Chapter 45: The languages of the Daly River region (Northern Australia)
Rachel Nordlinger, University of Melbourne

Abstract
This chapter surveys the polysynthetic characteristics of the languages of the Daly River region of Australia’s Northern Territory. Although they are not all closely related, these languages share many typological features typical of polysynthesis, including the encoding of core arguments in the verbal word; noun incorporation; and complex templatic verbal morphology. In addition the Daly languages exhibit complex verbal predicates composed of two discontinuous stems, one functioning broadly to classify the event type and the other providing more specific lexical semantics. These properties are surveyed across a range of Daly languages, considering both their similarities and their differences, and the implications they have for a cross-linguistic typology of polysynthesis.

KEY WORDS: polysynthesis, complex predicates, incorporation, applicatives, Australian languages

45.1 Introduction
In this chapter I discuss the languages of the Daly River region of Northern Australia, focussing particularly on the typological features relevant to polysynthesis. These languages are relatively undescribed in the literature (as a whole), and are generally treated as an areal Sprachbund sharing substantial typological features. However, as we will see in this chapter, the typological similarities among these languages may have been overstated (Harvey, pers. comm.) and we find variation in a number of features across the languages. Furthermore, the issue with respect to polysynthesis is complex. The class of polysynthetic Daly languages changes significantly depending on the definition of polysynthesis one applies, since many of the points of variation across the region are those that reveal the challenges of defining this morphological type.¹

¹ My work on Murrinhpatha and Marri Ngarr has been financially supported by the ARC Centre of Excellence for the Dynamics of Language, and the following ARC grants: DP110100961, DP0984419, DP0343354. My heartfelt appreciation to the people of Wadeye who have worked with me over many years, especially Carmelita and Ernest Perdjert and their family, Theodora Narndu and Mark
The notion of polysynthesis is notoriously difficult to define and various authors have treated different grammatical properties as criterial. It is generally agreed that polysynthesis involves holophrasis (the possibility that an inflected verb can stand alone as an independent clause), although this is not a sufficient condition for a language to qualify as polysynthetic. Another relevant feature is the possibility of lexical morphemes occurring within complex verb forms, such as in noun incorporation. In fact, focusing on Australian languages, Evans (Chapter 19, this volume) treats this property as crucial in distinguishing the polysynthetic languages of Northern Australia from the surrounding head-marking languages which “lack vital criterial characteristics of polysynthetic languages, particularly nominal and adverbial incorporation, and applicatives” (p. XX).

Other approaches to polysynthesis focus on the expression of arguments within the verbal word. Evans and Sasse (2002:3) state that “a prototypical polysynthetic language is one in which it is possible, in a single word, to use processes of morphological composition to encode information about both the predicate and all its arguments, for all major clause types [...].” Fortescue (1994:2601) on the other hand, points to “the entanglement of derivational and inflectional elements, such that morphemes having a bearing on the sentential syntax may be packed deep within the complex word” as being one trait shared across polysynthetic languages.

The languages of the Daly vary in a number of these respects. While holophrasis and noun incorporation are found in all languages of the region, the entanglement of inflectional and derivational material is less widespread, and very few of the languages have applicatives at all. Furthermore, while subjects and objects are encoded on the verb across all languages of the region, almost none of the languages encode all three arguments of a ditransitive verb morphologically, thus not meeting the Evans and Sasse (2002) definition of polysynthesis. Instead, what we find is a continuum of polysynthetic characteristics across the languages of the region and, depending on the characteristic(s) taken to be criterial for polysynthesis, we may...
either consider all of them to be polysynthetic, none of them to be polysynthetic, or something in between.

45.2 The Daly languages
The Daly region lies in the Northern Territory of Australia, south-west of Darwin. This region is home to 22 different language varieties, many of which have been the subject of only limited (published) description. Tryon (1974) proposed a single Daly language family including all of the languages of the region, except for Murrinhpatha. However, his evidence for considering them to be a single family appears to be largely typological (Tryon 1974: 304). Subsequent work, most notably by Ian Green (e.g. 2003) and Mark Harvey (e.g. 2003a; 2003b) has revised this picture, as outlined below. Evans (2003a:13) observes: “[t]he overall picture that emerges from recent work on the Daly languages is that they have much more genetic diversity than originally believed, but that this has been overlaid and partly erased by strong convergence in a Daly River Sprachbund.” However, this typological convergence across the whole region may likewise be overstated – as we will see there is considerably more similarity among some of the families (e.g. Western and Southern Daly) than across the region as a whole.2

The current consensus on the languages of the Daly region is shown in Figure 45.1, which represents a collation of the information in Dixon (2002), Evans (2003a), Green (2003), and Harvey (2003a; 2003b). Language varieties listed in a single column are most likely dialects of a single language (as defined by linguists, not by communities, who consider all named varieties to be distinct languages); alternative names for language varieties are given in brackets.

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2 Thank you to Mark Harvey and Ian Green for discussion of this issue.
Figure 45.1: The languages of the Daly region

Northern Daly
- MalakMalak (Ngulk Wanggar)
- Tyerraty (Guwema)

Eastern Daly
- Matngele (Werret/Dakayu)
- Kamu
- Yunggurr

Western Daly³
- Marri Ngarr
- Magati Ke
- Marri Tjevin
- Marri Ammu
- Marridan
- Marrithiyel
- Marramaninjsji
- Merranunggu
- Emmi
- Menthe

Southern Daly
- Murrinhpatha
- Murrinh Kura
- Ngan’gikurunggurr
- Ngen’giwumirri
- Ngan’gimeri

Anson Bay
- Batjamalh (Wadjiginy)
- Pungu Pungu (Kandjerramalh)

³ There is some evidence for further internal structure in this group, but more research is required (Ian Green, pers comm).
The 22 language varieties can be grouped into 10 different languages belonging to five language families. It is not clear whether there are any superordinate relationships among these five families, apart from proto-Australian, and indeed Evans (2003a) suggests that (some of) these Daly families may be early off-shoots of the proto language itself. Harvey (2003a) suggests a possible remote connection between the Eastern Daly group and the Gunwinyguan languages of Arnhem Land to the east, but this has yet to be definitively established.

Irrespective of genetic relationships, the Daly languages form a loose areal grouping (“a small linguistic area with ragged edges” (Dixon 2002: 679)), with a number of shared grammatical features. These include high-levels of morphological fusion in the verb; bipartite verbal systems; incorporation of body parts; and the use of serialised verbs of motion or stance to mark imperfective aspect (Dixon 2002: 677-678). Many of these features are discussed in the following sections.

45.3 The current sociolinguistic situation and previous work
The languages of the Daly region are greatly underrepresented in the Australianist literature, and many have had only limited description beyond a brief chapter in Tryon (1974).

The Southern Daly languages are the best described group: Ngan’gikurunggurr (also Ngan’gityemerri) has been the subject of grammatical descriptions by Hoddinott and Kofod (1988) and Reid (1990; published as 2011), as well as a published dictionary (Reid & McTaggart 2008) and a number of other publications (e.g. Reid 1997; 2000; 2003). Murrinhpatha has had a fair amount of previous description (Walsh 1976a; 1976b; 1996; 1997; Street 1987; Blythe 2009; 2013; Nordlinger 2010; 2011a; 2015; Nordlinger & Caudal 2012; Mansfield 2014), but no published grammatical description as yet.

Of the Western Daly languages, the only published grammatical description is Tryon’s (1970) grammar of Merranunggu. Emmi has been described in a PhD thesis

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4 Although, as Dixon (2002: 677-9) points out, most of these are also shared by one or more of the surrounding languages, hence the ‘ragged edges’.

