; DM – discourse marker; EXCL – exclusive aspect marker; HAB – habitual; IMM – immediate future; ITER – iterative; INTS – intensive; MED – medial; NPFV – non-perfective; NSG – non-singular; PAT – patient; SEMBL – semblative; SEQ – sequential; SUF – (unclear) suffix; TEMP – temporal marker; VBZ – verbalizer.

² A number of other terms are used in the literature to refer to the same part-of-speech, such as preverb, uninflecting verb, participle or verbal particle. For an overview of the literature of these terms, see Schultze-Berndt (2017).

While verbs and coverbs are formally distinguished from one another in Wagiman and other languages of northern Australia, it is not equivalently evident that a distinction can be drawn between a coverb part-of-speech and an adverb part-of-speech. There are at least two possible analyses of adverbs in Wagiman. Cook (1987, p. 92) proposes a closed class of adverbs for Wagiman, which are unsuffixed and occur in clauses containing at least a verb. In contrast, Wilson (1999, p. 47) argues that there is no distinct class of adverbs in Wagiman. Instead, he proposes a small class of adverbial coverbs. The situation is very similar in Wardaman, a neighbouring language, only distantly related to Wagiman.⁴ Merlan (1994, p. 59) states that it is not possible to draw this distinction between coverbs and adverbs in Wardaman:

The class of Adverbs cannot, satisfactorily, be entirely distinguished from the preceding particle [= coverb] class. [...] In Wardaman, there is no set of formal properties by which adverbs can be distinguished from members of other word classes. In fact, they show partial formal overlap with particles in that some can occur with the suffix *-ma* ~ *-ba*.

Similarly, Schultze-Berndt (2000, p. 71) discusses a range of potential criteria for the adverb vs. coverb distinction in Jaminjung, another distantly related language of Wagiman spoken in northern Australia. However, her criteria are difficult to quantitatively evaluate given database limitations, and she does not provide a definitive conclusion:

The standard linguistic definition of ‘adverbs’ also applies, to some degree, to Jaminjung coverbs. Coverbs, like adverbs, do not inflect, and they are restricted to certain positions.

The absence of a clear distinction between coverbs and adverbs has significant implications for morphosyntactic analyses. There are three possible analyses of the constructions in (3) above. The first is that *durdut* ‘run’, *gabarn* ‘(be) quick’ and *dikkurrh* ‘(be) lame, limp’ in Wagiman are all coverb roots and all predicates with their necessarily associated arguments: ‘run (x)’, ‘quick (x)’ and ‘lame (x)’. The second is that they are all adverb roots, solely modifying and without arguments: ‘runningly’, ‘quickly’ and ‘lamely’. The third is that the distinction between predication and modification is not primarily based on the lexical category of a root but depends on the syntactic position in which it appears. Under Hypothesis 1, all constructions in (3) are complex predicate constructions. Under Hypothesis 2, they are all verb + adverb constructions. Under Hypothesis 3, coverbs have a predicative function when they occur in the predicational position but have a modifying function when they occur in the adverbial position. We consider these three hypotheses from the perspective of Wagiman and provide evidence that Hypothesis 3 is best supported for the majority of coverb constructions in Wagiman. The principal evidence comes from the occurrence of two coverbs in the same clause. We show that coverbs can occur in a predicational position, forming a complex predicate with verbs, or they can occur in an adverbial position, then modifying the predicate or the

³ The choice of the past suffix in Wagiman depends on the verb root (cf. §6.1). The most common past suffix is *-yi*, whereas *-nggi* only appears on the verb root *ya* ‘go’.

⁴ A discussion of the genetic affiliation of the languages in this study is beyond the scope of this paper; thus a brief summary should suffice here: Wagiman, Wardaman and Jaminjung are non-Pama-Nyungan languages (see Koch, 2014, p. 57, for a discussion of this term) belonging to different branches of the Australian family (Harvey & Mailhammer, 2017). Jaminjung is a Mirndi language (Harvey, 2008) whereas Wagiman remains unclassified. Merlan (1994, p. 3) hypothesizes that Wagiman is closely related to Wardaman and Yangman, whereas Wilson (1999, p. 5) states that there is not enough evidence for such a genetic relationship. The languages Kamu, MalakMalak and Matngele, which are discussed in §9, belong to different language families of the Daly region (Nordlinger, 2017).

entire clause. In the final section of this paper, we tentatively expand our findings to other languages of northern Australia with multi-coverb constructions and show that our theory is applicable to languages which are structurally similar to Wagiman. However, an alternative proposal is sought for those languages for which the theory is not directly applicable.

We have chosen Wagiman because it features verbalization of coverbs, which is absent in the other languages (Wilson, 1999, pp. 82–85). The occurrence of coverbs without an accompanying verb is well attested in Wagiman and is part of the evidence that they can be predicational. These differences bear directly on the comparative evaluation between the three hypotheses and are discussed in §7.

This paper is structured as follows: in §2, we present the theoretical framework for the paper which is a minimalist approach. The terminology revolving around predication and adverbial modification is discussed in §3. In §4, we briefly examine existing theoretical approaches to complex predicates in Wagiman. The database for Wagiman and the other languages which form the basis for this study is discussed in §5. A brief overview of the major parts-of-speech of Wagiman is provided in §6. We discuss the characteristics of Wagiman coverbs in §7. In §8, we examine the adverbial position and show that it may be occupied by other parts-of-speech. We consider the broader typological applicability of our approach in §9. We summarize our findings in §10.

2. The framework

We propose that coverbs behave differently when they appear in a syntactically predicational position than when they appear in a syntactically adverbial position. This is illustrated with the phrase structure tree in Figure 1 from the minimalist perspective (Boeckx, 2010; Chomsky, 1995). The syntactic oppositions modelled in Figure 1 could be translated into other theoretical approaches. Given that there is no conclusive answer as to whether Australian languages have a VP, we use the more neutral label

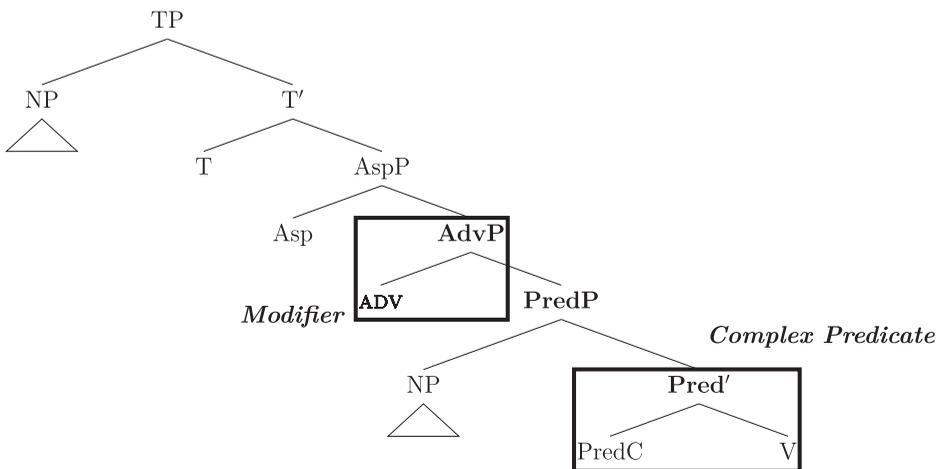


Figure 1 Arrangement of adverbial modification and complex predication

Predicate Phrase (PredP) rather than VP. The typical syntactic assumptions that apply to the VP also apply to the PredP here.⁵

The central idea is that a complex predicate, sitting in Pred-bar (Pred'), has two necessarily predicational positions, one of which is the verb and the other is any other potentially predicational constituent (cf. §3 for the terminology), abbreviated as PredC. We demonstrate in this paper that the prototypical PredC in Wagiman is a coverb, while in other languages, this position can also be filled by a noun or another verb.⁶ The implication of this proposal is that the overall predicate, sitting in PredP, is either simple if only V is filled, or complex if PredC is also filled. The lower NP position is reserved for the object argument of the predicate. We propose an intermediate level AdvP, which licenses the addition of manner adverbials (ADV) outside the PredP.⁷ The crucial point for this paper is that the coverb in Wagiman can appear not just in the PredC position but also in the ADV position. When it occurs in PredC, it has a predicational function and forms a complex predicate with the verb. When it occurs in ADV, it functions as a modifier of the predicate. We apply this proposal in §8.2 to the Wagiman data and demonstrate that when two coverbs appear in the same clause, the outer (modifying) coverb is located in ADV, whereas the coverb that immediately precedes the verb sits in PredC and is predicational.

Our proposal differs slightly from previous theories of complex predicates which posit that complex predicates fall into two classes: Baker and Harvey (2010) divide complex predicates into 'merger structures' and 'coindexation structures' (cf. §4). Svenonius (2016) proposes a distinction between 'complex predicates formed by complementation' and 'complex predicates formed by adjunction'. We argue that if we want to arrive at a consistent cross-linguistically applicable definition of complex predicates, then adjunction or adverbial modification should be analyzed as taking place outside of the PredP, i.e. at a higher level, and not within the PredP itself. This means that only 'merger structures' or 'complementation structures' are genuine complex predicates, whereas 'coindexation structures' and 'adjunction structures' require an alternative analysis (Kraube, forthcoming).

The focus of this paper is the syntactic distinction between predication and adverbial modification, not primarily a distinction between certain parts-of-speech. However, many of our arguments relate to the question of how and whether particular lexical classes can go into particular syntactically defined slots. A central question in the literature on

⁵ It is common practice in theoretical descriptions of Australian languages to avoid the designation VP. For example Simpson (1991, p. 111ff.) provides evidence against a VP in Warlpiri and uses \bar{V} (V-bar) instead. Wilson (1999, p. 71) works with V' (also V-bar) rather than VP for Wagiman complex predicates. Laughren (2010, pp. 180–181) uses VC (verbal constituent) for her analysis of the Warlpiri thematic core, and not VP.

