ARGUMENT STRUCTURE OF SIMPLE AND
COMPLEX VERBS

CHAPTER 4

Complex predicates of the type found in Jaminjung pose a challenge for the mainstream approach to valency or argument structure. The standard approach is characterised by the view that the syntactic behaviour of relational lexemes – of which simple verbs are seen to be the prototype – is determined by a lexical property of syntactic relationality. This is couched in terms like 'verbs govern their complements', 'verbs assign case' or 'verbs project their argument structure'.

Complex predicates are problematic for this approach because they consist of more than one (potentially) relational lexeme which may influence the syntactic behaviour of the predicate. In Jaminjung, canonical complex predicates, as defined in §3.2, consist of an inflecting verb from a closed class and a non-inflecting element, a coverb, in a single intonation unit. Within the lexicalist approach to argument structure, three analyses are logically possible.

The first possibility is that the coverb is not relational, i.e. it does not have syntactic valency or the potential to govern complements. This means that argument structure is determined by the verb alone. The non-inflecting element, the coverb, only functions as an adverbial modifier of the verb. This analysis has been proposed, e.g., by Cook (1988) for Wagiman, a language which is geographically close, and structurally similar, to Jaminjung.

The second possibility is the converse of the first. The verb is considered to be semantically 'empty' to the degree that it has no or only a 'skeletal' argument structure. Instead, argument structure is determined by the semantically specific, non-finite element alone, which in this case, of course, has to be relational. This analysis has been suggested for the light verb constructions e.g. of Japanese (Grimshaw & Mester 1988). Neither analysis is tenable for Jaminjung complex verbs (for reasons which were briefly summarised in §3.2.4, and which will become clearer in this chapter). Both types of analysis also have been shown to be untenable for complex predicates in other languages.[59]

A third possibility is to treat the complex predicate as an unanalysable lexical unit which determines argument structure as a whole, just like a simple predicate.

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[59] See Durie (1997) for serial verbs in various languages, Mohanan (1994) for light verb constructions in Hindi, and Matsumoto (1996) for light verb constructions in Japanese, among others.

This is the analysis often given to the lexicalised particle verbs in European languages (but see Lehmann 1983, and the references cited on this topic in §1.4.1.3). This is not a convincing alternative for Jaminjung, because it misses a number of generalisations about the possible combinations of verbs and coverbs, and about the morphosyntactic behaviour of the resulting complex verbs, that can be stated most clearly if one considers each as a relational lexeme in its own right. Moreover, the 'lexical complex verb' analysis also cannot explain why Jaminjung coverbs may function as the predicate in non-finite subordinate clauses without a verb (§2.6.5), or as a semi-independent predicate, again without a verb (§3.4), or as what is in many respects the main predicate in productive progressive constructions with a verb in auxiliary function (§3.3.1).

Note, however, that under the definition of 'lexicon' and 'grammar' provided in §1.4.1.3, recognition of the independent status of coverbs and verbs as relational lexemes does not preclude recognition of complex verbs as expressions that are lexicalised – that is, conventionalised – to varying degrees.

An alternative, fourth possibility has been explored for complex predicates in a number of languages. According to this analysis, both constituents of a complex predicate are relational, and jointly determine its syntactic possibilities. This approach necessarily leads to the adoption of a concept of 'argument fusion' or 'argument sharing': the relational properties of two (or more) lexemes join forces, as it were, to determine the relationality of the complex predicate. Analyses of this type have been suggested for Latin particle verbs by Lehmann (1983), for light verb constructions in Hindi, Urdu, and Japanese by Mohanan (1994, 1997), Butt (1997), and Shibatani (1996), respectively; for serial verb constructions in a number of languages by Foley & Olson (1985), Durie (1997), and Andrews & Manning (1999), and for the complex verbs of the Northern Australian language Wagiman by Wilson (1999), among many others.

Argument sharing can be implemented in any framework that allows for unification. In this study, I adopt a Construction Grammar approach to argument structure, as outlined in Goldberg (1995). According to this approach, grammatical constructions – including those representing arguments – are seen as signs in their own right, i.e. their existence does not depend on the valency of lexical items. Predicates are not assigned a syntactic, but only a semantic valency. Central participants can be identified by language-specific criteria; for example, they may have to be expressed obligatorily, and/or as unmarked arguments. Participants (semantic arguments) can be mapped directly onto the argument roles of grammatical constructions. Lexical items and constructions may unify on the basis of semantic compatibility. This does not preclude restrictions in productivity by degrees of conventionalisation; see §1.4.1.2.

This constructional approach is more flexible than the traditional approach based on syntactic valency. First, it avoids the notorious problems posed by the

complement-adjunct distinction. For Jaminjung, the difficulties of identifying complements as opposed to adjuncts will be discussed in §4.1.1 and throughout §4.2 below.

Second, a single participant may also be represented in more than one constructional argument slot. Therefore, a constructional analysis is well suited to dealing with a language of the 'double marking' type, that is, a language where argument roles are indicated both by bound pronominals and by case marking. A representation of the interaction of case-marked noun phrases and bound pronominal marking is introduced in §4.1.2.

Third, the constructional approach lends itself easily to a representation of argument sharing. The same argument slot of a construction may represent – by unification – participants of more than one relational lexeme. A way of representing argument sharing (or rather, participant sharing) is introduced in §4.1.3 below.

In §4.1.3, I will also provide operational criteria for identifying central participants of Jaminjung coverbs and verbs, in terms of expression as core arguments. Since core arguments in Jaminjung cannot be identified by recourse to fundamental grammatical relations, or by relying on cross-reference marking alone, or case marking alone, I will argue for a 'mixed' definition of core arguments which takes into account both cross-reference marking and case marking. Central participants will be defined as those expressed as core arguments across all constructions where a given predicate occurs.

Section 4.2 provides additional justification for the constructional approach just outlined, by providing constructional meanings for the main case-marking constructions and the bound pronominal construction, and by accounting for their integration with participant roles. It will be shown that cross-reference marking (following a basically nominative-accusative pattern) and case-marking (following an ergative-absolutive pattern) do not converge but rather diverge in their functions, and are therefore better treated as constructions in their own right, rather than as exponents of grammatical relations. Some additional constructions of relevance for the description of argument structure in Jaminjung are also discussed in this section.

Section 4.3 provides a systematic overview of patterns of argument sharing in Jaminjung complex verbs, that is, the possibilities of combining verbs and coverbs with different valencies.

4.1   A   construction-based   approach   to   Jaminjung argument structure

4.1.1   Problems of identifying core arguments

In the typological-functionalist literature,[60] there is a consensus that grammatical relations like 'subject' and 'object' are not universal primitives, but multi-factorial categories which arise from the grammaticalisation of semantic and pragmatic constraints on certain syntactic constructions. This means that languages can have categories with degrees of 'subjectlike' or 'objectlike' properties. The identification of grammatical relations in any particular language has to depend on clear morpho-syntactic evidence. This could manifest itself either in syntactic behaviour, or in morpho-syntactic coding strategies, or, preferably, in both.

In Jaminjung, there is no clear syntactic evidence for the existence of grammatical relations of the 'subject' and 'object' type, which could form the basis for a description of argument structure. As shown in §2.6.2, Jaminjung has free word order of predicates and arguments, lexical arguments can be freely omitted, and there is no evidence for the existence of a phrasal category 'verb phrase'. Grammatical relations can therefore not be identified by the obligatory presence of arguments, or by phrase structure configurations.

There are also no constructions that would provide conclusive evidence for the existence of syntactic pivots, defined in the terminology of Role and Reference Grammar as noun phrases 'around which a construction is built' (Foley & Van Valin 1984: 110). Jaminjung does not have voice alternations like passive or antipassive, or a switch-reference system. Furthermore, there are no 'control' verbs which would require non-finite complements (see §2.6), and there are no coreference constraints between arguments in a main clause and a non-finite adverbial clause like the purposive clause (see §§2.6.5.1-2). For non-finite subordinate clauses functioning as secondary predicates, e.g. the constructions with allative-marked coverb described in §2.6.5.3, coreference constraints are best expressed in semantic, not in syntactic terms.

Accessibility to relativisation (Keenan & Comrie 1977, Comrie 1981: 131ff., Lehmann 1984: 211ff.), and the use of resumptive pronouns in relativisation (cf. Lehmann 1984: 227ff., Wilkins 1989: 157ff.) also do not constitute possible tests for a hierarchy of grammatical relations in Jaminjung. This is because the function of 'relativisation' is fulfilled by a general type of subordinate clause (cf.

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[60]   See e.g. Li & Thompson (1976), Foley & Van Valin (1984), Sasse (1982), Comrie (1989: 66), Van Valin & LaPolla (1997: 242ff).

Hale 1976), which may be adjoined to noun phrases in virtually any function in the clause, or function as adverbial clause (see §2.6.4).

In the absence of clear syntactic criteria, only the morphological correlates of argument structure – bound pronominals and case marking – are possible candidates for indicating core argument status.

Since Jaminjung is a morphologically ergative language, case marking identifies 'subjects' of intransitive verbs with 'objects' of transitive verbs, and singles out 'subjects' of transitive verbs (although various marking possibilities exist for the latter, see §4.2.1).

In addition to case marking, Jaminjung has one intransitive and one transitive paradigm of bound pronominal prefixes[61] (see §2.4.1.2). Three categories are formally distinguished, which will be abbreviated as S ('single argument with intransitive verbs'), A ('Actor') and U ('Undergoer'), respectively. Since marking of A and S are formally related (see §2.4.1.2.2), bound pronominal marking corresponds more closely to a nominative-accusative pattern.

Morphological marking as such, therefore, does not identify 'subjects' or 'objects'. This is the situation encountered in many Australian languages (Blake 1979: 293, cf. also Dixon 1994: 94ff.). One possibility for dealing with the lack of a one-to-one relationship between bound pronominal marking and case marking is to assume fundamental grammatical relations which are independent of morphological marking. In this view, case marking and cross-reference marking may jointly mark grammatical functions, but are neither necessary nor sufficient to identify them (see e.g. Dixon 1994: 45, Blake 1987: 23f., 1994: 51ff.). It was argued above that such grammatical relations can only be assumed in the presence of clear morpho-syntactic evidence.

An analysis whereby only bound pronominal marking on the verb is considered to be indicative of core argument status has also become widely accepted. According to the 'pronominal argument hypothesis',[62] bound pronominals represent the 'real' arguments, while the corresponding noun phrases constitute 'adjuncts' that are licensed by these arguments but do not have argument status themselves. This analysis has also been claimed by Jelinek (1984) to account for

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[61]   These traditional terms are used here in preference to 'head-marking' and 'dependent-marking' (Nichols 1986) since they do not presuppose any syntactic function of the carriers of these elements. The term 'cross-reference marking' will be used interchangeably with 'bound pronominal marking' and should not be taken to suggest a dependency analysis.

[62]   This analysis was suggested in passing already by Boas (1963 [1911]: 30). It has been widely adopted in the functionalist and descriptive literature, in particular in dealing with North American languages (see e.g. Nichols 1986, Mithun 1991). It was developed into a formal, GB-based framework by Jelinek (1984), with explicit reference to double-marking languages like Warlpiri.

split case marking, the possibility of so-called 'null anaphora' (i.e. the absence of lexically represented arguments), and other 'non-configurational' properties of languages like Warlpiri which exhibit a similar kind of 'double marking' to Jaminjung.

In a recent paper, Austin and Bresnan (1996) adduce evidence from a number of Australian languages to show that there is no strict correlation between nonconfigurational properties and the possibility of omitting lexical arguments, on the one hand, and the presence of bound pronominals on the other hand. Both Austin and Bresnan (1996) and Nordlinger (1998a) also argue that case-marked noun phrases can in fact be arguments in these languages. Some of the problems for the 'pronominal argument' hypothesis that these authors identify are also found in Jaminjung.

First, there are maximally two positions marked on the verb; therefore the 'pronominal argument' analysis excludes the possibility of three core arguments in a clause. However, Jaminjung has a number of trivalent simple and complex verbs, among them the verb -*ngarna* 'GIVE'. These verbs are formally transitive, that is, only two participants may be represented as bound pronominals on the verb (in the case of -*ngarna* 'GIVE', these are the 'giver' and (usually) the 'recipient'; see §5.7.1). The third participant is represented by an additional absolutive noun phrase which is not cross-referenced, as shown in (4-1). Such an additional absolutive noun phrase is not possible with bivalent predicates; for the trivalent predicates, one therefore has to allow for 'primary objects' and 'secondary objects' in the sense of Dryer (1986).

(4-1)   **walayarra nganyi**-wu-ngarna
         tobacco   1sg:2sg-FUT-GIVE

         'I'm going to give you tobacco'

Second, in the progressive construction (§3.3.1), only one argument is cross-referenced on the verb, but a second argument may be represented by a second absolutive noun phrase, as shown in (4-2).

(4-2)   **gugu**   burlug-mayan   **yirri**-yu
         water   drink-CONT   1pl.excl-BE.PRS

         'we are drinking water'

It is therefore unsatisfactory to use cross-reference marking as the sole determinant of argument status in Jaminjung. On the other hand, there are obvious problems with using case-marking on its own, too. The main problem, of course, is that case-marked noun phrases are not obligatory. Another problem resides in the frequent 'mismatches' of case marking and cross-reference marking, to be discussed in more detail below. For example, the same case form marks agents of transitive clauses ('ergative') and instruments ('instrumental'),

and it is therefore problematic to regard all ergative-marked noun phrases as core arguments.

Nevertheless, for practical purposes it is desirable to make a distinction, to be established on purely formal grounds, between core arguments and peripheral arguments. Under the definition of these terms adopted here (see §1.4.1.2), this distinction does not strictly correspond to the distinction between complements and adjuncts. All core arguments can be regarded as complements (corresponding to participants that are central to the meaning of a predicate); thus, core arguments can be used to establish the 'basic' valency of a predicate. However, as we will see below, central participants may sometimes be expressed as peripheral arguments as well.

As already indicated, in Jaminjung both case marking and bound pronominal marking have to be taken into account in determining core argument status. The criteria adopted here are summarised in (4-3) and will be justified in the course of this section.

(4-3)   Criteria for core argument status

(i)   All pronominal prefixes constitute core arguments.

(ii)   Any absolutive noun phrase constitutes a core argument, with the
           exception of nominal predicates (see §2.6.3), of unmarked locational
           nominals (see §2.2.2.4 and §2.2.3.3.1), and of body parts in a part-
           whole construction (see §4.2.3.2).

By these criteria, any absolutive (i.e. unmarked) noun phrase (with the restrictions outlined in (4-3ii)) counts as a core argument, whether or not it is also cross-referenced on the verb in addition. On the other hand, a noun phrase that is not in the absolutive does not count as a core argument in its own right, although it may be coreferent with a bound pronominal which does constitute a core argument. In particular, the ergative/instrumental case is not, by itself, taken as indicative of core argument status. The arguments against considering oblique pronominal clitics as core arguments (except when they enter into the bound pronominal paradigm; see §2.2.4.3.3) were already presented in §2.2.4.3.1.

This 'mixed' definition of core arguments relies on one of the central assumptions of a constructional approach to grammar: constructions can overlap. That is, an occurring linguistic expression (e.g. a clause) can "be seen as simultaneously instantiating more than one grammatical construction at the same level" (Fillmore 1988: 35). Therefore, case-marked noun phrases and bound pronominals can be viewed as instances of different constructions which are superimposed on one another in a given clause. A representation of this overlap is proposed in the next section.

4.1.2   Representing double-marking

Treating morphological markers like the pronominal prefixes as constructions perhaps requires some justification. After all, they are part of the obligatory morphology of the verb, which means that, at one level, there is no choice of construction involved. Considering morphological markers as constructions, though, is completely consistent with the basic assumptions of Construction Grammar outlined in §1.4.1. Also, we will see in §4.1.3 and §4.3 that the interpretation of the prefixes is not necessarily determined by the verb alone, but also by the presence of certain coverbs which contribute to the valency of the complex verb. Moreover, as will be shown in §4.2.2, the bound pronominals can be given a function (or 'constructional meaning') different from that of the main case-marking constructions.

The overlap of case marking and cross-reference marking constructions manifests itself in the representation of the same participant filling argument slots of both constructions. In this approach, there is no need to posit a level of underlying grammatical relations to mediate between predicate semantics and surface form. Rather, the language-specific function of the constructions should be sufficient to account for the representation of participants, i.e. for the range of predicates that may enter a given construction (with the caveats mentioned in §1.4.1.2). The possibility of integrating a verb and its participant(s) is evaluated for each of these constructions separately. Consequently, the relation between a given bound pronominal and a noun phrase (case marked or not) is not one of dependency (by way of agreement), but rather an indirect one: both may represent the same semantic participant, but apart from that belong to argument structure constructions which are in principle independent from one another.

By way of illustration, consider the simple example in (4-4).

(4-4)   Nalyarri-ni   gan-angu   warrag
         \<subsection>-ERG   3sg:3sg-GET/HANDLE.PST   catfish

         'Nalyarri caught a catfish'

Here, the two participants of the verb *-angu* 'GET/HANDLE' are represented by the transitive bound pronominals on the verb itself, and at the same time have the lexical instantiations of a subsection term (*Nalyarri*) and a common noun (*warrag* 'catfish'), which are in ergative case and absolutive case (unmarked), respectively. Each case-marked noun phrase in combination with a predicate is considered a sub-construction in its own right, since each may appear independently of the other. As indicated above, bound pronominal prefixes are also considered constructions in their own right. The simultaneous integration of the verb and its participants into both case-marking and cross-reference constructions can then be schematically represented as in Fig. 4-1.