5 Reid uses the term Ngan’gityemerri as a cover name for the two dialects Ngan’gikurunggurr and Ngen’giwumirri.

6 Walsh (1976b) has been published unrevised as Walsh (2011), but it is not a complete grammatical description of the language.
by Ford (1998; published as 2011), as has Marrithiyel (Green 1989; also Green 1997). The other Western Daly languages have almost no grammatical materials available apart from a brief description in Tryon (1974), a few journal articles (e.g. Ford 2006), and some unpublished student work (Preston 2012).

Beyond Tryon (1974), the Eastern Daly languages and the Anson Bay language have had barely any grammatical description, apart from an unpublished sketch grammar of Kamu (Harvey 1989), and two unpublished shorter theses on Matngele (Zandvoort 1999) and Batjamalh (Ford 1990). Malak Malak (Northern Daly), was the subject of a short published grammar by Birk (1976) and an unpublished honours thesis by Cahir (2006). Dorothea Hoffmann is currently undertaking documentation research with the remaining speakers of MalakMalak and Matngele (see Hoffmann To appear; 2015a).

Unfortunately, our opportunities to expand on this relative dearth of linguistic information are limited. Murrinhpatha is the most robust language of the region; still being used by around 2500 people for daily communication in the community of Wadeye (Port Keats) and acquired by all Wadeye children as their first language. All other languages of the region are highly endangered; many have only a handful of elderly speakers left and some (e.g. Marramaninjsji, Yunggurr) have no fluent speakers left at all.

45.4 The Daly languages: grammatical overview

The Daly languages are all head-marking with complex predicates (see below), nominative-accusative alignment in their agreement systems, word order flexibility, templatic morphology, and some noun incorporation (to varying degrees of productivity, see §45.7). All languages have subject, object and indirect object (or ‘goal’) pronominal marking within the verbal word (although the details of this and the structure of the verbal template may vary, see Table 45.1).

Unsurprisingly for head-marking languages, case morphology plays a relatively minor role across the Daly languages in encoding core grammatical relations. Most of the languages do not have obligatory case marking on subjects and objects; in some languages (e.g. Ngan’gityemerri (Reid 1990), Marrithiyel (Green 1989)) an ergative marker can be attached to transitive subjects that are ‘pragmatically’ marked. Many languages also have a set of semantic cases, including
dative, instrumental, ablative, locative (e.g. Emmi (Ford 1998), Kamu (Harvey 1989), Marrithiyel (Green 1989), etc); Kamu even has multiple case marking:

(1) \textit{barl-daij=ngu=bumu ngun-gin-diyn-ni}  
\textit{wrongly-hit=1MIN.OBJ=3MIN.SBJ.AUX.PST:PRF there=ALL-ABL-ERG}  
‘The bloke from that way wrongly hit me.’ (Kamu, Harvey 1989: 73)

Across the Daly languages we find complex predicates, or compound verb constructions (McGregor 2002), in which the verbal predicate is formed through the combination of two parts: the first is variously called the ‘auxiliary verb’, the ‘classifier’, the ‘light verb’ or the ‘inflecting verb’ and generally belongs to a small class of verbal stems that serve to classify or categorize the event in some way. This combines with the second element – the ‘verb root’, ‘verb stem’, ‘coverb’, or ‘lexical stem’ – which is generally from a larger (potentially open) class and carries the primary lexical meaning. The verbal predicate is formed through the combination of these two parts, in a way that is not always fully compositional. Some examples from across the Daly languages are provided below. In these examples the two parts of the verbal predicate are shown in bold, with the gloss of the ‘auxiliary’ or ‘classifier verb stem’ (CVS) provided in capitals.

Kamu (Eastern Daly)

(2) \textit{Wer=wun=any-ta-m tease=3AUG.OBJ=2MIN.SBJ-SPEAR-PST:PRF}  
‘You teased them.’ (Harvey 2003a:160)

MalakMalak (Northern Daly)

(3) \textit{Kaykay -ma wutta call out.RDP -IPFV 3AUG.SBJ.GO.PST}  
‘They were screaming.’ (Cahir 2006:30)

Batjamalh (Anson Bay)

(4) \textit{ŋakulo kutti-perry-p-uc-pe-cika-ŋi}  
\textit{NEG fight-2DU.SBJ.FUT-FUT-SCOLD-FUT:CM-RECP-DU}  
‘Don’t you two fight each other!’ (Ford 1990:135)
Marri Ngarr (Western Daly)

(5) \( \textit{ganggi gumbun-ninggi-musjinin-fingi-ganggi} \)

\(1\text{DU.INCL} \text{INCL.SBJ.GO.R-1INCL.G-frightened-NOW.RECP} \)

‘We were frightened of each other.’ (Preston 2012:10)

Murrinhpatha (Southern Daly)

(6) \( \textit{wurdana-nga-yith-ngintha-yu} \)

\(3\text{SG.SBJ.SHOVE.RR.PST:PFV-1SG.IO-tell-DU.NSIB-DM} \)

‘They (two non-siblings) were telling me.’ (Blythe 2009:100)

Although this complex verbal construction type is found across the Daly languages, its features differ in important ways (see also Table 45.1 for a summary). In MalakMalak (3), the two constituents are usually separate phonological words (Hoffmann 2015a), whereas they are more tightly bound in Marri Ngarr and Murrinhpatha. There are also differences in the ordering: in the Eastern Daly, Northern Daly and Anson Bay languages, the ‘lexical stem/coverb’ (LVS) typically appears before the ‘auxiliary/classifier’ (CVS),\(^7\) whereas in the Western Daly and Southern Daly languages, it typically appears to the right of the CVS in the middle of the verbal word.\(^8\) Languages also vary in terms of the number of CVSs, ranging from six in MalakMalak (Hoffmann 2015a) to 38 in Murrinhpatha (Blythe, Nordlinger & Reid 2007); see Table 45.1 for full details.

Similar to other languages with this type of complex predicate system across Australia (e.g. Wilson (1999), Schultze-Berndt (2000)), the argument structure and predicate semantics of the overall verb in the Daly languages is determined through interaction of the two parts of the complex predicate. Although the details vary across

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\(^7\) For ease of comparison, I use the labels ‘classifier verb stem (CVS)’ and ‘lexical verb stem (LVS)’ throughout this chapter although the terms are not necessarily the best ones for all the languages under discussion. The CVS equates to McGregor’s (2002) ‘Inflecting Verb’, and the LVS to McGregor’s ‘Uninflecting Verb’.

\(^8\) There is some evidence that the Western and Southern Daly languages used to have the ‘coverb/lexical stem’ before the ‘auxiliary/classifier’, as in the other Daly languages; namely, there is a subset of complex predicates that retain this older order (Green 1989; Reid 1990), and Reid (2003) shows that the order has switched since the 1930s in Ngan’gityemerri (Southern Daly).
languages, the following examples from Murrinhpatha serve as an illustration of the
general nature of the system. The combinations of CVS and LVS vary in their
productivity, with some forms being very restricted in their occurrence. However, for
the most part the system is fairly productive, with CVSs entering into combinations
with many different LVSs, and vice versa. In (7) we see the same LVS (-rtal- ‘break
by single chopping action’) combining with four different CVSs to produce four
different predicates; and in (8) we see a single CVS (bash(14)) combining with four
different lexical stems, again resulting in different verbs.10

(7a) bangarntal
    bangam-rtal
    3SG.SBJ.BASH(14).NFUT-chop
    ‘He chopped it (with an axe).’
    (RN 20070530-002:003)

(7b) pantal
    pan-rtal
    3SG.SBJ.SLASH(23).NFUT-chop
    ‘He sliced it (with a knife).’
    (RN 20070531-002:012)

