4 *Phrasal verb to synthetic verb: recorded morphosyntactic change in Ngan'gityemerri*

NICHOLAS REID

The verbal structure of Ngan'gityemerri[1] is characterised by the presence of two major constituents; a finite verb in combination with a coverb. Each of these constituents consists of a root to which other grammatical (and sometimes lexical) morphemes are affixed. The entire verbal structure is a polysynthetic complex with the fixed constituent ordering of finite verb–coverb, though a few subsets of verbs have the inverse but fixed ordering, coverb–finite verb. Intriguingly, the same subsets of verbs have variant ordering patterns in other Southern and Western Daly languages. Purely synchronic data provide little explanation for this variation. However, for Ngan'gityemerri the recent and serendipitous discovery of Gerhardt Laves' 1930 work, allows us a diachronic viewpoint on the structural change that has taken place in this language. This paper compares the verbal structure of contemporary Ngan'gityemerri with that recorded by Laves in 1930, and that recorded by Tryon in the mid 1960s and Hoddinott and Kofod in the late 1960s to mid 1970s. With these three windows on the development of the Ngan'gityemerri verb, it is possible to clearly show it to have developed from a phrasal verb structure into a polysynthetic word complex. Opportunities to observe recorded rather than reconstructed morphosyntactic change are rare in the case of Australian languages. The changes that have taken place in Ngan'gityemerri have been surprisingly rapid but, intriguingly, not in the direction that contact with English might suggest.

---

[1] Ngan'gityemerri is a non-Pama-Nyungan language spoken by about 150 people principally in the communities of Nauiyu Nambiyu and Peppimenarti in the Daly River region of Australia's Northern Territory. This paper has had a long gestation period and evolved through some quite different drafts. For comments and criticisms along the way I express my sincere thanks to Nicholas Evans, Ian Green, Mark Harvey, Jeffrey Heath, Bill McGregor and David Nash. Responsibility for the content, though, lies with me alone.

---

1 The two-part verb

Before turning to the verbal structure of Ngan'gityemerri specifically, some general observations about this type of verbal structure as an areal feature are in order. Tryon's (1974) classification of the Daly languages is done in terms of the lexico-statistical method that classifies languages having 16%–25% of cognates as groups of the same phylic family; 26%–50% as subgroups of the same group; 51%–70% as languages of the same subgroup; and over 71% as dialects of the same language, following Wurm (1972).

While the classification is primarily lexical (based on the cognate density revealed by a 200-item comparative word list), the higher level groupings rely on the use of two additional criteria, the comparison of finite verb classes, and verbal structure (Tryon 1974:xii).

> It is this, *(the feature of two verbal elements, a finite verb and a coverb within a complex verb)* then, in addition to the almost identical verb class categories throughout the Family, which is most characteristic and distinctive, and it is this which most clearly distinguishes the Daly Family from surrounding linguistic neighbours. (Tryon 1974:304; bracketed italicised elements mine)

In passing, Tryon's additional use of 'verb class categories' (i.e. finite verbs) as a secondary tool in distinguishing the 'Daly Family' languages from their neighbours should have provided clear grounds for the co-classification of Ngan'gityemerri and Murrinh Patha, for they share highly similar finite verb systems with respect to finite verb number and finite verb semantics, not to mention shared suppletive finite verb forms. Murrinh Patha, the immediate neighbour to the west of Ngen'giwumirri, shares with Ngan'gityemerri not only the near-identical finite verb system noted above, but also similar finite verb + coverb structure. Indeed Murrinh Patha has recently been shown (I. Green this volume) to be the language most closely related to Ngan'gityemerri.

Setting aside systems of finite verb, and focusing instead on the type of verb structure characterised by two verbal elements, it is clear that these are found in languages over a far wider area than Tryon envisaged.

The languages south of the Daly share verbal systems characterised by this two-part structure. The Yirram languages, Jaminjung, Nungali and Ngaliwurru, also have verbs comprised of an uninflecting root in combination with a small closed class of inflecting verbs with similar stance/posture/motion semantics (Cleverly 1968; Bolt, Hoddinott & Kofod 1971; and Schultze-Berndt 2000). Within the same family as the Yirram languages, the Barkly languages Jingili, Ngan.ga, Binbin.ga, Wambaya and Gudanji retain an essentially two-part verbal structure despite having undergone radical typological restructuring that has led them to abandon prefixing morphology in favour of suffixing (Green 1995; Nordlinger 1998; Chadwick 1975, 1997).

To the east of the Daly region, languages like Wagiman (Cook 1987), Wardaman, and Mangarrayi (Merlan 1994, 1982) and Alawa (Sharpe 1972) also have verbal systems involving a finite verb combining with a coverb. Verbal systems of this type are likewise found in languages extending to the southwest of the Joseph Bonaparte Gulf, like the Jarrakan languages Miriwoong and Gajerrawoong (Kofod, pers. comm.), and languages extending westwards into the Kimberleys such as Bunaba (Rumsey 2000), Gooniyandi (McGregor 1990), Nyulnyul (McGregor pers. comm.), Warrwa (McGregor 1994), Nyikina (Stokes 1982), Yawuru (Hosokawa 1991), and Worrorra (Capell & Coate 1984; Silverstein 1986). It would be misleading to imply either that this listing is exhaustive, or that all these languages have verbal structure identical to that found in the southern and western Daly

languages. What they do share, though, is a verbal system combining some kind of uninflecting coverb with a finite verb that contributes something to the semantics of the complex verb. In short there is nothing about this verb structural type that is uniquely distinctive of those languages that Tryon chose to include in his 'Daly Family'. While no Daly area languages lack this as a dominant construction, the construction type itself is found in numerous non-Daly languages. Indeed some Pama-Nyungan languages, like Warlpiri, have verbal structures in which similar phenomena can be found.

Admittedly, these similarities are slightly masked by a variety of terminological conventions; 'preverbs and generic verbs' (Schultze-Berndt 2000, which contains a good discussion of terminological choices in typological perspective), 'verbals and classifiers' (McGregor 1990), 'auxiliary and verb root' (Reid 1982, 1990). Other labels for coverbs include 'verbal particle' (Merlan 1982), 'gerund' (Capell 1976), 'participle' (Cook 1988). In this paper I will use the labels 'finite verb' and 'coverb'. To facilitate comparison of the function of these constituents across a range of languages, we need to be clear about their word-class status and what they contribute to the meaning of the complex verbal word.

Coverbs are an open class of typically uninflecting roots. Several hundred coverbs can usually be identified, and the class is typically open in the sense that additions to the class come about through some derived use of adjectives and nouns as coverbs; through the combination of finite verbs with English/Kriol coverbs; and through, usually limited, morphological derivation (often marking location), etc. Although generally uninflecting, coverbs in some languages exhibit some limited capacity to be roots. For example, in Bunuba, coverbs can host aspectual and directional suffixes. Additionally, they can be phonotactically distinct from nominal roots, often being (closed) monosyllabic and allowing initial consonants not found in other word classes.

Finite verbs are a small closed class of bound inflecting verbs. They typically inflect for TAM categories and index the person/number categories of core participant roles. The indexing of gender categories is usually restricted to third singular pronominals, and there may be some interaction between person/number categories and other grammaticised categories such as kinship in Murrin-patha (Walsh 1976). The number of finite verbs within such systems varies considerably. At the lower end we find as few as eight in MalakMalak (Birk 1976), while at the higher end there are about thirty-five in Murrinh Patha (Walsh 1976).

Critically, finite verbs contribute to the semantics of the resultant complex verb in some way. The semantics of finite verbs in the languages listed above vary too widely to be easily characterised. The following list is thus not intended as a recipe for such a system, but merely to give readers unfamiliar with these languages an indication of the finite verb semantics that they might expect to find. The semantics of a typical Daly language finite verb system may then include;

- posture/stance: *sit, lie, stand, be*
- movement: *go, bring, carry, throw*
- contact type: *flat/edge, compact/blunt, sharp/poke*, etc.
- manipulation: *with hands, with feet, with mouth*, etc.
- contact: *hit, touch*
- consumption: *burn, ingest*

- *say/do(/think)*
- *see*
- *reciprocal/reflexive* activity can also be coded through finite verb choice
  (e.g. Murrinh Patha, Ngan'gityemerri, Gooniyandi)

As a general observation, for those languages with larger finite verb systems, such as the southern Daly languages, finite verb semantics tend to be more transparent and lexical, whereas for those languages with smaller finite verb systems, such as the eastern Daly languages and the Kimberley languages, finite verb semantics tend to be more difficult to specify, often involving more generalised semantic categorisations and vaguer distinctions in aspect and transitivity (see for example McGregor's (1990:557–572) discussion of 'extendible classifiers' and 'accomplishment classifiers' in Gooniyandi, and Knight's (1999) treatment of Bunuba finite verbs).

While finite verbs contribute to the semantics of the whole verb complex in terms of the kinds of meanings listed here, and can usefully be thought of as having a classificatory function, they do not provide a basis for the division of coverbs into disjoint classes. That is, the class of coverbs cannot be divided up into subclasses according to their finite verb combination. Across a finite verb system there is typically wide variation in the degrees of productivity and semantic transparentness that individual finite verbs display. While some coverbs will occur in combination with only a single finite verb, more typically there will be coverbs which combine with a number of different finite verbs. In Ngan'gityemerri, for example, the coverb *man* 'crawl' combines only with the *Go* finite verb, whereas the coverb *ket* 'detach' has been recorded in combination with the *Sit*, *Hands*, *Mouth*, *Poke*, *Slash*, *Shove*, *Bash* and *Feet* finite verbs, as demonstrated below.

