

# Argument coding and clause linkage in Australian Aboriginal languages

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## 1. Introduction<sup>1</sup>

In the descriptive and typological linguistic literature, Australian Aboriginal languages, especially those of the Pama-Nyungan group, have become notorious for their complex systems of case marking, showing such characteristics as split-ergative morphological coding (Silverstein 1976, Dixon 1979, 1980, 1994, Blake 1977 etc.), interactions of marking with animacy (Aristar 1997, Bickel 2008, Simpson 2012, Verstraete 2010, Filimonova 2005), multiple levels of case marking ('case stacking') (Dench and Evans 1988, Simpson 1991, Planck 1996, Andrews 1996, Nordlinger 1998, Austin 1995), and case affixation on verbs (Dench and Evans 1988, Blake 1997).

The focus of this paper is argument encoding in linked, typically non-finite, clauses in a range of languages to explore the ways in which predicate-argument grammatical functions are encoded in such constructions cross-linguistically within Australia. I will draw on data from a range of languages, primarily from the Pama-Nyungan group, but also including some non-Pama-Nyungan materials. The aim is to develop a descriptively adequate typology of argument encoding in linked clauses which can serve as a basis for further theoretical and historical research (but see Nordlinger 1998, Dench 1994, Evans 1995).<sup>2</sup>

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<sup>1</sup> The major issues discussed in this paper have been the subject of on-going research over the past 35 years, arising from my attempts to understand the morpho-syntax of languages of the Gascoyne-Ashburton region of Western Australia (see Austin 1981b, 1988, 1995). The wider cross-linguistic comparison entered into here were begun in a paper presented at the Third International Workshop on Australian Languages held at the Max Planck Institute, Nijmegen, 28-29 April 1998. I am grateful to David Wilkins for inviting me to participate in the workshop, and for triggering the development of the ideas herein. My thanks go to Alan Dench for providing copies of his unpublished papers which were particularly helpful in elaborating the typology, and to Bill McGregor, David Nash, Rachel Nordlinger, Jane Simpson, and David Wilkins for answering my questions about languages they have studied. Support for an early part of this research came from the Australian Research Council (1998-99). I owe a great debt to speakers of Gascoyne-Ashburton languages for their patient efforts to enlighten me about them, especially the late Jack Butler, Dolly Butler and Helen Hayes. The usual disclaimers apply.

<sup>2</sup> The empirical data presented here seem to me to be highly supportive of the approach taken by

Clause combining in Australian languages is typically achieved by hypotactic linking of dependent clauses, which commonly occur structurally on the margins of the matrix clause (Hale 1976, Lehmann 1988, Diessel 2001, but see Nordlinger 2006) and code in their (non-finite) verb morphology both clause type and cross-clausal reference relations (with many systems encoding switch-reference, ie. sameness or difference of subjects between the linked clauses - see Austin 1981c). In many languages the types of non-finite construction of interest here are relatively rare textually, and when they do occur they generally consist of just a non-finite dependent verb without any arguments. Occurrence of such verbs with one argument, let alone two, is even rarer although it is clear that the structural principles outlined here are well motivated in the languages concerned, and can be confirmed through elicitation.

We will show that there are seven strategies for argument encoding that Australian languages adopt in linked clause construction. In a number of languages strategies co-exist and it is possible to array clauses in a formal hierarchy of clause linkage according to such parameters as the argument coding strategy, encoding of cross-clausal reference, case agreement on the dependent verb, and expression of tense/aspect/mood categories. We will explore such formal hierarchies and their relation to proposed functional hierarchies of clause linkage (see Silverstein 1976, 1980, 1993, Van Valin 1993, O'Dowd 1992), concluding that much empirical research needs to be undertaken before it is possible to show that the semantics and pragmatics of clause linkage in any way predicts the distribution of the formal characteristics detailed here.

## 2. Case marking in Australia

In their seminal paper on argument encoding through case marking in Australian languages, Dench and Evans 1988 (see also Dench 1996) set up five functions of case marking:

- a. *relational*: the prototypical function of case marking to code argument roles at the clause level;
- b. *adnominal*: indicating relationships between NPs within the one NP, such as genitive possessor;
- c. *referential*: nominal adjuncts of various kinds, including secondary predications, linked to the arguments of the main predicate in a clause by a system of case agreement;
- d. *associating*: linking NPs to nominalised verbs; and,
- e. *complementising*: the use of case morphemes to mark a dependency relationship between clauses - either C-complementising, linking the subject of the subordinate clause to a coreferential NP in the main clause, or T-complementising, indicating a temporal or logical connection between the two clauses.

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Nordlinger (1998), especially her Generalization B: “Case morphology can construct the larger syntactic context, including providing complex information about the clause” (Nordlinger, 1998:6) – see also Sadler and Nordlinger 2006. Nordlinger has been working on elaborating her approach and explore interactions with clause linkage.

Austin 1995 adds a further case function:

- f. *derivational*: the use of case morphemes as founding forms on which certain case inflectional forms are based, eg. dative as a derivational case for allative, locative as a derivational case for ablative etc.

Dench (1996:3) points out that ‘Dench and Evans (1988) propose four general case marking conventions (noting that there may be others)’:

- a. *complete concord*: all elements of a constituent are marked for case;  
 b. *head-marking*: only the head bears case;  
 c. *final-marking*: the final word of a constituent bears case;  
 d. *free-marking*: at least one subconstituent bears case.

The focus of the present paper is to explore further the ‘associating’ function of case marking identified by Dench and Evans 1988, and to develop an empirically adequate typology of such associating marking.

Silverstein 1976, 1980, 1993 proposes a theory to account for the distribution of morphological case markers cross-linguistically. In Silverstein’s account, case is treated as a DEPENDENT VARIABLE, the various configurations of which are the result of the interaction of a number of INDEPENDENT VARIABLES of referential and predicational meaningfulness. The theory is a functional one (in the logical or mathematical sense) in which surface case forms are the range of the function and the independent variables are its arguments. There are four independent variables in Silverstein’s account: inherent lexical content, propositional function within a clause (called somewhat confusingly by him ‘case relations’), clause-linkage, and discourse coreference. These are defined as follows (Silverstein 1976:229-230)<sup>3</sup>:

- ‘Variable I.** The inherent referential content of noun phrases, coded ‘locally’ in noun phrase categories, and organised by criteria of both pragmatic and semantic markedness into a feature-space of categories of referring;
- Variable II.** The case relations - ‘Agent of’, ‘Patient of’, ‘Subject of’, ‘Dative of’ (A, P, S, D) - that noun phrases bear within schemata of predicate argument relationships at the clause level of analysis, however we wish to represent these;
- Variable III.** The (logical) clause-linkage type connecting two (or more) clause-level structures in a complex or compound sentence, or in sequential discourse, forming a kind of hierarchy of tightness of linkage ..., evidenced by greater and greater deformation of the full, plain surface structure of at least one, and sometimes both, of the clauses;
- Variable IV.** The reference-maintenance relations of arguments of predicates (as expressed by

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<sup>3</sup> I have replaced Silverstein’s abbreviation for ‘Patient of’ (O) by P.

noun-phrases in non-linked clausal structures) across discourse-level structures, so-called anaphoric ‘coreference’ and ‘switch-reference’ being names for specific types of formal-functional systems for indicating this.’