(7c) mungarntal
    mungam-rtal
    3SG.SBJ.BREAK(11).NFUT-chop
    ‘He broke it with his hands.’
    (RN 20070530-002:009)

(7d) darntal
    dam-rtal
    3SG.SBJ.POKE(19).NFUT-chop
    ‘He broke it off with his mouth.’
    (RN 20070530-002:009)

(8a) bangarntal
    bangam-rtal
    3SG.SBJ.BASH(14).NFUT-chop
    ‘He chopped it (with an axe).’
    (RN 20070530-002:003)

(8b) bangamelmel
    bangam-melmel
    3SG.SBJ.BASH(14).NFUT-flatten
    ‘He flattened it (with a hammer).’
    (RN 20070531-002:015)

9 Murrinhpatha examples given with no bibliographic source are from my own field recordings. The
semantics of CVSs in Murrinhpatha is still being determined – the number in the CVS glosses indicates
the traditional way of referring to these paradigms (see Blythe, Nordlinger & Reid 2007).
10 See Green (1989), Reid (1990) and McGregor (2002) for more detailed discussion of the semantics
of these systems.
The argument structure of the verb is also determined through the interaction of the two parts of the complex predicate. In the Western and Southern Daly language groups, valence-changing operations are largely achieved through changing the classifier stem, without the need for causatives, detransitivizers, and other types of valence-changing morphology (although see §45.8 for a discussion of limited applicative marking). Reid (2000) provides a detailed discussion of this in Ngan’gityemerri (see also Green (1989) on Marrithiyel). Some examples from Murrinhpatha are provided in (9-12) (see also Seiss & Nordlinger 2010). In (9) we see that the transitive verb ‘to crush something’ is given an anticausative reading once the classifier stem is changed to the intransitive ‘SIT(1)’. Similarly, in (10) we see that the causative ‘to drop (to make descend)’ is encoded with the use of the transitive classifier stem ‘do with HANDS(8)’. Examples (11) and (12) illustrate a common pattern in which transitive classifier stems alternate with reflexive/reciprocal counterparts to provide verbs with different argument structures (see Nordlinger (2011a) for further discussion).

(9a)  *ku tumtum mam-lerrkperrk*

NC:ANIM egg 1SG.SBJ.HANDS(8).NFUT-crush

‘I crushed the egg in my hand.’ (RN 002:039)

(9b)  *dim-lerrkperrk*

3SG.SBJ.SIT(1).NFUT-crush

‘It's crushed.’ (RN 002:039)

(10a) *ngirra-dharday-nu*

1SG.SBJ.STAND(3).FUT-descend-FUT

‘I’ll descend straight down.’ (Street & Street 1989, entry for #dharday)
(10b) *nanthi karlay kanhi-ka*

NC:THING fishing.net this-TOP

*nguma-dharday-deyida-nu-neme*

1DU.SBJ.HANDS(8).FUT-descend-again-FUT-PAUC.M

‘We (exclusive, paucal, nonsibling, male) will drop this fishing net down again.’ (Street & Street 1989, entry for #dharday)

(11a) *thu ngu-nhi-bat-nu*

NC:WEAPON 1SG.SBJ.SLASH(23).FUT-2SG.OBJ-hit-FUT

‘I’m going to hit you (with a weapon).’ (RN 001:009)

(11b) *pam-ningtha-nu-bat* *(p* \text{an}- SLASH(23))

3SG.SBJ.SLASH:RR(24).NFUT-DU.M-RR-hit

‘They two (fem) hit each other.’ (RN 001:079)

(12a) *mam-yerl=dim*

3SG.SBJ.HANDS(8).NFUT-paint=3SG.SBJ.SIT(1).NFUT

‘He is painting.’ (RN 001:081)

(12b) *mem-nintha-yerl*

3SG.SBJ.HANDS:RR(10).NFUT-DU.M-paint

‘They two painted each other up.’ (RN 001:081)

In the Eastern and Northern Daly languages valence changing does not normally involve a change in the CVS, but may be encoded by compounding LVSs in grammaticalized functions. The following examples from Kamu illustrate the use of *gatj* ‘throw’ as a causative marker.

(13) *ni-gatj=ayayn*

name-CAUS=1MIN.SBJ.AUX.PST:PFV

‘I named him.’ (Harvey 1989: 88)
(14)  boeng.ger  diyenu-gatj=ayayn
   billycan  full-CAUS=1MIN.SBJ.AUX.PST:PFV
'I filled the billycan.' (Harvey 1989: 88)

Table 45.1 provides an overview of some basic features of verbal constructions across the Daly languages. The more complex features relevant to polysynthesis, such as noun incorporation, adverbial incorporation and applicatives are discussed below and shown in Table 45.4. In all of the Daly languages except for Batjamalh, the CVS listed here also encodes subject information and some tense/aspect/mood (TAM).

As can be discerned from Table 45.1, there is a clear three-way typological split between the Western/Southern Daly languages, the Eastern/Northern Daly languages, and Batjamalh (Anson Bay). The Batjamalh verbal system is quite different to those of the other Daly groups. Firstly, there is a large number of CVSs that can occur on their own without forming a complex predicate. Ford (1990) identifies 134 such verbs in her corpus, of which only 37 are found in complex predicates. This is fundamentally different to the other Daly languages, in which complex predicates form the overwhelming majority of verbal constructions, with only 5-13 simple verbs that can occur alone. Batjamalh’s class of 134 CVSs is also significantly larger than the other Daly languages; the next highest being 38 in Murrinhpatha. In addition, Batjamalh differs from all of the other Daly languages in distinguishing transitive (A) from intransitive (S) subject marking in the verb, and in using portmanteaux prefixes to encode transitive subject (A) and object (O).
<table>
<thead>
<tr>
<th>Language</th>
<th>Complex predicate as single word?</th>
<th>No. of CVS (No. as simple verbs)</th>
<th>Basic order of complex predicate</th>
<th>Object agreement</th>
<th>Indirect object agreement</th>
<th>Serialized constructions?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southern Daly</td>
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<tr>
<td>Murrinhpatha</td>
<td>Yes</td>
<td>38 (11)</td>
<td>CVS-OBJ-IBP-LVS-TAM</td>
<td>Affix internal to verbal word</td>
<td>Distinct set of affixes but in same slot as object marker</td>
<td>Yes, a second CVS is serialized to encode imperfective aspect</td>
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<tr>
<td>(Nordlinger 2015)</td>
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<tr>
<td>Ngan’gi</td>
<td>Yes</td>
<td>31 (10)</td>
<td>CVS-OBJ-IBP-LVS-TAM</td>
<td>Affix internal to verbal word</td>
<td>Distinct set of affixes but in same slot as object marker</td>
<td>Yes, a second CVS is serialized to encode imperfective aspect</td>
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<tr>
<td>(Reid 1990)</td>
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<tr>
<td>Western Daly</td>
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<td>Marrithiyel</td>
<td>Yes</td>
<td>22 (12)</td>
<td>CVS-OBJ-(IBP)-LVS-(IBP)-BEN-TAM</td>
<td>Affix internal to verbal word</td>
<td>Distinct set of affixes but in same slot as object marker. Separate benefactive/purposive marker follows LVS.</td>
<td>Yes, a second CVS is serialized to encode imperfective aspect</td>
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<tr>
<td>(Green 1989)</td>
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<tr>
<td>Marri Ngarr</td>
<td>Yes</td>
<td>22 (‘a few’)</td>
<td>CVS-OBJ-IBP-LVS-TAM</td>
<td>Affix internal to verbal word</td>
<td>Distinct set of affixes but in same slot as object marker</td>
<td>Yes, a second CVS is serialized to encode imperfective aspect</td>
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<tr>
<td>(Ford 2006; Preston 2012)</td>
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<tr>
<td>Emmi</td>
<td>Yes</td>
<td>29 (13)</td>
<td>CVS-OBJ-(IBP)-LVS-(IBP)-BEN-TAM</td>
<td>Affix internal to verbal word</td>
<td>Distinct set of affixes but in same slot as object. Separate benefactive</td>
<td>Yes, a second CVS is serialized to encode imperfective aspect</td>
</tr>
<tr>
<td>(Ford 1998)</td>
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<tr>
<td>Region</td>
<td>No, LVS and CVS are typically separate words</td>
<td>LVS followed by CVS=OBJ (Object marker can also attach to LVS in reduced subordinate clauses)</td>
<td>One paradigm of enclitics used for both object and indirect object</td>
<td>One paradigm of enclitics used for both object and indirect object</td>
<td>Up to 4 LVSs can be compounded in a single verb</td>
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</tr>
<tr>
<td>Northern Daly</td>
<td>No, LVS and CVS are combined via cliticization</td>
<td>IBP-LVS=OBJ=CVS (but other variations that move internal clitics to after CVS are also possible)</td>
<td>Object enclitics generally attach to the end of the LVS</td>
<td>A separate set of indirect object enclitics may appear in the OBJ slot</td>
<td>Up to 3 LVSs can be compounded in a single verb</td>
<td></td>
</tr>
<tr>
<td>Eastern Daly</td>
<td>No, LVS and CVS are combined via cliticization</td>
<td>IBP-LVS=CVS=OBJ (but in some cases OBJ can come after LVS (Zandvoort 1999:83))</td>
<td>One paradigm of enclitics for both object and indirect object</td>
<td>One paradigm of enclitics for both object and indirect object</td>
<td>Up to 3 LVSs can be compounded in a single verb</td>
<td></td>
</tr>
<tr>
<td>Anson Bay</td>
<td>Yes</td>
<td>IBP-LVS-SBJ/OBJ(TAM)-CVS-TAM-IO</td>
<td>Object prefixes portmanteau with transitive subject</td>
<td>Pronominal enclitics attach to the end of the verbal complex</td>
<td>Yes, a second CVS is serialized to encode bodily orientation and associated motion</td>
<td></td>
</tr>
</tbody>
</table>
Among the remaining Daly groups we find a clear typological distinction between the Western/Southern groups on the one hand, and the Eastern/Northern groups on the other. These differences are presented in Table 45.2.