Fig. 4-1. *The overlap of case-marking and bound pronominal marking (ex. 4-4)*

	Nalyarri -ni	*warrag*	*gan-angu*
	[subs.]-ERG	catfish	3sg:3sg-GET/HANDLE.PST

Case marking: ERG

NP-ERG	V

ABS

NP(ABS)	V

Lexical filler: <handler   entity.handled>   *-angu*

Bound pron.:   TRANS

A:	U-	trVRoot
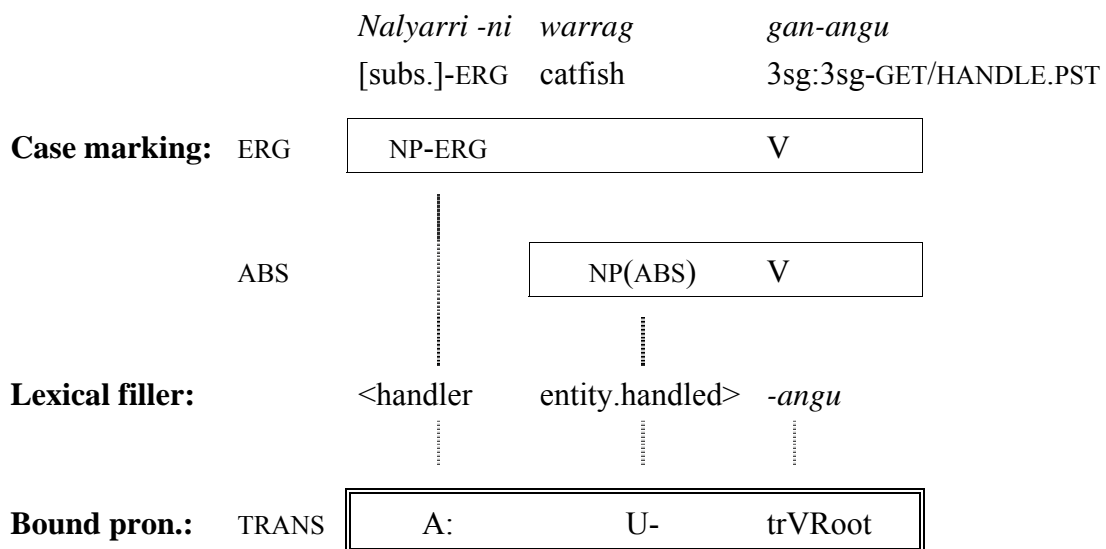
Each of the 'boxes' in Fig. 4-1 represents an argument structure construction.[63] The two upper boxes represent the case marking constructions, consisting of a verb and a noun phrase. They are labelled by the cases on the noun phrase, i.e. ABS(olutive) and ERG(ative), respectively. The bound pronominal construction, consisting of a verb root and its A and U prefix, is labelled 'TRANS(itive)' and framed by a box with double lines. It should be thought of as embedded in the V-slot of the case-marking constructions (something that is not adequately captured by the notation).

The representation of a predicate with its participant roles, which constitute the fillers of both argument structure constructions, is placed in between the 'boxes' representing the two constructions. The verb root is a lexical filler which may instantiate the verb slot of the construction(s). The participant roles are represented by noun phrase constructions which are in turn instantiated by lexical fillers (as illustrated by the example given above the figure). For the purposes at hand, no distinction is made in the notation between 'representation' and 'instantiation'; both relationships are indicated by a dotted line.

As already outlined in §1.4.1.2, no particular theoretical relevance is assigned to participant roles. The labels used here should be seen as abbreviations for participant roles that are specific to a given predicate (e.g. <handler, entity handled>), and or to a predicate class (e.g. <figure, location>). These participant roles, rather than constituting primitives of the analysis, fall out from the semantics of the predicate. Since the meaning of verbs and coverbs has not been investigated in detail so far (see Chs. 5 and 6), impressionistic labels are used in this chapter.

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[63]   Much of this notation is adopted from Mohanan (1994, 1997) and from Goldberg (1995).

The ordering of the boxes representing constructions in this and the other figures should not be taken to represent any hierarchical ordering, since both constructions are simultaneously present. Free word order is such a pervasive feature of Jaminjung that it is not represented here. The ordering in the figure is 'argument(s) – predicate' only to allow a clearer mapping to the bound pronominal construction, where the order 'pronominal prefixes – verb root' is, of course, fixed.

The approach just outlined has a number of advantages. It integrates the insights of typologists and functionally oriented linguists like Lehmann (1982b, 1988), Croft (1988), and Himmelmann (1996), who have emphasised that bound pronominal marking and case marking are structurally and semantically distinct. This is reflected in the distinct grammaticalisation paths that give rise to the two systems. However, the two systems converge in their function of signalling argument relations (see e.g. Lehmann 1988: 64ff). Therefore, languages may predominantly rely on cross-reference marking and not mark the function of noun phrases ('head-marking'), or vice versa ('dependent-marking'), but there are also languages (like Jaminjung) that use both devices.

Moreover, this analysis can easily accommodate one of the problems that the 'pronominal argument hypothesis' was originally developed to solve. Treating cross-reference marking and case marking as different constructions can be used to account for mismatches between case marking and bound pronominal marking such as split case marking. Jaminjung has no split ergative system, but nevertheless there is no one-to-one correspondence between case-marking and cross-reference marking, as will become clear in §4.2.

This approach also allows us to represent argument sharing, in a way to be outlined in the next section. The discussion of argument sharing, however, is tied to the identification of those participants of both predicates which potentially fill the same argument slot. First, therefore, criteria for identifying central participants are proposed.

4.1.3   Central participants of verbs and coverbs

It is not always easy to identify the semantic participants of a given predicate, and semantic intuition is not necessarily reliable here. To quote an example given by Mosel (1991: 244), does *eat* have two participants (as is commonly assumed), or also a third participant, an 'instrument' (e.g. a spoon or the fingers)? Formal criteria for the semantic valency of predicates will have to be, to some degree, language-specific, since criteria like obligatoriness do not work equally well for all languages. The criteria for the semantic valency of Jaminjung verbs and coverbs, proposed in (4-5) below, are based on the definition of core arguments in §4.1.1. Rather than allowing for a clear distinction between participants and

non-participants, these criteria identify the 'central', 'most involved' (Lehmann 1991) or 'profiled' (Goldberg 1995) participants of a predicate. This is not to deny that verbs and coverbs may have other participants, not expressed as core arguments, which are clearly central to their meaning. Some verbs and coverbs, for example, have a location participant as part of their meaning. This is not expressed as a core argument (in fact it is hardly ever expressed), but clearly determines the possibilities of these predicates to form complex verbs (see §5.2). Similarly, verbs of contact/force could well be argued to have an instrument participant (see §5.4). For the purpose of a more fine-grained division into predicate classes, as outlined, for example, in Lehmann (1991), valency classes beyond 'monovalent', 'bivalent', and 'trivalent' would have to be recognised for both verbs and for coverbs. To some extent this goal will be achieved in Chs. 5 and 6, which deal with the semantics of generic verbs and the semantics of coverb classes, respectively. However, for the practical purpose of describing argument structure and argument sharing in complex predicates in the remainder of this chapter, semantic valency will be described only with reference to central participants. Thus, 'monovalent', for example, should read 'the predicate in question has one central participant by the criteria given in (4-5)'.

(4-5)   Criteria for the identification of central participants

(i)   The central participants of a predicate are represented as core
          arguments across all expressions that the predicate occurs in (if they are
          represented at all), and/or they are obligatorily represented.

(ii)   It is possible for central participants to be lexically represented (in
          addition to being represented by a bound pronominal).

Criterion (i) covers all participants that are represented as bound pronominals on the verb (including those represented, in addition, by a noun phrase). Bound pro-nominals are, of course, obligatory. The same criterion accounts for all partici-pants that may be represented by an absolutive noun phrase (although this is not obligatory), since absolutive noun phrases also count as core arguments by the definition given in §4.1.1. The criterion of obligatoriness, furthermore, allows us to include participants of verbs of speech and performance, which are not expressed as core arguments; this case is discussed in §4.2.3.1-2. Criterion (ii) is necessary to exclude the 'Dummy-Undergoers' of some formally transitive verbs with monovalent readings, which do not represent participants (see §4.2.2.1.3).

These criteria are quite straightfowardly applied to verbs. All five intransitive[64] verbs are monovalent, since they only allow for one participant to be represented

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[64]   Recall that the terms 'intransitive' and 'transitive' are used here exclusively in reference to
       the formal verb classes established by bound pronominal marking.

by a pronominal prefix. They do not – as simple verbs – allow for a second absolute noun phrase which is not cross-referenced. For example, the ergative-marked 'heat source' of the intransitive verb -*irna* 'BURN' (see §4.2.1.1 below) does not count as a central participant by the criteria just given, since ergative-marked noun phrases are not considered to be core arguments.

All transitive verb roots (and all intransitive reflexive verb stems) are, as simple verbs, either bivalent or trivalent. Bivalent verbs can be identified on the basis of cross-referencing alone. It is of no concern, for example, whether a participant represented by the U prefix is also represented as an absolute noun phrase (which counts as a core argument), or a noun phrase marked with allative, comitative or any other case (see §4.2.2.1.2 below). Bivalent verbs form the largest class in Jaminjung. Only the transitive verb -*ma* 'HIT' has both bivalent and monovalent senses, but the latter only occur in combination with coverbs (see §4.2.2.1.3, 5.4.2.3). Trivalent verbs can be distinguished from bivalent verbs in that they allow for an additional absolute noun phrase, which is not cross-referenced on the verb. By the criteria given above, this represents a central participant of the verb. There are only two trivalent verbs, -*ngarna* 'GIVE' (see (4-1) in §4.1.1 above) and -*yungga* 'TAKE AWAY'.

The identification of central participants is much less straightforward for coverbs. Coverbs, by definition, do not take pronominal prefixes. Moreover, coverbs do not occur as the only predicate, except in stylistically marked utterances (see §3.4.1-2), and in non-finite clauses (§2.6.5), but even then they are rarely accompanied by argument expressions. Usually, coverbs only enter syntactic argument constructions in combination with a verb. Therefore, distinguishing the participant roles of the coverbs from those of the verb is not a trivial task.

As an example of the difficulties involved, and the application of the criteria, consider the two coverbs *jarr* and *jurrb* in (4-6). Both combine with the verb -*arra* 'PUT' in complex verbs translating as 'put s.th. down'. The two coverbs are in semantic opposition: *jarr* can only be predicated of singular entities (4-6a), *jurrb* only of nonsingular entities (4-6b). However, it is not immediately obvious whether *jarr* and *jurrb* should be regarded as stative predicates (e.g. 'be down'), as monovalent motion predicates (e.g. 'move down'), or as bivalent predicates (e.g. 'put down'). This uncertainty reflected in the glossing in (4-6).

(4-6a)   jungulug   **jarr**   gan-**arra**-m
          one   ??(single.entity)   3sg:3sg-PUT-PRS

          'he puts down one' (piece of firewood) (DP/MJ, JAM064)

   b)   jirrama..   **jurrb**   gan-**arra**-m   jirrama..
         two   ??(multiple.entities) 3sg:3sg-PUT-PRS   two

en	lubayi=ma	**jurrb**	gan-**arra**-m
and	many=SUBORD	??(multiple.entities)	3sg:3sg-PUT-PRS

'he puts down two, and it is many that he puts down' (firewood)
(DP/MJ, JAM065)

Both coverbs may also combine with other transitive verbs (see e.g. §6.13). In addition, *jurrb* was also found with the stative intransitive verb -*yu* 'BE'. The following example is from a Frog Story narrative, from the description of a scene where a boy and a dog who have been looking for their pet frog finally find it sitting together with its mate and their baby frogs. From the context it is quite clear that there was no agent that 'transferred' the group of frogs.

(4-7) malara=ma   **jurrb**   ga-**yu** \
       frog=SUBORD   be.multiply   3sg-BE.PRS

'... where the frogs are (together)' (Frog Story) (IP, F03296)

According to the criteria proposed in (4-5) above, central participants of coverbs will be identified as those that are expressed as core arguments **across all constructions** that a coverb can enter into. For those coverbs that combine with both transitive and intransitive verbs, only one participant is expressed as a core argument across all constructions. In the combinations with intransitive verbs, only one core argument is present, representing the only participant of both verb and coverb. In the combinations with transitive verbs, the verb contributes an additional participant, represented as a second core argument, while the first core argument represents a participant of both the verb and the coverb.

According to this reasoning, *jurrb* has to be regarded as a stative monovalent coverb, translating as something like 'be together (of multiple entities)', rather than as 'put down (of multiple entities)'. It functions as a coverb of spatial configuration, a class which in Jaminjung also contains other predicates expressing a complex configuration, e.g. *murruny* 'be heaped up' (see §6.1.1).

This conclusion, of course, is only valid under the assumption that polysemy should not be postulated unless there is construction-independent evidence to the contrary. Theoretically, one could postulate two senses for a coverb like *jurrb*, e.g. 'be together' and 'put down (of multiple entities)'. It is one of the fundamental advantages of the constructional approach that stipulation of regular polysemy of this kind can be avoided (see §1.4.2.2).

This point can be made clearer by introducing a representation for argument sharing. As pointed out at the beginning of this chapter, the notion of argument sharing is a necessary correlate of the assumption that both coverbs and verbs are relational predicates. In complex verbs, their semantic participants are fused such that the predicates share at least one participant. Argument sharing in a complex verb consisting of the bivalent verb -*arra* 'PUT' and the monovalent coverb *jurrb*

'be together (of multiple entities)' is represented in Fig. 4-2. The (canonical) complex verb construction (CCV), consisting of coverb and verb (see §3.2), is represented on a separate level, below the box representing the case marking construction, and is marked by shading. It should be thought of as occupying the 'V' slot in the case marking construction (here: absolutive construction). In the example under consideration, the coverb contributes a single participant, which, together with the second participant of the verb, is encoded simultaneously as an absolutive noun phrase, and as Undergoer. The Actor prefix only represents the verb's 'putter' participant, which does not correspond to any participant of the coverb.

Fig. 4-2. *Argument sharing of a monovalent coverb with a bivalent verb (ex. 4-6a)*

	jirrama	*jurrb*	*gan-arra-m*
	two	be.multiply	3sg:3sg-PUT-PRS
ABS	NP(ABS)		V
CCV		Coverb	Verb
	<figure>	*jurrb*	
	<putter	entity.put>	*-arra*
TRANS	A:	U-	tr.VRoot
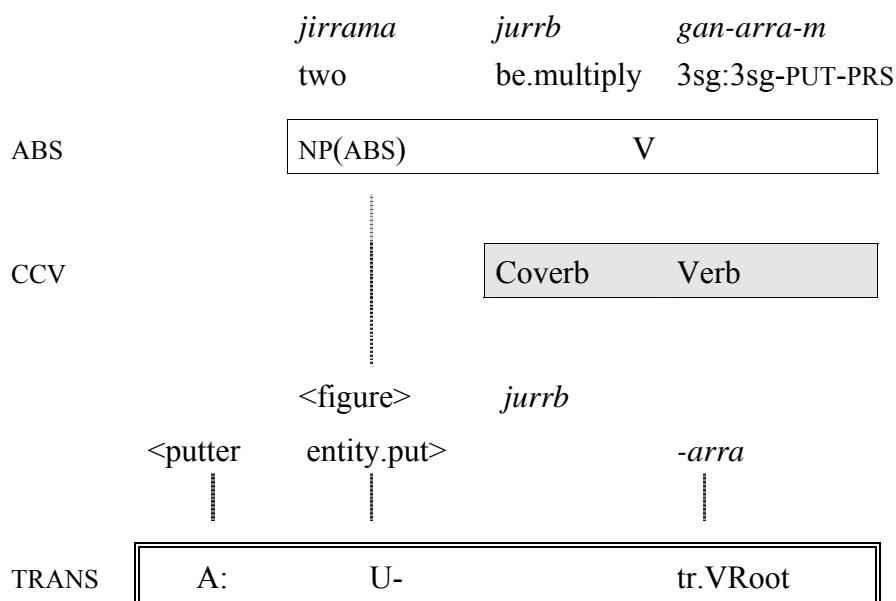
By analogy, we expect *jarr* to have the same valency as *jurrb*, the only difference being the singular number of the 'thing(s) put'. However, all my attempts to combine *jarr* 'put down one' with the intransitive verb *-yu* 'BE', or with other intransitive verbs, were rejected by speakers.[65] From this we can conclude that *jarr* is a bivalent coverb of transfer. It has two central participants, a 'putter' and a 'single thing put', which have to be expressed as core arguments, and possibly a third, marginal 'location' participant.

The integration of the bivalent coverb *jarr* 'put down (single entity)' into a two-argument construction with the verb *-arra* 'PUT' is illustrated in Fig. 4-3. Here we find a total overlap, both semantically and in morphosyntactic expression, between the two central participants of the verb, and those of the coverb: the first

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65   For the evaluation of acceptability judgments of this kind, see §1.3.4.

participant of both coverb and verb is expressed by the A prefix, and the second participant of both coverb and verb is expressed by the U prefix. In addition, the shared participants may be represented by a noun phrase; in this example, the second participant of the coverb and the verb are lexically expressed as an absolute noun phrase.