Go	+	*man*	'crawl'
Sit	+	*ket*	'be bogged'
Hands	+	*ket*	'pick (e.g. fruit)'
Mouth	+	*ket*	'stop someone talking'
Poke	+	*ket*	'feel for turtles in mud with a stick'
Slash	+	*ket*	'slice with a knife'
Shove	+	*ket*	'bog a car'
Bash	+	*ket*	'pass someone going the opposite way'
Feet	+	*ket*	'break something with your foot'

Also, some finite verbs will be highly productive and combine with hundreds of different coverbs, while others will be relatively unproductive. In Ngan'gityemerri, for example, the *Hands* finite verb has been recorded with over three hundred different coverbs, whereas the *See* finite verb has only ever been recorded with about six (Reid 1990).

Some finite verbs (typically the stance/posture/motion ones) can function independently, without a coverb, with a clear meaning (often referred to as 'simple verbs').[2] In combination with coverbs, some finite verbs that can occur as simple verbs will retain a highly specific meaning, others will undergo some degree of semantic bleaching — the stance/posture/

---

[2]   Gooniyandi (McGregor 1990) and Ngarinjin (Rumsey 1982), in addition to a smallish class of classifying finite verbs (about ten), have large classes of simple verbs, i.e. finite verbs that stand independently of coverbs.

motion finite verbs for example are often leached of their semantics and contrasted for aspectual distinctions. A more detailed typology of finite verbs in the Southern Daly languages Murrinh Patha and Ngan'gityemerri can be found in I. Green (this volume).

2 Ngan'gityemerri: 1930–1960–1980

This section tracks diachronic morphosyntactic change in the verbal structure of Ngan'gityemerri over the fifty years from 1930 to 1980, by contrasting the data available from three synchronic studies. First, we'll look at the contemporary Ngen'giwumirri verb structure, noting those features of it that are typical of Daly languages. Second, we will examine the findings of D. Tryon and W. Hoddinott and F. Kofod, who collected a lot of data on Ngan'gikurunggurr and Ngen'giwumirri in the late 1960s and early 1970s. Third, we'll then contrast these findings with data on Ngen'gimerri (another dialect of Ngan'gityemerri no longer spoken) collected in 1931 by Gerhardt Laves. In particular, we will concentrate on three aspects of verbal structure: constituent ordering, the possibilities for the independent occurrence of coverbs, and coverb constituency.

2.1 Contemporary Ngan'gityemerri

2.1.1 Constituent ordering

Ngen'giwumirri, Ngan'gikurunggurr and Ngen'gimerri are three closely related dialects of a language referred to as Ngan'gityemerri (Reid 1990). Ngan'gityemerri has a polysynthetic verbal structure that is primarily agglutinative, but partially fusional. Within the complex verb three functional units can be identified: a finite verb, a coverb and an enclitic group. These three units occur in a fixed order and together constitute a single phonological word. The morphemic constituency of these units is set out in Figure 1, below.
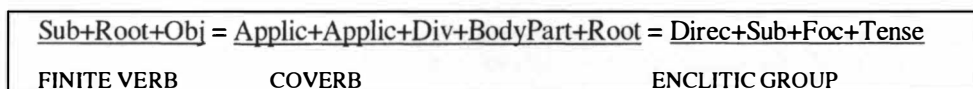
Sub+Root+Obj = Applic+Applic+Div+BodyPart+Root = Direc+Sub+Foc+Tense		
FINITE VERB	COVERB	ENCLITIC GROUP

Figure 1

As this diagram suggests, the Ngan'gityemerri verb can include as many as thirteen morphemes, though after the finite verb only the coverb and tense marker are obligatory. The fused part of the Ngan'gityemerri verb complex is the finite verb unit. Although the constituent morphemes of the finite verb are readily reconstructable (see I. Green, this volume) segmentation between them is not always synchronically practical.

To demonstrate these three units of the verb, consider the two Ngen'giwumirri examples given below. The first is quite complex, having a multimorphemic coverb and a dimorphemic enclitic unit. The second is a simpler example, having a coverb that consists simply of a coverb, and an enclitic group that consists simply of a tense enclitic. I use the symbol = in these examples to mark the boundaries between the finite verb, coverb and enclitic units, and simple hyphens between the constituent morphemes of these units.

(1)[3]   *Wári-ngi=fi-mi-tyerr-tit=nyine-pe.*
           3sgS.Poke.IR-1sgO=CAUS-APPLIC-mouth-raise=FOC-Fut
           'He's about to teach it to me now.'

(2)   *Ngini=fifi=tye.*
           1sgS.Sit.PI=smoke=Past
           'I was smoking.'

As among all the Daly languages, a small subset of finite verbs can stand with enclitics, but in the absence of a coverb, as full independent verbs. In Ngan'gityemerri it is the low transitive posture/motion finite verbs *Sit, Lie, Stand* and *Go* that can function in this capacity (contrast (3) below with (2) above), but there are a few high transitive finite verbs like *See* and *Take* (the latter demonstrated in (4) below), that can stand alone as full verbs.

(3)   *Ngini=tye.*
           1sgS.Sit.IMP=Past
           'I was sitting.'

(4)   *Yawam=ngi!*
           2sgS.Take.IR=1sgO
           'Take me!'

However, most high transitive finite verbs are found only in combination with a coverb.

While no free variation in the respective ordering of the finite verb and the coverb is permitted, there are three subclasses of verbs in contemporary Ngan'gityemerri that reverse the normal finiteverb=coverb=enclitic order, and instead require the ordering coverb= finiteverb=enclitic. The subclasses are (i) the verb 'to want', e.g. (5); (ii) all verbs employing the 'Say/Do' finite verb, e.g. (6); and (iii) a few verbs employing the 'Go' finite verb, e.g. (7).

(5)   *Derrigidi=ngerim-Ø=Ø.*
           want =1sgS.Hands.PR-3sgO=PR
           'I want it.'

(6)   *Ngirrkik=meyi=tye.*
           breathe=3sgS.Do.PI=Past
           'He was breathing.'

(7)   *Misi=yani=pe.*
           die=3sgS.Go.IR=Fut
           'He's going to die.'

---

3   Example glosses employ the following abbreviations: 1sgS - first person singular subject, etc.; 2plO - second person plural object, etc.; 3dlexG - third person dual exclusive goal, etc.; APPLIC - applicative; inc - inclusive; ex - exclusive; S - subject; O - object; G - goal; PR - present; PF - perfective; PI - past imperfective; IR - irrealis; Fut - future tense enclitic; Pres - present tense enclitic; Past - past tense enclitic; DIV - divisive prefix; BOD – body part prefix; CAUS - Causative prefix; FOC - focus marker; SEMB - semblative; HITH - hither; THITH - thither. Each of the 31 finite verbs are given a semantically based label, e.g. *Sit, Lie, Go, Do, Hands, Poke.*

2.1.2 *Independent occurrence of coverbs*

There is a constraint in contemporary Ngan'gityemerri on the independent occurrence of coverbs. In general coverbs are fully dependent on the presence of a finite verb and cannot occur in the absence of finite verbal morphology. A single exception is to be found in the minor and highly restricted occurrence of coverbs as imperatives. Only the following six coverbs have been recorded in isolation in this construction type.

(8) (*yani-*) *wap!*   – sit!
     (*yani-*) *karrbu!* – get down!
     (*yani-*) *pat!*   – get up!
     (*yani-*) *puy!*   – keep going!
     (*yani-*) *tyerr!* – stop!
     (*yani-*) *pap!*   – climb up!

However these are demonstrably reductions of a full imperative construction, with a deleted finite verb *yani* (second person singular subject, Irrealis finite verb *Go*). Otherwise coverbs have no independent status or options for occurrence as free forms.

2.1.3 *Coverb constituency*

Turning our attention to coverb constituency in contemporary Ngan'gityemerri, what reasons can be adduced in support of the claim that applicative, divisive and body-part morphemes form some sort of unit together with the coverb?
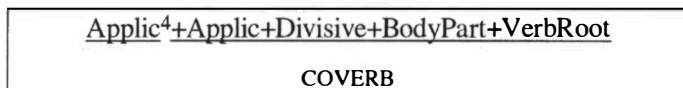
Applic[4]+Applic+Divisive+BodyPart+VerbRoot
COVERB

Figure 2

Some evidence comes from the productive combinatorial possibilities that hold between finite verbs and coverbs. Thus we can take a coverb consisting of 'divisive – bodypart – coverb' and productively recombine that complex coverb with several different finite verbs, as in (9)–(11) below.

(9)   *Nginem=gen-ge-ket.*
      1sgS.Heat.PR=DIV-belly-cut
      'I cut it in half (with a fire stick).'

---

[4]   Applicatives in Ngan'gityemerri are two constituents of the coverb which appear to have arisen through similiar processes that spawned the incorporation of object/location body-part nouns within the verb; however, they are essentially non-productive in the contemporary language. The morpheme -*fi*-, possibly deriving from *pi* 'head', generally now derives causative coverbs, and -*mi*-, derived from *muy* 'eye', functions increasingly as a 'presentive' applicative (to do something in the presence of someone, e.g. 'I pulled out some tobacco *in your sight*' or 'I pulled up *in front of you — where you could see me*'). These derivational forms are discussed in more detail in Reid (2000).

(10)   *Ngebem=gen-ge-ket.*
         1sgS.Bash.PR=DIV-belly-cut
         'I chopped it in half (with an axe).'

(11)   *Ngupun=gen-ge-ket.*
         1sgS.Slash.PR=DIV-belly-cut
         'I sliced it in half (with a knife).'