Table 45.2 Typological distinctions amongst Daly language groups

<table>
<thead>
<tr>
<th>Western and Southern Daly</th>
<th>Eastern and Northern Daly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complex predicate is a single morphological word</td>
<td>Complex predicate is two morphological words, which may be cliticized but can be inflected separately.</td>
</tr>
<tr>
<td>4-way number distinction (singular, dual, paucal/trial, plural)</td>
<td>3-way number distinction (singular, dual, plural)</td>
</tr>
<tr>
<td>Objects marked by affixes</td>
<td>Objects marked by enclitics</td>
</tr>
<tr>
<td>IBP internal to verbal complex</td>
<td>IBP prefixed to verbal complex</td>
</tr>
<tr>
<td>CVS precedes LVS</td>
<td>LVS precedes CVS</td>
</tr>
<tr>
<td>Serialisation of CVS</td>
<td>Serialisation of LVS</td>
</tr>
<tr>
<td>One LVS per verb</td>
<td>Up to 4 LVS per verb complex</td>
</tr>
<tr>
<td>No nonfinite verbs (see §45.9)</td>
<td>LVSs can be used as nonfinite verbs (see §45.9)</td>
</tr>
<tr>
<td>Valence changing done by CVS</td>
<td>Valence changing done primarily by serialization of LVS</td>
</tr>
<tr>
<td>Greater verbal synthesis</td>
<td>Lesser verbal synthesis</td>
</tr>
</tbody>
</table>

45.5 Verbal Morphology

As with other head-marking languages across northern Australia, verbs in the Daly languages encode person and number for subject and objects and tense/aspect/mood information in a templatic structure. Table 45.1 provides the basic verbal structure for each of the languages, but in fact the addition of number marking, derivational marking and other optional elements makes the verbal template significantly more complex. The most complex verbal templates are found in the Southern and Western Daly languages. The verbal template for Murrinhpatha can be found in Forshaw et al (this volume) and Evans (Chapter 19, this volume). In the interests of variety, here I provide the verbal template for Marrithiyel, based on Green (1989).
<table>
<thead>
<tr>
<th>Classifier stem + SUBJ + Mood</th>
<th>OBJECT / GOAL</th>
<th>Lexically incorporated noun / applicative</th>
<th>Lexical Verb Stem</th>
<th>Incorporated body part</th>
<th>Incorporated locational noun</th>
<th>Incorporated general noun</th>
<th>Additional participant (incl BEN)</th>
<th>Inclusive number</th>
<th>Non-inclusive number</th>
<th>Temporal Adverbial</th>
<th>Tense/aspect/mood inflection</th>
</tr>
</thead>
</table>

Table 45.3 Marrithiyel verbal template (based on information in Green 1989)
The Marrithiyel verb template is similar to that of the other Western and Southern Daly languages, beginning with the obligatory CVS which also encodes subject person/number features and tense/aspect/mood information. The CVS is followed by a slot encoding objects, indirect objects and goals (in complementary distribution), incorporated nouns, and then the lexical stem. Example (15) illustrates these four slots in the verb, along with the tense/aspect/mood inflection in Slot 12 which, along with the classifier stem, is the only other obligatory element:

(15) ngirr -iginj -yeri -batj -Ø -wa
    1EXCL.SBJ.IRR.RR -1EXCL.G:REFL -child -lie.down -PL -FUT
Slot 1        Slot 2        Slot 3        Slot 4        Slot 10        Slot 12
muku      ganda
woman      there
‘We (excl, pl) and those women (pl) will camp together.’ (Green 1989: 308)

One interesting feature of the Marrithiyel verb is that it has multiple positions for incorporated nominals. Lexicalised incorporations can appear before the lexical verb stem (15), while productive incorporations (Evans’ (1996) ‘syntactic’ incorporation) appear after the lexical stem. Of these, there are three different types: incorporated body parts (slot 5), incorporated locational nominals (slot 6) and incorporated general nouns (slot 7). The latter two occur less frequently, but are nevertheless possible. The following examples illustrate these three incorporation types and their positions in the template:

(16) ngirrinjinggi -git -muwarri -buluki -fini -wa
    1EXCL.SBJ.IRR.NJ-cut -testicles -bull -DU -FUT
Slot 1        Slot 4        Slot 5        Slot 7        Slot 10        Slot 12
‘We (excl, du) will cut (off) the bull’s testicles.’ (Green 1989: 255)

(17) ngata anji -dim -miri -demi -Ø
    house 2SG.SBJ.IRR.NJ-sink -eye -side -IMP
Slot 1        Slot 4        Slot 5        Slot 6        Slot 12
‘(You sg) Shut the side window on the house.’ (Green 1989: 227)
(18)  *arri*  -*fesjirr*- *demi*  -*ngata*  -*ya*

2SG.SBJ.IRR.RR clean side house PST

Slot 1  Slot 4  Slot 6  Slot 7  Slot 12

‘You (sg) should have cleaned up around the side of the house.’ (Green 1989: 255)

Slot 8 is used for the marking of additional participants, such as adversatives (as in *gunj-inggi-srip-nginanga*-Ø-*ya* ‘They (pl) speared (my brother) on me’ (Green 1989: 126)), and purposives, as in (19):