Fig. 4-3. *Argument sharing of a bivalent coverb with a bivalent verb (ex. 4-6b)*

	jungulug	*jarr*	*gan-arra-m*
	one	put.down.one	3sg:3sg-PUT-PRS
ABS	NP(ABS)	V	
CCV		Coverb	Verb
	<putter	entity.put.down>	*jarr*
	<putter	entity.put>	*-arra*
TRANS	A:	U-	tr.VRoot
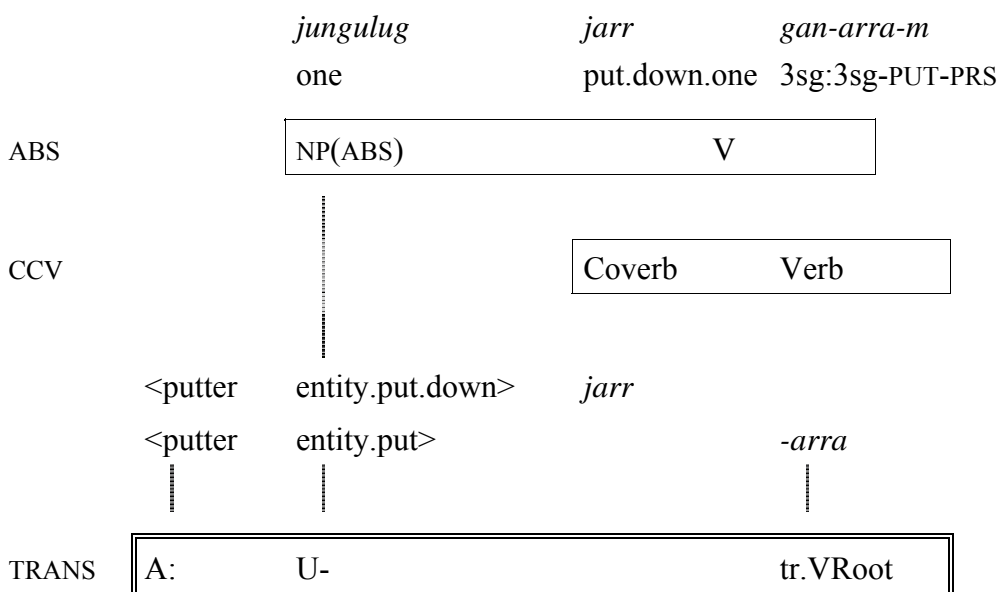
Thus, by taking into consideration the valency of the verbs that a given coverb may or may not combine with, it is possible to obtain indirect evidence for the semantic valency of this coverb.

Note that the occurrence of arguments with coverbs used as semi-independent predicates, i.e. without a verb, is not a good indicator of the coverbs' valency. This is because this type of construction is stylistically marked and restricted to highly contextualised genres (see §3.4 for details). In particular, it only seems to be used under conditions of 'topic chaining', i.e. where an agent is understood from context, and therefore ergative-marked noun phrases representing an agent do not occur with coverbs as semi-independent predicates in the data examined. More often than not, no argument expression at all is present. Where an absolutive noun phrase occurs, it is usually interpreted as the patient participant, as in (4-8b) below and in (3-35a-c) in §3.4.2. This interpretation does not allow the conclusion that the coverb is bivalent, since it may result from the 'reconstruction' of the applicable verb (which in (4-8) is even present in the verbal context). Thus, while *dalb* 'light a fire' and *bulg* 'take out guts' are truly bivalent coverbs by the criteria outlined in (4-5), *bag* 'break' in (4-8b) and *yirr* 'move out' in (3-35a) may combine with monovalent verbs and are therefore identified as monovalent coverbs of change of state (see §6.7) and direction of motion (see §6.5.3), respectively.

(4-8a) thanthiya=biya janyung **dud**   yirr-angga-m \
        DEM=NOW   other   hold.one   1pl.excl:3sg-GET/HANDLE-PRS

   b)   **!bag**..   jungulug   juwal \
        break   one   long

        'then we pick up another one, break! one long one' (IP, F01401-2)

Coverbs in case-marked subordinate clauses (see §2.6.5) occur with argument expressions so rarely that it is also not possible to draw conclusions about their valency from these constructions.

However, there are a few cases where direct evidence for the valency of coverbs can be found. This is when complex verbs formed with these coverbs allow for a certain number of core arguments which does not correspond to the valency of the verb. The first case concerns bivalent coverbs in the progressive construction, and in 'lexicalised progressives' (see §3.3.1 and §6.3). These allow for a second absolutive argument, even though they combine with an intransitive verb (see also §4.2.1.3). The reverse case is found where transitive verbs have a secondary sense which allows them to form monovalent complex predicates with monovalent coverbs. This is the case, for example, for *-ma* 'HIT' with coverbs of emerging (see §4.4.2.2.1.3 below, §5.4.2.3 and §6.5.4). Finally, some coverbs can be identified as trivalent because they always allow for three core arguments, regardless of whether they combine with bivalent or trivalent verbs. There are only a few trivalent coverbs, classified as 'coverbs of transfer' in §6.15. One of its members is *yurrg* 'show, teach'. This coverb exclusively combines with the bivalent verb *-arra* 'PUT', familiar from previous examples. The resulting complex verb, just like *-ngarna* 'GIVE' as a simple verb, allows for three core arguments. The 'shower' is encoded as Actor, the 'recipient' as Undergoer, while the 'entity shown' is optionally represented by an absolutive noun phrase, as illustrated in (4-9).

(4-9)   mulurru-ni   **gagawuli** yurrg **gan**-karra-ny   Gilwi-ni
        old.woman-ERG   long.yam   show   3sg:1sg-PUT-PST   <place.name>-LOC

        'the woman showed me yam in Gilwi' (DMc, CHE380)

Here we can see very clearly that the coverb *yurrg* has an influence on the overall argument structure of the complex verb; it introduces a third central participant (the recipient) to the complex predicate, which then (if lexically present) has to be expressed as a core argument. This is schematically represented in Fig. 4-4.

Fig. 4-4. *Argument sharing of a trivalent coverb with a bivalent verb (ex. 4-9)*

	mulurru-ni	*gagawuli*	*yurrg*	*gan-karra-ny*
	woman-ERG	long.yam	show	3sg:1sg-PUT-PST
ERG	NP-ERG			V
ABS		NP(ABS)		V
CCV			Coverb	Verb
	<shower recipient	entity.shown>	*yurrg*	
	<putter	entity.put>		*-arra*
TRANS	A: U-			tr.VRoot
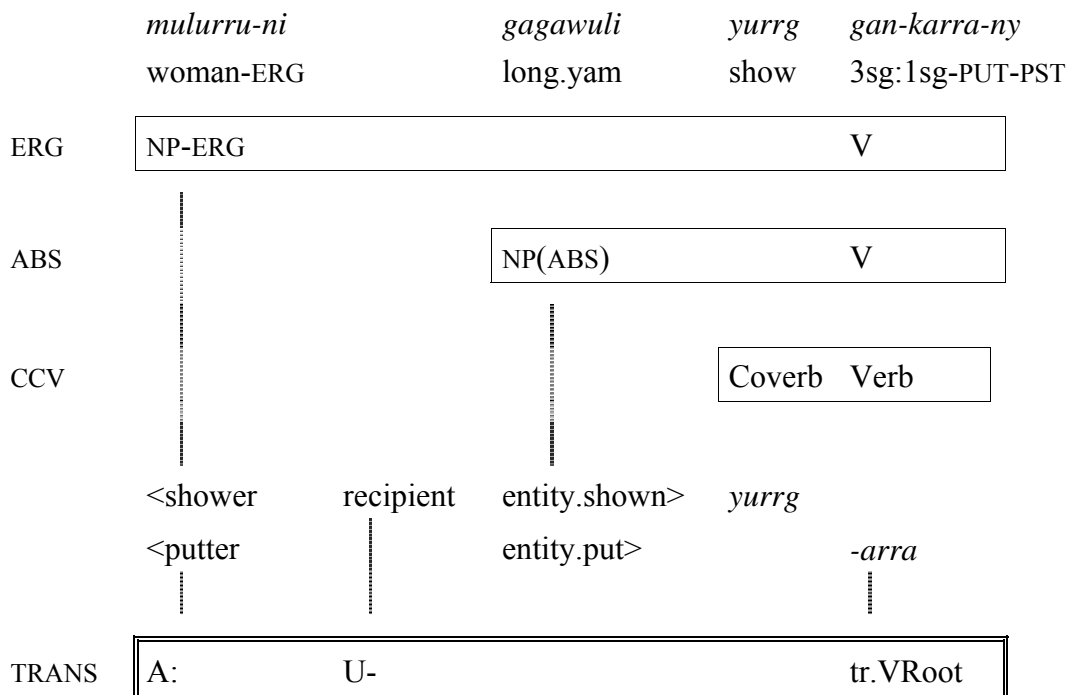
Coverbs, then, just like verbs, may be monovalent, bivalent, or trivalent. It is interesting to note that avalent predicates do not seem to exist in Jaminjung. Weather conditions – frequently expressed by avalent predicates cross-linguistically – are invariably expressed with a nominal argument specifying the weather condition and a corresponding verb of, e.g., motion or sound, as in (4-10).

(4-10)   wilarung   mimim-mayan   ga-ram
         lightning   flash-CONT 3sg-COME.PRS

         'the lightning comes flashing' = 'there is lightning' (MW, CHE023)

We have now established criteria for the identification of core arguments on the morpho-syntactic level, and for the identification of central semantic participants. Only bound pronominal markers and absolutive noun phrases were considered as core arguments; additional justification for the exclusion of all other case-marked noun phrases is provided in §4.2. Central participants were defined as those participants expressed as core argu-ments across all constructions where a given predicate occurs. For the practical purpose of describing argument structure and argument sharing in the remaining sections, only these central participants will be considered.

By introducing a representation of the integration of one or more predicates and their participants into morpho-syntactic argument structure constructions, we have also laid the foundations for the systematic description of argument structure constructions (§4.2), and of the patterns of argument sharing between verbs and coverbs (§4.3).

4.2   Main argument structure constructions

In this section, further evidence will be provided for regarding case-marking constructions and bound pronominals as independent constructions, with somewhat different functions. In §4.2.1, the case marking on noun phrases that could be considered candidates for core argument or 'complement' status are discussed in some detail. The function of bound pronominals is contrasted with the function of case-marked noun phrases in §4.2.2. In §4.3.3, other constructions are discussed which do not represent arguments, but are of some relevance for the description of argument structure; these are the quotation construction, the part-whole construction, and the complex verb construction where the coverb fills a propositional participant slot of the verb.

4.2.1   Some case-marking constructions

In this section, some case-marking constructions (i.e. constructions consisting of a case-marked noun phrase and a predicate) will be discussed. The cases to be considered[66] are the ergative (§4.2.1.1), the ablative in its function of marking contrastive agents (§4.2.1.2), the absolutive (§4.2.1.3), and the dative (§4.2.1.4). With the exception of the ablative, it will be argued that the case-marking constructions have unitary constructional meanings and may represent participants of the predicate(s) on the basis of semantic compatibility of the argument role with the participant role. In this way, we can account for the variability of case marking: there is no one-to-one correspondence between the participants of a predicate and noun-phrases marked with a given case. This section also provides some additional justification of why absolutive noun phrases, but not case-marked noun phrases, have been considered as core arguments of relevance for the identification of central participants.

4.2.1.1   Ergative-marked noun phrases

The surface identity of the 'ergative' and 'instrumental' case in many Australian languages is a notorious topic in Australianist linguistics (see the references below). Since Jaminjung also exhibits this phenomenon, it will serve here to further illustrate the constructional approach to double marking. In §4.2.1.2 and §4.2.2.1.2, some other 'mismatches' of case and cross-reference marking which are specific to Jaminjung (or at least less widely reported) will be discussed.

In Jaminjung, 'ergative' (i.e. the case that marks the agent of transitive verbs, as in 4-11a) and 'instrumental' (the case that marks an instrument, as in 4-11b) have the same form, *-ni ~ -di* (see also §2.2.3.3.2).

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[66]   Summary information on the function of other case markers can be found in §2.2.3.3.

(4-11a)   dibird=biji=wung   yaniny-mangu   **garridan-ni**
           be.wound.around=ONLY=COTEMP   IRR:3sg:2sg-HIT   tree.snake-ERG/INSTR

           'it will only wind itself around you, the yellow tree snake (it won't bite
           you)' (not: 'it will tie you up with a snake')

     b)   **galijba-ni**   dibird   burru-ma
           kapok.tree-ERG/INSTR   be.wound.around   3pl:3sg-HIT.PST

           'they tied it up with (strings from) the kapok tree' (not: 'the kapok trees
           tied it up') (traditional way of cooking a snake species)

Noun phrases in both functions can occur in a single clause, as in (4-12) (see
III/25 for another example).

(4-12)   **jalig-di**   digirrij   gani-mangu   julag   **wagurra-ni**
          child-ERG/INSTR   die   3sg:3sg-HIT.PST bird   stone-ERG/INSTR

          'the child killed a bird with a stone' (DR, TIM143)

According to one possible analysis of this phenomenon, the traditional
Australianist analysis (e.g. Blake 1987: 41ff., 1994: 49ff.), 'ergative' and
'instrumental' correspond to distinct grammatical relations. In addition to the
semantic criterion for the distinction, one formal criterion that has been adduced
is that the argument marked as 'ergative' is also cross-referenced on the verb,
while the argument marked as 'instrumental' is not, as the examples in (4-11)
and (4-12) also show.

According to the second possible analysis, which I will adopt here, the 'ergative/
instrumental' case form is taken to mark the same case role in all its uses (e.g.
McGregor 1990: 177f.). The differential treatment with respect to cross-reference
marking follows from the function of the A bound pronominal, which differs
from that of the ergative case (see §4.2.2.1.1 below), and not from the existence
of a different underlying grammatical function.

For the function of the ergative/instrumental case I adopt the label 'Effector'[67]
from Role and Reference Grammar (Foley & Van Valin 1984, Van Valin &
Wilkins 1996). In other words, the constructional meaning of the argument
structure construction consisting of an ergative-marked noun phrase and a

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[67]   Constructional argument roles, i.e. those roles represented in a construction by a case
       marker or bound pronominal affix, will be distinguished in the notation from the verb-
       specific participant roles by the use of uppercase and lowercase initials, respectively, e.g.
       'Effector' vs. 'putter'. As the gloss for the case form, I have kept the more traditional label
       ERG(/INSTR) to facilitate reading of the examples.

(simple or complex) verb is that the participant represented by the noun phrase has the role of Effector in the event, in a sense to be made more precise below.[68]

For example, in (4-12) above, both the 'hitter' participant and the 'instrument' participant of the verb *-ma* 'HIT' are instances of an Effector, and this is why both participants are represented by an ergative-marked noun phrase. Only the 'hitter' is also represented by the A pronominal prefix. The affected entity (the 'entity hit') is represented by the U pronominal prefix, and in addition by an absolutive noun phrase. This is schematically represented in Fig. 4-5 (to simplify matters, the complex predicate in (4-12) has been reduced to a simple predicate in Fig. 4-5).

Fig. 4-5. *Two effector noun phrases marking 'agent' and 'instrument' (ex. 4-12)*

	jalig-di	*julag*	*wagurra-ni*	*gani-mangu*
	child-ERG/INSTR	bird	stone-ERG/INSTR	3sg:3sg-HIT.PST

ERG	NP-ERG			V
ABS		NP(ABS)		V
ERG			NP-ERG	V

| | <hitter | entity.hit> | (instrument)> | *-mangu* |

| TRANS | A: | U- | | trVRoot |
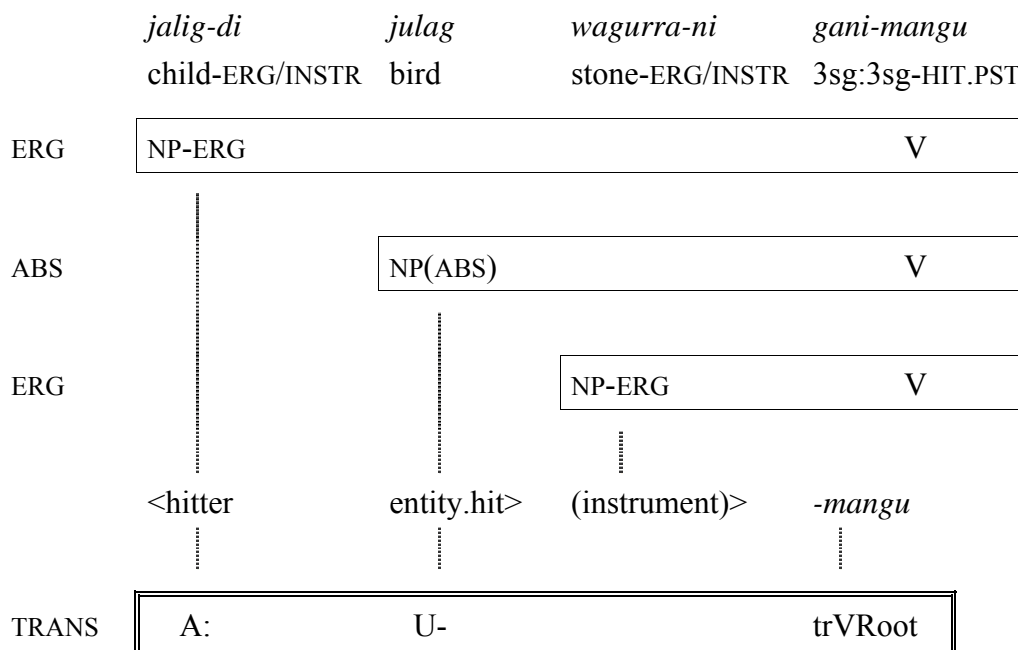
It is well known that cross-linguistically, the core cases (e.g. nominative-accusative or ergative-absolutive) tend to neutralise semantic distinctions, and can therefore only be given multi-factorial 'meanings'.[69] As stated by Van Valin & Wilkins (1996), the 'Effector' role subsumes the more specific roles conventionally called 'Agent', 'Force' and 'Instrument'. However, one could not predict, on the basis of these characterisations, that the 'perceiver' participants of the transitive verbs *-ngawu* 'SEE' and *-yangma* 'FEAR', the 'mover' of a

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[68]   For reasons of space, only the 'signifier' side, not the 'signified' side, of the constructions will be represented in all figures in this chapter.