⁶ For example, complex predicates in Persian and Hindi are analyzed as being composed of noun + verb (Folli et al., 2005; Megerdooian, 2012; Mohanan, 1997; Müller, 2010; Nemati, 2010, p. 386ff.) and complex predicates in serializing languages involve the combination verb + verb (Aikhenvald, 2018; Andrews, 1997; Baker, 1989; Bril, 2004; Næss, 2004; Reinig, 2004; Shibatani, 2009). Our proposal can also capture these complex predicates (cf. Kraube, forthcoming, for the details), but we will focus on coverb constructions in this paper.

⁷ Our proposal departs from AdvPs as defined in Cinque (1999) who does not analyze them as adjuncts but as unique specifiers of distinct maximal projections, which adhere to a fixed universal hierarchy of clausal functional projections. Our AdvP is understood as a Modifier Phrase. As such, the constituent in SPEC of AdvP is subject to the same temporal and polarity frame as the predicate (such as *run quickly*), as proposed by the adverbial structures (4) and (5) in §3. This is different from clause-level adverbs (such as *fortunately, he ran*), which are independent of the predicate and have scope over the entire clause. We focus on phrase-level adverbials in this paper.

parts-of-speech is whether part-of-speech classes are defined in the lexicon or in the syntax (Rijkhoff & van Lier, 2013, p. 20).

3. Predication vs. adverbial modification

Current theories define a predicate as a lexicalized concept with a linguistic meaning in a particular language that needs to combine with another concept to express a proposition (Adger, 2003, p. 61). The information as to which constituents are required by the predicate is called ‘argument structure’ or ‘subcategorization frame’ and is stored in the mental lexicon. Lexical-functional theories posit that each subcategorizable lexical item subcategorizes for function and exhibits a ‘predicate argument structure’ that “lists the arguments for which there are selectional restrictions” (Bresnan, 1982, p. 288). When we talk about predicationality in this paper, we mean that the given lexical item requires an argument to express a meaningful proposition. We employ the term ‘potential predicationality’ when the bare lexical item is underspecified for argument structure and only has one when it occurs in a syntactic position which requires that this lexical item must have an argument structure. Using the proposal from §2, we mean that every coverb in Wagiman is potentially predicational for the following reason: when the coverb occurs in the necessarily predicational position PredC, it has an argument structure, but when it occurs in the modifying position ADV, it has no argument structure.

In the standard neo-Davidsonian approach of formal semantics, syntactic adverbial positions can be analyzed in two ways. Maienborn and Schäfer (2011, pp. 1414–1415) propose the structure in (4) for a composition where the verbal and the adverbial syntactic positions merge, and the structure in (5) for a composition where the adverbial position modifies the entire predication.

(4) *Peter talked loudly.*

$\exists e$ [AGENT (e, peter) & TALK (e) & LOUD (e)]

(5) *Peter danced beautifully.*

$\exists e$ [AGENT (e, peter) & DANCE (e) & $\exists m$ [R (e, m) & BEAUTIFUL (m)]]

We adopt the structure in (5) for our syntactic study and argue that adverbial positions in the languages of northern Australia have no predicational meaning and are not subsumed under the same predicate as would be the case for structures following (4). We provide evidence in §8.2 that the coverb in the adverbial position modifies the predicate and is placed on a higher level in the c-structure (cf. our proposal in §2). In this case, the coverb is not part of the predication. The clearest evidence for this comes from the occurrence of two coverbs in the same clause. For a semantic distinction between adverbs and adverbials, we refer the reader to Maienborn and Schäfer (2011, pp. 1391–1393). For a typological discussion between the two categories, see Hallonsten Halling (2018, p. 79ff.).

4. Theoretical approaches to complex predication

The term ‘complex predicate’ has been used in relation to a wide range of constructions cross-linguistically (cf. Butt, 1995; p. 1; Svenonius, 2008, p. 47 for a critique). Consequently,

a necessary prerequisite to any consideration of theoretical approaches to complex predication is a consideration of criteria that might be used to distinguish ‘complex predicate’ from ‘not a complex predicate’. Despite the extensive usage of the term complex predicate, definitional materials are comparatively limited. However, there are two generally agreed-upon criteria. One is the obvious criterion that there must be multiple predicational constituents. The other is that the construction must be monoclausal (Alsina et al., 1997, p. 1; Bowerman, 2014, pp. 264–266; Butt, 2010, pp. 57–59). There is variation as to requirements on constituency. Bowerman (2014, p. 264) proposes that contributing constituents should be word-level, whereas Alsina et al. (1997, p. 1) allow both words and morphemes. Both the coverb and the verb are word-level constituents in Wagiman, and all potential requirements as to level of constituency are satisfied.

There also appears to be somewhat inexplicit agreement that the monoclausal construction has a single overall predicate, i.e. that it does not consist of multiple predicates. Baker and Harvey (2010, pp. 34–35) provide evidence that monoclausal structures may in fact involve multiple predicates, as is often the case with serial verb constructions. In this paper, we are not concerned with the internal structure of complex predicates but with the question what is and what is *not* a complex predicate. We focus on the argument that a complex predicate in Wagiman consists of one coverb and one verb, and that any other coverb in the same clause is outside this complex predicate. However, to follow the discussion about complex predicates, a brief explanation of their internal structure is essential.

The two competing approaches to complex predicates in Australian languages are verb classification and unification.⁸ Classification analyses propose that the verb classifies the coverb. McGregor (2002) adopts this approach and proposes a ‘superclassification’ system for Australian languages. McGregor (2002, pp. 125–128) also includes Wagiman within the purview of his analysis. Given that his analysis is not predictive (McGregor, 2002, p. 37), we do not see any significant advantages of this approach over other analyses for Wagiman. Bowerman (2010, pp. 44–47) also provides a number of arguments against McGregor’s verb classification approach.

In our analysis, we follow approaches to complex predicates which have been termed unification, fusion or merger (Baker & Harvey, 2010, pp. 15–17; Bowerman, 2010, p. 57; Wilson, 1999, p. 127ff.). Their common proposal is that arguments of the contributing predicational constituents merge to create a single overall predicate. Wilson (1999, pp. 142–150) argues that the argument structures of the coverb and the verb in Wagiman merge at the same level of the f-structure. He employs a Lexical-Functional Grammar framework and proposes the internal structure of complex predicates in (6).

$$(6) V' \rightarrow \begin{array}{ll} (CV) [PS, ASP], & V [PERS, TAM] \\ (\uparrow \backslash LCS) = (\downarrow LCS) & (\uparrow = \downarrow) \\ (\uparrow \backslash LCS SF^*) = (\downarrow LCS) \end{array}$$

Under this analysis, a complex predicate in Wagiman, here expressed by V-bar (V') (Wilson, 1999, p. 71), consists of two smaller constituents: the coverb (CV), which supplies

⁸ Another major approach to complex predicates involves argument transfer, proposed by Grimshaw and Mester (1988, p. 205). However, as it has been shown that argument transfer is not applicable to Australian coverb constructions (Bowerman, 2010, p. 53), we do not discuss this approach further here.

detailed predicational semantics (PS) and aspectual information (ASP) to the overall construction, both of which are spread upwards in the structure (cf. Wilson 1999, p. 144, for the details of this information spreading); the verb (V), which provides information on the subject and object as personal prefixes (PERS) as well as on the tense, aspect and mood (TAM). The arrows ($\uparrow=\downarrow$) indicate heads which license information spreading upwards to the f-structure of the V', i.e. the complex predicate, and then onwards up to the f-structure of the clause.

Predicate fusion takes place because the Lexical-Conceptual Structure (LCS) of the verb is spread up to the V' level where it fuses with the LCS of the coverb. The semantic function (SF) of the coverb is defined as the set of all LCS attributes. The asterisk (*) indicates functional uncertainty, i.e. any sequence of these attributes including none is permitted. The second line in the structure (6) tells us how the LCS of the coverb fuses with the LCS of the verb. The details of Wilson's proposal are beyond the scope of this paper. The relevant point is that the arguments of the coverb and the verb merge at the same level in the syntax and therefore form a single overall predicate. We return to this idea in §8.2 when we apply our proposal from §2 to the available positions of Wagiman coverbs. We show that the coverb and verb in a complex predicate merge on the same level of the c-structure, whereas the coverb in the adverbial position and the predicate merge on separate levels.

Bowern (2010, p. 53) offers a similar approach in her discussion of Bardi complex predicates, termed 'unification'. She provides evidence that the Bardi preverb (coverb in our terms) and the (light) verb have independent argument structures and that the arguments of these two elements are unified on the clause level. This is essentially the same as merger constructions and it can explain the vast majority of coverb-verb combinations.

Baker and Harvey (2010) use ideas from Butt (1995) and Wilson (1999) to frame a cross-linguistic constraint-based model for complex predication. They term one of the two major complex predicate strategies 'merger constructions' (Baker & Harvey, 2010, p. 15) and propose two constraints on them (2010, p. 21).

(7) The Predicate functions CAUSE, BECOME, MOVE, BE may appear only once in the LCS of the overall complex predicate.

(8) The major Predicate functions must appear in the following sequential order:

CAUSE > BECOME > BE
 MOVE

The authors propose that stative predicates have a BE structure and activity predicates have a MOVE structure. Achievement and accomplishment predicates are derived by applying additional predicates of a BECOME and/or CAUSE structure. The crucial point is that these constraints apply to both monomorphemic predicates and complex predicates. This means that coverb + verb combinations produce predicates which match in structure to monomorphemic predicates. For coverbs in the adverbial position, no such constraint-based model has been produced to date. We argue that there are no constraints on the kind of coverb that can occur in

the adverbial position as long as it is semantically and pragmatically plausible in the given clause.⁹

5. Data

Most of our evidence for the distinction between a predicational and an adverbial position for coverbs comes from Wagiman, a non-Pama-Nyungan language of northern Australia, traditionally associated with the middle Daly River region, about 200 km south of Darwin (Figure 2). The language has two elderly fluent speakers. All other people of Wagiman heritage have shifted to Daly River Kriol or English as their primary language. Our principal corpus consists of around 150 h of speech involving personal narration, dreamtime stories and elicitation collected between 1980 and 2019 by Mark Harvey, Stephen Wilson and Aidan Wilson. This is the principal source for materials that we cite unless otherwise indicated. The corpus references indicate the date of recording (NDMH for ‘no date recorded by Mark Harvey’), the speaker’s initials and the number of recordings with the same speaker on that date. Tape sides are indicated by A and B. We also draw on published material from Cook (1986, 1987, 1988). However, as all of his audio materials are lost (Anthony Cook, p.c.), we rely on the written examples and the indication therein where intonation boundaries occur.