(19)  *mana*  *gani*  -*sri*  -*winjel*  -*fini*  -*njsjan*- -Ø

brother 3SG.SBJ.R.GO cry 3NSG.PURP DU NOW PRS

Slot 1  Slot 4  Slot 8  Slot 10  Slot 11  Slot 12

*muku*  *yuwa-wa*

woman that-PURP

‘(My) brother is crying for those two women now.’ (Green 1989: 126)

The verbal template in Table 45.3 illustrates clearly the entanglement of inflectional and derivational morphology. Discontinuous dependencies are also evident in this verbal structure, most clearly in the interaction between the number markers in slots 9 and 10 and the verbal agreement marking in earlier parts of the verb. These additional number markers work together with the number information encoded by the subject and object agreement markers, and encode non-singular number and clusivity for any participant in the verb. Slot 9 encodes non-singular number for an inclusive participant, and Slot 10 for a non-inclusive participant. Example (20) illustrates the two co-occurring in the same verb:

(20)  *yeri*  *sjitjukuni*

child two

*ngumburr*  -*di*  -*butj*  -*fundi*  -*nim*  -*fini*  -*wa*

1INCL.SBJ.IRR.RR -2/3.NSG.OBJ hold hand INCL.PL DU FUT

Slot 1  Slot 2  Slot 4  Slot 5  Slot 9  Slot 10  Slot 12

*nganggi-nim-gin*  *diierr*  *federr*-sran

1INCL-INCL.PL-ERG river bank-ALL

‘We (INCL, PL) will take the two children to the river bank.’ (Green 1989: 138)
The classifier stem in slot 1 encodes the subject as first person inclusive, and this information unifies with the number marker in slot 9, which specifies the inclusive participant as plural. The object marker in slot 2 marks the object as non-singular; this is further specified by the dual number marker fini in slot 10. See Green (1989: 136ff) for a more extensive discussion of this number marking system.

45.6 Serial verbs

In addition to the complex predicates already discussed above, many Daly languages use serialized constructions of various types (Reid 2002; Hoffmann 2015b). In the Western and Southern Daly languages, these serialized constructions are used to encode imperfective aspect (see Nordlinger and Caudal (2012) on Murrinhpatha), encliticizing a CVS to the end of the verbal complex. The encliticized CVS must be one of the subset that can be used alone as a simple verb, and must be intransitive. Examples from Murrinhpatha include:

(21) \textit{dirran-nintha-nu-bath}\[3SG.SBJ.28.NFUT-DU.M-RR-look.at] ‘They (two) looked at each other.’ (RN 20070607-002:024)

(22) \textit{dirran-nintha-nu-bath=dim}\[3SG.SBJ.28.NFUT-DU.M-RR-look.at=3SG.SBJ.SIT(1).NFUT] ‘They (two) are looking at each other.’ (RN 20050711-001:007)

In (21), without the serialized CVS, the verb has a past perfective reading; with the serialized CVS in (22) the verb receives an imperfective (present) reading. The serialized CVS must agree with the tense of the main verb, but additional markers are not repeated on the serial verb, as shown by the fact that the future tense marker –nu is not present on the serialized CVS in (23).

(23) \textit{pirra-nintha-nu-bath-nu=pi}\[3SG.SBJ.28.FUT-DU.M-RR-look.at=FUT=3SG.SBJ.SIT(1).FUT] ‘They (two) will be looking at each other.’ (RN 20070607-002:024)
Serialised CVSs marking imperfective aspect in this way are found in all of the Southern Daly and Western Daly languages. In the Eastern Daly and Northern Daly languages, however, serialization takes a different form and function (Hoffmann 2015a). In these languages, it is the LVS that is serialized in order to modify the event semantics, or effect a change in the argument structure. Examples below are from Kamu (Harvey 1989: 92); note Kamu allows up to three serialized elements, as in (26).

(24) **dak bul-bul-guritj=buwali**
    camp RDP-clean-go around=3MIN.SBJ.AUX.SBJV
    ‘She should be going around, cleaning up the camp.’

(25) **binya guluwurr-ma anayn=gimin**
    animal bird.sp-PRM how=3MIN.SBJ.DO.PRS
    ‘What is the bird doing?’

    meyi ngak-ma=guyang dal-ngak-ma=guyang
    food eat-IPFV=3MIN.SBJ.AUX.PRS poke-eat-IPFV=3MIN.SBJ.AUX.PRS
    ‘It is eating the food. It is pecking the food.’

(26) **ditj-dey-jet=atayn**
    return-look-stand=1MIN.SBJ.AUX.PST:PFV
    ‘I (stood and) looked back.’

45.7 **Incorporation**
Incorporation is often central to definitions of polysynthesis. Bickel and Nichols (2007:193), for example, argue that “[o]ne of the typologically most important characteristics of polysynthesis is that pronominal and even lexical arguments are incorporated into their governing verb.” Evans (2014) considers incorporation as criterial for polysynthesis in Northern Australia, describing other head-marking languages “which have most features of polysynthetic languages, except incorporation of nouns and adverbials” as “the wannabes”.
All Daly languages have noun incorporation to some degree. Many have limited incorporation of adverbial elements also. In this section I discuss the properties of incorporation across the Daly languages in some detail; I return to a discussion of the relationship between incorporation and polysynthesis in §45.10.

Noun incorporation in the Daly languages primarily involves body part nominals, as in the following examples:

(27) dangim-ngi-tyerr-da dafî
    3SG.SBJ.POKE-1SG.OBJ-mouth-itch cheeky
    ‘It’s burning my mouth.’ (Ngan’gityemerri, Reid 1990: 210)

(28) melŋmelry wuŋmarrac mipe-kat-po-mene-kâpî.
    cheeky.yam long.yam eye-3DU.A.3OBJ.NFUT-hit-NFUT-DU
    ‘They found both cheeky yams, long yams.’ (Batjamalh, Ford 1990: 159)

(29) ginj-ing-wulit-thengo-gi-ya
    3SG.SBJ.R.NJ-1SG.OBJ-tie.on.clothing-bottom-PST
    ‘He tied on the clothing (loin cloth) around my bottom.’ (Marrithiyel, Green 1989: 273)

In the Southern Daly languages, body parts are the only nominals that may incorporate (Murrinhpatha (Forshaw 2011); Ngan’gityemerri (Reid 1990)). In Batjamalh, approximately half of the incorporated nouns in the corpus are body parts, and the rest are other nominals (Ford 1990: 159), although many of these seem lexicalized in their semantics and so may not be productive. In the Western Daly languages Marrithiyel (Green 1989) and Emmi (Ford 1998) incorporation of non-body part nominals is infrequent, but possible:

(30) guninj-felbatj-ngusra-nimbini-ya
    3NSG.SBJ.R.GO-jump-creek-TRIAL-PST
    ‘They (3) jumped over the creek.’ (Marrithiyel, Green 1989: 246)
In these Western Daly languages, it is even possible to incorporate two nominals into the one verb (as in Bininj Gun-Wok, for example (Evans 2003b)), as we saw for Marrithiyel in §45.5 above, and in the Emmi example below:

\[
\text{(31)} \quad \text{gana-purr-nunggu-katpilak} = \text{enhdeni} \quad \text{ganen} \\
\text{3MIN.SBJ.R.WALK-dance-hand-bucket} = \text{NOW} \quad \text{3MIN.SBJ.R.SIT}
\]

‘She’s sitting beating time (lit. hand-dancing) on a bucket now.’ (Emmi, Ford 1998: 263)

As illustrated in Table 45.1 above, the Daly languages differ in the position of the incorporated nominal in the verbal template. In the Southern Daly languages, the incorporated body part appears in the middle of the complex verb, between the two parts of the complex predicate:

\[
\text{(32)} \quad \text{dirran-ngi-me-thith} = \text{dim} \\
\text{3SG.SBJ.28.NFUT-1SG.OBJ-foot-stare} = \text{3SG.SBJ.SIT(1).NFUT}
\]