[69]   See e.g. Drossard (1991), Foley & Van Valin's (1984) discussion of the Actor-Undergoer macro-roles, and the multi-factorial definition of proto-Agents and proto-Patients in Dowty (1991).

transitive motion verb like *-unga* 'LEAVE', or the possessor of the verb *-muwa* 'HAVE', can also be encoded as Effector. In other words, ergative case marking is possible (but not necessary, as we will see in §4.2.1.2-3 below) with virtually all transitive verbs. On the face of it, this looks like evidence for a purely morpho-syntactic account of ergative marking, according to which verbs with transitive prefixes automatically 'select' for ergative case.

Still, it is possible to describe some restrictions on the encoding of participants as Effectors, and establish a difference in function between the ergative-absolutive case frame, and the transitive prefix construction (see also §4.2.2). Crucially, one of the five intransitive verbs does allow an Effector argument to be expressed. Like in many other Australian languages (cf. e.g. Wilkins 1989: 224, Laughren 1988: 215), this is a verb that can be glossed as 'burn', *-irna* (a better semantic characterisation is 'be affected by heat'; see §5.5.1). The participant represented by the ergative-marked noun phrase, as illustrated in (4-13), can be characterised as 'heat source'.

(4-13)   jalig   wuju   ga-rna   **guyug-di**
         child   small 3sg-BURN.PST fire-ERG/INSTR

         'the little child got burnt by the fire' (JM, NUN039)

The 'heat source' in (4-13) can be described as an Effector playing a causal role in an event which affects a second participant. In terms of a model of event construal based on the flow of energy in the causal chain (e.g. Talmy 1988, Langacker 1990, DeLancey 1990, 1991a), the Effector argument (in Jaminjung) corresponds to any participant that is construed as playing a causal role leading to an event at any stage of the energy flow preceding the event itself. This includes instruments as the "intermediate entity in a flow of energy from 'agent' to 'patient'" (Van Valin & Wilkins 1996: 301).

This account is somewhat problematic for predicates of perception, experience and possession, since in these cases the direction of the causal chain may as well be construed the other way round (from stimulus to experiencer or possessum to possessor), as it indeed is in many languages. But the pattern observed in Jaminjung, where these predicates are subsumed under the same type of marking as the predicates encoding more prototypically 'effective' events, is also widely attested cross-linguistically (cf. e.g. Foley & Van Valin 1984: 53ff., and Tsunoda 1981b). Here the feature determining the coding of an experiencer as Effector rather than as affected argument is most likely animacy/sentiency, one of the proto-agent properties suggested by Dowty (1991: 572). This is entailed by the perception and experience predicates, and also seems criterial for the coding of possessors as Effectors (see §4.2.1.3). Importantly, though, the functions of the ergative case in Jaminjung differs from that of languages where ergative marking is conditioned by conscious choice or volitionality of the agent, e.g. Hindi (Mohanan 1994: 72ff.), Urdu (Butt 1997: 122), or Tibetan (DeLancey 1990).

These language-specific differences in the functions of case marking constructions are another good justification for the approach taken here, which takes the meaning of grammatical constructions seriously.

4.2.1.2 Ablative-marking of agents

A rather marked alternative to ergative-marking is ablative-marking of agents; this seems to be restricted to the Jaminjung dialect, since only the Jaminjung ablative marker *-ngunyi* but not the Ngaliwurru equivalent *-giyag* is attested in this use.[70] The case-marking construction used here is formally identical to the one used to represent the spatial source in a motion event (see §2.2.3.3.7). The ablative, unlike the other cases discussed in this section, will not be argued to have a unitary function. Rather, the ablative construction is employed with a secondary, metaphorical meaning, consistent with a metaphorical relationship of the semantic roles 'agent', 'cause' and 'source' as postulated in localist approaches (see e.g. Lyons 1977: 721, Clark 1993: 57f.).

Ablative-marking of agents is relatively infrequent, and always has a contrastive function. The contrast could be one between the agent and one or more other protagonists in the discourse world which are potentially competing for the actor role. For example, in (4-14), the potential adulterers are contrasted with the 'legal' husband.

(4-14) <u>bat</u> majani **janyung-ngunyi** ngurlu burru-wu-ngawu
        but maybe other-ABL desire 3pl:3sg-FUT-SEE

        birrg bunyu-wu-yungga \
        take.away 3pl:2sg-FUT-TAKE.AWAY

        'but maybe others will set eye on her (your wife) and rob you of her'
        (IP, F03545)

The ablative case can also mark an unexpected agent, like the rather unexpected speaker in (4-15). This example is from a story about two kangaroos who start behaving in human-like fashion, to the surprise of the men hunting them.

(4-15) "nanggayan guny-bi-yarluga?" gani-yu=bunyag \
        who 2du:3sg-FUT-POKE 3sg:3sg-SAY/DO.PST=3du.OBL

        yangarra-ngunyi=marlang \
        kangaroo-ABL=GIVEN

        '"Who do you want to spear?" it said to the two, the kangaroo did'

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[70]   In Australia ablative-marking of agents, in the same contrastive function, is also reported for Nunggubuyu (Heath 1984: 204f.; see also Schultze-Berndt 1993), a language where agents are normally unmarked, not ergative-marked.

Ablative-marking of agents is not restricted to a particular class of verbs (in fact, in a few instances in the corpus, it also occurs with an intransitive verb of motion; see (4-25) for an example), but it is never found to mark semantic instruments. The construction with the ablative marker in a secondary sense can therefore be described as 'Contrastive Agent' construction, and is clearly different in range of functions from the 'Effector' construction, although it is available as an alternative in certain contexts. The interaction of the Contrastive Agent construction with the other argument structure constructions instantiated in (4-14) is represented in Fig. 4-6.

Fig. 4-6. *Contrastive ablative-marking of agents (ex. 4-14)*

	janyung-ngunyi		*ngurlu*	*burru-wu-ngawu*
	other-ABL		desire	3pl:3sg-FUT-SEE
CONTR. AG	NP-ABL			V
CCV			Coverb	Verb
	<desirer	desired>	*ngurlu*	
	<gazer	gazed.at>		*-ngawu*
TRANS	A:	U-		trVRoot
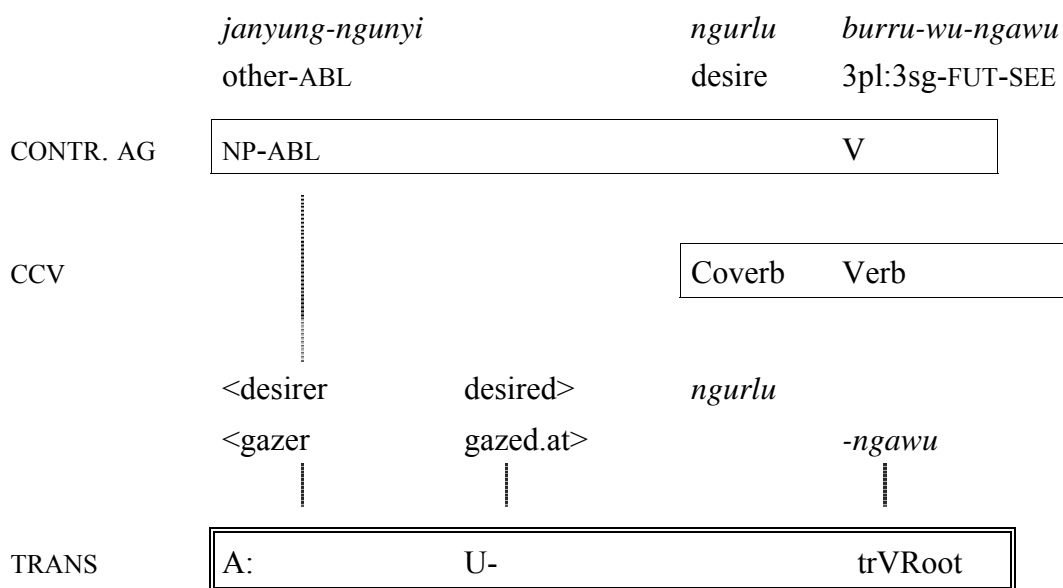
4.2.1.3 Absolute noun phrases

Absolute noun phrases are unmarked, that is, they lack a case suffix signalling a specific relation like 'Effector' or 'Source'. It will be argued that the absolutive, in fact, has no definable set of functions, but signals something like 'core argument in unspecified relation to the predicate'.

The relation can be left unspecified if there is no other core argument to compete with, that is, with ascriptive nominal predicates, or intransitive verbal predicates. To employ the terms used by Lehmann (1991: 206f.), the only participant of a monovalent predicate does not contrast with any other participant in degree of involvement vs. distantiation, and therefore the most neutral construction can be chosen.

With bivalent or trivalent predicates, absolutive noun phrases receive their interpretation both through the semantics of the verb, and through the (potential)

opposition with other case markers. By default, they encode core arguments in roles which can be subsumed under the Undergoer macro-role. With bivalent predicates, these correspond to the second, non-agentive participant. With trivalent predicates, both non-agentive participants can be encoded as absolutives (see §4.1.1 and §4.1.3). These are rarely both realised in the same clause, but (4-16) is an example with two absolutive noun phrases with the verb *-ngarna* 'GIVE'.

(4-16)   **ngayug**   bun-ngarna-ny   **thanthu**   **marlayi**,
          1sg   3pl:1sg-GIVE-PST   DEM   woman

          'me, they gave that woman' (i.e. 'they gave me that woman') (DP, F02275)

Fig. 4-7. *Two absolutive noun phrases with trivalent predicates (ex. 4-16)*
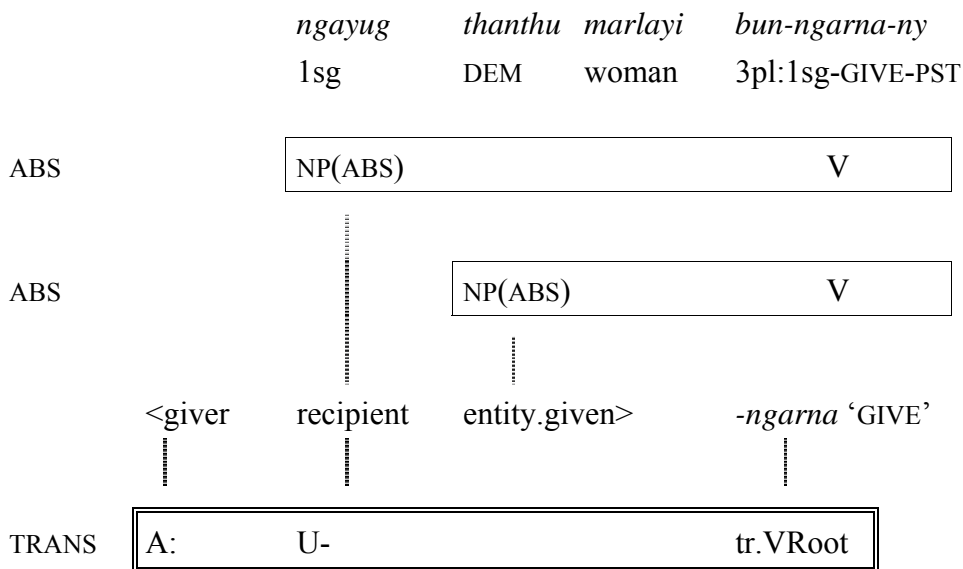
Interestingly, in Jaminjung, absolutive noun phrases can also encode agents, in other words, marking of agents as 'Effector' (with ergative case; §4.2.1.1) or as 'contrastive agent' (with ablative case, §4.2.1.2) is not 'obligatory'. This is illustrated in (4-17) to (4-19) below, and schematically represented in Fig. 4-8.

(4-17)   yawayi,   **yalumburrma**   burrara-wa-na   buligi \
          yes   saltwater.crocodile   3pl:3pl-BITE-IMPF   cow

          'yes, the crocodiles were eating cattle' (IP, EV03153)

(4-18)   **malara**=biya   dibard   ganuny-ngunga-m,   ba-ngawu /
          frog=NOW   jump   3sg:3du-LEAVE-PRS   IMP-SEE

          'the frog now is leaving the two, jumping away, look' (IP, F03035)

(4-19) **mulurru**   gani-minda-ny   malajagu
        old.woman   3sg:3sg-EAT-PST   goanna

        digirrij gani-wa   malajagu-ni   garrmalan-ni
        die   3sg:3sg-BITE.PST goanna-ERG/INSTR   fat-ERG/INSTR

        'the woman ate goanna, and the goanna fat knocked her out' (lit: 'the goanna fat bit her "dead"') (ER, TIM129-130)

Fig. 4-8. *Absolutive noun phrase representing an 'agent' (ex. 4-19)*

Ergative-marking of 'agents' has been described as 'optional' for a number of other non-Pama-Nyungan languages (see McGregor 1992: 276, and the references cited there). In Jaminjung, 'agents' in the ergative are much more frequent than 'agents' in the absolutive, that is, examples like (4-17) to (4-19) above are relatively rare. This corresponds to the relative frequencies found for Gooniyandi by McGregor (1992: 280f.), and for Bunuba by Rumsey (1994: 142).

Preliminary observations suggest that the variation in marking of 'agents' is systematic rather than random, and that the conditioning factors correspond to those identified by McGregor (1992, 1998a) on the basis of an investigation of the distribution of ergative-marking in Gooniyandi texts. The first of these conditioning factors concerns the degree of inherent 'semantic effectiveness' of an event. For example, atelic events, and events over which the agent has no control, are less 'effective', in terms of Tsunoda (1981b). The second factor concerns predictability of the status of the agent as agent; for example, inanimates, and animates that are not protagonists of an episode, are less likely agents and therefore marked. In sum,

> ... use of the ergative postposition foregrounds, or accords prominence to, the agentivity of the agent, thereby singling it out for special attention.

> Absence of the ergative postposition backgrounds the status of the agent as agent, according it no particular prominence (McGregor 1992: 277).

This appears to be a plausible explanation also for the variation in case-marking in Jaminjung. In (4-17) above, the agent is unmarked because the depicted event is atelic. Motion events, like that described in (4-18), have only a low effect on the 'patient'. In (4-19) the woman is pictured as the 'suffering' participant in the global event, so it makes sense to downplay her agentivity in the 'eating'.

Most frequently, absolutive agents are found representing the 'speaker' with the verb *-yu(nggu)* 'SAY/DO' in its use as speech framing verb ('say'), and as 'possessor' with the verb *-muwa* 'HAVE'. For *-yu(nggu)* 'SAY/DO', this is in line with the low (semantic) transitivity attributed cross-linguistically to verbs of speech (e.g. Munro 1982, Rumsey 1994, Kofod 1995; see also §5.6), although it is not clear in every single instance what triggers the presence or absence of ergative marking (for an illustration of both possibilities in a nearly identical context, see V/10-12 and V/16-17 in the Appendix).

The variation of absolutive and ergative-marked 'agents' is more systematic for the verb *-muwa* 'HAVE'. Here the conditioning factor seems to be the degree of control over the possessive relationship that is ascribed to the possessor. Inanimate possessors, of which it is predicated that the 'possessed' is an inherent part, always appear as absolutive arguments, as in (4-20) (see also §5.2.2).

(4-20) **gardawarlng** gana-ma-ya   wuju-wuju   mali   jalig-gina
        egg   3sg:3sg-HAVE-PRS RDP-small   thing   child-POSS

        'the egg has little things inside for kids' ('Kinder-Surprise' chocolate
        egg) (JM, CHE102)

On the other hand, if the possessor actively maintains control over the 'possessed' – which is usually the case with animate possessors – the corresponding noun phrase takes ergative case, as in (4-21) (see also §5.2.2).

(4-21) **Nawurla-ni**   gana-ma-ya   juyug   guwalambala
        <subsection>-ERG   3sg:3sg-HAVE-PRS cooked   short.neck.turtle

        'Nawurla has a cooked turtle' (N. was holding the turtle in her hand in
        a photograph) (SR, TIM027)

This rather systematic distribution of absolutive 'agents' has been emphasised because it provides further evidence for the analysis, proposed in §4.2.1.1 above, of ergative case as conveying Effector semantics, rather than having the disjoint functions of mechanically marking 'transitive subjects' and 'instruments'.

Absolutive 'agents' are found in yet another environment; this is in a progressive or a 'lexicalised progressive' construction with bivalent coverbs (see §3.3.1 and §4.3.1.2 below for examples). Here ergative-marking is not possible, that is,

there is no variation in the marking of the 'agent'. However, the explanation provided above can be extended to cover this case as well. An expression in the progressive is, by definition, atelic, and therefore only has a very low degree of effectiveness (in the sense of the term introduced above). This is signalled both by the choice of an intransitive verb, and by the absence of marking for the agentive participant.

4.2.1.4 Dative-marked noun phrases

In many descriptions and theoretical discussions of dative marking in Australian languages, some of its functions have been analysed as 'grammatical case functions', marking complements, and others as 'semantic case functions', marking adjuncts. It will be argued here that this distinction cannot be maintained for Jaminjung; this excludes dative noun phrases from core argument status as defined in §4.1.1.

Examples from Jaminjung that correspond to some uses that have been described in the literature[71] as dative complements are given in (4-22) and (4-23) below. The dative in these examples could be taken to mark complements of coverbs with meanings like 'look around for s.th./s.o.' *(wurdbaj* in (4-22))*, 'be afraid of s.th.' (*yarrajgu*; see ex. (2-23) in §2.2.3.3.3)**,** or 'know s.th./be knowledgeable of s.th.' (*jurriya* in (4-23)).