There have been a large number of discussions in the typological literature of the phenomenon of ergativity (Dixon 1979, 1980, 1994; Comrie 1980; Blake 1987, 1994; Manning 1996, to name a few), and included in these has been extensive analysis and discussion of the first two of Silverstein’s variables. Inherent lexical content (or the so-called ‘animacy hierarchy’) is defined by a system of features and values which generates a hierarchy of markedness. Essentially the hierarchy has pronouns at the top (or left) and non-animate nominals at the bottom (or right), with other nominals being distributed between these two types. Grammatical functions, or predicate-argument relations, are primitives defined by the configurations of predicate-argument types (transitive and intransitive being just two examples, contra Dixon 1979, 1980, 1994).

Variables I and II interact in a way which is by now familiar. Languages demonstrating split-ergativity in simple sentences typically have their case marking split conditioned by the interaction of the inherent lexical content hierarchy and the predicate-argument relations so that nominate-accusative morphology predominates at the top of the hierarchy, and ergative-absolutive morphology at the bottom (but see Simpson 2012 concerning possible counterexamples). In the middle of the hierarchy both marking schemas may apply to give ‘three-way’ marking. For example, in languages of the Mantharta and Kanyara groups (spoken in the Gascoyne-Ashburton region in the north-west of Western Australia), we find the following distributions (see also Dench 1993: Table 6, based on data from Austin 1981, 1995) where the arrows indicate:

- *ergative* case marking transitive subject function (A) extending up from the bottom
- *accusative* case marking transitive object function (P) extending down from the top

Table 1: Lexical Splits in Mantharta and Kanyara languages

	Tharrkari	Jiwarli	Payungu	Thalanji
1sg				
2sg				
1dlinc	↑	↑	↑	↑
1dlexc				
1plinc				
1plexc				
2dl				
2pl				
3rd				
demonstrative				
proper name				
human	↓	↓		
other animate			↓	
meat, vegetable*				↓
other inanimate				

*Note:* In Payungu, *murla* ‘meat’ and *thanuwa* ‘vegetable food’ are the only two inanimates to take accusative marking; they take it when specific reference to a particular piece of food is intended.

Most recent accounts of ergativity and morphological case marking have failed to include Silverstein’s other two variables (III and IV) and to examine their impact on argument encoding and case marking. It is to clause linkage (and cross-clausal reference maintenance) that we now turn.

### 3. Dependent clause argument coding - towards a typology

Most Australian Aboriginal languages make a distinction in their clause structure between *main* clauses and *dependent* clauses. The latter are usually formally marked by verb inflections as morphologically distinct from main clause verbs that encode tense/aspect/mood contrasts; such dependent verbs commonly encode *relative tense* relations between the main and dependent clause, and often other semantic contrasts such as purpose or intentionality as well. The dependent clause is frequently, though not always, on the margin of the main clause (preceding or following the main clause material) being hypotactically linked rather than embedded<sup>4</sup> and can serve several semantic functions, including providing information about nominal reference (like a restrictive relative clause) or adverbial specification (like temporal, conditional or causal

<sup>4</sup> Hale 1976 coined the term ‘adjoined relative clause’ in reference to such clauses in Warlpiri, distinguishing between their NP-relative and T-relative functions. We avoid the term ‘relative’ here since it has constructional connotations that do not apply for most Australian languages – see also Nordlinger 2006 for detailed discussion of these concepts.

clauses). In some languages there is case agreement between nominals in the main clause and the dependent clause verb, for some clause types at least.

In a number of Australian languages there are restrictions on clause linkage in terms of coreferentiality constraints across the main and dependent clause. In some languages, such as Dyirbal (Dixon 1972) there must be co-reference between an S or P referent in the main clause and an S or P referent in the linked clause. In other languages, such as Diyari (Austin 1981) the dependent verb encodes *same subject* for S or A coreference between the two clauses and *different subject* otherwise (such a system is called *switch-reference*, and it is found in a large number of central Australian languages – see Austin 1981c; Dixon 1980). This is Silverstein's 'Variable IV'.

Across Australia we find the following strategies for coding arguments in such hypotactically dependent linked clauses:

1. *main clause* strategy: code arguments in the same way as in main clauses (ignore Variables III and IV), eg. Diyari, Gamilaraay, central Ngayarta (Martuthunira, Panyjima);
2. *suspension* strategy: bare arguments without case marking co-occur with the dependent verb, eg. Warlpiri (some clause types only);
3. *copy* strategy: copy the dependent verb morphology onto the arguments of the dependent verb, eg. Warlpiri (for some non-adjacent P), Nyamal (for some clause types), Djapu (peripheral dependent clauses, purpose clauses);
4. *addition* strategy: add an additional layer of associating case to regular (main clause) coding, eg. Kayardild;
5. *replacement* strategy: replace the usual (main clause) argument coding with another coding not otherwise used for verb arguments, eg. Yidiny, Nyamal (for some clause types), Gascoyne-Ashburton (purpose-same subject clauses), Djapu (reduced relative clauses), Warlpiri A (for some clause types);
6. *dative/possessive* strategy: argument coding in dative case, the adnominal case commonly used for alienable possession in Australia. Note that this neutralises transitivity distinctions between clause types, eg. Gascoyne-Ashburton languages P (for some clause types), Warlpiri P (for some clause types);
7. *zero* strategy: obligatory null expression of arguments under coreference (Variable IV, typically A/S=A/S), eg. Warlpiri, Gascoyne-Ashburton, Pilbara, Yolngu (reduced relative clauses).

Note also that strategies co-exist in various languages, eg. Gascoyne-Ashburton, Nyamal, Djapu, with clauses able to be classified on a 'deformation hierarchy' (Lehmann 1988; Silverstein 1976; Van Valin 1983) according to the degree of deviance from main clause case encoding. There is also a relationship with dependent clause nominalisation (O'Dowd 1992) that is discussed below.

In the following sections we explore and exemplify each of these strategies in turn.

### 3.1 Main clause strategy (ignore Variables III, IV)

This is the pattern found in most languages of central and eastern Australia, namely no distinction in coding of arguments according to clause type, with the relevant main clause argument coding also applying in dependent clauses. Examples include Gamilaraay (Austin 2016, Williams 1980, Mparntwe Arrernte (Wilkins 1989), Yankunytjatjara (Goddard 1986), central Ngayarta (Panyjima, Martuthunira - see Dench 1983, 1995), and Diyari (Austin 1981a).

*Diyari* (Austin 1981a: chapter 5)

Diyari has a system of switch-reference marked hypotactically linked dependent clauses coding relative tense and sameness or difference of subjects (S/A) cross-clausally. Such clauses occur on the margins of the matrix clause (preceding or following); their arguments are coded like main clause arguments (split-ergative coding reflecting animacy). Where there are coreferential arguments, the second in sequence can be freely omitted. Examples are (square brackets indicate dependent clause boundaries):

- (1) *Yundrru*            *nhinha*            *nganka-mayi*            [*nhawu*            *warli-ndrru*  
2sg.erg            2sgnf.acc            make.imper-emph            3sgnf.nom            house.ablat

*ngari-rnanthu.*]  
go down-implDS

‘You make him come down from the house!’ (Austin 1981:200, ex 511)

- (2) [*Nhulu*            *puka*            *thayi-rna*]    *nhawu*            *pali-rna*    *warayi*  
3sgnf.erg            food.acc            eat-relSS            3sgnf.nom            dieptcple    aux

‘While eating some food he died’ (Dixon 1981:207, ex 533)

- (3) *Thana-li*    *nandr-ra-ya*    *thirrari*            *karna*            [*nhawu*            *thirirnanhi*  
3pl-erg            kill-past            Thirrari            man.acc            3sgnf.nom            fight-relDS

*marapu*            *marla-nhi.*]  
many            true-loc

‘They killed a Thirrari man who had fought with the whole lot (of them).’ (Austin 1981:210, ex 539)

*Martuthunira* (Dench 1995, 1996)

*Martuthunira* (spoken in the central Pilbara region, Western Australia) has nominative-accusative case marking in main clauses. Hypotactic non-finite dependent clauses carry a ‘complementising’

case marker in agreement with the nominal in the matrix clause which controls the reference of the missing (subject) argument in the dependent clause. Dench (1996:5) says that: ‘Martuthunira exhibits complete concord at the NP level, but headmarking at the clause level - only the verb bears the complementiser’. Clause internal arguments in the dependent clause are coded nominative-accusative like main clauses.