For our typological discussion in §9, we draw on published material for Jaminjung (Schultze-Berndt, 2000), Wardaman (Merlan, 1994), MalakMalak (Birk, 1974) and Matngele (Zandvoort, 1999), as well as on unpublished material for Kamu (Harvey, 1990).



Figure 2 Wagiman territory. Source: Adapted from Koch and Nordinger (2014, p. xiv)

⁹ In this paper, we rarely use the term ungrammaticality and instead talk about pragmatic implausibility. An anonymous reviewer remarked as to how we can possibly know what is pragmatically plausible and what is not. We draw our conclusions from real-world examples. While we would not say that the English sentence *The green horse galloped belly-up around the moon* is ungrammatical, it is pragmatically implausible to encounter such a sentence in the corpus. Such a sentence would take an immense amount of work to elicit in a language whose speakers are not accustomed to constraint-based linguistic tests for grammaticality judgements. Most speakers would simply say that such a sentence cannot be expressed in their language.

Hoffmann’s (2015a, 2015b, 2016) primary data on MalakMalak and Matngele are also part of our study.

6. Wagiman parts-of-speech

Although this paper primarily focuses on coverbs, a basic understanding of the other parts-of-speech is essential for the study of adverbial modification. We present here a brief overview of the major part-of-speech classes in Wagiman, which are nominals, verbs and coverbs. Particles are a minor closed part-of-speech class. Part-of-speech distinction is not the principal concern of the paper, as the focus is on the syntactic distinction between predication and adverbial modification. Syntactic evidence for complex predication and adverbial modification in Wagiman will be presented in §7 and §7.4, respectively.

Verb roots are distinguished from other parts-of-speech by their ability to take finite TAM affixation and by their incompatibility with case suffixes. Nominal roots take case suffixes, do not permit TAM affixes and can function referentially. Coverb roots are potentially predicational and therefore class with verb roots in this respect, but they differ from verb roots in that non-derived coverb roots cannot take finite TAM suffixation. Evidence for the potential predicationality of coverbs is presented in §7. Coverbs in Wagiman differ from nominals morphologically in that they cannot directly take case suffixation, and semantically in that they do not function referentially. There are derivational affixes which derive nominal and verbal stems from coverb roots, the latter of which is briefly outlined in §7.1. These derived stems can receive case or TAM affixation.

Table 1 illustrates the morphosyntactic differences between the five parts-of-speech in Wagiman which are relevant to the analysis of complex predication. All parts-of-speech except for particles can be inflected morphologically, only verbs are inherently predicational and only nominals may be referential.

6.1 Verbs

There are two classes of verbs in Wagiman. One is an unproductive closed class consisting of verbs with synchronically unanalyzable roots. The other is a productive open class, involving verb stems which consist of a coverb root and the verbalizer *-Ma* (§7.1). Morphologically, verbs in Wagiman inflect for person and TAM. A root is a verb if the following criteria are fulfilled:

- it requires at least one argument and can be the sole predicate of the clause;
- it can take TAM and/or participial inflection without derivation;

Table 1 Morphosyntactic behaviour of the five parts-of-speech in Wagiman

	Potentially referential	Potentially predicational	Necessarily predicational	Potentially modifying	Morphological inflection
Coverbs	X	✓	X	✓	✓
Nominals	✓	✓	X	✓	✓
Verbs	X	✓	✓	X	✓
Particles	X	X	X	✓	X
Adverbs	X	X	X	✓	✓

- it cannot take case affixes; and
- it cannot take the coverb suffixes *-Ma* and *-Cwi* (cf. §6.3).¹⁰

As an example, we consider the root *badi* ‘bite’. It can be the sole predicate of the clause heading the verb phrase and it takes TAM suffixation (9), but it cannot take case affixes (10) nor the coverb suffix *-Ma* (11).

(9) *Gahan lamarra buluman ng-a-n-badi-na.*
 DEM.MED dog big PST-1SG-3SG.AGT-**bite**-PST
 ‘That big dog bit me.’ (NDMH-LDM1)

(10) **Nimordal wunh-na nga-yu badi-gunda.*
 tooth be.aching-NPFV PRS:1SG-be **bite**-ABL
 (intended: ‘My teeth are aching from biting.’)

(11) **Lamarra-yi marluga badi-ma.*
 dog-ERG old.man **bite**-NPFV
 (intended: ‘The dog bites the old man.’)

There is variation in the existing analyses of Wagiman as to what counts as a verb root. Cook (1987, p. 215) lists 39, whereas Wilson (1999, p. 23) lists 45 unproductive verb roots plus nine productive verbalized roots.¹¹ In this paper, verbs are defined by the ability to inflect directly for finite TAM suffixation. Table A1 in the Appendix lists all 43 attested verb roots which may take TAM inflection.

The second class of verbs is formed by a productive derivation of coverb roots with the suffix *-Ma*, which we call ‘verbalization’, following Wilson (1999, p. 82). This is illustrated in (12), in which the coverb root *bak* ‘break (intr.)’ is derived as a verb by the suffix *-Ma* and then takes TAM marking. The use of *bak* as a coverb in the complex predicate with the verb *bu* ‘hit’ is exemplified in (13). We discuss the details of these verbalized roots in §7.1.

(12) *Gahan garnin Ø-bak-ka-yi.*
 DEM.MED spear 3PST-break-**vbz**-PST
 ‘That spear was broken ~ has become broken.’ (Cook, 1987, p. 267)

(13) *Bak-Ø Ø-ba-bu-ng lagarra.*
break-PFV 3>3PST-NSG-**hit**-PPFV leg
 ‘They broke his leg.’ (2011-06-07-LGL1)

6.2 Nominals

The nominal category encompasses nouns, numerals, pronouns, demonstratives and adjectival nominals. Nominals form an open class, which can freely incorporate loans

¹⁰ The suffix *-Ma* has the following allomorphs, conditioned by the last sound of the coverb and its syllable structure: *-ma*, *-na*, *-pa*, *-ta*, *-ja*, *-ka* and *-a*. The orthography collapses some distinctions in the phonology, e.g. *na* stands for /-na/ or /-ŋa/ , depending on the preceding consonant. Note that the homophonous suffix *-Ma* with the same allomorphy is used to derive verbs from coverbs. The initial consonant of the suffix *-Cwi* is conditioned by the final sound of the coverb root. It occurs as *-pwi*, *-twi*, *-jwi*, *-kwi* and *-wi*.

¹¹ In Cook (1987), these two classes of verbs are conflated, and he lists verbalized forms like *gukka* ‘sleep’ and *galhma* ‘climb’ as verb roots. These are derived from the coverb roots *guk* ‘sleep’ and *galh* ‘climb’ respectively, and the verbalizer *-Ma*.

from other languages. In Wagiman, a root is a nominal if at least two of the following criteria are fulfilled:

- it can be referential, i.e. function as the argument of a predicate;
- it can be replaced with a demonstrative like *mahan* ‘this’;
- it can take case suffixation, including grammatical and locative/directional cases; and
- it cannot take verbal or coverbal suffixation.

We test these criteria with the word *marluga* ‘old man’. It is possible to add a demonstrative (14) or the ergative marker (15), but it is not possible to add person/TAM markers (16).

(14) *Marluga mahan Ø-di-nyan minygu lahan mayh-laying.*
old.man DEM.PROX 3PST-COME-PST.HAB always country DEM.PROX-LOC
 ‘This old man always used to come to this country.’ (2010-06-03-LGL1)

(15) *Ng-unyju-nawu-ndi danganyin marluga-yi.*
 PST-3>2SG-give-PST tucker **old.man**-ERG
 ‘The old man gave you tucker.’ (2014-06-23-LGL1)

(16) **Ngagun ng-a-marluga-ni.*
 1SG PST-1SG-**old.man**-PST
 (intended: ‘I was/became an old man.’)¹²

There are no formal criteria for distinguishing nouns from adjectives in Wagiman. There is no adjectival morphology, no necessary ordering in NPs and no noun class system.

6.3 Coverbs

Many Australian languages have a distinct class of coverbs (Baker & Harvey, 2010, pp. 14–17; Bower, 2014; Dixon, 2004, pp. 174–201; Schultze-Berndt, 2000, p. 69, 2003, 2017; Wilson, 1999, pp. 45–88; Zandvoort, 1999, p. 84). We use the term ‘coverb’ here as defined in Wilson (1999, p. 1) and Schultze-Berndt (2000, pp. 71–72). Coverbs are potentially predicational and can therefore introduce arguments like verbs (cf. §7 for the evidence). However, unlike verbs, they are non-finite, as they cannot take tense, mood, person or participial inflection when underived. Coverbs form an open class system, which allows the incorporation of new members, such as verbs from other languages like Kriol.¹³

As stated in §6.1, verbs are necessarily predicational, which means that they cannot be used as modifiers. By contrast, coverbs are only potentially predicational, namely when they are part of a complex predicate. When they occur as modifiers, then they have no argument structure. This distinction is important for our analysis of adverbial modification in §8.2.

The most prominent way in which coverbs are distinguished from other parts-of-speech in Wagiman is their ability to take coverb-only suffixes.¹⁴ There is a productive

¹² To express this meaning, Wagiman uses an inchoative construction with *na* ‘become’ or with the Kriol loanword *na(w)* ‘now, then’: *ngagun marluga nganani* ‘I have become/became an old man’; *ngagun marluga na* ‘I’m an old man now’.

¹³ There are a few examples of Kriol verbs entering Wagiman as coverbs, most of them are defective in their conjugation: *woerrkkim-a* ‘to work’ is used as a Wagiman coverb. *laykki-ma* ‘to like’ is attested verbalized as *nga-Ø-laykki-ma-n* 1SG:PRS-3PAT-like-VBZ-PRS ‘I like (it)’ (Wilson, 2006, p. 14).