‘She’s staring at my feet.’ (Murrinhpatha, Forshaw 2011: 50)

In Batjamalh (Anson Bay) and the Northern and Eastern Daly languages, on the other hand, the incorporated body part is prefixed to the left of the verbal complex:

\[
\text{(33)} \quad \text{melŋmelŋ wuŋmarrac mipe-kat-po-mene-kaŋi}.
\text{cheeky.yam long.yam eye-3DU.A.3OBJ.NFUT-hit-NFUT-DU}
\]

‘They found both cheeky yams, long yams.’ (Batjamalh, Ford 1990: 159)

\[
\text{(34)} \quad \text{detoeŋ-dap-denek-awa} \\
\text{back-grab-3MIN.SBJ.DO.PST-1MIN.OBJ}
\]

‘He rubbed my back.’ (Matngele, Zandvoort 1999: 96)

In the Western Daly languages Marrithiyel and Emmi, on the other hand, there are two positions for incorporated body parts, either before (35) or after (36) the LVS:
(35)  *ganya-na-gumbu-gulu=yi*

3MIN.SBJ.R.MAKE-3MIN.M.REFL-foot-bend=PFV
‘He bent his feet.’ (Emmi, Ford 1998: 234)

(36)  *gana-ngany-betj-wulhtji=wany*

3MIN.S.R.WALK-1MIN.OBJ-grab-ribs=REPET
‘He kicks me in the ribs again’ (Emmi, Ford 1998: 234)

In MarrithiyeIl there is a subtle difference between the two positions: ‘lexically’ incorporated nominals can occur either in *either* position (37a) but productive ‘syntactically’ incorporated nominals can *only* occur after the lexical stem (37b) (Green 1989). This suggests that the pre-LVS position may be older, since it is the location of lexicalized incorporations (as well as the position for incorporations in the Southern Daly languages), and that MarrithiyeIl and Emmi may have innovated a second post-LVS position for (productively) incorporated nominals.11

(37a)  *ninjsja-wa gan nanj ginn-ing-thenggi-pirr-njsjan*

what-PURP here 2SG 2SG.SBJ.R.GO-1SG.OBJ-bottom-leave-NOW(PRS)
‘For what purpose are you keeping me here now? (MarrithiyeIl, Green 1989: 273)

(37b)  *ginj-ing-wulit-thenggi-ya*

3SG.SBJ.R.NJ-1SG.OBJ-tie.on.clothing-bottom-PST
‘He tied on the clothing (loin cloth) around my bottom.’ (MarrithiyeIl, Green 1989: 273)

Note, however, that in Marri Ngarr (also Western Daly), it appears that productive incorporations occur in the pre-LVS position, as in the Southern Daly languages (although the data is limited), suggesting that this innovative post-LVS position may not be a feature of all Western Daly languages:

11 This is further supported by the fact that it is in the pre-LVS position that we find incorporated body parts that have grammaticalized into applicatives, see §45.8.
Noun incorporation is most commonly of patient/theme objects (or more accurately, body parts associated with the patient/theme object), but in some languages it is possible to incorporate nominals with the thematic roles of location (e.g. 30) and instrument (e.g. 31) also.

The incorporation of lexical adverbials is also found in some Daly languages (see Table 45.4 below), although is less wide-spread and more limited than noun incorporation. Such incorporation generally involves aspectual/adverbial elements with the semantics of ‘now’, ‘in turn’, ‘again’. These incorporated adverbials occur in a different position in the verbal template than incorporated nominals; in the Western and Southern Daly languages, we find these positioned after the LVS:

(39)  
\[ \text{puddan-wunku-rlarl-deyida-ngime=pumpan} \]  
\[ 3\text{PL.SBJ.29.NFUT-3PAUC.OBJ-drop.off-in.turn-PAUC.F=3PL.SBJ.GO(6).NFUT} \]  
‘They were going along dropping them (paucal) off, one by one.’  
(Murrinhpatha, Blythe 2009)\[12\]

(40)  
\[ \text{niwinj y i gudingi-derrick-fingi=gawunh} \]  
\[ 3\text{DU that 3DU.SBJ.DI.R.IPFV-sharpen-NOW=3DU.SBJ.SIT.R} \]  
‘Those two fellas are sharpening their knives now.’ (Marri Ngarr, Preston 2012: 39)

45.8 Applicatives

Evans (chapter 19, this volume) discusses applicatives as one of the polysynthetic traits of the Gunwinyguan languages. Daly languages do not have the range of productive applicative constructions that Gunwinyguan languages do. Benefactives, for example, do not require valence-changing morphology, but are simply encoded with existing pronominal markers in the verbal word. The following examples from

\[12\] In examples taken from Joe Blythe’s work, I have changed the orthography to be consistent with the community-preferred orthography used in the rest of this chapter.
Murrinhpatha show the same set of markers being used to encode indirect object arguments (41) and benefactive adjuncts (42) (Nordlinger 2011a). In the latter case, the benefactive marker simply relaces the object marker with no valence-changing morphology required (42b).

(41)  
\[ \text{parram-na-mut} \quad \text{kardu} \quad \text{numi} \]  
3PL.SBJ.POKE(19).NFUT-\textbf{3SG.M.1O}-give \quad \text{NC:HUMAN} \quad \text{one}  
‘They gave them to one person.’ (RN 20050715-001:065)

(42a)  
\[ \text{ma-nhi-beri-nu} \quad \text{ngarra da} \]  
3SG.SBJ.HANDS(8).FUT-2SG.OBJ-take-FUT \quad \text{home}  
‘I'll take you home.’ (RN 20070608-002:042)

(42b)  
\[ \text{ma-mpa-beri-nu} \quad \text{ngarra da} \]  
1SG.SBJ.HANDS(8).FUT-\textbf{2SG.IO}-take-FUT \quad \text{home}  
‘I'll take him home for you.’ (RN 20070608-002:042)

Although applicatives are not prevalent in Daly languages, there is evidence in some languages of the development of applicative markers from incorporated body parts. This has been reported for the Southern Daly languages Ngan’gityemerri (Reid 1990; 2000) and Murrinhpatha (Nordlinger 2011b) and also for Marrithiyel (Western Daly) (Green 1989). It is worth noting, however, that these three languages are also the Daly languages for which we have the most detailed descriptions, so it may be that further investigation of other Daly languages would yield more examples of such grammaticalization.

In Murrinhpatha a ‘source’ applicative has grammaticalized from the incorporated body part -\textit{ma-} ‘hand’, as shown in the following examples. In (43) we see the use of the incorporated body part in its productive sense; in (44) we see it being used as an applicative marker.

(43)  
\[ \text{dirran-} \text{ngi-} \text{ma-thith}=\text{dim} \]  
3SG.SBJ.28.NFUT-\textbf{1SG.OBJ-hand}-stare.at=3SG.SBJ.SIT(1).NFUT  
‘She’s staring at my hands.’ (RN 20090930-002:079)
In (44b) -ma serves to promote a source role to an object argument, which is shown by the fact that it is then cross-referenced with a direct object marker (here –nhi) in the verb. If the applicative marker is not present (as in 44a and c) then a second person object is not grammatical (44c), showing clearly that its presence in (44b) is licensed by the applicative.

The fact that the incorporated body part has completely grammaticalized in this applicative function is shown by the fact that it is possible to have the applicative even with verbs for which the original body part meaning would be nonsensical, as shown in (45).