#### *Panyjima* (Dench 1991, 1996)

Dependent clause argument coding (as distinct from adjunct coding) is of the main clause nominative-accusative type. Dench (1996:6): ‘In Panyjima, in contrast to both Martuthunira and languages of the Kanyara and Mantharta groups, the marking convention of complete concord extends to complementisers on subordinate clauses. The consequence of this is that all constituents of a subordinate clause will bear a complementiser case suffix, following any adnominal, relational or referential suffixes which may occur.’ Although complementising case (accusative or locative) percolates down to dependent clause adjuncts (except doubling of locative is prohibited), Dench (1991:197) says that ‘accusative and agentive suffixes cannot be followed by another nominal affix’ and hence argument coding (as distinct from adjunct coding) is of the main clause type. Panyjima differs from Martuthunira and Diyari in that argument coding in dependent clauses differs from adjunct coding.

### 3.2 Suspension strategy

#### *Warlpiri* (Simpson 1991)

Warlpiri, spoken in central Australia, shows several dependent argument coding strategies, one of which appears to be suspension of argument coding and appearance of bare (uninflected) nominals. Simpson (1991:1 5fn8): ‘certain Warlpiri complementiser suffixes on nominalised verbs allow control of some non-subjects ... The Ergative may be omitted when the clause is used as a secondary predicate’; thus the next sentence is ambiguous:

- |     |              |                 |                 |                              |
|-----|--------------|-----------------|-----------------|------------------------------|
| (4) | <i>Kurdu</i> | <i>yula-ja,</i> | [ <i>jarntu</i> | <i>yarlka-rninja-warnu</i> ] |
|     | child.abs    | cry-past        | dog             | bite-inf-assoc               |

‘The child cried after biting/being bitten by a dog.’

In the cross-linguistic survey of Australian data that I have examined so far, this appears to be the only instance, and the only language showing suspension of marking.

### 3.3 Copy strategy

In the copy strategy, the dependent verb morphology is copied onto arguments of the dependent clause. A number of languages show this, including Warlpiri, Nyamal and Djapu (and also Wambaya, as a variant of the rank shifting strategy - see below).

*Warlpiri* (Hale 1982, Simpson 1991)

According to Simpson (1991:132): ‘a nominalised verb ... can appear with its argument preceding the AUX. The AUX cannot intervene between a complement of a nominalised verb ... and the nominalised verb. However, [it] can be marked with the complementiser suffix *-karra* also, in which case it may appear separated from the constituent, as a distinct constituent.’<sup>5</sup>

*Nyamal* (Dench 1993)

The copy strategy (Dench’s ‘associating spreading’) applies to past relative and jussive complement (purposive) clauses – here the verbal inflection (plus any complementising agreement case markers) is copied to non-subject arguments, replacing accusative if it would occur (the subject S/A is obligatorily zero, note that the past.rel inflection is homophonous with ablative case). In the following examples the copied morphology is in bold:

- (5) *Ngaja juntiya-nya-rna janala karti-yartara-la mantu-yartara-la.*  
 lsg.nom tell-past-lsg 3p1.loc get-purp-loc meat-purp-loc

‘I told them to get meat.’ (Dench 1993, ex 23)

- (6) *Juntiya-rna-rna janala punyja-larta-la papa-yartara-la.*  
 tell-past-1 sg 3p1.loc drink-purp-loc water-purp-loc

‘I told them to drink water’ (Dench 1993, ex 24)

- (7) *Nguja murni-lamu-rna maruntu-wanti kama-iwanti.*  
 firewood. acc collect-usit-1sg goanna-purp cook-purp

‘I used to collect firewood for cooking goanna.’ (Dench 1995, cx 7)

- (8) *Wajarri-nya-rna para jarrunpa-ku kama-lara-ku*  
 look for-past-lsg 3sg.dat man-dat cook-past.rel-dat

*mantu-kulyara-ku.*

meat-ablat-dat

‘I looked for that man after he cooked the meat.’ (Dench 1993, ex 27)

*Djapu* (Morphy 1983:127-131, Schebeck 1976)

According to Morphy (1983:133-4) purpose clauses consist of a nominalised verb plus dative

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<sup>5</sup> From the description we cannot tell if this is a copy or replacement strategy. Does it apply to dative-marked arguments of the nominalised extended intransitive verb? Does *-karra* follow dative or replace it?

case marker – the dative case (but not the nominaliser) is copied onto expressed arguments (coreferential S/A is obligatorily zero expressed – see 3.7):

- (9) *Ma'           nhe           Ngarritj       gurtha       bu-ma       [borrutj-ku*  
 come on   2sg.nom   Nganitj       fire.acc     make-imper   mosquito-dat
- guku-nhara-w]*  
 chase away-nml-dat

‘Come on Ngarritj, make a fire to chase away the mosquitoes.’ (Morphy 1983:134, ex 274)

Note that ambiguity can arise:

- (10) *Ngarra       djaal       nhungu       gungga'yu-nhara-w*  
 2sg.nom     want       2sg.dat     help-nml-dat

‘I want to help you’ or ‘I want you to help.’ (Morphy 1983:134, ex 277)

In peripheral dependent clauses, coding causal or purposive notions, we find a nominalised verb plus case marker – this case is copied to dependents of the verb (S/A is obligatorily expressed as zero). Morphy (1983:133) points out ‘HU[man] nominals take OBL(ique) case marking for causal and ablative case functions’.

- (11) *Ngarra           djawarryu-nan       yothu-wal       yatju-n-mi-nyara-y*  
 2sg.nom         be tired-perf       child-obl       yell-unm-recv-nml-causal

‘I am tired from the children yelling.’ (Morphy 1983:132, ex 263)

- (12) *Ngarra       nguyulk-thi-na-n       yumurrku-wal       gurnda-y       dupthu-nyara-y*  
 2sg.nom     annoyed-inchoat-perf-im   children-obl     stone-causal     throw-nml-causal

‘I am annoyed by the children throwing stones.’ (Morphy 1983:132, ex 266)

Note that clauses with one or two arguments present are very rare. Morphy (1983:133) argues for an analysis where ‘the NPs are raised out of the subordinate clause into the main clause, where they are apposed to the nominalised verb. A more accurate translation of [9] would therefore be “I’m annoyed by the children, by stones, by throwing”.’

### 3.4 Addition strategy

This strategy is the addition of a layer of ‘associating’ coding following the dependent argument case coding. There appears to be just one example of this type, namely Kayardild spoken on

Bentinck Island in the Gulf of Carpentaria. Notice that the associating marking follows the dependent argument coding in an anti-iconic ordering (Evans 1995).