¹⁴ The other criteria to distinguish coverbs from verbs are not relevant to the analysis proposed in this paper. For example, coverbs tend to have a distinct syllable structure that is uncommon for verbs (Wilson, 1999, p. 47). Further, the semantic

system of coverb suffixation. The citation form of a coverb is composed of the coverb root and the suffix *-Ma* with regular allomorphy. This is exemplified in (17) and we term this suffix Non-Perfective (NPFV). The Exclusive (EXCL) suffix *-Cwi* (18) indicates that potential alternate world interpretations are excluded and is roughly glossed as ‘and that’s it’. The zero suffix *-∅* (19) denotes a Perfective (PFV) reading of the complex predicate. There is a second suffix *-Ma*, which appears on coverbs and derives verbs from the root (20) (cf. Wilson, 1999, p. 82). It is identical to the aspectual suffix and follows the same allomorphy pattern. We examine this suffix in detail in §7.1.

- (17) *bak-ka* *ya-nggi*
 break-NPFV go-PST
 ‘it broke down’
- (18) *bak-kwi*
 break-EXCL
 ‘broken and that’s it’
- (19) *bak-∅* *ya-nginy*
 break-PFV become-PST.PFV
 ‘it became broken’
- (20) *∅-bak-ka-yi*
 3PST-break-VBZ-PST
 ‘it has become broken ~ it was broken’

The coverb suffixes correlate with the aspect of the accompanying verb, and therefore we follow previous analyses and refer to them as aspect markers (Cook, 1987, pp. 257–260; Wilson, 1999, pp. 50–55).

6.4 Particles

Roots that do not meet the criteria of the three classes mentioned above are particles. This class includes uninflectable words of time, space, manner and degree. While coverbs in an adverbial position are limited to having scope over the predicate (cf. §8.2), the particles listed in Table 2 seem to have scope over the entire clause. Further investigation about particles in Wagiman is needed to determine their exact modifying range.

7. Distinctive characteristics of coverbs in Wagiman

Like many other languages in north-central and north-western Australia, most predicational meanings in Wagiman are conveyed by a combination of a verb and a coverb. As coverbs cannot by themselves constitute independent indicative clauses without sufficient context (cf. §7.2), they must co-occur with an inflected verb, as illustrated in (21).

content of coverbs is richer and more elaborate than that of verbs, which tend to have very general meanings (cf. §6.1). Coverbs can be distinguished from nominals because they do not allow case suffixes to be attached to the underived stem. Many coverbs are attested in their reduplicated form, the exact range of which is still to be investigated. Wilson (1999, pp. 57–59) lists further distinctive criteria for coverbs.

Table 2 Particles in Wagiman acting as adverbials

Form	Gloss	Function
<i>benybeny</i>	'a little while'	temporal
<i>gawurdu</i>	'enough, finished'	degree
<i>gorro</i>	'later, trying'	temporal
<i>janybulku</i>	'chest-deep'	degree
<i>jappany</i>	'slowly'	manner
<i>mama</i>	'again and again'	temporal
<i>menuny</i>	'maybe'	frequency
<i>minygu</i>	'always'	epistemic modality
<i>wambaru</i>	'just'	degree
<i>yilalan</i>	'going for good'	locative?
<i>yilkkawu</i>	'alright, enough, well'	degree

- (21) *Liri-ma g-a-di-n lamarra.*
 swim-NPFV PRS-3-come-PRS dog
 'The dog is coming swimming.' (Wilson, 1999, p. 2)

The verb supplies generic predicational semantics, and the coverb provides the detailed predicational semantics in the clause. A finite indicative clause may and commonly does involve only a verb acting as the predicate, as shown in (22a) below, whereas it cannot involve solely a coverb (22b). In §7.2, we discuss that under certain circumstances, coverbs do occur independently.

- (22) a. *Lamarra g-a-di-n.*
 dog PRS-3-come-PRS
 'The dog is coming.'
- b. #*Lamarra liri-ma.*
 dog swim-NPFV
 (intended: 'The dog is swimming.')

Wagiman has a productive process of verbalization of coverbs (§7.1), which is a unique feature of this language and is absent in all other languages with coverbs in northern Australia.

7.1 Verbalization

Evidence that coverbs have their own argument structure is provided by their ability to be productively derived as finite verbs. The effects of verbalization vary according to the semantic class of the coverb. With stative coverbs, verbalization derives an inchoative. The base form of the coverb *nyenh* 'be quiet' combines with intransitive verbs such as *yu* 'be' and the resultant clause is stative, as in (23). When verbalized, the reading is inchoative, as in (24).

- (23) *Marluga gahan nyenh-na Ø-yu-nginy.*
 old.man DEM.MED be.quiet-NPFV 3PST-be-PST
 'The old man sat quiet.' (NDMH-LDM9B)
- (24) *Bolwon Ø-nyenh-na-yi ngerrengana na.*
 wind 3PST-be.quiet-VBZ-PST 1PL.INCL.OBL TEMP
 'The wind ceased for us now.' (lit.: 'has become quiet') (1995-LDM2B)

With active predicates, such as *bak* 'break', verbalization has no evident inchoative effect (25) because the aktionsart of its root already involves a change of state/place (26).

- (25) *Gahan* *garnin* \emptyset -*bak-ka-yi*.
 DEM.MED spear 3PST-**break**-VBZ-PST
 'That spear is broken ~ has become broken.' (Cook, 1987, p. 267)
- (26) **Bak- \emptyset** \emptyset -*ba-bu-ng* *lagarra*.
break-PFV 3>3PST-NSG-hit-PST.PFV leg
 'They broke his leg.' (2011-06-07-LGL1)

We argue that the coverb is predicational and has an argument, *nyenh* 'be quiet (x)', and that the verbalizer *-Ma* 'become' takes an event as its argument. An alternative approach would be that the coverb has no arguments and the verbalizer supplies the argument: *nyenh* 'quiet(ly)' + *-Ma* 'become (x)' > 'become quiet (x)'. We provide evidence from the transitive constructions (27) and (28), which involve the coverb *dalh* 'clout, jab, punch', that this alternative hypothesis is not borne out. In (27), the ergative case on the agent *nendo* 'horse' illustrates that it is a core argument of the clause. The verbalized coverb shows object agreement. Example (28) shows that the verbalized coverb bears subject and reciprocal marking.

- (27) *Ng-a-n-dalh-ma-yi* *nendo-yi*.
 PST-1SG-3AGT-clout-VBZ-PST horse-ERG
 'The horse clouted (kicked) me.' (1996-11-18-PBH2)
- (28) *Ng-i-dalh-ma-ji-ng-guju*.
 PST-1NSG-clout-VBZ-RECP-PST.PFV-DU
 'We clouted/punched each other.' (NDMH-LDM3B)

We know from the intransitive construction in (25) that the verbalizer could only have one argument. The constructions in (27) and (28) have two arguments. Therefore, the argument structure of the verbalized form must come from the coverb root.

Verbalization of coverbs is not a widely attested process. While verbalization commonly occurs with certain coverbs, we have no attestation of verbalization with many others. If the language was still actively spoken and acquired by children, the limitations of this derivational process could be better tested. However, there are no evident constraints on the process. It is attested with both stative and active coverb roots and with loanwords such as *laykkim-a* 'like' (Wilson, 2006, p. 17). Particles (cf. §6.4) cannot be verbalized in Wagiman.

7.2 Independent occurrence

We have shown in the previous sections that there is direct evidence that coverbs in Wagiman have the potential to be predicational. Further support that coverbs are predicational comes from their ability to introduce an object argument even when they occur independently, i.e. without verbs. Here, we do not claim that the independent occurrence of coverbs is an indication of finiteness. Coverbs are always non-finite. The relevant point is that their independent occurrence still permits the introduction of an object argument although no verb as the predicate is present. However, this independent occurrence of

coverbs requires sufficient context. In a listing context such as (29), the coverbs *dorh* ‘pick up’, *wert* ‘look back’ and *joro* ‘return’ head non-finite clauses independently.

- (29) *Lagariny* **dorh-Ø** *mama bulikki* // **wert-Ø** // *berrh-Ø* *mama*
 tail pick.up-PFV ITER cattle **look.back**-PFV throw-PFV ITER
Ø-ya-jan // **joro-Ø** *nyama lagiban-yiga* *dirrk-Ø* *mama*
 3>3PST-do-PST.HAB **return**-PFV also man-SEMBL tie-PFV ITER
Ø-ma-jan *ngerrp-pa-yan* *hon.*
 3>3PST-get-PST.HAB cut-VBZ-PTCP.IPFV horn
 ‘Picking up cows by the tail, looking back, she used to throw it again and again, also (throwing it) back, she used to tie them like a man cutting their horns.’ (1997-01-11-PHB3.4)

Imperatives with coverbs in Wagiman also occur without verbs. Consider (30) with the coverb *lut* ‘give’ in the Perfective aspect, which introduces the object argument *danganyin* ‘tucker’.

- (30) **Lut-Ø-wehen** *danganyin!*
give-PFV-PROH tucker
 ‘Don’t give (them) tucker!’ (Wilson, 1999, p. 58)

If the coverbs in (29) and (30) were not predicational, then the argument structure would need to come from an omitted verb in the sentences above. A verb-drop analysis faces significant problems because every coverb can occur with a range of verbs. For example, *dorh* ‘pick up’ (29) is attested with *bu* ‘hit’, *ga* ‘take’, *ma* ‘get’, *rega* ‘bring’ and *ya* ‘do/say’, each producing different complex predicate meanings. It would also be difficult to demonstrate where the argument *danganyin* ‘tucker’ in (30) came from if the coverb *lut* ‘give’ was not predicational. As the particular verb is not recoverable, this is evidence that the coverbs in these sentences are predicational.