(44a)  \textit{mangan-art} \quad \textit{kura}

\begin{verbatim}
1SG.SBJ.SNATCH(9).NFUT-get \quad NC:WATER
\end{verbatim}

‘I got (some) water.’ (RN 20091001-002:094)

(44b)  \textit{mangkanhimart} \quad \textit{kura}

\begin{verbatim}
mangan-nhi-ma-art \quad kura
1SG.SBJ.SNATCH(9).NFUT-2SG.OBJ-APPL-get \quad NC:water
\end{verbatim}

‘I took some water from you.’ (RN 20091001-002:094)

(44c)  *\textit{mangan-nhi-art}

(45a)  \textit{binthepup}

\begin{verbatim}
bim-yepup
1SG.SBJ.HEAR(16).NFUT-listen
\end{verbatim}

‘I heard it.’ (RN 20091001-002:098)

(45b)  \textit{bim-pirra-yepup}

\begin{verbatim}
1SG.SBJ.HEAR(16).NFUT-3PL.IO-listen
\end{verbatim}

‘I listened to them.’ (RN 20091001-002:098)
(45c) \textit{bim-pun-	extbf{ma}-yepup}  
\text{1SG.SBJ.HEAR(16).NFUT-3PL.OBJ-APPL-listen}  
‘I heard (the story) from them.’ (RN 20091001-002:098)

(45d) *\textit{bim-pun-yepup} (bimpunthepup)  
\text{1SG.SBJ.HEAR(16).NFUT-3PL.OBJ-listen}  

Only one such applicative exists in Murrinhpatha, but several are reported for Ngan’gityemerri and Marrithiyel involving other body parts as well. In Marrithiyel \textit{-mi} ‘eye’ has grammaticalized into an applicative with a range of meanings, including comitative (46) and \textit{-ma} ‘belly’ derives a causative of emotion (47) (Green 1989: 288ff).

(46) \textit{gun-ninggi-	extbf{mi}-batj-nim-Ø-a}  
\text{3NSG.SBJ.R.GO-1INCL.OBJ-APPL-lie.down-INCL.PL-PL\textsuperscript{13}-PST}  
‘They (pl) camped with us (incl.pl).’ (Green 1989: 294)

(47) \textit{gumun-ngi-ma-tjarr-Ø} \quad \text{mana} \quad \text{yigin-wa}  
\text{3SG.SBJ.R.PAINT-1SG.OBJ-APPL-sad-PRS} \quad \text{brother} \quad \text{1SG-PURP}  
\text{mubungandi}  
poor.fellow  
‘It makes me feel sad for my brother, poor bugger.’ (Green 1989: 299)

Whereas incorporated body parts can appear either before or after the lexical stem in the Marrithiyel verb (see Table 45.1 and the discussion in §45.7 above), these applicative markers \textit{must} appear in the pre-lexical stem position (slot 3), as for all other lexical incorporations (and, as in Murrinhpatha).

Ngan’gityemerri also has a comitative applicative derived from the incorporated body part ‘eye’ (Reid 1990):

\textsuperscript{13} This is incorrectly glossed as ‘dual’ in the original, but corrected here.
(48a)  ngaganiny-wap
   1SG.SBJ.GO.PFV-sit
   ‘I sat down’.

(48b)  ngaganiny-nyi-\textit{mi}-wap
   1SG.SBJ.GO.PFV-2SG.OBJ-APPL-sit
   ‘I sat down with you’. (Reid 1990: 138)

Additional evidence for the fact that this applicative has grammaticalized from the body part, which has the free form \textit{muy}, is the fact that in data from the 1930s collected by Gerhardt Laves – at which stage the language was less polysynthetic and lexical stems were often separated, preceding the classifier stem (Reid 2003) – the full form \textit{muy} is found with this applicative function. The following examples are taken from Laves’ data (as reproduced in Reid 1990: 139). In (49a) we see the applicative incorporated within the polysynthetic verb, and in (49b) it is word final, given the separated lexical stem, and in this case takes the full form \textit{muy}.

(49a)  \textit{yenim-\textit{mi}-wab}^{14}
   3SG.SBJ.GO.PRS-APPL-sit
   ‘He sits with him.’

(49b)  \textit{wab  yenim-muy}
   sit   3SG.SBJ.GO.PRS-APPL
   ‘He sits with him.’ (Reid 1990: 139)

The development of applicatives out of incorporated body parts is barely mentioned in the cross-linguistic literature yet appears to be an areal feature among the Daly languages (at least the Southern and Western subgroups). See Nordlinger (2011b) for further discussion.

^{14} The original Laves spelling is retained here, following Reid (1990).
45.9 Subordination

Many researchers have observed the relative lack of subordination among polysynthetic languages (Mithun 1984; Baker 1996), although it has also been argued that this correlation does not always hold (Nordlinger & Saulwick 2002; Evans 2006). The Daly languages behave fairly predictably in this respect: the more highly synthetic Western and Southern Daly languages have limited subordination structures, and no nonfinite verb forms; whereas the Eastern and Northern Daly languages form nonfinite subordinate constructions from the LVS.

Murrinhpatha (Southern Daly) has one finite subordinate construction, introduced by the complementizing preposition ngarra, as shown in (50). There are no nonfinite subordinate clauses in this language – associated events are represented with strings of finite clauses as shown in (51).

(50) murrinh ngurdi-mpa-yith-nu [ngarra ngay language 1SG.SBJ.30.FUT -2SG.IO-tell.story-FUT COMP 1SG


‘I’ll tell you a story [about when I was a child].’ (MP-20091008-RN01.wav)

(51) me-nganku-berti-ngintha-dha-tharra

3SG.SBJ.HANDS(8).PST:IPFV-1DU.EXCL.OBJ-take-DU.F-PST:IPFV-moving

ngay-ka nganam-yagarl-warda ngarra kura pepe

1SG-TOP 1SG.SBJ.BE(4).NFUT-fall-NOW LOC NC:WATER under

‘While he was taking my grandfather Pulthen and I (across the river), I fell under the water.’ (9-08 CP Drowning 251.256-258.629)

Ngan’gityemerri has an unusual subordination construction in which fully finite verbs are nominalized through the attachment of a noun class prefix, and can then function to modify nominal arguments, or even function as arguments themselves (Reid 1990: Chapter 5). Consider the following example:
(52) yerr-ngini-handbag-gumu yerr-wedimuy
THING-KIND-handbag-SEMBL THING-small

yerr-[every room nem key dim-nyine fillimup-mem]
THING-every.room 3SG.M key 3SG.SBJ.SIT.PRS-FOC fill-3SG.OBJ.PRS

watypela nyin me-wa
whitefella ANAPH 3SG.SBJ.SNATCH.PFV-pick.up
‘That whitefella (hotel receptionist) picked up a thing like a kind of handbag, a small thing, a thing filled up with the keys to every room.’ (Lit: a thing like a handbag, a small thing, a thing (which) the key to every room fills up, that whitefella picked it up) (Reid 1990: ex. 5-114)

In (52) we see clearly the noun class prefix yerr ‘thing/tree’ co-occuring with the nominals ‘handbag’ and ‘small’, as well as with the whole finite clause ‘keys to every room fill it up’. This clause is identical in form to any other finite independent clause, except for the presence of the noun class prefix yerr- (see Reid (1997) for further discussion). This use of noun class prefixes with finite verbal clauses has not been reported for other Daly languages.