*Kayardild* (Evans and Dench 1988, Evans 1995)

Kayardild appears to be the only language which uses an addition strategy; other languages prefer replacement, where the argument coding appears once, rather than doubled. Evans (1995:111-112) says that: ‘the OBLique case is also used to associate NP arguments with their nominalised verbs..., such nominalised verbs may be used independently as predicators showing ongoing uncompleted action..., or as complements of immediate perception predicates in the matrix clause. In the latter function they agree in modal case with their antecedent.’ All non-subject arguments and obliques thus take an additional layer of case coding following their (modal) argument coding case (bold in the examples):

- (13) *Ngada*            *kurri-ja*            *niwan-jina*    [ *kurdama-n-kina*  
 1 sg.nom            see-past            3sg-m.ablat    drink-nml-m.abl
- nguku-naa-ntha*            *wuruman-urru-naa-nth* ]  
 water-m.abl-obl            billy-assoc-m.abl-obl

‘I saw him drinking the water in the billy.’ (Evans 1995:112-113, ex 3-44)

- (14) *Ngada*            *balambi-wu*            *kurri-ju*            *bilwan-ju*  
 1sg.nom            tomorrow-m.prop            watch-pot            3pl-m.prop
- barrki-n-ku*            *kurda-wuu-nth*  
 chop-nml-m.prop            coolamon-m.prop-obl

‘Tomorrow I will watch them chopping a coolamon’ (Evans 1995: 112, ex 3-43)

### 3.5 Replacement strategy

This is quite widespread and can be exemplified from a range of Australian languages. It involves the replacement of usual (main clause) coding with another coding, typically formally related (synchronically or diachronically) to the verbal inflection. Yidiny and Gascoyne-Ashburton languages have one type of replacement strategy, however more complex systems appear to occur in Nyamal, and Yolngu. Clauses are typically nominalised; rank shifting with nominalisation is also found in some languages (see below).

*Nyamal* (Dench 1993, 1995)

Here relative clauses and stative relative clauses show a replacement strategy whereby argument case on A or P is replaced by *-kapu* ‘source’ and *-karra* ‘stative’ respectively (bold in the examples). Note that this case marker is added to oblique elements following their oblique case

marker:

- (15) *Kamparra-lu*    *paja-la*    *mantu,*    *kama-njanu*    *ngunya-kapu*    *mangkurla-kapu.*  
 little one-erg    eat-pres    meat.acc    cook-rel    that-sce    woman-sce

‘The child is eating the meat the woman cooked.’ (Dench 1993, ex 32)

- (16) *Nganartu*    *yamu-rtu*    *yurri*    *yurta-karra*    *kurtinya-nguru*  
 1plexc    go.usit-1plexc    netting    fish-stat    get-stat.rel

‘We used to go net fishing, getting fish’ (Dench 1993, ex 33)

Note: this construction type is also found in the neighbouring Ngarla (Dench 1993) with relative-different subject clauses (the outer dative case in this example is associating case copying from the dependent verb):

- (17) *Wula*    *gaja*    *para*    *waa-rnu*    *yukurru-rra*    *antu-kapu-rra*    *pajintangu-rra*  
 water    lsg.erg    3sg.dat    give-past    dog-dat    meat-sce-dat    eat-relDS-dat

‘I gave water to the dog while it was eating meat.’ (Dench 1993, ex 40)

*Gascoyne-Ashburton languages* (Austin 1988, 1995, 1997)

In Mantharta and Kanyara languages spoken in north-western Western Australia (Jiwarli, Thiin, Warriyangka, Tharrkari, Payungu, Purduna, Pinikura, Thalanyji) the normal case marking of P is replaced by allative case in purpose same-subject clauses, as in the Jiwarli examples:

- (18) *Kaji*    *nhurra*    *yana-ma*    *mana-ngku*    *ngurlu*    *karla-rla*  
 try    2sg.nom    go-imper    get-purpSS    that.allat    fire-allat

‘You try and go to get the fire!’ [T43s70]

- (19) *Kanya-ma-rni*    *pulangkiti*    *ngapa-ru*    *yurlu*    *juma-rla*  
 bring-imper-hence    blanket.acc    cover-purpSS    this.allat    child-allat

‘Bring a blanket to cover this child!’ [PAN5p109s7)

*Yolngu* (Morphy 1983; Schebeck 1976)

In Djapu reduced relative clauses there is obligatory coreference of an argument with an argument in the matrix clause. This can be S/A or P; when P is coreferent then replacement marking for remaining arguments (and adjuncts) occurs. The patterns are quite complex, but essentially the presence of a non-human A or adjunct triggers ‘associative’ case on the verb and on the relevant non-human nominal. Human A nominals are placed in the ‘origin’ case (not

ergative). If there is no associative case inside the clause then the nominalised verb is in the absolutive. Schebeck 1976 gives examples from Dhangu showing that nominalised verbs may take the ergative case, in which circumstance A inside the dependent clause is in the adessive case:

- (20) *Bala' yukurru dhaarra lurr'lur,yu-n-mara-nhar yumurrku '-wung*  
house.nom lie.unm stand.unm break up-unm-caus-nml.abs children-orig

'A house is standing (there), vandalised by children.' (Morphy 1983:137, ex 287)

- (21) *Bili ngunhi-ny-dhi gan.guri-ny ganu'-wuy lirrtha-nara-wuy*  
cause that-pro-anaph yam-pro ashes-assoc roast-nml-assoc

'Because those were yarns which had been roasted in the ashes.' (Morphy 1983:137, ex 290)

- (22) *Dhuwa-na miyapunu-ny gurndirr-wuy batha-nara-wuy ngarra-kung*  
this-unm turtle-pro antbed-assoc cook-nnil-assoc 1sg-orig

'This is a turtle, cooked by me in antbed.' (Morphy 1983:138, ex 292)

Schebeck's (retranscribed) examples are:

- (23) *Yuulngu-kuru tjuy'thu-nta-thu yuuthu-thu tjuurra' kuula-n tayka-wu*  
man-adess send-nml-erg child-erg letter.acc bring-unm woman-dat

'The child, sent by the man, brought a letter to the woman.' (Schebeck 1976:371, ex 134)

- (24) *Yuuthu-thu yuulngu-kun wukurri-wuy tjuurra' kuula-n tayka-wu*  
child-erg man-adess write.nml-assoc letter.acc bring-unm woman-dat

'The child brought a letter, written by a man, to the woman.' (Schebeck 1976:371, ex 136)

*Yidiny* (Dixon 1977)

Dixon (1977:338ft) shows that in purposive and causal dependent clauses in *Yidiny* (north-east Queensland) the dependent P can be coded as a locative or dative in an anti-passive construction (since *Yidiny* has a S/P pivot constraint) or alternatively the locative case-marking is replaced by ablative or causal in a causal clause and dative in a purpose clause:

- (25) *Ngayu gali-ng mayi-m buga-:ji-nyum*  
1sg.nom go-pres food-ablat eat-a/p-causal

‘I’m going out after eating food.’ (Dixon 1977:338, ex 692)

- (26) *Ngayu*            *gali-ng*            *minyaa-gu*            *duga-:ji-na*  
 lsg.nom            go-pres            meat-purp            get-a/p-purp

‘I’m going out to get some meat.’ (Dixon 1977:347, ex 730)

Note that in adversative (‘lest’) clauses the P inflection does not alternate but always appears as dative/locative, as we expect for anti-passive clauses. However, there is some evidence that the ergative in such clauses can be replaced by the ‘fear’ inflection. Dixon (1977:355) gives the following example, however he analyses it as having the ‘fear’ NP in the matrix clause and the A of the dependent clause unexpressed:

- (27) *Ngungu*            *jujuum-bu*            *bilaynggid-a*            *bambii-l*            *bama-yida*            *ngabi-yida*  
 that.abs.            aunt-erg            blanket-loc            cover-past            person-fear            many-fear
- wawa-:ji-lji*  
 see-a/p-lest

‘Auntie covered that [baby’s corpse] with a blanket, for fear of all the people, lest they should see it.’ (Dixon 1977:355, ex760)

### 3.6 Dative/possessive strategy

This strategy is not uncommon in Australia and is widespread cross-linguistically for dependent clauses involving nominalisation (O’Dowd 1992) – argument coding defaults to the dative case, typically for P, and sometimes for A. Typically, suspension of the nominal hierarchy (Variable II) in split-ergative languages collapses the distinction between coding the second argument of transitive verbs and the second argument of extended intransitive verbs (which also occur in the dative). Examples come from Gascoyne-Ashburton languages, Nyamal, Wambaya, and Warlpiri.