Independent occurrence of coverbs is also attested in other Australian languages such as Jaminjung (Schultze-Berndt, 2000, pp. 135–141, 2001, pp. 364–366), Wardaman (Merlan, 1994, p. 59), Matngele (Zandvoort, 1999, pp. 86–87), Ngan’gityemerri (Reid, 2003, p. 101), Wunambal (Vászolyi, 1976, pp. 639–640) and Worrorra (Clendon, 2014, p. 276), but this phenomenon is generally restricted to non-finite imperatives and/or enumerations. McGregor (2002, p. 105) provides an overview of Australian languages for which the independent use of coverbs has been documented. In other languages, such as Bardi, possibilities for coverbs occurring without an accompanying verb are highly limited (Bower, 2010, p. 65).

7.3 Argument structure in coverb constructions

Given that both the verb and the coverb are predicational, there are at least two hypotheses as to how the overall clausal argument structure is determined. Hypothesis 1 is that the verb and the coverb must show the same valency. In this scenario, the combination of an intransitive coverb and a transitive verb would be ungrammatical. Hypothesis 2 is that the argument structure of the verb merges with the argument structure of the coverb and that the overall argument structure of the clause depends on this merger process. We provide evidence that Hypothesis 2 is better supported.

can occur anywhere within a clause, as long as they do not appear internally within other constituents. We have no reliable data for multiple adverbial modification in Wagiman (cf. §8.4). The sentences in (35) below show variation to the position of *gabarn-a* ‘quick’. Options (a), (b) and (c) are possible and attested but (d) and (e) are not. Square brackets indicate constituents.

- (35) a. [Dardam-Ø *m-i-Ø-ma*] [gahan lamang] **gabarn-a!**
 open.up-PFV IMP-2SG-3PAT-get DEM.MED meat **quick-NPFV**
 ‘Open up that (tinned) meat quickly!’ (2012-06-07-LGL1)
- b. [Dardam *mima*] **gabarna** [gahan lamang]!
 c. **Gabarna** [dardam *mima*] [gahan lamang]!
 d. *[Dardam **gabarna** *mima*] [gahan lamang]!
 e. *[Dardam *mima*] [gahan **gabarna** lamang]!

8. Adverbial modification in Wagiman

In this section, we provide evidence that coverbs in the adverbial position cannot be analyzed as being part of a complex predicate because they do not introduce arguments in this position. Additionally, other parts-of-speech in Wagiman, such as nominals and particles, can also occupy the adverbial position (cf. §8.3 and §8.4). We also discuss a few cases of words that can only ever occur in the adverbial position, giving rise to future investigation of a possible part-of-speech category ‘adverb’ in Wagiman.

Our analysis involves both positive and negative evidence. As explained at the end of §4, we do not generally use the terms ‘grammatical’ and ‘ungrammatical’ as labels for these evidence categories. When there is limited contextual information, coverbs and verbs show highly consistent combination patterns. For example, the coverb *lem* ‘be in’ standardly combines with *yu* ‘be’, *ya* ‘go’ and *ge* ‘put’, yielding the complex predicates *lem + yu* ‘be inside’, *lem + ya* ‘enter’ and *lem + ge* ‘put into’. In situations of minimal or default context, *lem* does not combine with *du* ‘shoot, stab’. However, we may consider (36).

- (36) *Walanyja* *durdut-Ø* *Ø-ya-nginy*, *ngarrmen* **lem-Ø** *Ø-du-ng*.
 goanna run-PFV 3PST-go-PST.PFV hollow.log **be.in**-NPFV 3PST-shoot-PST.PFV
 ‘The goanna ran and shot into the hollow log.’ (Wilson, 1999, p. 64)

As shown in (36), when the requisite context is supplied, and the combination of *lem* and *du* is pragmatically and semantically plausible, the two do combine. The great majority of our database relates to situations of minimal or default context. We do not doubt that a larger database, involving more situations with unusual contexts, would expand the attested combinations of coverbs and verbs. Therefore, in the ensuing discussion, when we use negative evidence in relation to coverb + verb combinations, we mean that a particular coverb + verb combination is not attested in situations of minimal or default context, not that that particular coverb + verb combination is ungrammatical in the sense of being impossible regardless of contextual information.

8.1 Current analyses

There are two current analyses of adverbs and adverbials in Wagiman. Cook (1987, p. 92) proposes a closed class of adverbs for Wagiman, “the members of which are unsuffixed

Table 3 Adverbial coversbs in Wagiman according to Wilson (1999)

Form	Gloss
<i>gabarn-a</i>	'quickly'
<i>jappany</i>	'slowly'
<i>yonggorn-a</i>	'first, before, in front'

and occur in clauses containing at least a verb". His list of adverbs conflates coversbs and particles. By contrast, Wilson (1999, p. 47) argues that there is no justification for establishing a distinct class of adverbs in Wagiman, but that a small class of coversbs have the ability to function as adverbial modifiers. He does not address the question of whether other coversbs can be used adverbially. Wilson (1999, p. 123) lists three adverbial coversbs (Table 3) and states that they are different from all other coversbs in that they modify the verb rather than introduce arguments to the clause, although no evidence for this claim is provided.

The exact status of *gabarn-a* 'quickly' and *yonggorn-a* 'first, before, in front' as coversbs is debated (Kraube, forthcoming) because they can only ever occur in the adverbial position. They may be formally classified as members of a small, closed class of adverbs, but a detailed examination of the relevant data is beyond the scope of this paper. There is no evidence that *jappany* 'slowly' is either a coversb or an adverb, and we classify it as a particle (§6.4).

8.2 The adverbial syntactic position and coversbs

There has been some limited research literature on clauses with multiple coversbs in Wagiman and neighbouring Australian languages (Baker & Harvey, 2010, p. 36; Bower, 2010, p. 66; Cook, 1987, p. 250; Hoffmann, 2015a; Kraube & Harvey, 2018; Schultze-Berndt, 2000, p. 122; Wilson, 1999, p. 71), from which two possible hypotheses about clauses with multiple coversbs can be drawn.

Hypothesis 1: All coversbs in the same clause contribute to the complex predicate.

Hypothesis 2: Only one coversb contributes to the complex predicate and any other coversbs modify the overall complex predicate which consists of one coversb and the verb.

Most analyses adopt Hypothesis 1. However, Baker and Harvey (2010, p. 36) hint at Hypothesis 2 proposing that in clauses with two coversbs, one coversb modifies the other coversb. Our data on adverbial modification in Wagiman support Hypothesis 2. We demonstrate in §8.3 that the modifying coversb occupies an adverbial syntactic position. Under this analysis, there are two positions available to coversbs in Wagiman clauses: (i) a predicational position as part of a complex predicate; and (ii) an adverbial position. Consequently, we predict that Wagiman clauses will not contain more than two coversbs, and this is indeed the case in our database. To distinguish coversbs in an adverbial position from coversbs in a complex predicate position, we propose two independent tests.

Omission Test: The adverbial coversb can be omitted from the clause, whereas the predicational coversb cannot.

Proximity Test: The predicational coversb is adjacent to the verb, the adverbial coversb may be further away.

8.2.1 Omission test

The omission test distinguishes between the predictions of Hypothesis 1 and Hypothesis 2. If Hypothesis 1 is correct and all coverbs contribute to the complex predicate, then the verb must be compatible with all the coverbs. It should be possible to omit any of the coverbs, without affecting the pragmatic/semantic plausibility of the resulting clause. If Hypothesis 2 is correct and only one coverb forms a complex predicate with the verb, then only one coverb necessarily matches to the verb, and there is no direct relation between the second coverb and the verb. Consequently, if the predicational coverb is omitted, then the resultant clause will lack pragmatic/semantic plausibility. If the adverbial coverb is omitted, then the resultant clause will have pragmatic/semantic plausibility. Under Hypothesis 2, the coverb that can be omitted is the adverbial and modifies the complex predicate. Syntactically, one coverb is an adjunct, the other one is part of the predicate. We may consider (37) and (38).

- (37) *Gahan* **worok-∅** **lem-wi** *gu-ya* *gahan* *hawtj* *goron*.
 DEM.MED **wash-PFV** **be.in-EXCL** 3FUT-go DEM.MED house house
 'That (current) will wash right inside the house.'
 (lit.: 'That (current) will enter washingly right inside the house.')(1997-01-26-LDM1.178)

- (38) *Gurruwitj-yi* **nangh-∅** **berrh-∅** *∅-la-ng*.
 car-ERG **bash-PFV** **fling-PFV** 3SG>3PST-throw-PST.PFV
 'A car knocked him down.' (lit.: 'A car flung him bashingly.')(Wilson, 1999, p. 71)

The literal translations are not fluent English, but they foreground the adverbial contribution of the outer coverb. In (37), there are two coverbs: *worok* 'wash' and *lem* 'be in'. In our corpus, *lem* regularly forms a complex predicate with *ya* 'go', whereas *worok* is otherwise attested with the verb *ma* 'get' and not attested with *ya*. The sentence lacks pragmatic/semantic plausibility if *lem* is left out, whereas it is quite plausible to leave out *worok*. The test is equally applicable to (38), which shows that the coverb *nangh* 'bash' fills an adverbial position here because it standardly combines with the verb *bu* 'hit'. Instead, *berrh* 'fling' regularly combines with the verb *ra* 'throw', whereas *nangh* 'bash' does not.

The omission test provides evidence that *worok* 'wash(ingly)' and *nangh* 'bash(ingly)' are adjuncts in an adverbial position, whereas *lem* 'be in' and *berrh* 'fling' form a complex predicate with *ya* 'go' and *ra* 'throw', respectively. As can be seen from (37) and (38), the preferred position for the predicating coverb is immediately to the left of the verb. This positional preference is the basis for the second test (cf. §8.2.2).

We now show how our proposal from §2 can be applied to the Wagiman examples (37) and (38) from above. The phrase structure in Figure 3 illustrates that the adverbial coverb *worok* 'wash(ingly)' occupies the adverbial position ADV and modifies the complex predicate, which consists of the predicational coverb *lem* 'be in' in PredC and the verb *ya* 'go' in V. Similarly, Figure 4 shows that the adverbial coverb *nangh* 'bash(ingly)' in ADV functions as a modifier of the (complex) predicate consisting of the coverb *berrh* 'fling' in PredC and the verb *ra* 'throw' in V. This is evidence that coverbs in Wagiman can occur in two different syntactic positions, which directly affects their argument structure. Only the coverbs in PredC have an influence on the argument structure of the clause, whereas those in ADV do not.