(4-22)   burr-**angga**=mulu   **gugu-wu**   **wurdbaj** \
         3pl-GO.PRS=COLL   water-DAT   look.around

         'they all go looking for water' (DP, E13210)

(4-23)   **jurriya**   gun-**ngangga**-m   **baaj-gu**
         know   2pl:1sg-GET/HANDLE-PRS   speech-DAT

         'you all teach me language / you all make me knowledgeable about language' (VP, NUN139)

Dative-marked noun phrases are indeed found very frequently with coverbs of the type just illustrated. Like other lexical arguments, however, they are not obligatory. This is illustrated for *wurdbaj* 'look for' in (4-24); similar examples can be found for the other coverbs.

(4-24)   yinjuwurla   ga-ruma-ny=ni   garna-wurru,
         PROX:DIR   3sg-COME-PST=SFOC1   spear-PROPR

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[71] See e.g. Cook (1987: 133f.) and Wilson (1999: 13f.) for Wagiman, Merlan (1994: 70ff.) for Wardaman, Nash (1986: 49) and Simpson (1991: 358ff.) for Warlpiri, Nordlinger (1998: 186) for Wambaya.

milarrang-burru	ga-ruma-ny	olewei \	**wurdbaj**[72] \
spear-PROPR	3sg-COME-PST	all.the.way	look.around

'here he came with a spear; with a spear he came all the way - looking around' (DM, EV06055-7)

Identifying dative complements as opposed to adjuncts on purely semantic grounds is equally problematic. It is argued here that the dative case in Jaminjung can be given a unified meaning along the lines of that proposed by Wilkins (1989: 183) for one cluster of uses of the dative in Arrernte:

> [a sentient being is] cognizant of the entity marked by the dative, and ... the entity marked by the dative is in some way the cause (or) reason for [the sentient being's] present action or state

For Jaminjung, this characterisation has to be refined to 'the entity marked by the dative is the **anticipated** reason for a sentient being's present action or state', because it contrasts in this respect with the 'motivative' case *-garni ~ -warni* (see §2.2.3.3.5). This characterisation subsumes all the supposed 'complement' functions of the dative illustrated above, i.e. it can account for the use of the dative to mark an 'entity looked for' (4-22), a 'stimulus of fear', or a 'topic of instruction' (4-23). (In (2-23) in §2.2.3.3.3, in fact, two dative-marked noun phrases are related to the same predicate with different readings, which however can both be subsumed under the function 'anticipated reason'.) The characterisation also accounts for the fact that the dative may represent 'addressee' participants, as well as supposed 'adjuncts' like 'purpose' or 'beneficiary'. The 'purposive' interpretation of the dative in Jaminjung is illustrated in (4-25). Often, as in this example, the 'reason' is only metonymically indicated by the dative-marked noun phrase.

(4-25)

janyungbari-ngunyi=biyang	buliki	**warrng**	ga-**ram**	**gugu-wu** \
other-ABL=NOW	cow	walk	3sg-COME.PRS	water-DAT

'another cow comes walking for (drinking) water' (Farm Animals p. 9) (EH, E13517)

A comparison of (4-25) with (4-22) above illustrates again that, for Jaminjung, the borderline between complements and adjuncts is difficult to draw on semantic grounds, and impossible to draw on formal grounds: in both examples, the predicate consists of a motion verb accompanied by a coverb, with a dative noun phrase expressing the purpose of the motion event. In fact, *wurdbaj* 'search, look around' could be argued to be a manner of motion coverb just like *warrng* 'walk' (see §6.5.2). In contrast to some other Australian languages, e.g. Warlpiri

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[72] The subsequent intonation unit also does not contain a dative-marked noun phrase representing the 'person looked around for'. From context, it is understood to be the father-in-law of the mythical protagonist, whom he is going to spear.

or Arrernte, there is no morpho-syntactic evidence for postulating more than one dative construction, and it is difficult to determine in each individual case whether the dative-marked noun phrase represents a participant which is part of the semantic valency of a predicate, or not. Therefore, dative-marked noun phrases were excluded from the criteria for the identification of central participants in §4.1.3 above.

4.2.2 Bound pronominal constructions

core arguments. The transitive bound pronominals (§4.2.2.1) will be argued to encode Actor and Undergoer macro-roles, while the intransitive bound pronominals (§4.2.2.2) encode a single core argument which is According to the criteria proposed in §4.1.1, all bound pronominals constitute neutral with respect to the semantic roles of the participants it represents.

4.2.2.1 Transitive bound pronominals

4.2.2.1.1 Functions of Actor marking

In §4.2.1.1 above, it was argued that the ergative case in all its readings – including 'agents' and 'instruments' – could be subsumed under a general function of 'Effector'-marking. The question to be addressed in this section is why 'agents' are cross-referenced on the verb by bound pronominals, while 'instruments' are not. This can be accounted for by recognising that the A prefix in the transitive bound pronominal construction has a different constructional meaning from the ergative construction.

Transitive prefixes are obligatory with transitive verbs (unless these appear in reflexive form). As we have seen, all transitive verbs can also take Effector arguments. However, we have also seen that there is no one-to-one correspondence between Actors and Effectors. Actors (as encoded by the first or A prefix on transitive verbs) may also correspond to noun phrases marked as contrastive agents with the ablative (§4.2.1.2), or to unmarked (absolutive) noun phrases, representing agents that are not Effectors, i.e. whose status as agent has been backgrounded (§4.2.1.3).

Cross-linguistically, bound pronominals are known to represent more salient arguments, which "tend to be the most animate ones, the most definite ones, and the ones most central to the events being reported" (Croft 1988: 175), while being less specific about the semantic role of the participants which they represent; this is typically the domain of case marking (see e.g. Lehmann 1988).

The transitive bound pronominal forms in Jaminjung could be said to represent participants which have characteristics of what Foley & Van Valin (1984) have termed the macro-roles Actor and Undergoer, or Dowty's (1991) Proto-Agent

and Proto-Patient. The transitive prefix construction as a whole could be characterised as 'Actor acting on Undergoer'.

However, these criteria are not sufficient to distinguish Actors from Effectors in Jaminjung. Rather, the crucial property of an Actor is that it not only has to play a causal role in an event, but it has to be the 'ultimate cause' or 'first cause' of this event (cf. e.g. DeLancey 1991a, Van Valin & LaPolla 1997: 146). Actors in Jaminjung are not always agents, at least under those definitions of the 'agent' role which include animacy and/or volitionality. Rather, inanimate participants may also be encoded as Actors (as well as Effectors). Examples include the entity which is the cause of someone getting tangled up in (4-26), or the sun as the cause of burning in (4-27), as well as other natural forces.

(4-26)   wardba   **gan**-ngangu   thanthiya walig   ba-jga!
         entangle 3sg:1sg-GET/HANDLE.PST   DEM   round   IMP-GO

         'I got caught there, go around!' (i.e. by an obstacle) (DP, E04019)

(4-27)   wurlngan-ni   digirrij   **gan-**kirriga-m,
         sun-ERG/INSTR   dead   3sg:1sg-COOK-PRS

         'the sun is burning me "dead" (i.e. I'm suffering)' (Orig. Transl.: 'sun burning me') (DR, D27032)

Instruments which are manipulated by an agent, on the other hand, count only as Effectors, but not as Actors. This restriction is not adequately explained by an analysis whereby the more animate Effector is represented by the bound pronominal in the case where two Effectors (an 'agent' and an 'instrument') are competing for the Actor slot. This might explain why the agent, and not the instrument, is marked on the verb e.g. in a clause with both an 'agent' and an 'instrument', like (4-12) above. However, it does not explain the contrast between the two verbs for cooking/burning, intransitive -*irna* 'BURN' and transitive -*irriga* 'COOK'. As shown in §4.2.1.1 above, a fire as a 'heat source' can be coded as Effector with the intransitive verb -*irna* 'BURN' (which, being intransitive, does not provide an Actor slot). However, it may not figure as an Actor with the transitive verb -*irriga* 'COOK/BURN', since only human agents ('cooks'), and also the sun, but not a fire (which is a tool used by an agent), can be construed as an autonomous, ultimate cause of a 'heating' state of affairs.[73]

On the other hand, participants in self-propelled locomotion, possessors and perceivers can be construed as ultimate causes since without them the event

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[73]   This observation, for the moment, has to be restricted to fire as used by humans for the purpose of cooking, warming etc.; this is inherent in the semantics of the noun *guyug* 'fire, firewood'. It is unclear whether a bushfire (where it was not set by human agents), like the sun, could be the Actor of the transitive verb -*irriga* 'COOK'.

would not be possible, and, unlike canonical instruments, they require no further element in the causal chain leading to the the event in question.

4.2.2.1.2 Functions of Undergoer marking

The difference in function between case-marking and bound pronominal marking can also be demonstrated with reference to Undergoer marking on transitive verbs. Consider the transitive verb of motion glossed as 'APPROACH'.[74] This verb occurs in two case frames: the expected ergative-absolutive frame, and an absolutive-allative case frame (an ergative-allative case frame might be possible but I have no data to support this). In (4-27), the 'entity approached' is represented by an absolutive noun phrase, which is of course what one would expect (see also §5.3.7, and V/21 in the Appendix).

(4-27) ba-rrga   ngarla **mangarra**, majani jalag
        IMP-APPROACH   TRY   plant.food   maybe   good

        'try go to (look at) the fruit, maybe it is all right (to eat)' (DR, CHE052)

In (4-28), on the other hand, the 'entity approached' is xxxxxxxrepresented by an allative-marked noun phrase, while at the same time also being represented as Undergoer by the U prefix on the verb.

(4-28a) walilig   na-ruma-ny   maja \
         around   2sg-COME-PST   thus

         ngarrgina-bina   **nganjan-karrga** \
         1sg:POSS-ALL   2sg:1sg-APPROACH.PST

         'you came round like this, you came up to me'

    b) **ganurr-arrgantha-ya**   **lubayi-bina**,
         3sg:3pl-APPROACH-PRS   many-ALL

         gurrany   wurrng   ga-ngga
         NEG   shame   3sg-GO.PRS

         'he walks up to a group of people, he is not shy'

It is not all that surprising that allative case marking should occur with the verb *-arrga* 'APPROACH'. The allative case has the general function of expressing direction (usually of motion, but also of gaze, see §2.2.3.3.8), and is therefore found with all verbs of motion (see also §5.3.1.2). There is independent evidence that *-arrga* 'APPROACH' is a verb of motion: it can combine with the same

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[74]   The semantic characterisation proposed in §5.3.7 is 'x purposefully moves along a path which is oriented towards y'.

coverbs of manner, path, and change of location as the intransitive motion verb
-*ijga* 'GO' and the other five motion verbs (see §5.3.1.3).

If one compares the use of the two case frames, there seems to be a semantic
difference across the examples (although admittedly these are few in number), in
that the 'approached' participant is construed as more affected when encoded as
absolutive. For example, the fruit in (4-27) is likely to be eaten in the course of
the event, and the brolga in V/21 is being threatened by the emu. The allative-
marked 'approached' participants in (4-28) and (4-29), on the other hand, are not
particularly affected in any way and are, therefore, just treated as spatial goals.

Thus, it is possible to say that the 'approached' participant of the verb -*arrga* can
be construed as either an affected argument or a (spatial) goal, and that these
properties are highlighted by the choice of the absolutive vs. allative case. In
either case, though, an 'approached' participant counts as an Undergoer,
represented by the U-prefix on the verb. This does not present a problem for a
Construction Grammar treatment: a single participant may be represented by a
noun phrase marked with 'peripheral' case which marks its role as a Goal, and at
the same time as an instance of the Undergoer macro-role, if the participant role
is semantically compatible with the argument roles of both constructions. This is
schematically represented in Fig. 4-9.

Fig. 4-9. *Representation of 'approached' participant by U prefix and allative-
marked noun phrase (ex. 4-29)*

	lubayi-bina	*ganurr-arrgantha-ya*
	many-ALL	3sg:3pl-APPROACH-PRS
ALL	NP-ALL	V
	<approacher approached>	-*arrga*
TRANS	A: U-	trVRoot
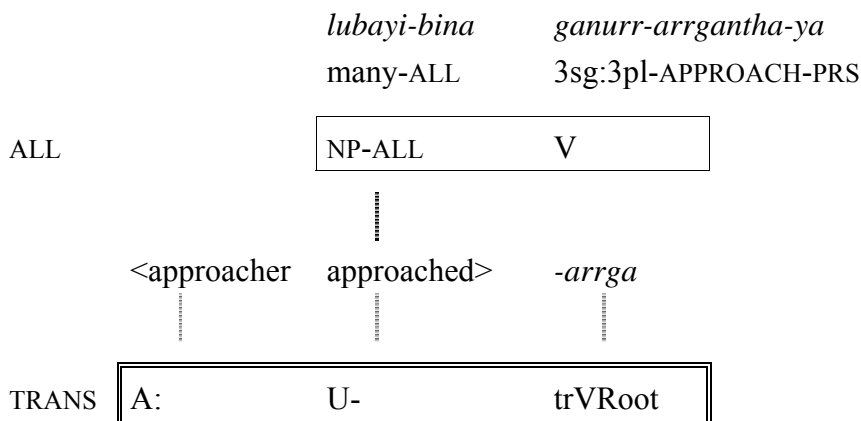
Another type of 'mismatch' between bound pronominal marking and case
marking is found with the verb -*uga* 'TAKE' (both as a simple verb and with
coverbs). Just like -*arrga* 'APPROACH' (but unlike English *take),* -*uga* 'TAKE'
is a true verb of locomotion,[75] which in addition to a moving entity has an 'entity
taken' as one of its central participants. The 'entity taken' is obligatorily

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[75]   For a more precise semantic characterisation of -*uga* 'TAKE' see §5.3.4.

represented by the U prefix on the verb. When it is lexically represented, this can be either as an absolute noun phrase, as in (4-29a), or (more rarely) as a noun phrase marked with comitative case, as in (4-29b).

(4-29a) **jalig**   yugung   gan-**uga**   <x yarrajgu x>
         child   run   3sg:3sg-TAKE.PST   afraid

'she ran away with the child, (being) afraid' (PW, D31154)

  b)   yugung=biya   gan-**antha**   **jalig-mij**=jung,
        run=NOW   3sg:3sg-TAKE.PRS   child-COMIT=COTEMP

'it runs away with the child' (deer in Frog Story) (IP, F03215)

It is also possible for the same verb to take a comitative-marked noun phrase with the interpretation that it is the means of transport for the 'entity taken', as in (4-30). (In all attested instances in the data, the 'entity taken' is represented as an absolute noun phrase rather than as a second comitative noun phrase).

(4-30)   nga-uga   burrag   **pleit-mij**   **ngayin** \
         1sg:3sg-TAKE.PST   3pl.OBL   plate-COMIT   meat/animal

'I took the meat to them with a plate' (NG, E11106)

This interpretation, however, is not possible for (4-29b): the child is not the means of transport, but the 'entity taken'. It is as if this clause is a blend of both possible English translations, *run away with the child* and *take the child away, running*. In other words, the fact that the child fills both an Undergoer and a Concomitant role can be explicitly marked in the same clause in Jaminjung because both bound pronominals and case marking are available for this purpose. (It may however be significant that this type of overlap is only attested for *-uga* 'TAKE' in combination with a coverb expressing manner.) This overlap is schematically represented in Fig. 4-10.

Fig. 4-10. *Representation of 'concomitant' participant by U prefix and comitative-marked noun phrase (ex. 4-30b)*

	jalig-mij	*yugung*	*gan-antha*
	child-COMIT	run	3sg:3sg-TAKE.PRS

| COMIT | NP-COMIT | | V |

| CCV | | Coverb | Verb |

| | <runner> | | *yugung* |
| | <mover | concomitant> | *-uga* |

| TRANS | A: | U- | trVRoot |
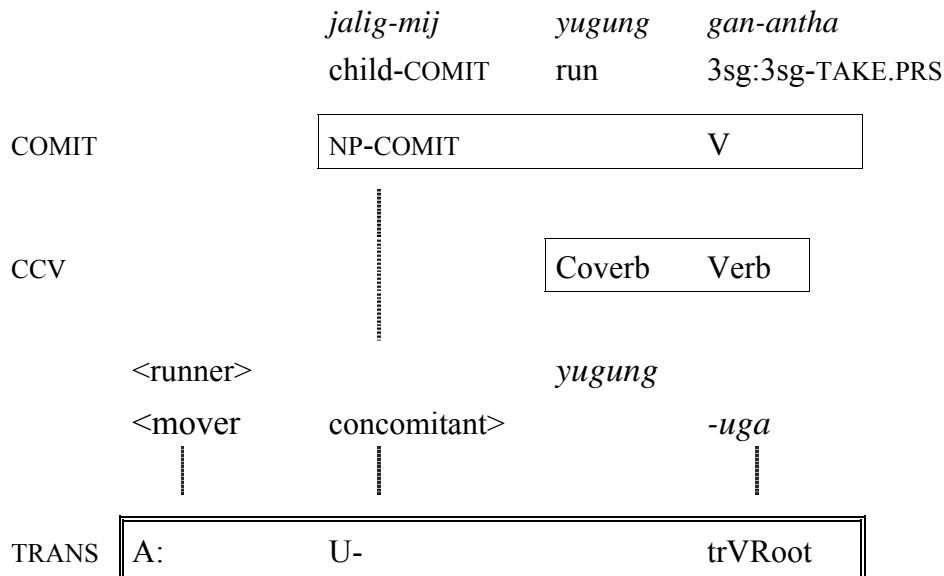
We now turn to the function of the U prefix with trivalent predicates. Here, there are two potential candidates for Undergoer status. Usually, the participant whose referent is higher in animacy will be encoded as Undergoer, for example the recipient with the verb *-ngarna* 'GIVE', the person from whom something has been taken with the verb *-yungga* 'TAKE.AWAY', or the 'student' with the complex verb consisting of *yurrg* 'show, teach' and *-arra* 'PUT'.