*Gascoyne-Ashburton languages* (Austin 1988, 1997)

In these languages P of intentive, imperfective and perfective relative-same subject clauses (but not different subject clauses) appears in the dative case (see table below for the full range of possibilities in Jiwarli):

- (28) *Kuwarti*            *kurriya*            *purra-rninyja*            *patha-rrkarringu-ru*            *jiriparri-yi*  
 now            boomerang.acc            toss-past            pelt-intent-erg            echidna-dat

‘Next he threw a boomerang to hit echidna’ [T35s10]

- (29) *Manthartha kumpa-inha wurnta-wu yinka-rnu juma-wu nhanhya-ngu-ru*  
 man.nom sit-pres shield-dat adze-imperfSS child-dat watch-imperfSS-erg

‘The man sits adzing a shield while watching the children.’ [N11p31s3]

- (30) *Ngatha papa-ngku-rru puntha-rninyja pirturami-rnu karla-wu.*  
 1sg.erg water-erg-now douse-past extinguish-imperfSS fire-dat

‘I doused him with water and put the fire out.’ [T52s22]

- (31) *Wirripuka ngunha ngathi-tharri-a kurlkayi-rninyjalu tharu-wu.*  
 many.nom that.nom cry-collect-pres hear-perfSS news-dat

‘They are all crying after they heard bad news.’ [N9p105s1]

*Nyamal* (Dench 1993, 1996)

In this language purpose-same subject clauses show dative/purposive case marking on their transitive objects:

- (32) *Yampa-rna-ngarri yurlu-karni kama-larta mantu-yu.*  
 go.fut-1sg-now camp-allat cook-purp meat-dat

‘I am going home to cook meat.’ (Dench 1993, ex 19)

- (33) *Ngunya-ngku mangkurla-lu warnta kurti-la punga-lartaa-lu yukurru-ku*  
 that.erg woman.erg stick.abs get-pres hit-purp-erg dog-dat

‘That woman is getting a stick to hit the dog’

Dench 1993 mentions that ‘privative’ and ‘lest’ clauses also show dative/possessive, however he gives no examples. In Ngarla, dative/possessive marking occurs in purposive, privative and relative-same subject clauses:

- (34) *Ngaya piyanga wangkakayi jilya-rra-jarra mantu-rra kati-yartara-rra*  
 1sg.nom 3dl.dat talk-past child-dat-dl meat-dat bring-purp-dat

‘I told the two children to bring meat’ (Dench 1993, ex 39)

- (35) *Yukurru ngaja nganima-yinyu mantu-rra paji-rnanyuru-lu.*  
 dog 1sg.erg see-c.past meat-dat eat-relSS-erg

‘I was watching the dog while (I was) eating the meat’ (Dench 1993, ex 42)

*Wambaya* (Nordlinger 1998a,b)

Wambaya purposive complements can be formed with the *-barda* infinitive and require obligatory coreference of main S/A with dependent S/A (the dependent subject being coded obligatorily as zero). If the dependent verb is transitive its object is shifted to the dative (hence collapsing with extended intransitive complements which are always marked dative). Examples are:

- (36) *Yarru*            *ng-uba*                    *ayaniji-barda*            *manganyimi-nka*  
go                    1sg-npast.away            look for-infin            vegetable.food-dat

‘I am going to look for vegetable food’ (Nordlinger pc.)

Note that purposive complements can also be formed with a dative-marked verb, in which case the object also appears in the dative (this is a copy strategy which has the same result as dative/possessive encoding - compare Yolngu above):

- (37) *Yarru*            *ng-uba*                    *ayaniji-nka*                *manganyimi-nka*  
go                    1sg-past.away            look for-dat                veg.food-dat

‘I am going to look for vegetable food.’ (Nordlinger pc.)

*Warlpiri* (Hale 1982, Simpson 1993)

Simpson (1993:395) says that: ‘unlike the *-kurra* and *-karra* clauses, the *-rlarni* clause may have an overt subject, but the subject usually has dative case’ (but see Simpson 1993:106, ex 70b with dative on A and 70c with normal ergative on A). Example 70e in Simpson (1993:107) shows that the same is true for *-puru* marked infinitives:

- (38) *Nyuntu*            *ya-nta*                    *ngapa-ku*                    *wanti-nja-rlarni*  
2sg.nom            go-imper                    water-dat                    fall-infin-obvcomp

‘You go while it’s raining’ (Simpson 1993:395, ex 358)

- (39) *Ngarrka-patu-rlu*            *ka-lu-jana*                    *puluku*                    *turnuma-ni*  
man.pl-erg                    pres-3nom-3acc                    cow.acc                    muster-npast

*karnta-patu-ku*            *miyi*                    *purra-nja-puru*  
woman-pl-dat                    food                    cook-infin-tempcomp

‘The men are mustering cattle while the women are cooking the food.’ (Simpson, 1993: 107, ex 70e)

### 3.6 Zero Strategy

Here what we find is obligatory null expression of arguments when they are coreferential with some element in the main clause (variously referred to as ‘(functional) control’, ‘PRO’, in the theoretical linguistic literature). This is Variable IV in Silverstein’s account, typically A/S=A/S, however for Dyrbal we find P/S=P/S. Instances are found in many Australian languages including Warlpiri, Gascoyne-Ashburton languages, Pilbara languages, Wambaya, Kayardild, Yidiny and Yolngu and can be seen in the examples presented above:

*Table 2: Zero strategy exemplification*

Language	Clause type	Example
Nyamal	purpose	(5)-(7), (32), (33)
	past relative	(8)
	relative	(15)
	stative relative	(16)
Ngarla	relative-same subject	(35)
	relative-different subject	(17)
	purposive	(34)
Djapu	purposive	(9)
	causal	(11)
	reduced relative	(20)-(22)
Kayardild	nominalization	(11), (14)
Kanyara-Mantharta	purposive	(18), (19)
	intensive	(28)
	imperfective relative-same subject	(29), (30)
	perfective relative-same subject	(31)
Yidiny	purposive	(26)
	causal	(25)
	adversative	(27)
Wambaya	purposive	(36), (37)

### 3.7 Summary

Table 3 presents a summary of the patterns described above.