Secondly, we find that the complex coverb forms a unit that stress-marking rules are sensitive to. In Ngan'gityemerri primary stress falls on the first syllable of the finite verb unit, and secondary stress falls on the first syllable of the coverb, regardless of their internal constituency (i.e. whether the coverb consists simply of a coverb, or of a coverb plus any combination of applicative, divisive or body-part morphemes). Thus while stress marking on nominals is syllable-timed in Ngan'gityemerri, it is possible for primary and secondary stress marking on complex verbs to occur on contiguous syllables, or separated by up to five syllables, as demonstrated in (12)–(16) below.

(12)   *Ngá=pàwal=pe.*
         1sgS.Poke.IR=spear=Fut
         'I'll spear it.'

(13)   *Ngárin-nyi=pàwal=Ø.*
         1sgS.Poke.PF-2sgO=spear=Pres
         'I speared you.'

(14)   *Wúdum-ngirrki=pà=Ø.*
         3sgS.Shove.PF-1dlexG=smile=Pres
         'She smiled at us two.'

(15)   *Wúdumbun-ngiti=fìtyi=Ø   peke.*
         3sgS.Shove.PF-1sgG=roll=Pres   tobacco
         'He rolled me a cigarette.'

(16)   *Wári-ngi=fì-mi-tyerr-tit=nyine-pe.*
         3sgS.Poke.IR-1sgO=CAUS-APPLIC-mouth-raise=FOC-Fut
         'He's about to teach it to me now.'

Looking just at this synchronic data it is not obvious what would motivate the existence of a word-internal boundary at this point, for the purpose of stress assignment. However, an explanation for this pattern arises naturally from the direction of morphosyntactic change argued for in this paper, so we'll return to this issue in §2.3. For now, the main point is that in contemporary Ngan'gityemerri patterns of finite verb and coverb combination, and secondary stress assignment rules, both give us grounds to identify the coverb as some kind of unit.

However, there is also some apparent counter-evidence for such coverb constituency. In §2.1.1 above we noted that all verbs in contemporary Ngan'gityemerri formed with the *Say/Do* finite verb have their coverb ordered before the finite verb. This structural type is demonstrated in Figure 3 below, and exemplified in examples (17)–(20).

Root =	Sub+Root+Obj+BodyPart	Direc+Sub+Foc+Tense
COVERB	FINITE VERB	ENCLITIC GROUP

Figure 3

Note that these verbs share several structural characteristics;

- the coverbs consist of a monomorphemic root only, no examples have causative or other prefixes.
- incorporated body-part morphemes occur in the postfinite verb position.

Both these characteristics suggest that these verbs do not have the kind of coverb constituency demonstrated in Figures 1 and 2. The occurrence of bodypart morphemes to the right of the finite verb raises questions about the juncture between finite verb and body-part morpheme. While this will not be pursued in detail here, because tense enclitics fall to the right of such body-part terms, as demonstrated in (20) below, I'm assuming body-part morphemes to be affixes to the finite verb, and represent this juncture in examples (17)--(20) with a simple hyphen.

(17)   *Tyip=ngiminy-bi-tyeri.*
         dark =1sgS.Do.PF-2sgG-ear
         'I forgot about you.'

(18)   *Palak=ngiminy-muy.*
         blink=1sgS.Do.PF-eye
         'I winked.'

(19)   *Bul=ngimin-ge.*
         anger=1sgS.Do.PF-belly
         'I'm angry.'

(20)   *Buy=ngimi-pi-pe.*
         light=1sgS.Do.IRR-head-Fut
         'I'll go greyhaired.'

Examples such as these do not weaken the analysis of coverb constituency argued for here. In §2.3 it will become apparent that these *Say/Do* verbs are relics of an earlier verbal structural pattern, and have not undergone the changes that have led to the coverb constituency found in the contemporary Ngan'gityemerri verb.

2.2 Ngan'gityemerri in the 1960s and 1970s

Both Tryon (1974) and Hoddinott and Kofod (1989), who worked in the late 1960s and early 1970s, reported some minor variation in the ordering of the coverb and finite verb in Ngan'gikurunggurr (bracketed italicised elements mine):

> ... the verb stem *(coverb)* may either immediately follow the affix unit *(finite verb)* ...
> ngi-ni-lalirr-tye[5] "I ate while in a sitting position", or may sometimes precede the affix
> unit, as in a sentence such as lalirr ngi-ni-tye, which has exactly the same meaning as
> the previous example. (Tryon 1974:238)

> This *(coverb)* normally follows the auxiliary verb *(finite verb)* but in some cases
> (determined by convention) may precede it and in a few other cases both precede and
> follow it. (Hoddinott & Kofod 1989:87)

> Verb stems *(coverbs)* usually follow, but sometimes precede, the auxiliary *(finite verb)*.
> (Hoddinott & Kofod 1989:199)

Tryon does not make explicit claims about whether these complex verbs are made up of one
or more words. Note however that he uses hyphens between all elements in his example
representing the ordering finite verb–coverb, but appears to represent the coverb as a separate
word, without a hyphen, when the coverb precedes the finite verb. His belief that the pre-
positioned coverb is a separate word is further confirmed by his observation about the ability
of the coverb to host tense enclitics (bracketed italicised elements mine):

> ...the position of the tense auxiliaries *(enclitics)* (tye past, ngini future*)* is flexible. They
> may be suffixed to the affix unit *(finite verb)* itself ... or they may be attached to the
> verb stems *(coverbs)* when they precede the affix unit. (Tryon 1974:238)

Hoddinott and Kofod's representations of verbs are just too varied to know whether they
interpret complex verbs as one or two words.

   While each of these authors claimed that the variation is 'free' in the sense that it carries
no change in meaning, both made some attempt to further chase down some conditioning
factor. Tryon suggested that Ngan'gikurunggurr may have used the finite verb–coverb
ordering for past and future tenses, but coverb–finite verb for present tense (Tryon
1976:686), though this would appear to be at odds with the data given in the quote above.
Hoddinott and Kofod further observed that finite verb–coverb ordering appeared to be less
fixed in Ngen'giwumirri than in Ngan'gikurunggurr. I return to this interesting observation
in §3.

2.3 Ngen'gimerri of 1930

   Before detailing the verbal structure, I will offer a few comments concerning the status of
Ngen'gimerri and how it came to be recorded as early as 1930.

2.3.1 Ngen'gimerri and Gerhardt Laves

   Ngen'gimerri is the name given to a speech variety that until fairly recently[6] was spoken
by the northeastern-most Ngan'gityemerri-speaking clan, rak-Merren (the language variety is

---

5   *Ngi-ni-lalirr-tye.*
     1sgS-Sit.Pl-eat-Past
     I was eating.

6   The last active speaker of Ngen'gimerri died in the 1950s. Since his death, his descendants have
     'followed up their mother's side', claiming their primary linguistic and land affiliation with the
     Ngen'giwumirri estate of rak-Lafuganying on the west bank of the Fish River. At the time of writing, no-
     one around the Daly region claims to be Ngen'gimerri anymore.

also known as Ngan'gimerren). Stanner (1933) makes a brief mention of the name, and probably on the basis of this reference, it was included in Capell's (1963) survey. Tindale also appears to have included it in his map, but misplaced it far to the southeast of Wagiman (Tindale 1974). Tryon discounts the existence of Ngen'gimerri as a separate entity, assuming that this is just a variant name for Ngen'giwumirri:

> In the Capell survey (1963) Ngengomeri is allocated the identification no. N64. In the same survey Capell also mentions a language called Nangimerri, to which he assigns the identification no. N65. In fact the two are one and the same language, the two names being simply variants. (Tryon 1974:251)

However the evidence for Ngen'gimerri as a third dialect of Ngan'gityemerri is quite conclusive. First and foremost, it is identified and named by contemporary Ngan'gityemerri speakers. Secondly, despite being spoken by only the clan members of a single small estate, it is remarkably well documented.

Between 1929 and 1931 Gerhardt Laves carried out linguistic and anthropological fieldwork in Australia under the auspices of the Australian National Research Council. A student of Edward Sapir's, he was sent to Australia to study Aboriginal languages, following A.R. Radcliffe-Brown's invitation to Sapir to do the same. During his two years in Australia (August 1929 to August 1931) he travelled widely, collecting data in most mainland states. After working on Gumbaynggir, Karajarri, Bardi, and Goreng, Laves travelled to the Daly region where he worked on Ngen'gimerri and Matngele.[7] On his return to the USA in 1931 Laves continued linguistic studies for a few years, though he switched his focus to American Indian languages. By the time of World War II, he had made a career with the International Harvester Company, and never worked further as a linguist or anthropologist, though according to Nash (1993) he remained in contact with anthropologists at the University of Chicago until his death in March 1993. Laves published only two minor notes about his Aboriginal studies. His original fieldnotes were tracked down by Michael Walsh and Mark Francillion in 1982–83 and copies of these were deposited in the AIATSIS Library in 1985.

Laves' Ngen'gimerri data, consisting of elicitation notes, vocabulary cards, and about 130 pages of annotated but mostly unglossed and untranslated text, is very impressive. Obviously well trained in phonetics, Laves had no difficulty in hearing the rhotic contrast, initial velar nasals, geminate stops etc. Less competent with the rather complex phonology, he had trouble perceiving the nature of the stop contrast[8] and was confused by certain phonological rules. Most impressive is his incisive understanding of the complex verbal morphology, particularly the finite verb inflectional system. Laves is careful to name his informants (King and Nipper), and these are recognised by Ngan'gityemerri speakers as the names of Ngen'gimerri men who died in the 1940s and 1950s.

---

[7]   He named this language 'Emdil' presumably from an Aboriginal pronunciation of 'Hermit Hill', the site of one of the Jesuit Missions on the western side of the middle Daly.

[8]   This contrast has caused considerable difficulties for all who have worked on this language, principally because the parameters underlying the contrast shift from glottal timing to manner of articulation across the place of articulation categories. It took the author several years to figure this out. Laves spent probably no more than a few months working on Ngen'gimerri, so this failure does not diminish my admiration for the detail and accuracy of his work.