Only in the rare cases where the 'entity given' ranks higher than, or equally high as, the recipient in animacy may the argument roles be reversed (as for example in the case of 'giving' women in marriage). In (4-31), both possibilities are realised in the same context by the same speaker for *-ngarna* 'GIVE': first the 'recipient' and then the 'entity given' is cross-referenced on the verb.

(4-31)   ba-**wurru-ngarna**=na   juwi,
          IMP-2pl:3sg-GIVE=NOW   hand.over

          ba-**wurruny-ngarna**   thanthiya-gurna   marlayi,
          IMP-2pl:3du-GIVE   DEM-??   woman

          'hand (them) over to him, give the two (to him) those women' (IP, F03531)

4.2.2.1.3 'Dummy' Undergoer prefix with monovalent complex verbs

There are a few cases where the Undergoer prefix on the verb does not correspond to any participant, and therefore has to be regarded as a 'dummy' prefix. This concerns complex verbs formed with the two polyfunctional verbs

-*yu(nggu)* 'SAY/DO' and -*ma* 'HIT'. With certain monovalent coverbs, these form complex verbs which only have a single semantic participant, and only allow a single, absolutive, noun phrase. That is, only one argument (e.g. *jalig* 'child' in (4-32), and *ngayin* 'animal, meat' in (4-33)) can be expressed lexically. At the same time, the participant – which fits the Actor role semantically because it is the instigator of the event – is represented by the Actor prefix. The Undergoer prefix, on the other hand, is always in third person singular form.[76]

The formally transitive verb -*yu(nggu)* 'SAY/DO', the general performance verb, forms monovalent complex verbs e.g. with coverbs of internal motion, as in (4-32), or coverbs of bodily/emotional condition (see §4.2.3.3, §5.6.1 and §6.4.3 for details).

(4-32) jalig   **jalug**   gan-**unggu**-m \
        child   be.lively   3sg:3sg-SAY/DO-PRS

       'the child is bouncing happily' (IP, F01549)

The verb -*ma* 'HIT' has a monovalent sense of 'emerging' with coverbs from a small class including *bul* 'emerge' in (4-33) (see §5.4.2.3 and §6.5.4 for details and further examples).

(4-33) ngayin=malang   **bul**   gani-**ma**   bunyag
        meat.animal=GIVEN   emerge   3sg:3sg-HIT.PST   3du.OBL

       'the animal came out to/for the two'

In other words, although the verbs in these cases take the transitive (Actor-Undergoer) prefixes, the Undergoer prefix does not correspond to any semantic participant of the complex verb, but has to be considered a 'dummy argument'. This is quite comparable to expletive subjects in languages like English or German, e.g. *it* in *it is raining*. In these languages, syntax requires a clausal subject which does not correspond to any participant of the verb. In Jaminjung the verbal morphology, which is lexically fixed, requires an Undergoer prefix which does not correspond to any participant of the complex predicate in some uses of the verb. This state of affairs is schematically represented in Fig. 4-11.

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[76]   In §4.2.3.3 we will allow for the possibility of coverbs representing a (propositional) participant of certain verbs, and present arguments why the third person singular U prefix does not represent this participant.

Fig. 4-11. *Argument structure of complex verbs with 'dummy' U prefix (ex. 4-33)*

	ngayin	*bul*	*gani-ma*
	meat.animal	emerge	3sg:3sg-HIT.PST

ABS | NP(ABS)   V |

CCV | Coverb   Verb |

<emerging.entity>   *bul*
<emerging.entity>   *-ma* (iii)

TRANS | A: *U-*   trVRoot |
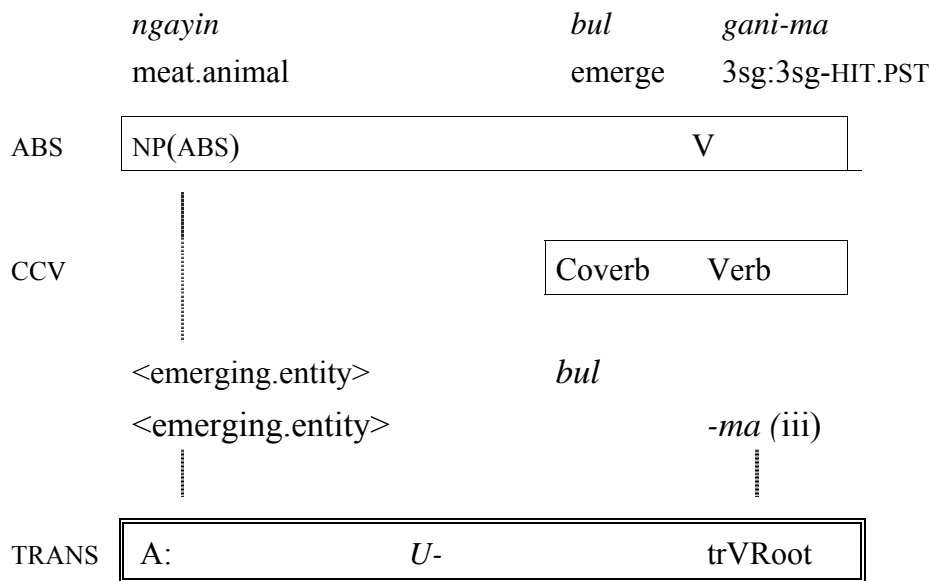
The existence of 'dummy' Undergoer prefixes illustrates again that a (simple or complex) verb's valency can only be inferred on the basis of both lexical arguments and bound pronominals, not by relying on the bound pronominals alone as claimed by the 'pronominal argument hypothesis'. One of the criteria for central participant status, (4-5ii) in §4.1.3, was therefore that it has to be possible for the participant to be lexically represented.

It is worth noting that in Jaminjung, in contrast to some other Northern Australian languages (see e.g. Walsh 1987), the S or A prefixes never seem to have 'dummy' function. In other words, there are no impersonal constructions of the type 'it is raining' (see also the comment on (4-9) in §4.1.3) or of the type 'it cramps me' = 'I have a cramp'. That is, it is always possible to add a lexical argument corresponding to the A prefix, although in actual discourse this is often omitted. For example, with some predicates of bodily state and experience, the animate experiencer is encoded as an Undergoer, but the inanimate Actor can always be lexically specified, as shown in (4-34).

(4-34)   garrij ...   gurrany   yang-iyaj=biyang   ngabulgja,
         cold   NEG   IRR:1sg-BE=NOW   bathe

         yana-   yan-**mangu**   **garrij-di** \
         <false start>   IRR:3sg:1sg-HIT   cold-ERG/INSTR

         '(it's) cold, I wouldn't be swimming now, the cold would affect me'
         (DB, E02061)

4.2.2.2 Intransitive bound pronominals

No constructional meaning has been provided for the S pronominal prefix. As in the discussion of the functions of absolutive noun phrases (§4.2.1.3), I would argue that the single pronominal prefix of intransitive verbs is neutral as to the role of the participant that it represents, because there is no need to express a contrast to a second participant role. For example, the participant encoded as S could be a controller of the event or not.

This also holds where the S prefix is the only argument of a reflexive/reciprocal verb stem. Reflexive/reciprocal stems consist of a bivalent verb root and a suffix *-ja* (past perfective) or *-ji* (see also §2.4.1.1). The resulting stems not only always take the intransitive paradigm of pronominal prefixes, but can also only take one lexical core argument, which is in absolutive, not in ergative case, as shown in (4-35). Thus, reflexive stems occur in the same constructions as root intransitive verbs.

(4-35) jurruny-ni   buny-ma-ji   yangarra \
        lower.arm-ERG/INSTR   3du-HIT-REFL.PRS   kangaroo

  'the two fight with their paws, the kangaroos' (MJ, E04197)

Since the reflexive/reciprocal suffix signals referential identity (or reciprocity) between an 'Actor' and an 'Undergoer', the single argument slot in constructions with reflexive verbs still represents two semantic participants (this is represented in Fig. 4-12 by underlining of the two coreferential participants). However, the expression of their roles is neutralised. It follows that, with respect to complex verb formation and argument sharing, reflexive verb stems have the same possibilities as the transitive verb roots they are based on; therefore, they will not be considered separately in the description of argument sharing in §4.3.

Fig. 4-12. *Argument structure with reflexive-reciprocal verbs (ex. 4-35)*

	yangarra	*jurruny-ni*	*buny-ma-ji*
	kangaroo	arm-ERG/INSTR	3du-HIT-REFL.PRS
ERG	NP(ABS)		V
ABS		NP-ERG	V
	<hitter entity.hit (instrument)>		-*ma-ji* 'HIT-REFL'
INTRANS + REFL	S-		trVRoot-REFL
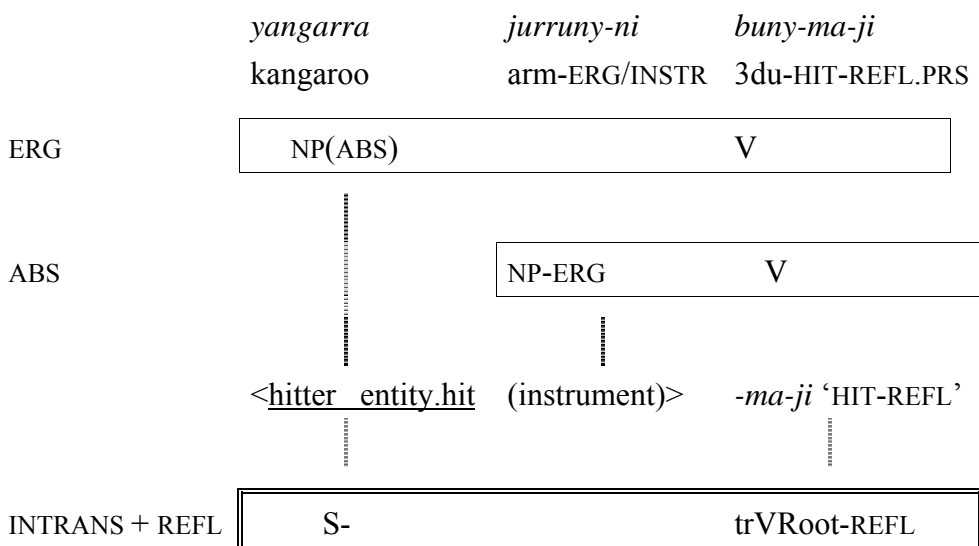
4.2.3   Other constructions

In this section, a number of phenomena are discussed which do not correspond to argument structure constructions, but which are of some relevance for the description of argument structure. These are the part-whole construction (§4.2.3.1), the quotation construction (§4.2.3.2), and the possibility that a coverb in a complex verb construction fills a semantic participant slot of the verb (§4.2.3.3).

4.2.3.1   The part-whole construction

In this section, it will be argued that absolutive noun phrases in a part-whole construction should be distinguished from an argument structure construction (cf. the criteria given in §4.1.1 for core argument status). Absolutive noun phrases referring to inalienably possessed body parts often appear to constitute an extra argument in the clause. As in many other Australian languages,[77] the preferred way to express the idea that a body part is involved in an event is to treat its 'possessor' as a core argument. That is, the possessor is cross-referenced on the verb with the appropriate person marker, and optionally (and rarely) represented by a noun phrase as well, while the body part is represented as an additional noun phrase which agrees in case with the possessor expression. This is illustrated in (4-36a) and (4-36b), for an intransitive and a transitive verb, respectively.

(4-36a) lum   nga-ngga   wirlga
         swell.up   1sg-GO.PRS   foot

         'my foot is swelling up' (MW, CHE113)

  b) warrij-di   gan-ba   bunu   ngayug
      freshwater.crocodile-ERG   3sg:1sg-BITE.PST   bone   1sg

      'a crocodile bit my leg' (lit. 'a crocodile bit me leg') (fieldnotes J. Bolt)

Constructions like these are of course found in many languages and have received considerable attention in recent years (cf. e.g. the contributions in Chappell & McGregor 1996a and Payne & Barshi 1999); the phenomenon in question is commonly referred to as 'possessor raising', 'possessor ascension' or 'external possessor'. The term 'Part-Whole construction', rather than 'possessor raising', is used here because the verb's argument structure does not have to be changed (by an applicative derivation or a comparable device) to 'raise' the possessor; therefore a process-oriented term seems unsatisfactory (cf. Chappell & McGregor 1996b: 6f., Harvey 1996: 127).

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[77]   Several papers discussing the phenomenon in Australian languages are contained in Chappell & McGregor (1996); see also McGregor (1985), Dixon (1980: 293), and Blake (1987: 94ff.).

The grammatical status of the Part expression is a matter of debate in the literature: it has been described both as part of the same noun phrase as the Whole expression and as a separate phrase from the Whole expression (see Blake 1987: 95ff. for an overview), as 'range' (McGregor 1985), and even as 'secondary predicate' (Hale 1981, Laughren 1992). For the purposes of this study, it is sufficient to recognise the Part-Whole construction as a distinct type of construction, which in Jaminjung and other Australian languages is restricted to representing inalienable Part-Whole relations. Inalienable relations in Jaminjung include not only body part expressions, but also other expressions with referents in the personal sphere, such as a name or a shadow, but not kinship relations. The Part-Whole construction is not an argument structure construction, and hence does not reflect the semantic valency of a predicate in any way. Rather, any (body) Part expression licenses a Whole expression, which – if one of them corresponds to a central participant of the verb – assumes core argument status. In other words, it is the Whole that is represented as most involved in the event, and which therefore has grammatical argument status, while the Part expression merely provides an additional specification. The function of the Part expression is appropriately characterised by McGregor (1985: 210f.):

> [T]he body part specifies the EXTENT or LOCUS of the participant's involvement in the action. That is, it specifies the part of the individual which is most directly and intimately involved in the action.

The overlap of a Part-Whole construction with the argument structure constructions discussed so far is represented in Fig. 4-13. It shows that only the Whole, not the Part expression is linked to the participant of a predicate. This is true whether or not the Whole is represented by a separate noun phrase, as in (4-36b), or only by a bound pronominal, as in (4-36a) above.

Fig. 4-13. *Overlap of part-whole construction with argument structure constructions (ex. 4-36b)*

	warrij-di	*bunu*	*ngayug*	*gan-ba*
	croc-ERG	bone	1sg	3sg:1sg-BITE.PST

ERG   NP-ERG   V

ABS   NP(ABS)   V

PART-WHOLE   NP(ABS)   NP(ABS)
                          Part   Whole

          <biter   entity.bitten>   *-wa* 'BITE'

TRANS   A: U-   trVRoot
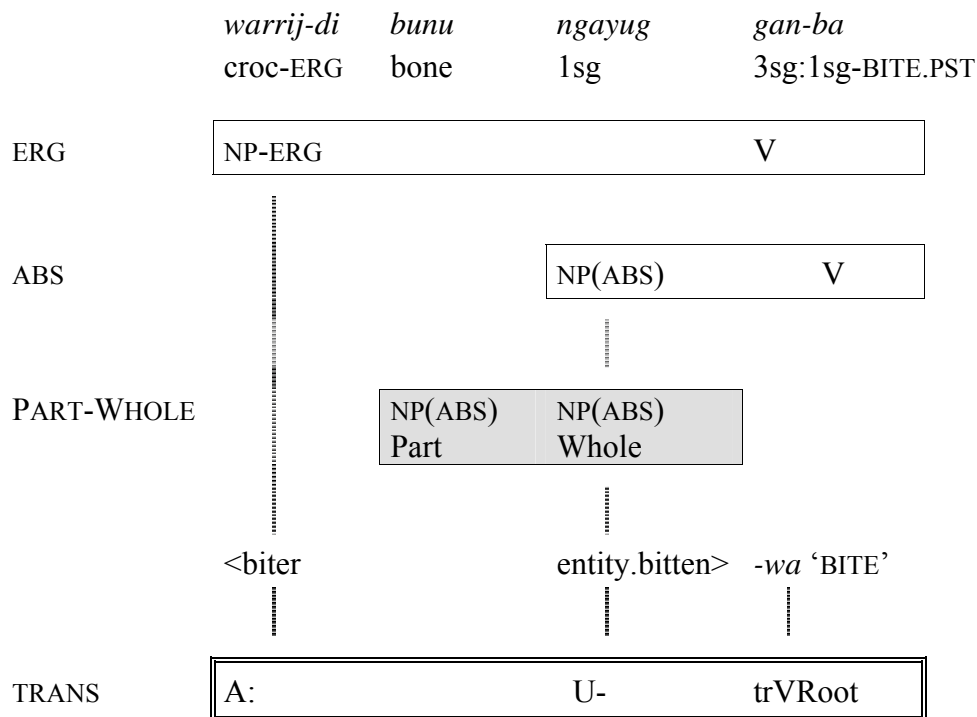
4.2.3.2   The quotation construction

Quotations differ syntactically in striking ways from arguments in the strict sense. Where (direct or indirect) speech is quoted, these quotes formally constitute finite clauses (and also units larger or smaller than a clause) which are not subordinated or otherwise marked as complements. This is illustrated in (4-37) for direct speech.