*Table 3: Strategy types*

Strategy	Language	Dependent clause type	Notes
1. Main clause	Diyari, Gamilaraay, Arrernte, Pitjantjatjara, central Ngayarta	all	

2. Suspension	Warlpiri	some nominalisations	only 1 exemplar
3. Copy	Warlpiri	nominalisations split by AUX	
	Nyamal	past relative and jussive complement (purposive)	
	Djapu	purpose, causal	
4. Addition	Kayardild	complements of immediate perception predicates	only 1 exemplar
5. Replacement	Nyamal	relative and stative relative	A → source; P → stative
	Kanyara-Mantharta	purpose same-subject	P → allative
	Djapu	reduced relative	non-human A → associative, human A → origin
	Dhangu	nominalised	A → adessive
	Yidiny	purposive	P → dative
		causal	P → causal
		adversative	A → fear
6. Dative - possessive	Kanyara-Mantharta	intensive, imperfective and perfective relative-same subject	
	Nyamal	purpose-same subject	
	Ngarla	purposive, privative, relative-same subject	
	Wambaya	purposive	
	Warlpiri	different-subject complement	
7. Zero	see Table 2		

*Table 3: Strategy types*

#### 4. Formal clause linkage hierarchies

As we have seen above, there are a number of languages where several argument coding strategies coexist (eg. Nyamal uses copy, replacement, dative/possessive and zero), each occurring in a particular dependent clause type. It is possible then to produce classifications of clause linkage in terms of the coding strategy and other formal characteristics of the dependent verb. The following table (from Dench, 1994, Table 7) gives the arrays we find in languages of north-central Western Australia (with corrections to the Jiwari information added by myself):

*Table 4: Clause types in Nyamal, Ngarla and Jiwarli*

**ADD TABLE HERE**

What would be an interesting exercise, and one which I have yet to undertake, would be to attempt such cross-tabulation for the full set of languages with multiple strategies for which we have reliable descriptions. However, there is an obvious problem arises in doing such research and that is the extent to which descriptive categories assigned by linguists working on different languages have some degree of comparability. Thus, to what extent are ‘purposive’ clauses comparable cross-linguistically. Can we identify any common semantic parameters which will enable us to compare formal codings across the languages described above?

## 5. Functional clause linkage hierarchies

A number of linguists have noted that argument coding in dependent clauses can differ from that in main clauses in a range of languages (though without elaborating the typology of differences in the way we have done in this paper). There are basically two hypotheses in the typological literature to explain this:

- the **discourse function** of clauses (main and subordinate) determines their syntactic form (degree of nominalisation and expression as independent verbal predicates). This is the approach taken by Hopper & Thompson 1980, Fox 1983, and O’Dowd 1992.
- the **semantic link** between the predicates of the main and dependent clauses (sometimes called the ‘degree of bonding’) determines their syntactic forms (the degree of nominalisation and expression as independent verbal predicates). We find this in Givón’s 1980 ‘binding hierarchy’; Silverstein 1976, 1980, 1993; Foley and van Valin 1983; Van Valin 1984, 1993; Van Valin and La Polla 1998, and Lehmann 1988.

### 5.1 Bonding hierarchies (a la Givón)

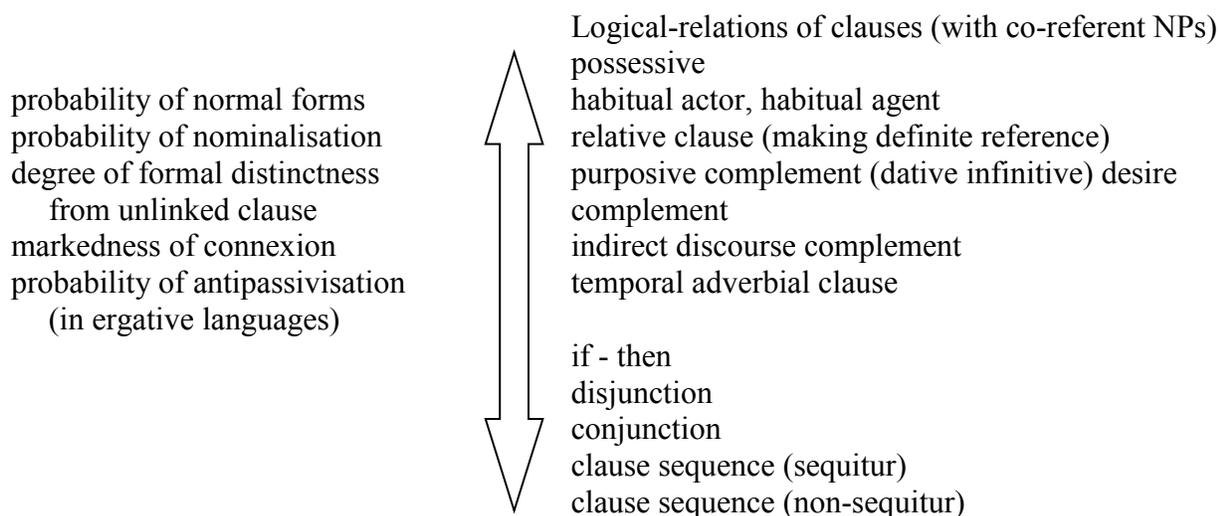
Givón (1980) proposes a concept of a semantic binding scale for complement clauses, suggesting that the syntactic shape of the subordinate verb is determined by the rank of the main clause verb on a hierarchy of semantic binding, where ‘binding’ means the degree of influence that the main clause agent exerts over the dependent clause agent. Strongly manipulative verbs like ‘force’ and ‘cause’ involve stronger influence and so their complement clauses will be less like main clauses formally. The agent of a cognition or utterance verb like ‘know’ or ‘say’ has little influence over the agent of the complement clause and so that clause will formally look more like a main clause.

O’Dowd (1992: 59) notes that this seems to be the case as she points out that the distinction between nominalised (‘Reduced’) and non-nominalised (‘Propositional’) complement clauses ‘seems to depend on the class of the matrix verb’ (cf. Givón). However, she argues that ‘[c]lass membership is unpredictable’, giving as an example the Mayan language Tzutujil where

‘verbs like “begin” take Reduced complements, as in English; but in contrast with English, volitional verbs take Propositional complements’. She is sceptical about the applicability cross-linguistically of verb semantic class-membership as a criterion, when she says: ‘[f]or other languages, or even for certain verbs within languages, the distinction may involve subtle pragmatic factors, such as focus and emphasis’. Again, O’Dowd (1992:71) says: ‘different semantic factors are involved in the hierarchical positioning of verbs across and even within languages’.

## 5.2 Clause linkage hierarchies (a la Silverstein and van Valin)

As we noted above, Silverstein 1976, 1980, 1993 identifies as one of the variables that is involved in case systems and argument coding cross-linguistically is Variable III, clause-linkage type. He presents the following hierarchy of ‘logical relations between clauses with coreferent NPs’ without detailed justification or exemplification:



Silverstein (1993 :482) says:

[a]s we move up the hierarchy of linkage types in Figure 6, there seems to be greater and greater formal distinctness of the surface structure remnants of what could be reconstructed as full ‘kernel’ clauses for the linked (or dependent) member of the pair under consideration ... In terms of case-marking systems, it is always the case that the following kinds of regularities hold: the NP adjuncts of nominalised constructions never have a greater case-elaboration than the non-nominalised ones, and generally have far fewer ... case-marking is ‘telescoped’ into a reduced or even minimal system, gradually in some languages, more abruptly in others, as we climb the hierarchy of linkage types.

Silverstein (1980:14) is ambivalent about whether this proposed hierarchy is basic, or whether, like Variable II, it arises out of a feature space of semantic possibilities:

What is not entirely clear is whether or not this hierarchy is a primitive; i.e., if the categories of linkage form a single, unilinear dimension, or if there are several dimensions of connexion, each expressible as ‘features’ of syntactic complexes (multiple S structures) and their parts, which, just like the inherent lexical content hierarchy [elaborated in the 1976 paper], generate a space of possible categories of connexion.

To my knowledge, neither Silverstein nor anyone else has attempted to deal with this issue, and it remains an open question for language typology.

Silverstein (1976, 1993:482) is also careful to point out that we additionally need to look at Variable IV which relates to the types of coreference relations found between elements in the linked clauses:

[f]inally, continuing with the notion of linkage, one of the types of linkage of clauses (or cohesion-devices of discourse) in both multi-sentence and single-sentence structures, is *reference-maintenance*.