2.3.2 Ngen'gimerri as recorded by Gerhardt Laves

Examination of Laves' corpus reveals several striking features of verbal structure. Firstly, there is wide variation in the ordering of the coverb in relation to the finite verb, and evidence that they constituted two phonological words. A text count of all the verbs in Laves' texts reveals that about twenty-five per cent of tokens have the ordering;

coverb = finite verb = enclitics

and in his elicited fieldnotes the proportion is much higher, about 65%. The examples set out below have been specifically chosen to demonstrate this ordering, and should therefore be understood to not reflect these percentages. In the line immediately below each example taken from Laves' texts[9] I have included the glossed contemporary Ngen'giwumirri equivalent.

(21)   Du yeninj, pard deminj.

Yeniny-du   deminy-pat.
3sgS.Go.PF-sleep   3sgS.Hands.PF-rise
'He slept then he got up.'

(22)   Wadad yunin, wadad wum, lalirr wirringgu.

Yu-nin-watat,   wum-watat,   wirriny-gu-lalirr.
2sgS.Slash.IR-1dlincG-hook   3sgS.Slash.PF-hook   3plS.Sit.PF-dlS-eat
'You hook it off (the fire) for us!', he hooked it off, and they (dl) ate it.'

(23)   Dudu dam, dam dudu, kinji dinj parl.

Dam-dudu   dam-dudu   kinyi   diny-pal,
3sgS.Poke.PF-track   3sgS.Poke.PF-track here   3sgS.Sit.PF-camp
'He tracked it, he tracked it along here (to where) it made camp,

Bard deminj, du yeninj, bard deminj.

deminy-pat   yeniny-du   deminy-pat.
3sgS.Hands.PF-arise   3sgS.Go.PF-sleep   3sgS.Hands.PF-rise
'got up, slept again, and got up again.'

Note the varied orderings of the finite verb and the lexical root in the verb 'to track' in example (23).

In addition to variation in constituent ordering, the lack of bonding between the coverb and the rest of the verb is manifest in several other ways. Firstly, compared to modern Ngan'gityemerri, coverbs show a greater capacity to function as free forms without any co-occurring finite verb. Recall that in contemporary Ngan'gityemerri this type of independent occurrence is only found for a small number of coverbs in imperative constructions. With this in mind consider Laves' examples given below.

---

[9]   The only changes I have made to Laves remarkably modern looking orthography are the substitution of e for his ε and ng for his ŋ. Laves' use of ‹rd› and ‹rl› to represent retroflex stop and lateral are an example of his (fortunate) tendency to over-phonemicise when in doubt. There is no apical contrast operating in Ngan'gityemerri, although there are retroflex allophones in certain positions (see Reid 1990 for details).

(24)   Debi yeninj parl debi yeyi

De-bi   yeniny-pal   de-bi   yeyi,
BOD-thigh 3sgS.Go.PF-break BOD-thigh other
'One of its legs was broken, the other leg,

yeyi **parl** daba yeyi **parl**

yeyi   yeniny-pal,   da-ba   yeyi   yeniny-pal.
other   3sgS.Go.PF-break BOD-arm other   3sgS.Go.PF-break
'the other one was broken, one of its arms was broken too.'

(25)   tip deme **daidj**[10] dabi **parl**

Deme-tip   deme-waty   de-pi   deme-pal,
3sgS.Hands.PF-grab 3sgS.Go.PF-twist BOD-head   3sgS.Hands.PF-break
'The ghost seized it, twisted it, broke it's head,

Wurru wudem yerdirri -nide anguitj.

wudeny-wurr   de-yedirr-nide   anguty.
3sgS.ShoveSelf.PF-insert   BOD-hip-LOC   ghost
'and stuck it in his hip (hairbelt).'

Although in these examples the coverbs *parl* 'break' and *daidj* 'twist' appear as free forms, this 'independent' occurrence of the coverb is clearly not unconstrained. From these and other examples it is apparent that this capacity of coverbs to stand independently is sanctioned only where they occur within a string of verbs understood within the discourse referencing structure to share certain information. In (24) the coverb *parl* occurs on its own twice, though both follow an occurence of the full finite verb + coverb *yeninj parl*. This then is clearly finite verb deletion where the same verb is repeated. In (25) we find *parl* occurring on its own, following the different verbs *deme-tip* 'seize' and *(deme)-waty* 'twist'. Significantly, though, all of these three verbs share not only the same finite verb (actions performed holding some object within the grasp of your hands), but also identical subject person/number and TAM coding.

So these free form coverbs can be seen to result from finite verb deletion rather than being truly independent coverbs. Nevertheless, it must be noted that, apart from imperatives, the deletion of even contextually recoverable finite verbs is no longer possible in contemporary Ngen'giwumirri. Note though that contemporary MalakMalak (Harvey pers. comm.) permits finite verb deletion under the same sort of constraints — within a string of serialised verbs sharing the same subject/tense information.

The second striking feature of Laves' Ngen'gimerri texts is the positioning of applicative, divisive and body-part morphemes. Verbal constructions in Laves' Ngen'gimerri data,

---

10   The correspondence between Laves' 'daidj' and contemporary *waty* is unclear. Coverbs that begin with w in contemporary Ngan'gityemerri tend to undergo some phonological changes, most typically *w-* > *m* after *m*, thus underlying 'dem-wurity' becomes surface *dem-murity*, etc. However, no known phonological processes provide a good motivation for the apparent *d-* > *w* found here.
    Note that there are two possible analyses of the first three words in example (25). Either it is underlyingly 'deme-tip deme-daidj' with with deletion of the first finite verb 'deme', or underlyingly the first verb is 'tip-deme' with the ordering of coverb before finite verb. In this scenario (which the bolding suggests) it would be the second coverb *daidj* that stands independently of a finite verb in surface form.

involving both coverbs preceding the finite verb and incorporated body-part morphemes, have the body-part morpheme in the postfinite verb position, as in (26) and (27) below.

(26)　　lid beyinpi waninggi, du yeninj

　　　　Beyin =pi -lit　　　　　wa-ninggi　　　yeniny=du.
　　　　3sgS.Bash.PF=head-cover　paperbark-INSTR　3sgS.Go.PF=sleep
　　　　'He covered himself with paperbark and went to sleep.'

(27)　　tu wurrmudjirri dege

　　　　Wurrmu=tyirri-tu　　de-ge.
　　　　3plS.Slash.IR=navel-cut　BOD-belly
　　　　'They'll cut its guts open.'

Similarly, applicative and divisive morphemes in Laves' Ngen'gimerri data, also occur in the postfinite verb position, as in (28)–(30) below.

(28)　　miyi djuq damnefi

　　　　Miyi　dam-ne=fi-tyuk.
　　　　food　3sgS.Poke.PF-3sgG=CAUS-place
　　　　'He put down food for him.'

(29)　　wurl ngudumuipe

　　　　Ngudu=mi-wul=pe.
　　　　1sgS.Shove.IR=APPLIC-return=Fut
　　　　'I'll take it back.'

(30)　　bi ninggi gerrgerr wurrbumgenge

　　　　Bi-ninggi　wurrbum=gen-ge-gerrgirr.
　　　　axe-INSTR　3plS.Bash.PF=half-belly-cut
　　　　'They chopped it in half with an axe.'

Intriguingly there are no examples in Laves' data where applicative, divisive and body-part morphemes appear in the postfinite verb position, and at the same time the coverb does not appear before the finite verb. It thus seems that in 1930s Ngen'gimerri, coverbs were free to variously appear before or after the finite verb. However this freedom was constrained by the fact that any enclitics attached to the finite verb and enclitics had to be the final element of the verbal complex. Thus coverbs were obligatorily positioned before the finite verb whenever the finite verb bore either applicative, divisive, body-part or overt tense marking. And it is only in the absence of such enclitic morphology that we encounter the optional repositioning of the coverb to the right of the finite verb, as in example (23).

3　Summary of changes in the Ngan'gityemerri verb

This section provides a summary of the changes evident through these three synchronic windows on Ngan'gityemerri verb structure, and uses them to conjecture about the diachronic process of morphosyntactic restructuring. This discussion is essentially pan-dialectal, assuming that Ngen'gimerri of 1930 was not significantly different from Ngen'giwumirri (or even Ngan'gikurunggurr) of the same time, i.e. Laves' description of 1930s Ngen'gimerri is assumed to be an equally good description of 1930s Ngen'giwumirri. While it is the general

direction of morphosyntactic restructuring, from a phrasal verb to the more tightly glomped synthetic verb, that I am primarily concerned with here, rather than the comparative timing of this change in particular dialects, this assumption is crucial to the claims made in this paper, so the basis on which it is made deserves some comment.

Firstly, Laves makes a single comment on the relationship between Ngen'gimerri and Moyel; 'close to Moyel, slight variations, almost purely phonetic'. By 'Moyel' (from Ngen'giwumirri and Ngan'gikurunggurr *muyil* 'swamp'), he probably meant either just Ngan'gikurunggurr, or both Ngan'gikurunggurr and Ngen'giwumirri.[11]   Laves does not mention Ngen'giwumirri explicitly, but given the overall high quality of his data it is difficult to believe that he did not understand it to be different from Ngen'gimerri. As Laves' fieldnotes include no data on 'Moyel', we can not be sure that his reference to the difference between it and Ngen'gimerri being 'purely phonetic' is anything more than impressionistic.