(4-37)	Nangari	gani-yu=ngarrgu	**"wajama yurru-w-ijga"**
	<subsection>	3sg:3sg-SAY/DO.PST=1sg.OBL	fishing 1pl.incl-FUT-GO

'Nangari said to me "let's go fishing"' (DMc, TAP023)

Indirect speech, in Jaminjung, differs from direct speech not by being formally more integrated into the 'reporting' clause in any way, but only in 'point of view' (McGregor 1994a: 79), i.e. in what Munro (1982: 303) calls 'transparency of pronominal reference': in indirect quotation, deictic elements, such as pronominals and tense, receive their value from the speech situation itself, not from the reported speech situation. Expressions like that in (4-38) are much less frequent than expressions like (4-37) above.

(4-38) ba-yu=nu   <u>Iza</u>-wu,   **ga-wu-rum,** (...)
        IMP-SAY/DO=3sg.OBL <proper.name>-DAT   3sg-FUT-COME

        'say to Iza, she should come, ...' (NR, EV03018-9)

Other types of quotations include non-linguistic sounds, e.g. animal noise imitations as in (4-39), and quotations of non-verbal behaviour, i.e. by pantomime or iconic gestures, which are linguistically indexed only by the demonstrative coverb *maja* 'thus, do like that' (4-40) (see also §2.3.1.3). This is also the reason the term 'quotation construction' instead of the more usual 'reported speech construction' was adopted here.

(4-39) <u>en</u>   malajagu=biyang **"hhhhhh"** +
        and   goanna=NOW   <sound.imitation>

        + gan-**unggu**-m=yirrag=ngarndi   jarriny- jarriny-ngunyi,
           3sg:3sg-SAY/DO-PRS=1pl.excl.OBL=SFOC2   hole   hole-ABL

        'and the goanna then goes "hhhhh" at us from its hole' (imitating hissing noise) (IP, F01566)

(4-40) **maja'**   gan-**unggu**-m
        do.like.that 3sg:3sg-SAY/DO-PRS

        darlarlab=bung   ga-ngga   warlnginy \
        shiver=COTEMP   3sg-GO.PRS   walking

        'he does it like that, shakingly he walks' (with accompanying pantomime) (MJ, E04181)

The demonstrative coverb *maja* 'thus, (do) like that' may substitute for all types of quotations; the same holds for the corresponding interrogative coverb, *warndug* 'what (event)/how'?, which has to be used instead of *nganthan* 'what (entity)?'.

(4-41) warndug   nga-wu-yu
        do.what   1sg:3sg-FUT-SAY/DO

        'what will I say' (could also mean: 'what will I do?') (JJ, MYA076)

As examples (4-37) to (4-41) show, all types of quotation are accompanied by the same verb of speech and performance, *-yu(nggu)* 'SAY/DO'. In addition, some trivalent simple and complex verbs of transmission, such as *-ngarna* 'GIVE', may also occur with quotations (see §5.7.1.3).

The precise syntactic analysis of quotation constructions is a matter of debate (see e.g. De Roeck 1994 and McGregor 1994a for an overview) and will not concern us here. For example, it is difficult, if not impossible, to determine whether the quotation is cross-referenced on the verb or not in Jaminjung (indicated by a question mark in Fig. 4-14 below). The U prefix invariably has

the third person singular form, and therefore could be analysed either as cross-referencing the quotation, or as a 'dummy prefix' as described in §4.2.2.1.3 above. The main point here is that the quotation construction has to be distinguished from argument structure constructions. As McGregor (1994a) points out, the relationship between the speech/performance predicate and the quotation is not adequately captured by a complementation or subordination analysis, and is perhaps best analysed as a 'framing relationship', following Rumsey (1982a: 157ff., 1994).

Since in our approach semantic and syntactic levels of argument structure are clearly separated, it is still possible to regard the quotation as representing a semantic participant of certain verbs, i.e. a propositional participant in the sense of Lehmann (1991: 204f.). This does not contradict a 'framing' analysis of the syntactic relationship. The verb -*yu(nggu)* 'SAY/DO' has, as part of its semantics, a propositional participant, i.e. an 'event performed' (see §5.6.2 for a refinement of this statement), just as a frame can be said to have a 'slot' for a picture (in the analogy used by McGregor 1994a). One of the possibilities of representing this participant is by a quotation. Quotations are not dependent on a framing verb since they very frequently occur without one, and may only be marked by suprasegmental means such as voice register. On the other hand, -*yu(nggu)* 'SAY/DO', and other verbs used in a similar way, require an overt representation of their propositional participant, even though this does not have to be part of the same intonation unit as the verb. This is the only case where the expression of a participant (other than where it is represented by a bound pronominal) is obligatory in Jaminjung. (A quotation construction, though, is not the only possibility of expressing a propositional participant; see §4.2.3.3 and §5.6.2). This is why obligatoriness, in addition to core argument status, was included among the criteria for central participant status proposed in §4.1.3.

The integration of the propositional participant of the verb -*yu(nggu)* 'SAY/DO' and the quotation construction (of which the 'framing' verb is only an optional part) is illustrated in Fig. 4-14. This figure also represents the equivalence between a verbal quotation, and the propositional pro-forms which may stand for both verbal and non-verbal quotations. Note that the addressee of the speech, or, more generally, the person towards whom the behaviour is directed, is not taken to correspond to a participant of the verb, but is regarded as an argument added by the construction, in line with the very general function of oblique pronominal clitics and dative-marked noun phrases outlined in §2.2.4.3.1 and §4.2.1.4.

Fig. 4-14. *The quotation construction with the performance verb* -yu(nggu) *'SAY/DO' (ex. 4-39)*

	malajagu	*"hhhhhhh"*	*gan-unggu-m=yirrag*
	goanna	\<sound\>	3sg:3sg-SAY/DO-PRS=1pl.excl.OBL

ABS NP(ABS)   V

QUOT   "S" / *maja / warndug*   (V)

         \<performer   event\>   *-yu(nggu)*
                            ??

TRANS A: U-   tr.VRoot
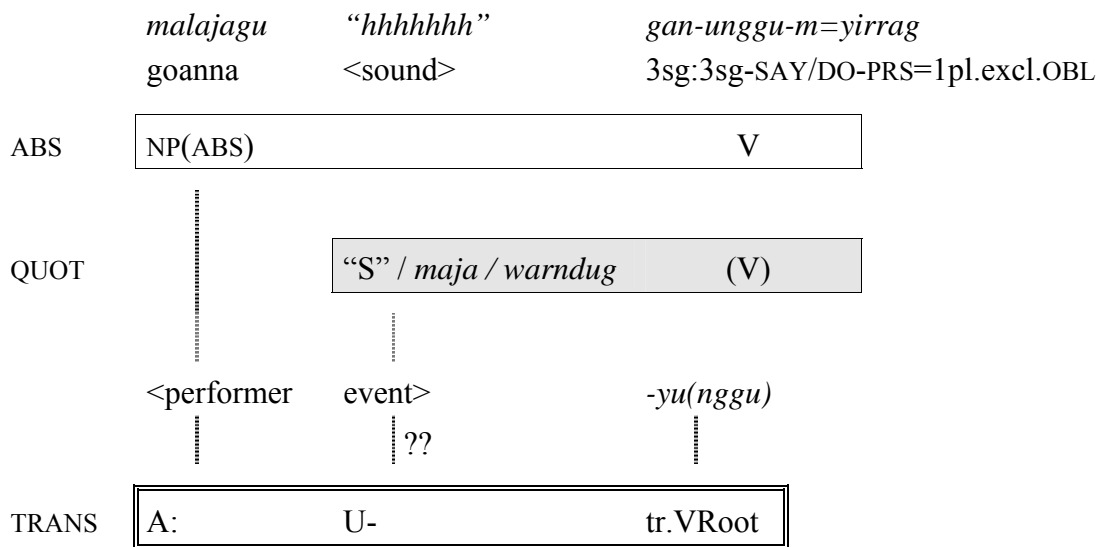
4.2.3.3 Coverbs as propositional 'arguments'

In the previous section (§4.2.3.2), a quotation was regarded as one of the possibilities of representing the propositional participant of the performance verb *-yu(nggu)* 'SAY/DO'. We will now consider the possibility of a coverb fulfilling the same function, i.e. fulfilling the valency requirements of this verb. As will be demonstrated in more detail in §5.6, *-yu(nggu)* 'SAY/DO' as a simple verb always has a reading of 'say', and accompanies a quotation or takes the 'cognate object' *liiny* 'word, speech'. However, it also functions as a part of complex verbs, with coverbs encoding types of sound emission, speech act, internal motion, and bodily and emotional condition. That is, quotations and coverbs, with this verb, are in complementary distribution. It is therefore plausible to assume that this verb requires a representation of a 'propositional participant', that is, a representation of something said, or of an event performed. The role of a propositional participant – unlike any other participant role – can also be filled by a coverb. (In fact, it was already shown in §4.2.3.2 that the demonstrative and interrogative coverbs *maja* and *warndug* are equivalent to a quotation). An example of a coverb encoding an event of 'internal motion', *jalug* 'be lively', is given in (4-42).

(4-42) jalig   **jalug**   gan-**unggu**-m \
        child   be.lively   3sg:3sg-SAY/DO-PRS

'the child is bouncing happily', 'the child does "bouncing"' (IP, F01549)

Although the coverb fills a semantic participant slot of the verb, it is not equivalent to a noun phrase here. Rather, the combination of coverb and verb in these cases is no different from other canonical complex verbs. As in other complex verbs, the coverb itself introduces a participant, which shares the Actor argument slot with the first participant of the verb. If the coverb is monovalent, like *jalug* 'be lively', this participant is always lexically encoded by an absolutive noun phrase, never by an ergative noun phrase. That is, the resulting complex verb behaves like a monovalent simple verb, even though the verb itself is formally transitive. The double status of a coverb both as a predicate in a complex verb, and as representing a propositional participant, is represented in Fig. 4-15. A similar analysis has been proposed for Hindi by Mohanan (1994, 1997), where nominals in complex predicates can function simultaneously as predicates and as arguments of the verb they combine with (see (7-12) in §7.2.1 for an example).

Fig. 4-15. *A coverb in a complex verb construction filling a participant slot of the verb -yu(nggu) 'SAY/DO' (ex. 4-32)*
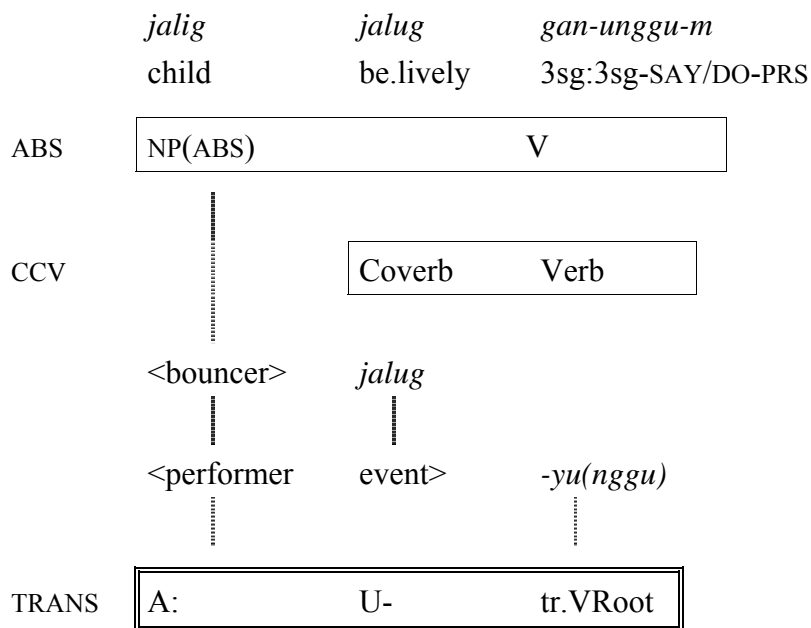
In Fig. 4-15, the 'event' participant is not linked to the U prefix. Just as in the case of quotations, it cannot be excluded with certainty that the propositional participant is also cross-referenced on the verb, since this is invariably in third person singular form and therefore there is no evidence from agreement. Note, however, that a coverb filling the propositional participant role may contribute a second participant to the complex verb, which in this case is represented as Undergoer. An example with a coverb borrowed from Kriol is given in (4-43) (see also §5.6.1.4 and §5.6.2.1 for further discussion and examples). In the light of examples like these, it seems unlikely that the propositional participant is

cross-referenced on the verb in the case of monovalent coverbs only. In §4.2.2.1.3, I suggested that the Undergoer prefix, in this case, should be regarded as a 'dummy' argument.

(4-43)   **helpim**   nganyi-wu-**yu**
          help:TR   1sg:2sg-FUT-SAY/DO

          'I will help you' (butchering a turtle) (JM, fieldnotes 1999)

The argument structure of (4-43) is represented in Fig. 4-16.

Fig. 4-16. -yu(nggu) *'SAY/DO' with a bivalent coverb (ex. 4-43)*

		helpim	*nganyi-wu-yu*
		help:TR	1sg:2sg-SAY/DO.PST
CCV		Coverb	Verb

	<helper	helped>	*helpim*	
	<performer		**event>**	*-yu(nggu)*
TRANS	A:	:U-		-tr.VRoot
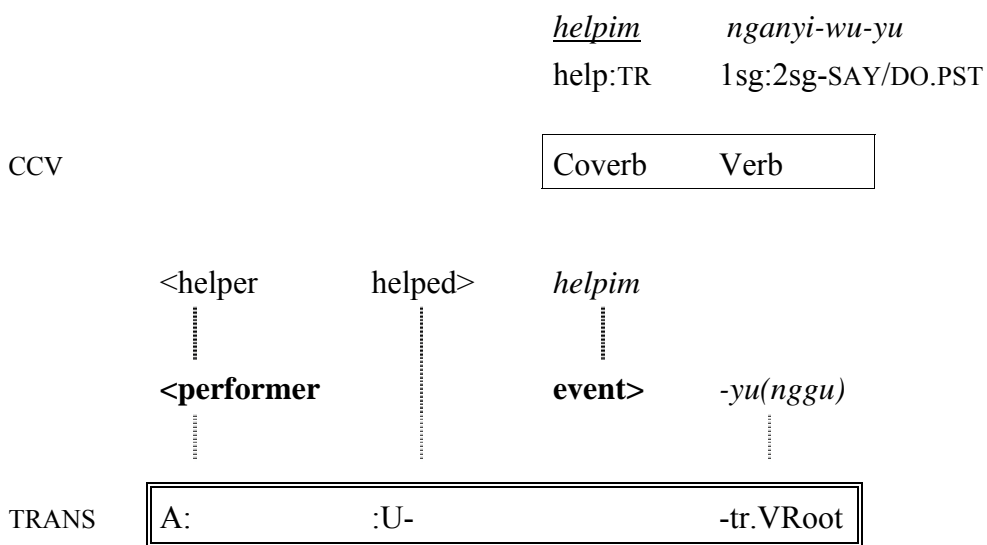
4.2.4   Summary

This section provided some justification for the constructional approach taken in this thesis, and illustrated the application of the criteria for core arguments and central participants proposed in §4.1. The separation of the semantic and the syntactic level of argument structure was shown to be fruitful for the description of the argument structure of Jaminjung predicates in several ways. First, it was demonstrated that the function of case-marked noun phrases (e.g. ergative-marked noun phrases) and the bound pronominal prefixes are best described by treating them as independent constructions which may overlap in representing the same semantic participant of a verb. For example, a participant represented as a pronominal Actor prefix may at the same time be represented as an ergative, ablative or absolutive noun phrase. A participant represented as a pronominal Undergoer prefix may correspond, in addition, to an absolutive, comitative or allative-marked noun phrase. Moreover, in some cases no participant may correspond to a pronominal prefix (instances of a 'dummy' U prefix). An absolutive noun phrase which formally looks like a core argument may not

correspond directly to a participant of the verb, but be introduced by a part-whole construction. On the other hand, a semantic participant may not correspond to any core argument, but may be represented as a quotation, or a coverb.

The discussion also provided the justification for excluding case-marked noun phrases (i.e. non-absolutive noun phrases) from core argument status in §4.1.1. No case-marked noun phrases can serve to unambiguously identify central participants; ergative-, ablative-, dative-, allative- and comitative-marked noun phrases all may or may not represent central participants of verbs or coverbs.

The notion of (semantic) valency as defined here, i.e. as based on the expression of central participants as core arguments throughout all constructions where a given predicate occurs, will be crucial for the description of argument sharing between coverbs and verbs in §4.3, as well as the more detailed account of the semantics of coverbs and verbs in Chs. 5 and 6.

4.3   Patterns of argument sharing in complex verbs

In this section, argument sharing of coverbs and verbs in a canonical complex verb construction will be addressed systematically for coverbs and verbs of different valencies. The discussion relies to some extent on the classes of verbs and coverbs to be established in Chs. 5 and 6. For reasons of space and readability, the relevant sections in these chapters will not always be cross-referenced, since they can be identified by the label given to the predicate class.

4.3.1   Argument sharing with monovalent verbs

4.3.1.1 Monovalent coverbs

The set of monovalent verbs, by the criteria given in §4.1, is co-extensive with the set of formally intransitive verbs, i.e. verbs taking intransitive pronominal prefixes. Intransitive verbs (with the exception of *-yu* 'BE' and *-ijga* 'GO' in auxiliary function; see §4.2.1.3 and §4.3.1.2) only combine with monovalent co-verbs. This presents the simplest logical possibility for argument sharing: the single participants of the coverb and verb are represented by both the S pronominal prefix on the verb, and by an (optional) absolutive noun phrase. This is illustrated in (4-44) and (4-45) for two of the five intransitive verbs, *-ruma* 'COME' and *-irna* 'BURN', and is schematically represented in Fig. 4-17.