In a language such as Jiwari we can see the interaction of Variables III and IV clearly since same-subject and different-subject clauses use different strategies. In imperfective clauses (providing relative present tense information) same-subject dependent clause Ps are placed in the dative (the same case used for possession and dependents of nominals and nominalizations), but different-subject dependent transitive clauses never occur in my data and so marking of dependent Ps never arises. Same-subject perfective clauses shift the object to dative, however in the different-subject constructions main clause coding occurs. In purposive same-subject clauses replacement of object coding to allative is found, however in purposive different-subject clauses the main clause coding strategy is used. Clearly, different-subject constructions tend to be coded like main clauses, rather than in some specially marked way.

A number of authors have pointed out that nominalisation (with shifting of expressed arguments to dative) is a common device for expressing clausal dependency relationships. O’Dowd (1992:66) presents a hierarchy of preference for nominalisation strategies in terms of subordinate functions:

- |              |  |
|--------------|--|
| Most likely  | 1. Reduced complement clause           |
|              | 2. Before/After clause; Purpose clause |
|              | 3. When clause                         |
|              | 4. Relative clause                     |
| Least likely | 5. Propositional complement clause     |

There is a major difficulty with applying O’Dowd’s ideas to the Australian language data in that

the ‘semantic’ categories she sets up (such as complement clauses versus relative clauses) have no role in these languages. In Austin (1988) in a discussion on Jiwari case marking I made the following cautious remarks about the approach of Silverstein (and by extension O’Dowd) to the relationship between clause linkage type and nominal argument coding:

We now see that Silverstein’s account with its several variables makes the correct generalisations. Nominalisation and normalisation of object case marking to dative apply at the top of the hierarchy ..., another normalisation pattern to allative applies [next and] to the bottom of the hierarchy main clause (‘plain’) inflection is found. Switch-reference applies from position 5 up to the top, and special dependent verb morphology applies from position 6 to the top. At position 7 we get linked main clauses but there is a tense/mood parallelism requirement. Finally, at the weakest clause linkage type of textual sequence (including direct quotation) discourse cohesion principles are at work.

A comparison of the details of the Jiwari clause-linkage hierarchy proposed here and Silverstein’s hierarchy shows that there are some similarities and differences. Jiwari (and most Australian languages) does not distinguish (adnominal) relative clauses from adverbial clauses expressing background information (the imperfective and perfective types) so there is no language-internal reason for seeing relativised clauses linked more tightly than adverbials (contra Silverstein). Also, the Jiwari purposive complements (corresponding to Silverstein’s dative infinitive) are below intentives (Silverstein’s desire complements) in our account. This is no doubt due to the use of the purposive structure in Jiwari to express weaker semantic connections such as jussives, and not just pure purpose. The positions of conditionals, conjunctions and clause sequences are identical to those in Silverstein’s table. What this suggests is that a clause linkage hierarchy of the type suggested by Silverstein is potentially applicable cross-linguistically, but that it requires a great deal of detailed investigation before it gains full empirical support. It would not be surprising if language particular factors of clause linkage (such as the non-distinction of relative and adverbial clauses in Australian languages) were to play a part in any comprehensive account.

An even more negative view is put forward by Lehmann (1988:183) who is highly sceptical of the possibility of identifying similar semantic functions of clauses cross-linguistically and correlating these with the syntactic structure of the clause types. Thus, he says:

the semantic nature of the relation between the two clauses does not figure in this list. While this has always played a prominent role in the classification of subordinate clauses, it does not appear to be constitutive of cross-linguistically valid types of clause linkage. That is, there is no cross-linguistic notion of, say, the concessive clause which would possess any constant structural correlates.

## 6. Conclusion

The data from Australian languages shows that there are a range of strategies available for languages to code dependent arguments of hypotactically linked clauses (where they occur), and

that several strategies can coexist in different languages. Hierarchies of formal deformation and degree of nominalisation have been set up by typologists and related to non-canonical (non-main clause) argument coding, but none of these deals with the richness of coding types identified in Australia. In addition, whether it is possible to correlate these proposed hierarchies cross-linguistically, let alone whether we can predict argument coding strategy application from an all encompassing hierarchy (or feature space) of clause linkage types remains an open question for further research.

## References

- Andrews, Avery D. 1996. Semantic case-stacking and inside-out unification. *Australian Journal of Linguistics* 16(1), 1-55.
- Ariel, Mira. 1990. *Accessing Noun-phrase Antecedents*. London: Routledge.
- Aristar, Anthony R. 1997. Marking and hierarchy types and the grammaticalization of case-markers. *Studies in Language* 21(2), 313-368.
- Austin, Peter and Joan Bresnan. 1996. Non-configurationality in Australian languages. *Natural Language and Linguistic Theory* 14, 215-268.
- Austin, Peter. 1981a. *A grammar of Diyari, South Australia*. Cambridge: Cambridge University Press.
- Austin, Peter. 1981b. Case-marking in Southern Pilbara languages. *Australian Journal of Linguistics* 1, 211-226.
- Austin, Peter. 1981c. Switch-reference in Australia. *Language* 57, 309-334.
- Austin, Peter. 1987. Word order and clause combining in Gascoyne-Ashburton languages. In Scott DeLancy and Russell Tomlin (eds.) *Proceedings of the Third Annual Pacific Linguistics Conference*, 1-11. Eugene: University of Oregon.
- Austin, Peter. 1988a. Cases and clauses in Jiwarli, Western Australia. La Trobe University, MS.
- Austin, Peter. 1988b. Classification of Southern Pilbara languages. In S.A. Wurm (ed.) *Papers in Australian Linguistics*, 17, 1-17. Canberra: Pacific Linguistics.
- Austin, Peter. 1995. Double case marking in Kanyara and Mantharta languages, Western Australia. In Frans Planck (ed.) *Double Case: Agreement by Suffixaufnahme*, 363-379. Oxford: Oxford University Press.
- Austin, Peter. 2016. A reference grammar of the Mantharta languages, Western Australia. SOAS University of London, MS.
- Austin, Peter. 1997. *Texts in the Mantharta Languages, Western Australia*. Tokyo: ILCAA, Tokyo University of Foreign Studies.
- Bickel, Balthasar. 2008. On the scope of the referential hierarchy in the typology of grammatical relations. Case and grammatical relations. In Greville Corbett & Michael Noonan (eds.) *Case and grammatical relations: Studies in honor of Bernard Comrie*, 191-210. Amsterdam: John Benjamins.
- Blake, Barry J. 1977. *Case marking in Australian languages*. Canberra: Australian Institute of Aboriginal Studies.
- Blake, Barry J. 1987. *Australian Aboriginal Grammar*. London: Croom Helm.
- Blake, Barry J. 1994. *Case*. Cambridge: Cambridge University Press.
- Comrie, Bernard and Sandra A. Thompson. 1985. Lexical nominalization. In Timothy Shopen (ed.) *Language typology and syntactic description Vol III*, 349-98. Cambridge: Cambridge University Press.