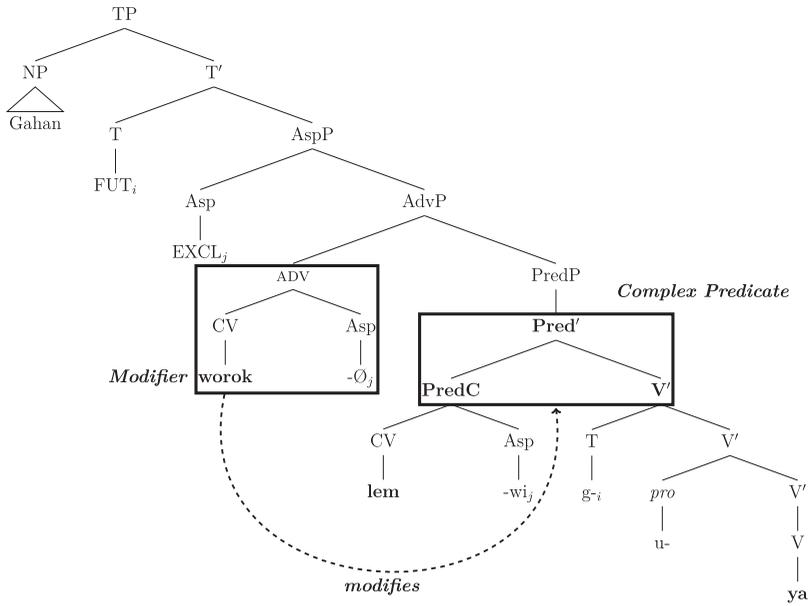


Figure 3 Syntactic analysis of example (37)

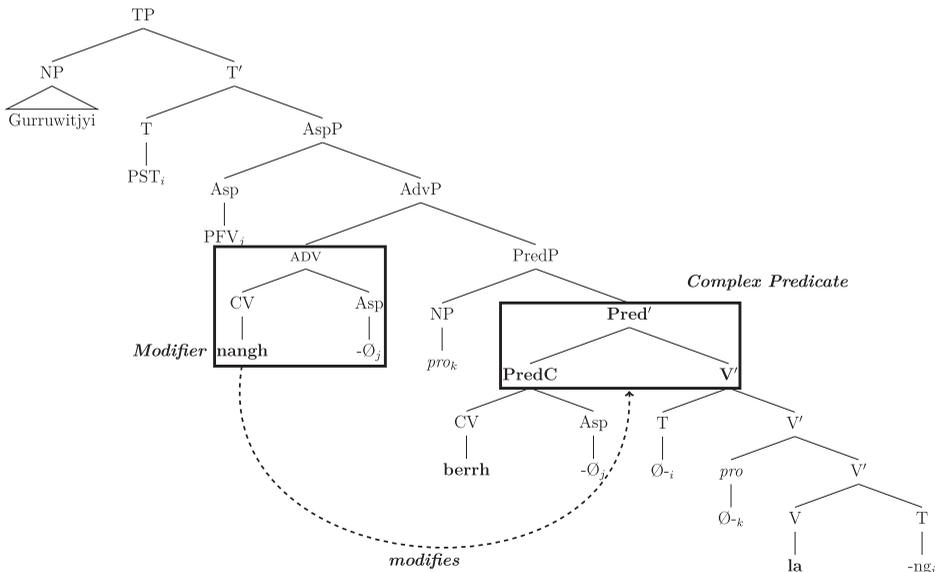


Figure 4 Syntactic analysis of example (38)

8.2.2 Proximity test

The proximity test serves as evidence that the coverb which is immediately to the left of the verb forms a complex predicate with it. The other coverb, which is further away, modifies the predicate. Consequently, if there are two coverbs, the adverbial one will not appear immediately to the left of the verb. This accords with the general configurationality of complex predicates in Wagiman (S7.4).

We have identified three special cases of commonly analyzed coverbs that can only ever occur in the adverbial position, namely *gabarn-a* ‘quick’, *ngonongh-a* ‘like that’ and *yonggorn-a* ‘first, before, in front’.¹⁶ These are incapable of competing for the predicational position immediately to the left of the verb. If there is a coverb and one of the three special cases, then the latter will not appear between the coverb and the verb (see (35) above). The sentences in (39a) and (40a) are acceptable, whereas those in (39b) and (40b) are not. There is no attested example of *gabarn-a* ‘quick’ or *ngonongh-a* ‘like that’ being closer to the verb than the coverb that is part of the complex predicate, and our Wagiman language consultant has rejected examples such as those in (39b) and (40b).

- (39) a. *Lagiban gabarn-a durdut-ta g-a-ya.*
 man quick-NPFV run-NPFV PRS-3-go
 ‘The man runs quickly.’ (elicited)
- b. **Lagiban durdut-ta gabarn-a g-a-ya.*
 man run-NPFV quick-NPFV PRS-3-go
 (intended: ‘The man runs quickly.’)
- (40) a. *Gahan larangu larrp-Ø Ø-ya-ny ngonong-a.*
 DEM.MED nail become.apart-PFV 3PST-do-PST.PFV like.that-NPFV
 ‘That nail split apart like that.’ (2013-08-10-LGL1)
- b. **Gahan larangu larrp-Ø ngonong-a Ø-ya-ny.*
 DEM.MED nail become.apart-PFV like.that-NPFV 3PST-do-PST.PFV
 (intended: ‘That nail split apart like that.’)

All examples that we have used for the omission test also satisfy the proximity test. When the omission test identifies one of two coverbs as being in an adverbial position, as in (37) and (38) above, the proximity test also shows that the adverbial coverb is never in the predicational position directly preceding the verb. When the omission test is not sufficient to tell apart the predicational from the adverbial coverb, there is semantic and pragmatic evidence from the proximity test that the outer coverb is the modifier and the inner one is part of the predicate. Consider (41):

- (41) *Dongonyin lurrutj-ja jubungh-a g-a-Ø-ba-bu-n.*
 cycad.nut be.strong-NPFV pound-NPFV PRS-3AGT-3PAT-NSG-hit-PRS
 ‘They are pounding the cycad nuts strongly.’ (2011-06-21-LGL1)

Both *lurrutj* ‘be forceful/strong’ and *jubungh* ‘pound’ are coverbs, evidenced by their ability to take the aspectual *-Ma* suffix, and both coverbs could technically form a complex predicate with the verb *bu* ‘hit’. However, *jubungh* is closer to *bu* and therefore forms a complex predicate with it. *Lurrutj* is further away and modifies the complex predicate *jubungh gababun* ‘they are pounding’. It is not plausible, both syntactically and pragmatically, to assume that the above sentence could be interpreted as ‘they are forcing (the cycad nuts) poundingly’. *Jubungh* ‘pound’ cannot be the modifier and *lurrutj* ‘be forceful/strong’ does not form a complex predicate with

¹⁶ The details of these cases are beyond the scope of this paper. For the establishment of a small closed class of adverbs in Wagiman, see Krauß (forthcoming).

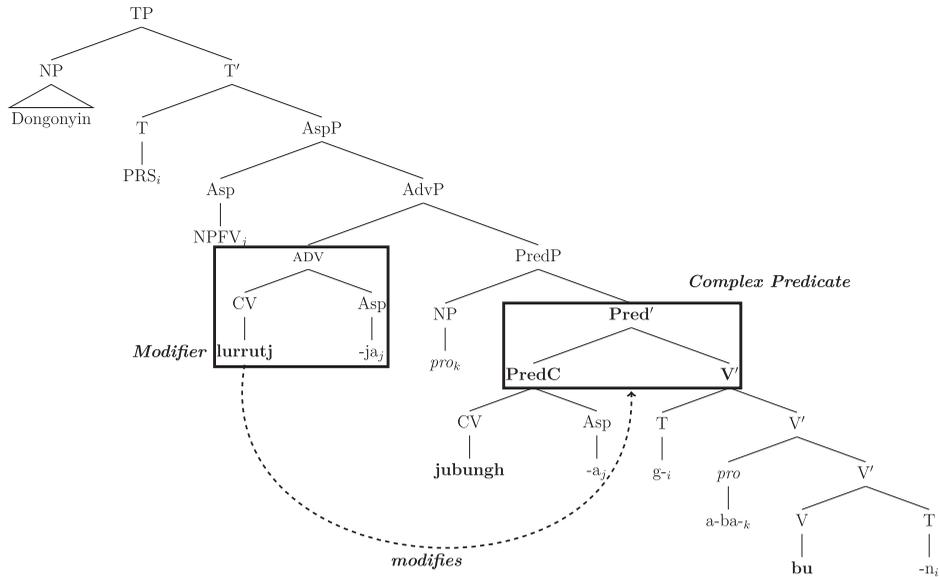


Figure 5 Adverbial analysis of example (41)

bu 'hit' in this clause. We illustrate the different syntactic behaviour of the two coversbs in Figure 5.

Table A2 in the Appendix provides a non-exhaustive list of typical coversbs attested in an adverbial syntactic position.

8.3 The adverbial syntactic position and nominals

There is nothing in the formal morphological or syntactic structures of Wagiman which tells us whether a nominal without substantive suffixation such as *maman* 'good (one)' is part of the subject NP or in an adverbial position modifying the predicate. Consider (42), which has an ambiguous reading:

- (42) *Maman Ø-ya-nggi.*
 good 3PST-go-PST
 'The good one went. ~ He/she/it went well. ~ It worked well. ~ He/she/it was alright.'
 (2014-06-27-LGL1, 2014-07-01-LGL1, 2015-08-18-LGL1)

The sentence above cannot be disambiguated syntactically, and we cannot offer a reliable test to determine that *maman* 'good' is in an adverbial position here. However, it is pragmatically difficult to establish a natural context in which the reading 'the good one went' is a plausible interpretation. By contrast, *maman yanggi* is a common expression to refer to objects that used to work well but do not work well anymore, such as cars. In these cases, the reading of *maman* is clearly adverbial. We may contrast (42) with (43).