In the Eastern and Northern Daly languages we find LVSs used as nonfinite verbal predicates. The following example is from Kamu (Eastern Daly):

(53) yil nguru-ma [yirr-ma-rdiyn] bilpurr-jet=butayn
skin 1MIN-PRM scratch-IPFV-ABL red-INCH=3MIN.SBJ.AUX.PST:PFV
‘My skin has gone red from me scratching it.’ (Harvey 1989: 98)

45.10 Summary: Polysynthesis in the Daly
Across the Daly languages we find a number of features characteristic of polysynthesis: holophrasis, head marking, the incorporation of nouns and adverbs and complex verbal templates which entangle inflection and derivation. However, there is also a reasonable amount of variation across the languages in these (and other) features. The Southern and Western Daly languages show significantly greater verbal synthesis, elaborate verbal templates, productive incorporation of both nouns and adverbs, applicatives and discontinuous dependencies across the verbal inflectional
morphology. The Eastern and Northern Daly languages, while still morphologically complex in many ways, show more evidence of syntactic combination, with detachable verb stem components, object enclitics rather than suffixes in their verbal systems, and a clearer separation between inflectional and derivational morphology in the verbal template.

Table 45.4 focuses on the key features associated with polysynthesis in the literature, and shows their realisation across the Daly languages. Holophrasis, incorporation, and the entanglement of inflection and derivation were all discussed as properties of polysynthesis in §45.1. The marking of three arguments of the trivalent verb relates to Evans and Sasse’s (2002: 3) definition of polysynthesis as involving the morphological encoding in the verbal word of all arguments of all major clause types. Applicatives are mentioned in Evans (Chapter 19, this volume) as one of the features (along with incorporation) that distinguishes polysynthetic languages from other head-marking languages in Northern Australia; and the relationship between a lack of nonfinite verbal forms and polysynthesis relates back to claims by Baker (1996).
<table>
<thead>
<tr>
<th></th>
<th>Holophrasis</th>
<th>Noun incorporation</th>
<th>Adverbial incorporation</th>
<th>All three arguments marked on ditransitive verb</th>
<th>Applicatives</th>
<th>Nonfinite subordinate verbs</th>
<th>Entanglement of inflection and derivation</th>
<th>Discontinuous dependencies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Southern Daly</strong></td>
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<tr>
<td>Murrinhpatha</td>
<td>Yes</td>
<td>Yes (body parts only)</td>
<td>Yes (limited)</td>
<td>No, only 2 argument slots in the verb</td>
<td>Yes (one)</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Ngan’gi (Reid 1990)</td>
<td>Yes</td>
<td>Yes (body parts mostly, with a few non-body parts possible (Reid &amp; McTaggart 2008))</td>
<td>Yes (limited), although described as enclitics</td>
<td>No, only two argument slots in the verb</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td><strong>Western Daly</strong></td>
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<tr>
<td>Marrithiyel (Green 1989)</td>
<td>Yes</td>
<td>Yes (body parts and other nouns have separate positions in the verb)</td>
<td>Yes (limited)</td>
<td>No, only two argument slots per verb, although third additional participant can be encoded in some contexts (19)</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Marri Ngarr</td>
<td>Yes</td>
<td>Yes (body parts)</td>
<td>Yes (limited)</td>
<td>No, only two argument slots per</td>
<td>Not reported</td>
<td>Not reported</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Language</td>
<td>Verb</td>
<td>Adverbial Clitics</td>
<td>Number of Argument Slots</td>
<td>Adverbial Incorporation</td>
<td>LVS as Nonfinite Verb</td>
<td>Reporting</td>
<td></td>
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<tr>
<td>Emmi (Ford 1998)</td>
<td>Yes</td>
<td>Yes</td>
<td>No, adverbial clitics</td>
<td>No, only two argument slots per verb, but three participants possible if one is a benefactive adjunct (p. 155)</td>
<td>Not reported</td>
<td>No</td>
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<td>Northern Daly</td>
<td></td>
<td></td>
<td></td>
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<td>Yes</td>
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<tr>
<td>MalakMalak (Birk 1976, Cahir 2006)</td>
<td>Verb complex (=2 words)</td>
<td>Yes, mostly body parts but a few others (Hoffmann, pers. comm)</td>
<td>No</td>
<td>No, only two arguments slots per verb</td>
<td>No</td>
<td>LVS can be used as a nonfinite verb</td>
<td>No</td>
<td>No</td>
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<tr>
<td>Eastern Daly</td>
<td></td>
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<td></td>
<td>Yes</td>
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<tr>
<td>Kamu</td>
<td>Verb complex (=2 cliticized lexemes)</td>
<td>Yes, mostly body parts but a few others.</td>
<td>No clear adverbial incorporation, but adverbial enclitics to verbal complex</td>
<td>No, only one object enclitic per verb</td>
<td>No</td>
<td>LVS can be used as nonfinite verb</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Matngele</td>
<td>Yes (cliticized?)</td>
<td>Yes</td>
<td>No clear adverbial incorporation</td>
<td>No, only one object enclitic per verb</td>
<td>No</td>
<td>Not reported</td>
<td>No</td>
<td>No</td>
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<td>Anson Bay</td>
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<tr>
<td>Batjamalh (Ford 1990)</td>
<td>Yes</td>
<td>Yes</td>
<td>Not reported</td>
<td>Yes</td>
<td>No</td>
<td>LVS function as nonfinite verb</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
A quick glance at this table reveals that, while the Daly languages vary considerably on many of these features, an analysis of which of these languages are polysynthetic depends solely on which feature(s) we take to be criterial for polysynthesis (as opposed to just head-marking). If holophrasis and noun incorporation are criterial, then all of the Daly languages fit the definition. If, on the other hand, the ability to morphologically encode all verbal arguments for all major clause types is central to the definition of polysynthesis, then none of the Daly languages, apart from Batjamalh, appear to be polysynthetic since they don’t morphologically encode three arguments in a trivalent verb. Note, however, that although all three arguments are not morphologically encoded in these languages, it is still possible for the trivalent verb to stand alone as a sentence without an additional NP encoding the third argument:

(54)  \textit{\textit{dam-nge-mut=dim}}

\text{3SG.SBJ.POKE(19).NFUT-3SG.F.IO-give=3SG.SBJ.SIT(1).NFUT}

‘He’s giving it to her.’ (Murrinhpatha, RN-20050711-001:008)

Looking across Table 45.4 we can see a clear typological distinction between Batjamalh, Western Daly and Southern Daly languages on the one hand – which show a great majority of polysynthetic features and the most highly synthetic verb structures – and the Eastern and Northern Daly languages which, apart from having noun incorporation, show less synthesis in the verb and significantly fewer polysynthetic features. I would argue that Batjamalh, Western Daly and Southern Daly languages are clearly polysynthetic, despite the fact that they don’t morphologically encode all arguments for \textit{all} major clause types. MalakMalak (Northern Daly) is clearly head-marking but not polysynthetic. The Eastern Daly languages fall somewhere in between, showing some features of polysynthesis (most notably noun incorporation), but not all.

The data from the Daly languages, therefore, argues for a gradient, contingently multi-factorial view of polysynthesis as a collection of grammatical features which may develop and exist independently of each other, but which can also co-exist and cluster in the most prototypical of polysynthetic languages.
REFERENCES


Hoffmann, Dorothea. 2015b. Complex predication and serialization in the Daly River languages (and beyond). University of Queensland.


Abbreviations

ANAPH ‘anaphoric element’
AUG ‘augmented number’
CM ‘conjugation marker’
DM ‘discourse marker’
G ‘goal’
IBP ‘incorporated body part’
IO ‘indirect object’
MIN ‘minimal number’
NC:ANIM ‘animate noun class marker’
NC:HUMAN ‘human noun class marker’
NC:WATER ‘water noun class marker’
NC:WEAPON ‘weapons noun class marker’
NC:THING ‘residue noun class marker’
NSIB ’non-sibling’
PAUC ‘paucal’
PRM ‘prominence marker’
PUNC ‘punctual’
R ‘realis’
RDP ‘reduplicand’
REPET ‘repetitive’
RR ‘reflexive/reciprocal’
SEMBL ‘semblative’
TEMP ‘temporal marker’
THITH ‘direction away’