- Dench, Alan and Nicholas Evans. 1988. Multiple case-marking in Australian languages. *Australian Journal of Linguistics* 8, 1-47.
- Dench, Alan. 1988. Complex Sentences in Martuthunira. In Peter Austin (ed.) *Complex Sentence Constructions in Australian Languages*, 97-139. Amsterdam: John Benjamins.
- Dench, Alan. 1991. Panyjima. In R.M.W. Dixon and B. J. Blake (eds.) *Handbook of Australian Languages*, 124-243. Melbourne: Oxford University Press.
- Dench, Alan. 1993. Case systems. University of Western Australia, MS.
- Dench, Alan. 1994. Insubordination: The accusative revolution in Australian languages. University of Western Australia, MS.
- Dench, Alan. 1995a. *Martuthunira: A Language of the Pilbara Region of Western Australia*. Canberra: Pacific Linguistics C: 125.
- Dench, Alan. 1995b. The development of associating case marking in Nyamal. University of Western Australia, MS.
- Dench, Alan. 1996. The development of multiple case marking in the Pilbara languages of Western Australia. University of Western Australia, MS.
- Dench, Alan. 2008. Case in an Australian language: Distribution of case and multiple case-marking in Nyamal. In Andrej Malchukov & Andrew Spencer (eds.) *The Handbook of Case*, 756-769. Oxford: Oxford University Press.
- Dench, Alan. 2009. Categories of the verb in the Pilbara languages of Western Australia. Plenary paper, *CHRONOS: 9th International Conference on Tense, Aspect and Modality*. University Paris-Diderot - Paris 7 & University of Chicago Center in Paris. September 2009
- Diessel Holger. 2001. The ordering distribution of main and adverbial clauses: A typological study. *Language* 77(3), 433-455.
- Dixon, R.M.W. 1972. *The Dyirbal language of north Queensland*. Cambridge: Cambridge University Press.
- Dixon, R.M.W. 1977. *A grammar of Yidiny*. Cambridge: Cambridge University Press.
- Dixon, R.M.W. 1979. Ergativity. *Language* 55:59-138.
- Dixon, R.M.W. 1980. *The Languages of Australia*. Cambridge: Cambridge University Press.
- Dixon, R.M.W. 1987. *Studies in Ergativity*. Amsterdam: North Holland. (= *Lingua* 71).
- Evans, Nicholas. 1995. *Kayardild, the Language of the Bentinck Islanders: With elements of a Historical-comparative Tangkic Grammar*. Berlin: Mouton de Gruyter.
- Filimonova, Elena. 2005. The noun phrase hierarchy and relational marking: problems and counterevidence, *Linguistic Typology* 9, 77-113.
- Foley, William A. and Robert D. van Valin. 1983. *Functional Syntax and Universal Grammar*. Cambridge: Cambridge University Press.
- Fox, Barbara. 1983. The discourse function of the participle in Ancient Greek. In F. KleinAndreu (ed.), *Discourse perspectives in syntax*, 23-40. New York: Academic Press.
- Givon, Talmy. 1980. The binding hierarchy and the typology of complements. *Studies in Language* 4: 333-377.
- Givon, Talmy. 1995. *Functionalism and Grammar*. Amsterdam: John Benjamins.
- Goddard, Cliff. 1986. *Yankunytjatjara Grammar*. Alice Springs: Institute for Aboriginal Development.
- Hale, Kenneth. 1976. The adjoined relative clause in Australia. In R.M.W. Dixon (ed.) *Grammatical categories in Australian languages*, 78-105. Canberra: AIAS.
- Hale, Kenneth. 1982. Some essential features of Warlpiri main clauses. In Stephen Swartz (ed.) *Papers in Warlpiri grammar: in memory of Lothar Jagst, Work Papers of SILAAB*. Series A,

- Volume 6, 217-315. Berrimah: Summer Institute of Linguistics.
- Hopper, Paul J. and Elizabeth C. Traugott. 1993. *Grammaticalization*. Cambridge: Cambridge University Press.
- Hopper, Paul J. and Sandra A. Thompson. 1984. The discourse basis of lexical categories in universal grammar. *Language* 60(4), 703-752.
- Jacobsen, William H. 1993. Subordination and cosubordination in Nootka: clause combining in a polysynthetic verb-initial language. In Robert D. van Valin (ed.) *Advances in Role and Reference Grammar*, 235-274. Amsterdam: John Benjamins.
- Lehmann, Christian. 1988. Towards a typology of clause linkage. In John Haiman and Sandra A. Thompson (eds.) *Clause Combining in Grammar and Discourse*, 181-225. Amsterdam: John Benjamins.
- Manning, Christopher D. 1996. *Ergativity: argument structure and grammatical relations*. Stanford: CSLI Publications.
- Morphy, Frances. 1983. Djapu, a Yolngu dialect. In R.M.W. Dixon and Barry J. Blake (eds.) *Handbook of Australian Languages, Volume 3*, 000-000. Canberra: Australian National University Press.
- Nordlinger, Rachel. 1998a. *Constructive case: evidence from Australian languages*. Stanford: CSLI Publications.
- Nordlinger, Rachel. 1998b. *A grammar of Wambaya*. Canberra: Pacific Linguistics.
- Nordlinger, Rachel. 2006. Spearing the Emu drinking: subordination and the adjoined relative clauses in Wambaya. *Australian Journal of Linguistics* 26(1): 5-29.
- O'Dowd, Elizabeth 1992. The syntactic metaphor of subordination: a typological study. *Lingua* 86, 47-80.
- Sadler, Louisa and Rachel Nordlinger. 2006. Case stacking. *Realizational Linguistics* 44(3), 459-487.
- Schebeck, Bernard. 1976. Yuulngu. In R.M.W. Dixon (ed.) *Grammatical Categories in Australian Languages*, 352-382. Canberra: Australian Institute of Aboriginal Studies.
- Silverstein, Michael. 1976. Hierarchy of features and ergativity. In R.M.W. Dixon (ed.) *Grammatical Categories in Australian Languages*, 112-171. Canberra: Australian Institute of Aboriginal Studies.
- Silverstein, Michael. 1980. Of nominatives and datives: universal grammar from the bottom up. University of Chicago, MS.
- Silverstein, Michael. 1993. Of nominatives and datives: universal grammar from the bottom up. In Robert D. van Valin (ed.) *Advances in Role and Reference Grammar*, 465-498. Amsterdam: John Benjamins.
- Simpson, Jane. 1988. Case and complementiser suffixes in Waripiri. In Peter Austin (ed.) *Complex Sentence Constructions in Australian Languages*, 205-218. Amsterdam: John Benjamins.
- Simpson, Jane. 1991. *Warlpiri Morpho-Syntax: A Lexicalist Approach*. Dordrecht: Kluwer.
- Simpson, Jane. 2012. Information structure, variation and the referential hierarchy. In Frank Seifart, Geoffrey Haig, Nikolaus P. Himmelmann, Dagmar Jung, Anna Margetts & Paul Trilsbeek (eds.) *Potentials of Language Documentation: Methods, Analyses, and Utilization*, 73-82. Hawaii: University of Hawai'i Press, Language Documentation & Conservation Special Publication No. 3.
- Van Valin, Robert D. 1984. A typology of syntactic relations in clause linkage. *Berkeley Linguistics Society* 10, 542-558.

- Van Valin, Robert D. 1993. A synopsis of role and reference grammar. In Robert D. van Valin (ed.) *Advances in Role and Reference Grammar*, 1-164. Amsterdam: John Benjamins.
- Van Valin, Robert D. and Randy J. La Polla. 1998. *Syntax: Structure, Meaning, and Function*. Cambridge: Cambridge University Press.
- Verstraete, Jean-Christophe. 2010. Animacy and information structure in the system of ergative marking in Umpithamu. *Lingua* 120(7),1637–1651.
- Wilkins, David. 1989. Mparntwe Arrernte (Aranda): studies in the structure and semantics of grammar. PhD dissertation, ANU.
- Williams, Corinne 1980 *A Grammar of Yuwaalaraay*. Canberra: Pacific Linguistics.