The parallel development of Ngen'gimerri and Ngen'giwumirri is further suggested by anecdotal evidence from contemporary Ngen'giwumirri speakers. Taking Laves' texts with me to Nauiyu Nambiyu and Peppimenarti in 1988, I read them to Ngen'giwumirri people expecting them to be as surprised as I was at the back-to-front verbal structure. While they showed keen interest in the content of the texts, and reminisced about Laves' informants, the structural features of the language elicited not an iota of interest. When I explicitly drew Ngen'giwumirri speakers' attention to the inverse ordering of particular verbs, they seemed nonplussed. When I suggested that this differed from the way they spoke Ngen'giwumirri, in a classic example of the disparity that can exist between people's perception of their language use on the one hand, and their actual use of it on the other, they insisted that this inverse ordering was still normal. Now, in my work on Ngen'giwumirri since 1982, in hundreds of hours of collected texts, and thousands of hours of conversation, I had never heard or recorded a single example of the type of coverb = finite verb = enclitics verbal structure found in Laves' data (except for the three exceptional subclasses listed in §2.1.1). Yet it seems that older Ngen'giwumirri speakers clearly recall this variation, and not only as definitive of Ngen'gimerri but equally as true of Ngen'giwumirri. But while Ngen'giwumirri speakers happily repeated those coverb = finite structures which I read to them from Laves texts, they never spontaneously produced other such constructions, even in the context of discussion of this very topic. It is primarily on the basis of this evidence, then, that I have assumed all the Ngan'gityemerri dialects to have undergone this morphosyntactic restructuring in the same way and at about roughly the same time. Recall though, that Hoddinott and Kofod's (1989) observation that constituent ordering in Ngen'giwumirri was a little 'less fixed than in Ngan'gikurunggurr', provides a suggestive hint that there may have been at least some timing differences between the dialects.

The occasional variation in ordering encountered by Tryon and Hoddinott and Kofod now starts to make sense. Their claim that this type of variation was acceptable only twenty years ago sits nicely with the memories of contemporary elder Ngen'giwumirri speakers who clearly recall such variation even though they no longer spontaneously produce such ordering in their own speech. It thus seems that Tryon and Hoddinott and Kofod, working in the late 1960s and early 1970s, may have just caught the tail end of the stage in this structural

---

[11]   Stanner, working several years later, uses the term Nangiomeri for Ngen'giwumirri, and Moil for Ngan'gikurunggurr. Other writers have used Moyel, or Moil as a blanket term in reference to both dialects.

evolution of the verb during which a variety of structural types co-existed. Certainly this phase was complete by the time I began fieldwork on these dialects in the early 1980s.

So what happened to the Ngan'gityemerri verb? We are now in a position to tie together the various bits of evidence, and see how the verbal complex lost its two-word structure and developed its fixed ordering and single phonological word status.

Sixty years ago the coverb varied between appearing before the finite verb and appearing after the finite verb. In either position it represented a constituent that was not strongly bonded to the finite verb. In addition to the indexing of core participant roles and TAM inflection, it was the finite verb that hosted additional kinds of verbal morphology, such as the applicative, divisive and body-part morphemes. The overt presence of such morphemes, together with the preference for them to be verb-final, tended to send the coverbs to the front. The few subclasses of irregular verbs in contemporary Ngan'gityemerri that have the ordering coverb = finite verb = enclitics (as found in examples (5)–(7)), can logically be thought of as relics of this earlier stage.

The coverb begins to remain in a position after the finite verb, even in the presence of finite verb enclitics. Moreover, some of the verbal morphology that was previously only encliticised to the finite verb (such as applicatives and body-parts), comes to be reinterpreted as prefixes to the coverb, e.g. (i) below becomes (ii).

(i)   finite verb-applicative-bodypart coverb

(ii)   finite verb applicative-bodypart-coverb

A few examples of this attraction can be found in Laves. Consider (31) below.

(31)   warrangitipe   piparlendipe
        Warra-ngiti=fi-pal=endi-pe.
        3plS.PokeSelf.IR-1sgG=CAUS-return=EMPH-Fut
        'They'll be coming back to/for me.'

Compare the position of the 'Causative' applicative *=fi-* in example (31) with that found in (28). In (31), although Laves does not mark stress, we find evidence of *=fi-* reanalysed as a prefix to the coverb *parl* (though Laves has written it as *-pi-*, its identity is not in doubt). This reanalysis is evidenced weakly in Laves breaking up this complex into two orthographic words. It is more strongly evidenced by the fact that both the finite verb root and the coverb root host the tense-marking enclitic *-pe*. Clitic concord of this kind strongly suggests that Ngen'gimerri had a phrasal verb structure, characterised by the combination of a free-form finite verb, and another free-form unit which has begun to develop its own morphological complexity. So lexical coverbs have genuinely become roots, and started to attract their own dependent morphology.

The motivation for this re-encliticisation of tense marking to the coverb in (31) flows from the preference for the enclitic morphemes to be the final element of the complex verb. This same preference earlier prevented coverbs from appearing after the encliticised finite verb. Now that coverbs remain in the postfinite verb position, the enclitics reattach to it. Once the enclitics are hosted by the coverb, and thus retain their verb-final position, they no longer need to also attach to the finite verb. We now have a verbal structure that looks remarkably like that found in contemporary Ngan'gityemerri, except that it still comprises two phonological words. While Laves does not record word stress, assuming all words to be

stressed on their initial syllable, we would now have stress marking on the initial syllable of the finite verb, and also on the initial syllable of the coverb.

(32)   áuxiliary   ápplicative-divisive-bodypart-coverb=enclitics

At this stage, as encountered by Tryon and Hoddinott and Kofod in the late 1960s–1970s, the coverb still shows some capacity to appear in the position before the finite verb, but only where it comprises a bare coverb.

From the two-word verb complex in (32) above, only two changes remain to get us to the contemporary Ngan'gityemerri verb. Firstly we develop fixed constituent ordering, such that bare coverbs can no longer freely shift to the position in front of the finite verb. Secondly, fixed ordering leads to phonological merger, producing a single phonological word, as in the following example.

(33)   áuxiliary=ápplicatives-divisive-bodypart-coverb=enclitics

Note that this merger now provides an explanation for why the unit labelled coverb in contemporary Ngan'gityemerri is relevant to the rule assigning secondary stress to the complex verb.

We can summarise §3 with examples of the stages discussed here.

STAGE 1:   Coverb   Finite verb
[two separate words, ordered as above]

(34)   wurl ngudumuipe   (example (29) repeated)
        Ngudu=mi-wul=pe.
        1sgS.Shove.IR=APPLIC-return=Fut
        'I'll take it back.'

STAGE 2:   (Coverb)   Finite verb   (Coverb)
    [two words, coverb can variably appear after the finite verb when the finite verb carries no enclitics, thus bracketed constituents are either/or].

(35) Dudu dam dam dudu, kinji dinj parl   (example (23) repeated)
    Dam-dudu   *dam-dudu*   *kinyi*   *diny-pal* ...
    3sgS.Poke.PF-track 3sgS.Poke.PF-track here   3sgS.Sit.PF-camp
    'He tracked it, he tracked it along here (to where) it made camp ...'

STAGE 3:   Finite verb = Enclitics   (Coverb)
    [two words, coverb now appears after the finite verb, even when the finite verb carries enclitics].

There are no examples of this putative stage in Laves' corpus.

STAGE 4:   Finite verb=Enclitics   Coverb   →   Finite verb   prefixes=Coverb
    [still two words, coverb appears after the finite verb. Applicative, divisive, and body-part morphemes get reinterpreted from enclitics to the finite verb, to prefixes to the lexical coverb root. We now have a morphologically complex coverb. Tense enclitics can appear on both words].

    Laves provides examples of this stage, as in (36) below, but note that no examples of this type can be found in contemporary Ngan'gityemerri.

(36)   warrangitipe   piparlendipe   (example (31) repeated)
         Warra-ngiti=fi-pal=endi-pe.
         3plS.PokeSelf.IR-1sgG=CAUS-return=EMPH-Fut
         'They'll be coming back to/for me.'

STAGE 5:   Finite verb = Coverb = Enclitics
    [Enclitics attach only to coverb. Finite verb and coverb merge into single phonological
    word, but secondary stress marking falling on the initial syllable of the coverb is a residual
    marker of its former word status].

(37)   (example (1) repeated)
         Wári-ngi=fì-mi-tyerr-tit=nyine-pe.
         3sgS.Poke.IR-1sgO=CAUS-APPLIC-mouth-raise=FOC-Fut
         'He's about to teach it to me now.'

4   Further recent verb complex innovation in Ngan'gityemerri

There are two features of contemporary Ngan'gityemerri of which no evidence can be
found in Laves' data. The first is the development of encliticised finite verbs coding
progressive aspect as the final element of the verbal complex. The second is incorporation
into the verbal complex of a set of body-part morphemes. This section argues that these are
recent innovations in Ngan'gityemerri, and considers how the coding of innovated categories
can be handled within an essentially polysynthetic fixed ordered verbal complex.

4.1   Serialised verbs as aspect marking enclitics

Aspect cannot be said to be marked neatly in Ngan'gityemerri, the task of marking
aspectual information falling onto several overlapping subsystems, including finite verb
inflection, coverb reduplication, and encliticised serial verbs. Discussion of finite verb
inflection and coverb reduplication can be found in Reid (1990). This section looks briefly at
a mechanism of using encliticised serial verbs to code aspectual information, that has all the
hallmarks of being a recent innovation.

In contemporary Ngan'gityemerri the five intransitive finite verbs, *Sit*, *Lie*, *Stand*, *Go*,
and *Travel*[12] can be serialised to the entire verbal complex as aspectual operators coding
imperfective aspect.

(38)   FINITE VERB = COVERB = SUFFIX GROUP = SERIAL FINITE VERB

Morphologically, these serial verbs function as enclitics to the complex coverb, though they
are distinguishable from the enclitics that we have already encountered by virtue of being
added on as the final right-most element of that group. As their morphophonological status
might suggest, these enclitics fall within the pitch contour assigned to the verbal complex as a
single phonological word. They are assigned no stress, not even secondarily, and because
they typically occur utterance-finally, they are characterised by falling intonation and lack
any auditory prominence.