- (43) *Gahan lagiban Ø-ya-nggi.*
 DEM.MED Aboriginal.man 3PST-go-PST
 'That man went.' (NOT: 'He went manly ~ He went like a man ~ He went as a man.'
 (NDMH-LDM7B)

In (43), the noun *lagiban* 'Aboriginal man' is referential and cannot function as an adverbial to modify the verb. To express the adverbial meaning 'manly', Wagiman speakers would say *lagiban-yiga ya-nggi* 'he went like a man' with the semblative case suffix *-yiga*.

In contrast, the adjectival nominal *maman* in (42) can be both in the subject position meaning 'good one' and in the adverbial position meaning 'well ~ in a good manner'. It can have a range of functions, for example as an attributive nominal modifying *ngonyin* 'pandanus nut', contrasted with *liwa(tjondony)* 'bad one' in (44). *Maman* in an adverbial position can modify a simple predicate such as *gunajamin* 'it will burn' (45) or a complex predicate like *nanghnanga gaya* 'he performs' (46), respectively. Example (47) allows two plausible interpretations. The phrase *goron maman* means 'good house', and *maman ngi-dippajan* means 'we used to build it well'.

- (44) *Ngonyin* **maman** *m-i-Ø-ma-ja,* *m-i-Ø-ge-ja*
 pandanus.nut **good** IMP-2SG-3PAT-get-IMM IMP-2SG-3PAT-put-IMM
bek-laying! **Liwa=nga,** **liwatjondony=di** *berrh* *m-i-Ø-ra!*
 bag-LOC bad=DM bad=CONTR throw-PFV IMP-2SG-3PAT-throw
 'Get the good pandanus nuts and put them in a bag! The bad ones, you throw away!
 (does not mean: 'get the pandanus nuts well') (NDMH-LDM12A)

- (45) *Go-yobe!* *Ngurru-yi* *gu-na,* **maman** *gapput* *gu-na-ja-min*
 3>3IMP-stay sun-ERG 3>3FUT-burn **good** tomorrow 3>3FUT-burn-IMM-SEQ
gahan *guda.*
 DEM.MED firewood
 'Leave it! The sun will dry it, that firewood will burn well tomorrow.'
 (does not mean: 'that good firewood will burn') (NDMH-LDM1B)

- (46) **Maman** *nanghnang-a* *ga-ya=ma* *marluga* *gahan.*
good perform-NPFV PRS-3-go=FOC old.man DEM.MED
 'That man performs well.'
 (does not mean: 'That good man performs.') (1996-LDM3B)

- (47) *Goron* **maman** *ng-i-Ø-dippa-jan.*
 house **good** PST-1NSG-3PAT-make-PST.HAB
 'We used to make a good house ~ we used to build the house well.' (1996-LDM-MTA)

The use of *maman* as a modifier of the complex predicate in (46) suggests that it is situated in SPEC of AdvP, i.e. in ADV (cf. §2). This is illustrated in Figure 6.

8.4 The adverbial syntactic position and particles

The particles described in §6.4 are capable of modifying the predicate or the entire clause. Further investigation is needed to determine their exact scope within the clause. As particles are not the main topic of this paper, we only exemplify the use of the particle *jappany* 'slow' as a phrase-level adjunct which has scope over the predicate *gornkorn yu* 'be talking' (48).¹⁷

¹⁷ We cannot reliably state that *gornkorn yu* 'be talking' is a complex predicate, as the verb *yu* 'be' may be better analyzed as an auxiliary with no argument structure. The word order in (48) with the verb preceding the coverb is permitted in Wagiman syntax but is quantitatively very rare (§7.4).

(50) *Nga-jga-ny* *ngiya-ngunyi* *warrng~warrng.* [Jaminjung]
 1SG-**go**-PST DEM.PROX-ABL ITER~**walk**
 'I went walking from here.' (Schultze-Berndt, 2000, p. 72)

(51) *Gurryu-ma* *Ø-we-ndi.* *wiya-ya.* [Wardaman]
dive-SUF 3PST-**fall**-PST water-LOC
 'He dived in the water.' (Merlan, 1994, p. 76)

Examples (52)–(54) from the three languages also show similar patterns when two coverbs appear in the same clause.

(52) *Dalili-ma* *g-a-ba-yu-buga* *dul-ma.* [Wagiman]
be.in.line-NPFV PRS-3-NSG-be-PL **lie.down**-NPFV
 'They are all lying down in a line.' (2015-08-24-LGL1)

(53) *Waga=bija* *bunthu-yu* *thawu.* [Jaminjung]
sit=TEMP 3DU-be:PRS **be.immersed**
 'The two are now sitting in the water.' (Schultze-Berndt, 2000, p. 122)

(54) ... *wiyan-wan* *girdibun-ma* *yarr-ma* *Ø-ya-nggi.* [Wardaman]
 rain-SEQ **finish**-SUF **end**-SUF 3SG-go-PST
 '... when the rain tailed off finally.' (Merlan, 1994, p. 253)

We argue that in all three languages, one coverb sits in PredC and one in ADV. Like in Wagiman (cf. §7.4), it seems that the preferred position for the predicational coverb is immediately before the verb, whereas the adverbial coverb may follow the verb (as in the Jaminjung example) or be further away (as in the Wardaman example) from the verb. However, like in Wagiman, it is not possible to predict the exact syntactic position of the modifiers in Wardaman (Merlan, 1994, p. 223) and in Jaminjung (Schultze-Berndt, 2000, p. 108).

For Jaminjung, Schultze-Berndt (2000, p. 122) explains that the occurrence of two coverbs is only licensed "as long as they are both compatible with the same verb". We have provided evidence from Wagiman in §8.2 that two coverbs within a single clause do not both merge at the same level and do not both form a complex predicate with the same verb. Rather, one of the coverbs forms a complex predicate with the verb and the other one adverbially modifies this complex predicate. We suggest that this is the same for Jaminjung.

Clauses with two coverbs in Wardaman have a limited attestation but it is most likely a productive pattern as in Wagiman and Jaminjung. Merlan (1994, p. 253) remarks that one coverb "enters into regular combination with the finite verb", whereas the other is more general and "refines or elaborates it semantically". This statement supports our findings from Wagiman that one coverb forms a complex predicate with the verb, whereas the other modifies this complex predicate.

Both authors also discuss 'semantic compatibility' as a constraint on how two coverbs can co-occur in the same clause. Instead, we argue for pragmatic possibility rather than semantic compatibility (cf. §4 and §8.2). Example (53) above is attested in Jaminjung not because *waga* 'sit' and *thawu* 'be immersed' share the same semantics but because it is pragmatically plausible to be seated while being immersed. Consequently, we

hypothesize that (55) with the two coverbs *mugurn* ‘sleep’ and *thawu* ‘be immersed’ in the same clause is not ungrammatical in Jaminjung but unlikely to occur in any conversation because it is pragmatically highly unusual.

- (55) ?*Mugurn=biya bunthu-yu thawu.* [Jaminjung]
sleep=TEMP 3DU-be.PRS **be.immersed**
 (intended: ‘The two are now sleeping in the water.’)

We have just shown that our proposal from §2 is applicable to cases of multiple coverbs in Wardaman and Jaminjung. However, there are other languages in the region which allow multi-coverb constructions of a different kind. For these, another analysis will be necessary.

Hoffmann (2015a) provides a brief typological overview of multi-coverb constructions in the languages of the Daly River region. She proposes that all are analyzable as ‘serial coverb constructions’ and cites examples from Wagiman and Jaminjung along with Kamu, MalakMalak and Matngele. As said before, we can apply our theory to Wagiman and Jaminjung, but it cannot account for the following serial coverb constructions in Kamu (56), MalakMalak (57) and Matngele (58).

- (56) *Yim may=ma goerr~goerr-wa-ga=anyayn?* [Kamu]
 firewood DEM.DIST=FOC DISTR~**drag-get-come**=2SG.AUX.PST.PFV
 ‘Did you drag that firewood back here?’ (Harvey, 1990, pp. 92–93)

- (57) *Kubuk-karrarr dat-tyed yuyu yanak ka* [Malak Malak]
swim-move.up look-stand 3SG.M.stand.PST one come
yida=ke.
 3SG.M.go.PST=FOC
 ‘He crossed the river and looked once, then he came here.’ (Hoffmann, 2015a, p. 7)

- (58) *Daray-jalk-gatj-ayanggak-nung.* [Matngele]
hit-fall-caus-go:1sg.s.pst-3sg.obj
 ‘I knocked him down.’ (Zandvoort, 1999, p. 92)

We argue that this kind of coverb serialization is syntactically different from adverbial modification through a secondary coverb, as explained in §2 and applied in §8.2. For example, the Matngele clause (58) involving serialization could be translated more literally as ‘I hit him and made him fall down’. If adverbial modification were involved, the meaning would be ‘I made him fall down in a hitting way’, which is an undesired and incorrect rendering of the meaning in Matngele.

The prediction is that there are at least two distinct construction types in the languages of the Daly River region. **Wagiman**, **Wardaman** and **Jaminjung** abbreviated as **WWJ**, feature ‘adverbial constructions’, whereas **Kamu**, **MalakMalak** and **Matngele**, abbreviated as **KMM**, feature ‘serial coverb constructions’. There are three major differences between **KMM** and **WWJ**:

- **Number of coverbs:** current databases do not provide any examples of more than two coverbs within the same clause in **WWJ**, while **KMM** can serialize up to four coverbs.

- **Word order:** the order within the arrangement of the two coverbs in WWJ is flexible, while the coverbs are in temporally sequential order in KMM.¹⁸
- **Configurationality:** the two coverbs in WWJ may appear in two orders: (i) adverb(ial) + coverb + verb; (ii) coverb + verb + adverb(ial). By contrast the serialized coverbs in KMM must necessarily be adjacent to one another.