---

12   The finite verb *Travel* differs semantically from *Go* in denoting more purposive, goal-oriented movement.

Another characteristic of the serial verb construction is that both the main verb and the encliticised serial verb are fully inflected finite verbs overtly coded morphologically for subject person/number and TAM categories. However, strict agreement constraints make it clear that this is a complex monoclausal construction, rather than a biclausal paratactic construction.

An encliticised serial verb functioning as an enclitic must show concord with the main finite verb with regard to tense/aspect/mood inflection, and subject person and number. This is demonstrated in examples (39)–(41) below (for these three examples I've adopted the convention of bolding those components of the gloss which indicate the required concordance. I've not maintained this convention throughout the rest of this section though).

(39)   *Warri-batybity-pe-wirri.*
       3plS.Poke.**IR**-sew-Fut-**3pl**.Sit.**IR**
       'They will be sewing.'

(40)   *Dangim-batybity-dim.*
       3sgS.Poke.**PR**-sew-**3sgS**.Sit.**PR**
       'She is sewing.'

(41)   *Nganni-batybity-tye-nginni.*
       1plexS.Poke.**P**-sew-Past-**1plexS**.Sit.**P**
       'We were sewing.'

Looking now at the subjects of encliticised serial verbs, note that person concord is always with the syntactic subject of the main finite verb. Ngan'gityemerri has an 'impersonal verb' construction (see Walsh (1987) for more detailed discussion of this verb type) where non-volitional patients get cross-referenced as the direct object of an unspecified referentless third person singular subject. These kinds of constructions, as in (42)–(45) below, are always translated by Ngan'gityemerri speakers into English constructions where the semantic patient is syntactic subject, as indicated by my translations, rather than the bracketed 'literal' translations. Even in such 'impersonal verbs' though, subject marking on the encliticised serial verb shows strict concordance with the referentless third person singular subject marking.

(42)   *Dani-ngi-kada-tye-dini.*
       3sgS.Poke.PI-1sgO-sad-Past-3sgS.Sit.PI
       'I was feeling sad.' (lit. 'It was saddening me.')

(43)   *Danging-ngi-fulful-yenim.*
(NgK) 3sgS.Poke.PR-1sgO-twinge-3sgS.Go.PR
       'I keep feeling this "twinge".' (lit. 'It was "twinging" me.')

(44)   *Deme-nyi-mi-dit-tye-dini*   *kuru-nimbi.*
       3sgS.Hands.PI-2sgO-APPLIC-ache-Past-3sgS.Sit.PI liquid-CAUS
       'You still had a headache from the beer.' (lit. 'It was making you ache.')

(45)   *Fidi-nide   wa-ngirrki-syalat-pe-wiri.*
       heat-LOC   3sgS.Heat.IR-1dlexO-warm-Fut-3sgS.Sit.IR
       'We'll get warm in the sunshine.' (lit. 'It will warm us.')

Encliticised serial verbs concord only for the subject marking that is cross-referenced on the main finite verb, and cannot play host to non-subject marking. As is evident from example

(47) below, this constraint extends even to the copying of the indirect objects of reflexive verbs, where the Goal (G) is co-referential with the subject.

(46)   *Ngeme-mbi-yen'gi-tye-ngini*   (*-mbi).
        1sgS.Hands.PI-2sgG-tell.story-Past-1sgS.Sit.PI   (*-2sgG)
        'I was telling you a story then.'

(47)   *Demen-ne-dundum-yenim*   (*-ne).
        3sgS.Hands.Self.PR-3sgG-bury-3sgS.Go.PR   (*-3sgG)
        '(The sandfrog who) habitually buries himself in the sand.'

Likewise, the subject of the encliticised serial verb cannot represent the aggregate of the subject and non-subject arguments of the main verb. Thus in example (48) below, the attempt to serialise a finite verb with first person exclusive dual subject marking, as the sum of first person singular subject and third person singular goal marking, is ungrammatical.

(48)   **Ngerim-ne-tyerr-baty-ngannung-gu.*
        1sgS.Hands.PR-3sgG-mouth-hold-1plexS.Go.PR-dlS
        'I am leading him along.'

Any violation of the requirement that the subjects of the main finite verb and the encliticised serial verb be fully coreferential, is quite ungrammatical. Note that an example like (48) above could plausibly be interpreted as 'I lead him, we are going along', though to fulfil the phonological requirements of an independent paratactic clause *ngannunggu* (an enclitic in (48)) would have to be set off on its own intonation contour with primary stress marking on its initial syllable, and of course this would neutralise the imperfective aspect reading. Alternatively, note that example (48) could be repaired by substituting the encliticised finite verb *ngannunggu* with *ngaganim* 'I go'.

As imperfective aspect operators, the *Sit, Lie, Stand, Go* and *Travel* finite verbs can have the same sort of classificatory role with regard to posture/motion that they display as main finite verbs in general intransitive verbs. *Sit, Lie* and *Stand* classify the action of the verb with respect to the posture of the subject, for example:

(49)   *Yawul   karrityinmade   ngebem=wurity=ngirim*   *tyatma.*
        spear   bent   1sgS.Bash.PR=fix=1sgS.Sit.PR   straight
        'I'm sitting straightening this bent spear.'

(50)   *Yawul   karrityinmade   ngebem=wurity=ngibem*   *tyatma.*
        spear   bent   1sgS.Bash.PR=fix=1sgS.Lie.PR   straight
        'I'm lying straightening this bent spear.'

(51)   *Yawul   karrityinmade   ngebem=wurity=ngirribem*   *tyatma.*
        spear   bent   1sgS.Bash.PR=fix=1sgS.Stand.PR   straight.
        'I'm standing straightening this bent spear.'

However, in general serialised aspectual finite verbs are bleached of any strong lexical semantic content, and it is the serialised *Sit* finite verb which is the posturally unmarked choice for imperfective actions performed within a single location. Thus examples (50) and (51) above can be said to be highly marked with respect to posture. Conversely, it would be quite natural for (52), employing the *Sit* finite verb, to be uttered by someone standing over a billy.

(52)   *Nginem=purrngpurrng=nyine=ngirim!*
       1sgS.Heat.PR=boil=FOC=1sgS.Sit.PR
       'I'm boiling it right now!'

The choice of the *Go* finite verbs as imperfective aspectual markers either denotes motion as in (53) and (54), habitual activity as in (55) and (56), or common knowledge facts as in (57) and (58).

(53)   *Werrmim-ne=tyerr-baty=wannim.*
       3plS.Hands.PR-3sgG=mouth-hold=3plS.Go.PR
       'They are leading him along.'

(54)   *Wasangari-kana   wirribem,*
(NgK) Clean-FOC   3sgS.Stand.PR

       yerim=fityi=pefi=yaganim.
       2sgS.Hands.PR=roll=THITH=2sgS.Go.PR
       '(The car) is clean now, you can drive it away.'

(55)   *Yerr-ngini-warrgudu-gumu*
       Tree-KIND-dillybag-SEMB
       'They were repeatedly throwing a thing like a dillybag

       wunni=wutyity=tye=waddi   a-bilirri-ne.
       3plS.Slash.PI=throw=Past=3plS.Go.PI Anim-alive-PURP
       '(a throw net) in order to catch live bait.'

(56)   *Madewetimbi wa-mumu-nimbi   resyin*
       long.ago   Male-taboo-SRCE rations

       wurrmu=wawu=tye=waddi.
       3plS.Snatch.PI=pick.up=Past=3plS.Go.PI
       'In the old days they used to collect rations from the policeman.'

(57)   *Detyeri-werri yenim   dem=wurity=yenim   mudiga.*
       ear-ASSOC   3sgS.Go.PR 3sgS.Hands.PR=fix=3sgS.Go.PR car
       'He knows how to fix cars.'

(58)   *Gagu   a-niyen,   a-yaga   menyirr nganimuy-nide,*
       animal Anim-sandfrog Anim-DEM   sand   loose-LOC
       'Ancestral Sandfrog, that one who always buries himself in the loose sand,

       demem=dundum=yenim   kine puty-meny-me,
       3sgS.Hands.Self.PR=bury=3sgS.Go.PR this   create-3sgS.Do.PF-hand
       'he made this place,

       Niyen.
       place
       'Niyen.'

There are two factors which suggest that this type of complex predicate structure in contemporary Ngan'gityemerri has only been developed very recently. Firstly, there is no evidence of encliticised serial verbs in Laves' Ngen'gimerri data of 1930. In contemporary Ngan'gityemerri encliticised serial verbs occur frequently in text, and a text corpus as

substantial as Laves' would be expected to include some if they were a feature of this language in the 1930s.

The second factor draws on typologically driven expectations about the position of aspectual operators with respect to verbal nuclei. The ordering of these encliticised serial verbs as the final element of the verbal complex in Ngan'gityemerri stands as a counter-example to two of the general claims made by Foley and Van Valin about the relationship between aspectual operators and the verb nuclei over which they have scope. Foley and Van Valin (1984:210) claim that aspect is a nuclear operator while tense is a peripheral one. They argue that this difference in scope is reflected in ordering constraints in those languages that mark tense and aspect as separate inflectional categories. Quoting examples from Kewa (Franklin 1971) and Tiwi (Osborne 1974) they note that aspect is always marked closer to verb nuclei than tense, and add that 'they know of no cases of the inverse ordering in which tense is closer to the stem than aspect' (Foley & Van Valin 1984:210). Similar claims are to be found in Bybee (1985).

In contradistinction to this claim Ngan'gityemerri clearly marks tense closer to the verb nucleus than imperfective aspect. This is demonstrated in (59) below, where the Past tense enclitic *-tye* immediately follows the coverb, and is in turn followed by the serialised 'Sit' finite verb.

(59)   *Wanni=batybity=tye=winni   warrgudu.*
        3plS.Poke.PI=sew=Past=3plS.Sit.PI dillybag
        'They were sewing dillybags.'

Foley and Van Valin also describe the relationship between directionals and aspectual markers (both nuclear operators) in the following way. 'Kewa also has directional suffixes and provides evidence that of the two nuclear operators aspect and directionals, aspect is the more inner. For when a verb is inflected for both aspect and directionals, aspect occurs immediately following the coverb, followed by the directional, followed in turn by tense' (Foley & Van Valin 1984:212). Unlike Kewa, in Ngan'gityemerri we find the directional enclitics (*pefi* in (60)) 'inside' the serialised aspect enclitic.

(60)   *Wasangari-kana   wirribem,   yerim=fityi=pefi=yaganim.*
        clean-FOC   3sgS.Stand.PR   2sgS.Hands.PR=roll=THITH=2sgS.Go.PR
        '(The car) is clean now, you can drive it away.'

While the ordered position of aspectual operators in the Ngan'gityemerri verb violates the ordering constraints that, according to Foley and Van Valin (1984:212), are widespread in the languages of the world, this does not so much weaken Foley and Van Valin's claim, as point to the recent development of these encliticised serial verbs. Clearly the serialised posture/motion finite verbs in Ngan'gityemerri are not good examples of aspectual operators. By weakly retaining some of their lexical semantic character, and by fully inflecting for subject and TAM categories, they are still more than just simply markers of aspect. If these encliticised serial verbs in contemporary Ngan'gityemerri were to fully lose their lexical semantic characteristics and develop into simple aspect markers, one might predict, in view of Foley and Van Valin's claim, that they might shift 'inside' the tense markers to a position closer to the coverb, as indeed they have in the neighbouring language Marrithiyel where the

major tense/mood enclitics have shifted rightwards from the transitive verb to appear on the serialised intransitive finite verb (Green 1989:175).[13]

(61)   Marrithiyel
       Awu nginj-bi   gangi-ya.
       meat 1sS.R.nj-cook 1sS.R.sit-Pst
       'I was cooking the meat on the coals.'

4.2 Syntactic incorporation of body-part terms

Analysis of contemporary Ngan'gityemerri verbs benefits from a distinction between lexical and syntactic incorporation of body-part morphemes. A fuller description of the distinction can be found in Reid (1990), Green (1989), and Evans (1996). For the purpose of this discussion, the distinction can be summarised as follows.

Firstly, syntactic incorporation is 'optional', in the sense that the construction can be paraphrased by extracting the body-part noun and having it appear as a free-form noun external to the verb. Syntactic incorporation is productive, and constrained to certain predictable grammatical relations holding between the incorporated nominal and predicate (prototypically, where body-part possessors are the objects or locatives of transitive verbs). Thus in (62) below, *panmi* could either appear outside of the verb, or indeed could be substituted with *firr* 'foot', *garri* 'leg', *purr* 'bottom', etc.

(62)   *Dangim=fi-panmi-tyat   (da-panmi).*
       3sgS.Poke.PF=CAUS-crotch-place   BOD-crotch
       'He placed it in the fork (of the tree).'

Secondly, lexical incorporation, on the other hand, is a compounding process that takes a body-part morpheme and a coverb, and from them derives a new coverb. Lexical incorporation is non-productive, cannot be paraphrased by having the body-part noun appear outside the verb, and the meaning of coverbs is typically compositional and implicit, and not amenable to description in terms of syntactic relations. Thus *tyeribaty* in (63) below is a lexically compounded coverb meaning 'listen', so *tyeri* is not omissible, nor can it be productively substituted with any other body-part morphemes.

(63)   *Ngibem-mbi=tyeri-baty.*
       1sgS.Lie.PR-2sgG=ear-hold
       'I'm listening to you.'

Now, returning to Laves' data, we have already noted the restructuring that has taken body-part terms from being suffixes to the finite verb and grouped them along with applicative and divisive prefixes in a coverb unit along with the coverb root. However, while there is some evidence in Laves' Ngen'gimerri data of incorporated body-part roots, all examples are body-part incorporation of the lexical kind, regardless of the ordering of coverbs with respect to the finite verb.

---

[13]   This data comes from Green (1989), but the analysis is my own. Here, and in the following section on body-part term incorporation, I am operating on the as yet unproven assumption that Marrithiyel has earlier undergone similar restructuring through areal diffusion of this verbal type.

(64)   darl menj mui
         Tal-meny-muy.
         focus-3sgS.Do.PF-eye
         'He focused his eyes on the distance.'

(65)   wannimne mendjityerr
         Wannim-ne-menytyi-tyerr.
         3plS.Go.PF-3sgG-throat-stop
         'They waited for him.'

In other words there are no examples to be found in Laves data of the type of syntactic body-part term incorporation where the body-part morpheme is omittable or externally paraphrasable. In contemporary Ngan'gityemerri, syntactic incorporation of body-part terms is highly productive, but its frequency of occurrence is dependent on text type. It is in texts about travel across the landscape that the highest rates of occurrence are found. I have collected texts where nine contiguous verbs include incorporated body-part terms. Significantly, even in Laves' texts that fit this contextual 'type', no examples of syntactic incorporation are found.

Assuming syntactic incorporation to have developed in Ngan'gityemerri since the 1930s, it is possible to now consider how a language that has developed a fixed polysynthetic verbal structure goes about the task of coding a new type of grammatical information, in a manner that may inform our understanding of the contemporary verbal structures of not only Ngan'gityemerri, but also the Western Daly languages. Let us take Ngen'giwumirri and Marrithiyel as examples. Once you have moved from a loose phrasal type verb characterised by a finite verb and an independent coverb, to a highly 'glomped' polysynthetic structure, as described above for contemporary Ngan'gityemerri, you have a fixed constituent 'finite verb = coverb' structure to which the enclitic group can be attached. For example:

(66)   [fínite verb = (applicative) – (divisive) – (lexical bodypart) – coverb] = enclitics

Faced with the prospect of coding a new category of grammatical information (i.e. syntactically incorporated body-part terms), there are only two possibilities. Either you must develop new slots to the right of the coverb, or you make double use of existing slots by assigning the marking of the new information to existing slots within the coverb.

In developing syntactic incorporation of body-part terms, Ngan'gityemerri and Marrithiyel have each exploited one of these options. In Marrithiyel, which also has lexically incorporated body parts to the left of the coverb, we find the subsequent development of syntactic incorporation assigned to a new slot to the right of the coverb root. For example:

(67)   Marrithiyel

         [finite verb – applicative – divisive – lex bodypart – coverb] – syn bodypart – enclitics

(68)   Marrithiyel (lexical)
         Ngirringgi-yan-dim-Ø-a.
         1plexS.rr.IRR-nose-sink-plS-Past
         'We should have drowned him.'

(69)   Marrithiyel (syntactic)
        Ginj-inj-duk-miri-ya   sjiri.
        3sgS.nj.PF-2sgO-pull.out-eye-P splinter
        'She removed a splinter from your eye.'

In contrast Ngan'gityemerri has opted for assigning the marking of syntactic incorporation to the same verbal slot as lexically incorporated body-part terms.

(70)   Ngan'gityemerri
        [finite verb = applicative – divisive – lexical bodypart – coverb] = enclitics
                                    syntactic bodypart

(71)   Ngan'gityemerri (lexical)
        Ngibem-mbi=tyeri-baty.
        1sgS.Lie.PR-2sgG=ear-hold
        'I'm listening to you.'

(72)   Ngan'gityemerri (syntactic)
        Dangim=fi-panmi-tyat.
        3sgS.Poke.PF=CAUS-crotch-place
        'He placed it in the fork of the tree.'

However, for Ngan'gityemerri one consequence of assigning syntactically incorporated body-part morphemes to the same verbal position as lexical incorporation, is that syntactic incorporation is blocked where the coverb is a lexicalised *body part – coverb root* compound. There is room for only a single nominal root, and lexicalised compounds have prior claim to this slot.[14]

The situation with Marrithiyel is not quite as neat as this suggests. There appears to have been some bleeding between the two body-part term positions in contemporary Marrithiyel, and also some evidence for the reassigning of lexically incorporated body-part morphemes to the post-coverb position (I. Green pers. comm.). However this account does provide for a plausible mechanism whereby languages like Marrithiyel (Green 1989), and possibly Mayali (Evans 1996), come to develop multiple slots within the verbal complex to which different types of incorporated nominal are assigned.

5 Direction and timing of these morphosyntactic changes

If the arguments put forward are convincing, we have evidence for Ngan'gityemerri having undergone a fairly radical morphosyntactic restructuring. Only sixty years ago we find a loose phrasal type verb, the last vestiges of which were recorded by Tryon, Hoddinott and Kofod in the 1970s. By the mid 1980s the Ngan'gityemerri verbal complex has become a tightly structured polysynthetic unit with an enclitic group allowing for the coding of further grammatical information within the verb complex as a whole.

Two aspects of these changes, their speed and their direction, deserve some comment. Firstly, the speed of this restructuring, even allowing for it to have begun a few generations before Laves' visit to the Daly, would appear at first glance to be rapid. However, there are no real models for diachronic morphosyntactic restructuring in Australia with which the

---

14   This 'consequence' is not ubiquitous. As demonstrated here, languages like Mayali and Marrithiyel allow multiple nominal roots to be incorporated into different slots, depending on their function.