We illustrate this syntactic difference between WWJ and KMM by translating the MalakMalak sentence in (56) above into Wagiman in two ways: literally, which results in a structure unattested for Wagiman (59), and rephrased as a Wagiman speaker would express it (60).

(59) **Liri-ma galh-ma let-ta yurru-pa Ø-ni-nginy nunga-gun.* [Wagiman]
 swim-NPfv climb-NPfv look-NPfv stand-NPfv 3SG.PST-be-PST one-GEN
 (intended: ‘He crossed the river and looked once standing upright.’)

(60) *Liri-ma Ø-ya-nggi muny-baban, werr-ma Ø-di-nya* [Wagiman]
 swim-NPfv 3SG-go-PST below-side emerge-NPfv 3PST-come-PST
wah-gunda, let-Ø, yurru-pa ni-nginy na.
 water-ABL look-PFV stand-NPfv 3SG.PST-be-PST TEMP
 ‘He swam across, came out of the water, looked, and then stood up.’ (constructed)

Our corpus shows no occurrence of any constructions similar to (59). There is also no attested example from WWJ with more than two coverbs in the same clause.

It is important to note that ‘coverb serialization’ differs significantly from ‘verb serialization’. The latter is described at length in Aikhenvald (2018).¹⁹ An important criterion of verb serialization is that the verbs need to be able to occur as predicates on their own in a finite declarative clause (Aikhenvald, 2006, p. 1; Dixon, 2006, p. 339; Haspelmath, 2016, p. 302; Sebba, 1987, p. 39). This criterion cannot be applied to coverb serialization because coverbs in Australian languages do not normally occur independently (cf. §7.2 for exceptions) and are always non-finite. Therefore, we understand coverb serialization as a monoclausal syntactic phenomenon of predicate-chaining, all of which are non-finite and require a verb or auxiliary to host TAM and person information in a finite declarative clause.

At the present stage, we cannot reliably state how adverbial modification is distinguished from predication in KMM. Harvey (1990, p. 69) shows that Kamu makes use of adverbs that precede compound verbs (i.e. coverb plus auxiliary), such as (61).

(61) *Barl-datj=ngu=bumu may-ni.* [Kamu]
 wrongly-hit=1SG.OBJ=3SG.SUBJ.AUX.PP DEM.DIST-ERG
 ‘That bloke wrongly hit me.’ (Harvey, 1990, p. 70)

¹⁸ Hoffmann (2015a, p. 12) discusses the same criterion but cites a counterexample from MalakMalak.

¹⁹ Nordlinger (2014) describes ‘verb serialization’ for Wambaya, a language related to Jaminjung, which shows many similarities to coverb serialization in KMM. However, much depends on the terminology. She terms the constituent which bears TAM marking an ‘auxiliary’ and the non-finite constituent a ‘lexical verb’ (our ‘coverb’). Thus, multiple lexical verbs in Wambaya are described as ‘verb serialization’ and multiple coverbs in KMM are described as ‘coverb serialization’. A major difference between the two constructions is that in Wambaya, verb serialization describes a single event, whereas coverb serialization in KMM tends to refer to multiple events in succession, although this is not always the case. In Wambaya, the lexical verbs in serialization surround the auxiliary, whereas the coverbs in KMM precede the auxiliary in temporal order that reflects the real-world order of the events.

For MalakMalak, Birk (1974, p. 55) states that “adverbs modify the verb complex”. The verb complex in MalakMalak resembles coverb constructions in the other languages. In (62), *watyurr* ‘quickly’ is the adverb, *pi* ‘move’ is the coverb and *wutta* ‘they went’ is the inflected auxiliary/verb. The same pattern is used with other adverbs, such as *wanyarra* ‘slowly’ (63).

(62) **Watyurr** *pi* *wutta*. [MalakMalak]
quickly move go:3PL.SUBJ.PRS/PST
 ‘They go/went quickly.’ (Birk, 1974, p. 56)

(63) **Wanyarra** *pi* *yita*. [MalakMalak]
slowly move go:3SG.M.SUBJ.PRS/PST
 ‘He goes/went slowly.’ (Birk, 1974, p. 56)

Birk (1974, pp. 138–139) also lists a range of “compound verb roots” for MalakMalak, which are reminiscent of coverb serialization. It is not clear whether all of them involve predication or adverbial modification, and we leave this question as a topic for further research.

10. Conclusion

The principal claim that we have made in this paper is that Wagiman has two necessarily predicational positions and one adverbial position in its syntax. One of the necessarily predicational positions must be filled by the finite verb, the other is optionally filled by a coverb. The combination of the verb and the predicational coverb results in a complex predicate. However, coverbs can also appear in the adverbial position and then modify the predicate.

We have shown that the distinction between predication and modification in Wagiman is coded in the syntax. The open syntactic position for adverbial modification can also be filled by other parts-of-speech, such as nominals and particles. Given that Wagiman has only two syntactic positions available for coverbs, one a predicational position and one an adverbial position, our analysis predicts that only two coverbs may co-occur in the same clause. In general, multiple syntactic modification of any kind is very rare in Wagiman and the languages that we have investigated.

While our analysis of Wagiman also appears to hold for Wardaman and Jaminjung, we have provided evidence that apparently similar structures found in Kamu, MalakMalak and Matngele significantly differ from the other three languages and that they require a different syntactic analysis. This finding, that apparent similarities mask significant differences, raises a more general question for syntactic and typological analyses of coverb constructions in Australian languages. It appears that in all languages with coverb constructions, combinations of only one coverb with a verb are quantitatively predominant. To date, most analyses have focused on this quantitatively predominant type. This paper suggests that a general examination of less frequent construction types may lead to revisions of analyses, including possibly recognition of further distinct types of coverb constructions.

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Appendix

Table A1 Synchronically unanalyzable verb roots in Wagiman

Root	Gloss	Root	Gloss
<i>badi</i>	'bite'	<i>murttu</i>	'chase'
<i>belkka</i>	'roast'	<i>na</i>	'burn'
<i>bore</i>	'dream'	<i>na</i>	'become'
<i>boro</i>	'cause'	<i>nanda ~ yanda</i>	'see'
<i>boyh</i>	'forget'	<i>nawu</i>	'give'
<i>bu</i>	'hit'	<i>ne</i>	'step on'
<i>buga</i>	'name, beget'	<i>nga</i>	'hear'
<i>bula</i>	'leave'	<i>ngotije</i>	'fear'
<i>da</i>	'consume'	<i>ni</i>	'be'
<i>da</i>	'stand'	<i>ra</i>	'throw'
<i>di</i>	'come'	<i>rabu ~ rewo</i>	'look for'
<i>dippa</i>	'make'	<i>re</i>	'spear'
<i>du</i>	'stab'	<i>rega</i>	'bring'
<i>ga</i>	'take'	<i>rinyi</i>	'fall, be born'
<i>ge</i>	'put'	<i>ru</i>	'cry'
<i>gobe</i>	'tell lies'	<i>warle</i>	'tell off'
<i>gondo</i>	'have, keep'	<i>werrenybu^a</i>	'cast a spell against'
<i>jewo</i>	'follow'	<i>ya</i>	'go'
<i>litbu^a</i>	'sew'	<i>ya</i>	'say, do, become'
<i>ma</i>	'get'	<i>yobe ~ nebe</i>	'stay'
<i>morna</i>	'like, love'	<i>yu</i>	'be located'
<i>mule</i>	'fuck'		

^aThe roots *litbu* 'sew' and *werrenybu* 'cast a spell against' are historically analyzable as compounds with the verb *bu* 'hit' but are synchronically treated as verb roots.

Table A2 Typical coverbs occurring in the adverbial position in Wagiman

Coverb	Gloss	Adverbial meaning
<i>barp</i>	'hunker, be back, be behind'	'hunkering, hiding'
<i>berdey</i>	'strut, shuffle'	'in a flash way, haughtily'
<i>borotj</i>	'slip'	'while slipping'
<i>borrongh</i>	'be slack, slouch'	'in a slouching way'
<i>borpporr</i>	'sleep deeply'	'deeply (asleep)'
<i>bunyjup</i>	'be belly down'	'belly down, upside down'
<i>dabaley</i>	'go around'	'all around'

(Continued)

Table A2 Continued.

Coverb	Gloss	Adverbial meaning
<i>dalili ~ dalala</i>	'be lined up'	'in a line'
<i>dangak</i>	'look up'	'while looking up'
<i>darat</i>	'be belly up'	'belly up, on the back'
<i>dawh</i>	'be in four-figure leg cross position'	'with crooked legs'
<i>dikdik</i>	'be straight'	'straight'
<i>dikkurrh</i>	'be lame'	'in a lame/limping way'
<i>dirt</i>	'look down'	'head down, while looking down'
<i>donbong</i>	'go in file'	'in file'
<i>dorong</i>	'be full'	'sated'
<i>dorrng</i>	'go side-by-side'	'together, side-by-side'
<i>durdih</i>	'be coiled up ~ be crossed'	'coiled up, cross-legged'
<i>gorritj</i>	'be sweet'	'nicely, well'
<i>jin</i>	'do for a long time'	'for a long time'
<i>joro</i>	'return'	'back'
<i>joroberr</i>	'go back and forth'	'back and forth'
<i>jorttoyh</i>	'limp'	'in a limping way'
<i>lek</i>	'go down'	'downward'
<i>letjletj</i>	'swagger'	'in a flash way'
<i>lurrutj</i>	'be strong, be forceful, endure'	'strongly'
<i>mirr</i>	'roar'	'noisily'
<i>mornenh</i>	'be back-to-back'	'back-to-back'
<i>nangh</i>	'bash'	'in a bashing way'
<i>ngonong</i>	'be like that, do that way'	'like that'
<i>nornh</i>	'go in a group'	'in a group, together'
<i>nyenh</i>	'be quiet'	'quietly'
<i>yarryarr</i>	'be in a row'	'in a row'
<i>yerdengh</i>	'go out of sight, do secretly'	'secretly, quietly, away'
<i>yorryorr</i>	'be sound asleep'	'soundly'
<i>yurrh</i>	'be inside'	'inside'