Ngan'gityemerri situation can be usefully compared. Looking beyond Australia, while there is a wealth of literature on morphosyntactic changes to English and other European languages, the radically different type of speech communities of these languages calls the applicability of any such models to Australian contexts into question. There is a dearth of research into rates of morphosyntactic change in small, non-literate speech communities, although Nettle (1999) suggests that language changes can be 'fixed' more readily in small speech communities. Given the tiny size of the Ngan'gityemerri speech community (about a hundred people), it is probable that innovations are exposed to the whole community in a very short time, and if adopted can become norms almost instantly. Small speech-community size would thus appear to facilitate *parole* becoming *langue*, and in light of this, the view that the changes documented here are 'radically fast' may be nothing more than expectations predicated on models of language change based on much larger speech communities.

Secondly, let us consider the direction of these changes. The period of 1900 onwards has been one of massive upheaval for Ngan'gityemerri speakers. During this period contact with Europeans ended the old order and ushered in a period of almost unimaginable social disruption (see Stanner's (1933) description of the Daly). Two issues arising here are: was this substantial language change triggered by these events? And is this change associated with language death/disuse in any way? What we know about the use of Ngan'gityemerri, coupled with the facts about the structural changes described here, can shed some light on these questions.

Ngan'gityemerri speakers themselves, despite the social turmoil of the time in question, describe a continuous and strong tradition of speaking this language, even though at times, such as the years of the Army camps, [15] the pool of speakers became quite small.

If the structural changes that have taken place in Ngan'gityemerri somehow resulted from contact with English, we would anticipate that morphosyntactic restructuring would flow in the direction of English. This expectation is established on the basis of several studies, such as Lee's (1987) study of Tiwi, and in Schmidt's (1985) study of young speakers of Dyirbal. In both these cases we find evidence of widespread and systematic reduction in morphological contrasts. In the case of Tiwi, contact with English has lead to massive simplification of the Tiwi verb structure by younger generations of speakers. Among other changes, Lee describes the reduction of complex verbs to bare coverbs by stripping them of all affixal and inflectional morphology. Amongst young speakers of Dyirbal, Schmidt records, among other things, systematic reduction and neutralisation of nominal case categories. In both these studies the direction of recorded changes is clearly towards English, at least in the sense of the changes being geared towards decreased morphological complexity and increased analytic word formation.

In stark contrast to these case studies, the recorded changes in Ngan'gityemerri are clearly in the direction of increased morphological complexity and synthesis. There is nothing about the process of taking a phrasal verb and restructuring it into a polysynthetic complex that can conveniently be viewed as resulting from pressure brought to bear on Ngan'gityemerri from the direction of English. For these reasons I believe that these changes were incipient in Ngan'gityemerri, and their timing with respect to contact with English speakers quite coincidental.

---

[15]   During WWII there were a series of Defence Force staging camps along the Stuart Highway. Many
Ngan'gityemerri speakers drifted to these camps to seek work collecting firewood and shooting game.

References

Birk, David, 1976, *The MalakMalak language, Daly River (Western Arnhem Land)*. Canberra: Pacific Linguistics.

Bolt, Janet, William Hoddinott and Frances M. Kofod, 1971, An elementary grammar of the Nungali language of the Northern Territory. Unpublished MS. Canberra: AIATSIS.

Bybee, Joan, 1985, *Morphology: a study of the relation between meaning and form*. Amsterdam: John Benjamins.

Capell, Arthur, 1963, *Linguistic survey of Australia*. Sydney: AIAS

1976, Simple and compound verbs: conjugation by auxiliaries in Australian verbal systems: Rapporteurs's introduction and summary. In R.M.W. Dixon, ed. *Grammatical categories in Australian languages,* 615–625. Canberra: AIAS.

Capell, Arthur and Howard Coate, 1984, *Comparative studies in Northern Kimberley languages*. Canberra: Pacific Linguistics.

Chadwick, Neil, 1975, *A descriptive study of the Djingili language*. Canberra: AIAS.

1997, The Barkly and Jaminjungan languages: a non-contiguous genetic grouping in North Australia. In D. Tryon and M. Walsh, eds *Boundary Rider: essays in honour of Geoffrey O'Grady*, 95–106. Canberra: Pacific Linguistics.

Chappell, Hilary and William McGregor, 1996, *The grammar of inalienability*. Berlin: Mouton de Gruyter.

Cleverley, John R., 1968, A preliminary study of the phonology and grammar of Djamindjung. Unpublished MA thesis, University of New England, Armidale.

Cook, Anthony, 1987, Wagiman Matyin: a description of the Wagiman language of the Northern Territory. PhD thesis, La Trobe University, Melbourne.

1988, Participle sentences in Wakiman. In Peter Austin, ed. *Complex sentence constructions in Australian languages*. Amsterdam: John Benjamins.

Evans, Nicholas, 1996, The syntax and semantics of bodypart incorporation in Mayali. In Chappell and McGregor, eds 1996:65–109.

Foley, William and Robert Van Valin, 1984, *Functional syntax and universal grammar*. Cambridge: Cambridge University Press.

Franklin, Karl, 1971, *A grammar of Kewa, New Guinea*. Canberra: Pacific Linguistics.

Green, Ian, 1989, Marrithiyel: a language of the Daly River region of Australia's Northern Territory. Unpublished PhD thesis, The Australian National University, Canberra.

1995, The death of 'prefixing': contact induced typological change in northern Australia. In Proceedings of the twenty-first annual meeting of the Berkeley Linguistics Society. *BLS* 21:414–425.

Hoddinott, William and Frances Kofod, 1988, *The Ngankikurungkurr language (Daly River Area, Northern Territory)*. Canberra: Pacific Linguistics.

Hosokawa, Komei, 1991, The Yawuru language of the Western Kimberleys: a meaning-based description. Unpublished PhD thesis, The Australian National University, Canberra.

Knight, Emily, 1999, The semantics of Bunuba verb roots: the semantic motivation for the combination of coverbs and verb roots. Paper presented at ALT–III, Symposium on verb classification, Amsterdam.

Laves, Gerhardt, n.d., Ngangimerri Fieldnotes. MS. 2189. Australian Institute of Aboriginal and Torres Strait Islander Studies Library, Canberra. [notes of fieldwork carried out 1929–31].

Lee, Jennifer, 1987, *Tiwi today: a study of language change in a contact situation.* Canberra: Pacific Linguistics.

McGregor, William, 1990, *A functional grammar of Gooniyandi.* Amsterdam: John Benjamins.

1994, *Warrwa*. Munich: Lincom Europa.

Merlan, Francesca, 1982, *Mangarayi*. Lingua Descriptive Series 4. Amsterdam: North Holland.

1994, *A grammar of Wardaman: a language of the Northern Territory of Australia.* Berlin: Mouton de Gruyter.

Nash, David, 1993, Obituary for Gerhardt Laves. *Australian Aboriginal Studies* 1/93. Canberra: AIATSIS.

Nettle, Daniel, 1999, *Linguistic diversity.* Oxford: Oxford University Press.

Nordlinger, Rachel, 1998, *A grammar of Wambaya, Northern Territory (Australia).* Canberra: Pacific Linguistics.

Osborne, Charles R., 1974, *The Tiwi language.* Canberra: Australian Institute of Aboriginal and Torres Strait Islander Studies.

Reid, Nicholas, 1982, The basic morphology of Ŋangikurunggurr. Unpublished BA (Hons) thesis, ANU, Canberra.

1990, Ngan'gityemerri: a language of the Daly River Region, Northern Territory of Australia. PhD thesis, The Australian National University, Canberra.

2000, Complex Verb Collocations in Ngan'gityemerri: a non-derivational mechanism for encoding valency alternations. In R.M.W. Dixon and A. Aikenvald, eds *Changing Valency: case studies in transitivity.* Studies in Language Series. Cambridge: Cambridge University Press.

Rumsey, Alan, 1982, *An intra-sentence grammar of Ungarinjin, north western Australia.* Canberra: Pacific Linguistics.

2000. Bunuba. In R.M.W. Dixon and Barry Blake, eds, *The handbook of Australian languages*, vol. 5, 34–152. Melbourne: Oxford University Press.

Schmidt, Annette, 1985, *Young people's Dyirbal: an example of language death from Australia.* Cambridge: Cambridge University Press.

Schultze-Berndt, Eva, 2000, Simple and complex verbs in Jaminjung. A study of event categorisation in an Australian language. PhD thesis, Katholieke Universiteit Nijmegen.

Sharpe, Margaret C., 1972, *Alawa phonology and grammar.* Canberra: AIAS.

Silverstein, Michael, 1986, Classifiers, verb classifiers, and verbal categories. *Berkeley Linguistic Society* 12:497–514.

Stanner, W.E.H., 1933, The Daly River tribes: a report of fieldwork in north Australia. *Oceania*, 3/4:337–405, 4/1:10–29.

Stokes, Bronwyn, 1982, A description of Nyigina: a language of the West Kimberley. Unpublished PhD thesis, The Australian National University, Canberra.

Tindale, Norman B., 1974, *Aboriginal tribes of Australia: their terrain, environmental controls, distribution, limits, and proper names.* Berkeley: University of California Press.

Tryon, D.T., 1974, *Daly family languages, Australia*. Canberra: Pacific Linguistics.

1976, The Daly family. In R.M.W. Dixon, ed. *Grammatical categories in Australian languages*, 673–691. Canberra: AIAS.

Walsh, Michael J., 1976, The Murinypata language of North-West Australia. PhD thesis, The Australian National University, Canberra.

1987, The impersonal verb construction in Australian languages. In R. Steele and T. Threadgold, eds *Language topics: essays in honour of Michael Halliday*. Amsterdam: John Benjamins.

Wurm, S.A., 1972, *Languages of Australia and Tasmania*. The Hague: Mouton.