(4-44)   ngidbud=biyang   **bul**   ga-**ram**
          night=NOW   emerge   3sg-COME.PRS

          'night falls' (DB, D13134)

(4-45)   **bud**   ga-w-**irna**   ngunggu   mangarra
          cook.on.coals   3sg-FUT-BURN   2sg.OBL   plant.food

          'it will cook for you on the coals, the food' (IP, E09298)

Fig. 4-17. *Argument sharing of a monovalent verb and a monovalent coverb (ex. 4-44)*

	ngidbud	*bul*	*ga-ram*
	night	emerge	3sg-COME.PRS
ABS	NP(ABS)		V
CCV		Coverb	Verb
	<emerging.entity>	*bul*	
	<mover>		*-ruma*
INTRANS	S-		intrVRoot
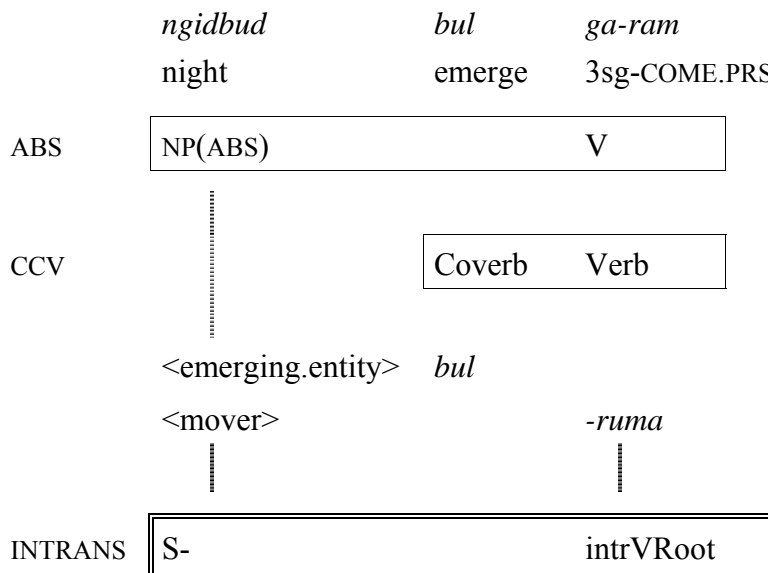
Monovalent coverbs which combine with intransitive verbs in this way come from a number of classes. Although coverbs and verbs in the complex verbs listed below may stand in various semantic relationships to one another, they all behave alike from the point of view of argument structure.

(i) Coverbs of state, including the large class of coverbs of spatial configuration (position, posture, direction of gaze), combine with the stative verb -*yu* 'BE', as in (4-43) above, or (more rarely) with motion verbs in the reading 'move while in position' (see §5.3.1.4).

(ii) Most coverbs of spatial configuration, and some coverbs of path and change of location, combine with the verb -*irdba* 'FALL' (better glossed as 'change of locative relation'; see §5.2.3.1).

(iii) Coverbs of manner of motion and coverbs of path combine with the intransitive motion verbs -*ijga* 'GO' and -*ruma* 'COME', as in (4-44) above.

(iv) Coverbs of change of state combine with -*ijga* 'GO' in its 'change of state' reading (see §5.3.2.2), and – more rarely – with the verbs -*irdba* 'FALL' and -*irna* 'BURN' .

(v) Coverbs of cooking and burning combine with the verb -*irna* 'BURN' , as shown in (4-44) above.

More than one coverb from these classes may combine with the same verb in a single complex predicate, as long as the coverbs are semantically compatible with each other as well as with the verb (see also §3.2.2). The most frequently attested combinations are those consisting of multiple coverbs of spatial configuration and the intransitive verb *-yu* 'BE', and of multiple coverbs of path and/or manner of motion with an intransitive motion verb, as in (4-46).

(4-46)   **walnginy**   ga-**ngga**   **buyi**
         walk   3sg-GO.PRS   keep.going

         'he keeps on walking'

Argument sharing in this case is completely parallel to the case represented in Fig. 4-17 above: the single participants of all three monovalent predicates fill the same argument slots. For the sake of clarity, this is represented in Fig. 4-18.

Fig. 4-18. *Argument sharing of a monovalent verb and two monovalent coverbs (ex. 4-46)*

	walnginy	*buyi*	*ga-ngga*
	walk	keep.going	3sg-GO.PRS
CCV	Coverb	Coverb	Verb

<walker>	*walnginy*	
<mover>		*buyi*
<mover>		*-ijga*

INTRANS   S-   intrVRoot
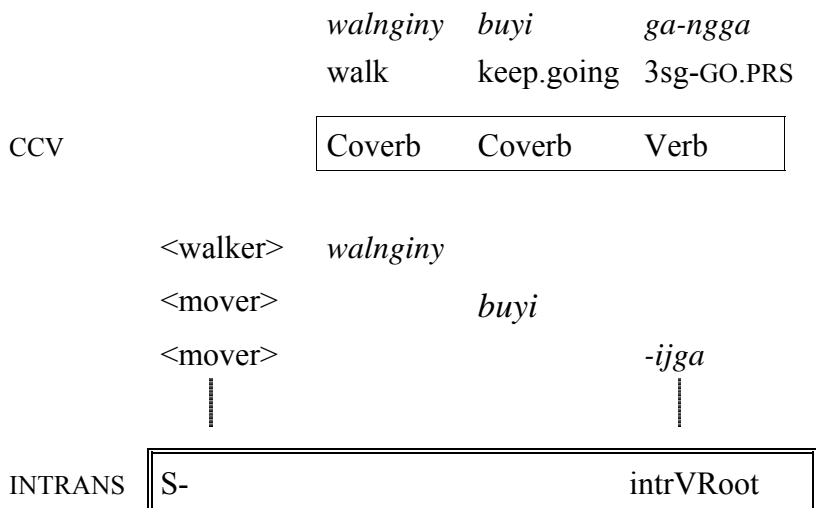
4.3.1.2 Bivalent coverbs with *-yu* 'BE' and *-ijga* 'GO' as auxiliary verbs

Two of the five intransitive verbs, namely *-yu* 'BE' and *-ijga* 'GO', may function as auxiliary verbs with nominal predicates and stative coverbs, as well as in the progressive construction and in its lexicalised counterpart, i.e. complex verbs formed with coverbs of continuous activity (see §3.3.1 and §6.3). The construction with *-yu* 'BE' is the more frequent one; the use of the verb *-ijga* 'GO' adds a semantic nuance of habitual or ongoing activity (see §5.3.2.3). The single participant of the auxiliary verb is thus neutral with respect to its role, and is simply represented as 'theme' in Fig. 4-19 below.

In this function, these two intransitive verbs may combine not only with monovalent coverbs, but also with bivalent coverbs. In this case, the first participant of the bivalent coverb is cross-referenced on the verb, and optionally represented by an absolutive noun phrase. The second participant may be represented as a second core argument, i.e. a second absolutive noun phrase, but is not represented by a pronominal prefix. This is illustrated for the productive progressive in (4-47) and for the 'lexicalised progressive' in (4-48), and is schematically represented in Fig. 4-19 (further examples can be found in §3.2.4, §3.3.1,§ 5.2.1.2, and §5.3.2.3).

(4-47) <u>en</u> janyungbari **burlug**-mayan ga-**yu** gugu \
and another drink-CONT 3sg-BE.PRS water

'and the other one is drinking water' (Farm Animals 9) (DMc, E13020)

(4-48) **thawaya**=biya burr-**inyi** <u>buliki</u> \
eating=NOW 3pl-BE.IMPF cow

'they were eating cattle' (crocodiles) (IP, EV03152)

Fig 4-19. *Argument sharing of a bivalent coverb and a monovalent verb in the progressive construction (ex. 4-47)*
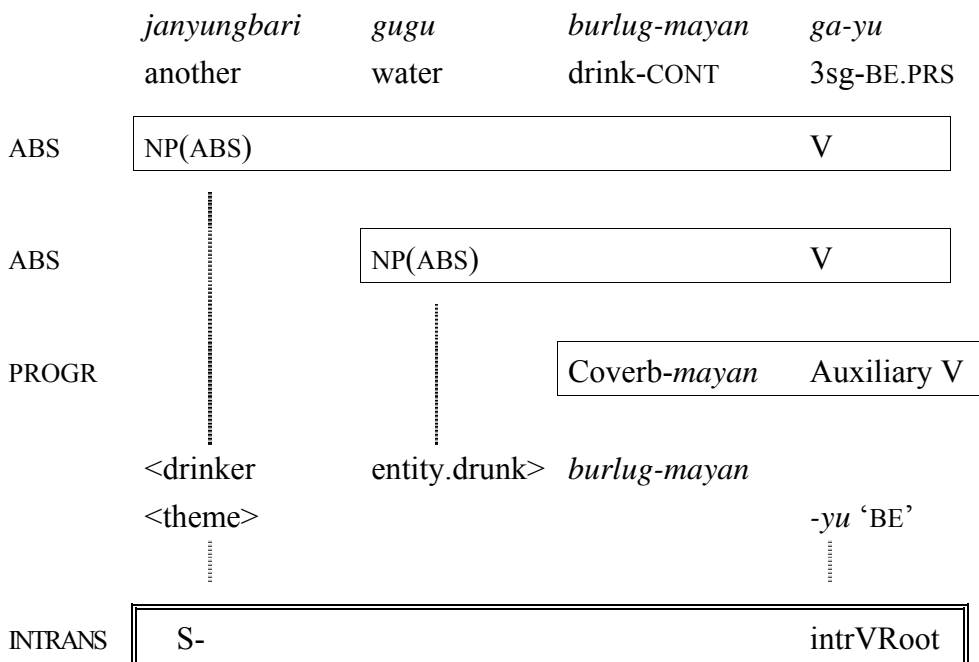
4.3.2 Argument sharing with bivalent verbs

Coverbs combining with bivalent verbs may be monovalent, bivalent or trivalent. For monovalent coverbs, two possibilities of argument sharing exist: the only

participant of the coverb can be coreferential with the verb's Actor participant (§4.3.2.1) or the verb's Undergoer participant (§4.3.2.2).[78] Both possibilities are attested for several classes of coverbs, although the second type seems to be more frequent both in terms of types and tokens. With bivalent coverbs (§4.3.2.3), naturally, both participants of the coverb are represented as (A and U) bound pronominals, and optionally as noun phrases in ergative and absolutive case, or in one of the other cases discussed in §4.2. Bivalent verbs may also combine with more than one coverb which may differ in valency (§4.3.2.4). Rarely, bivalent verbs combine with trivalent coverbs (§4.3.2.5).

4.3.2.1 Monovalent coverbs aligning with A

Complex verbs in which the single participant of a monovalent coverb is represented by the Actor prefix of a bivalent verb include the following types:

(i) Coverbs of spatial configuration, including coverbs of direction of gaze, may combine with the verb *-ngawu* 'SEE'. With this verb, an unmarked coverb of spatial configuration is always interpreted as predicating on the Actor, as in (4-49). It can only be understood to predicate on the Undergoer if it occurs in a secondary predicate construction, marked with allative case (see §2.6.5.3).

(4-49)   **gurdij**   gan-**ngayi**-m=mindag,   **mung**
         stand   3sg:1-SEE-PRS=1du.incl.OBL watch

         'he looks at us, standing' (clearly A standing, U sitting in the context) (IP, E17159)

Coverbs of spatial configuration also – rarely – align with the Actor of other transitive verbs. With some transitive verbs of motion, the resulting complex verb has the reading of 'moving while in a certain position', as in (4-50), with the positional *wamam* 'facing, face up'.

(4-50)   ngiya=ma   **wamam**   gan-**karrganthi**-ya=mindag +
         PROX=SUBORD face.up   3sg:1-APPROACH-PRS=1du.incl.OBL

         + **warrng-warrng** walthub-ngunyi \
           RDP-walk   inside-ABL

         'here he walks towards us, facing us, from inside' (man Enter/Exit animation video) (IP, E17153)

---

[78]   This is really a shorthand for 'the semantic participant of the verb which is morphosyntactically represented as Actor or Undergoer, respectively'. Correspondingly, 'monovalent coverbs aligning with A' should be read as 'coverbs whose single participant is coreferential with that participant of the verb which is represented as A'.

Combinations of a coverb of spatial configuration and the verb *-mili/-angu* 'GET/HANDLE' may receive the interpretation 'act on something to maintain a position with respect to it', e.g. 'ride' in (4-51). Here, the single participant of the positional is also represented by the A prefix[79] (see also §6.1.1).

(4-51) nindu /   nindu=ma **ngamang**   burr-**angga**-m \
        horse   horse=SUBORD   astride   3pl:3sg-GET/HANDLE-PRS

        'horse, when they ride a horse,' (MJ, E04191)

(ii) Coverbs of manner of motion (e.g. *warrng-warrng* 'walk' in (4-50) above), as well as directional coverbs, like *ngirr* 'go past' (4-52) also align with the A of some transitive motion verbs.

(4-52) ngayug   nganjin-**ngunga**-ny   **ngirr**
        1sg   2sg:1sg-LEAVE-PST   go.past

        'you went past me' (JM, E16418)

(iii) Some monovalent coverbs of continuous activity, and a few coverbs of manner and direction of motion, combine with the verb *-ma* 'HIT' in its reading of 'totally affect s.th.' (see §5.4.2.2); the resulting interpretation is 'A affects U by an activity' (see (6-27) in §6.3 for an example). Some coverbs of activity also combine with the verb *-ngawu* 'SEE' in its reading 'direct one's aggression at s.o.' (see §5.8.1.2).

(4-53) wirib-di   **ngarl'ma** gani-**ngayi**-m   malajagu
        dog-ERG   bark   3sg:3sg-SEE-PRS   goanna

        'the dog is barking at the goanna' (DMc, CHE393)

Again, the kinds of semantic relationships found in complex verbs with monovalent coverbs aligning with A are diverse, but their behaviour with respect to argument structure is uniform. Argument sharing for a monovalent coverb aligning with the Actor of a bivalent verb is represented in Fig. 4-20.

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[79]   The 'location' participant of the coverb – not a central participant by the criteria used here – is coreferential with the second participant of the verb, and represented as Undergoer. The location participant can also be expressed as a locative noun phrase, as in (4-54) below.

Fig. 4-20. *Argument sharing of a bivalent verb and a monovalent coverb aligning with A (ex. 4-53)*

	wirib-di	*malajagu*	*ngarl'ma*	*gani-ngayi-m*
	dog-ERG	goanna	bark	3sg:3sg-SEE-PRS

ERG	NP-ERG			V

ABS		NP(ABS)		V

CCV			Coverb	Verb

	<barker>		*ngarl'ma*	
	<aggressor	object.of.aggr. >		*-ngawu*

TRANS	A:	U-		trVRoot
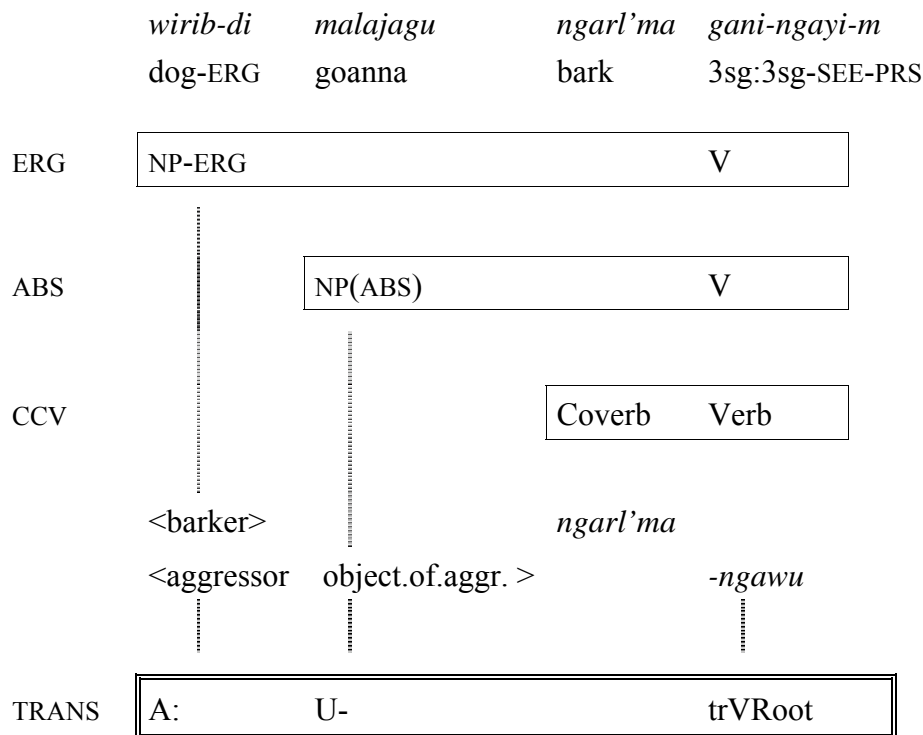
4.3.2.2 Monovalent coverbs aligning with U

Monovalent coverbs whose single participant shares an Undergoer argument with the second participant of a bivalent verb come from a large number of classes:

(i) Coverbs of spatial configuration regularly combine with the verb of induced change of locative relation, -*arra* 'PUT' (see also Fig. 4-2 in §4.1.3, representing argument sharing for the coverb *jurrb* 'be multiply'). The coverb illustrated in (4-54) is *bayirr* 'supported, on top'.

(4-54) gurang-ni   **bayirr**   gan-**arra**-ny   langin-ki
old.man-ERG   supported   3sg:3sg-PUT-PST   wood-LOC

'the old man put it up in the tree' (ER, MIX150)

A few coverbs of spatial configuration also combine with   -*mili*/ -*angu* 'GET/HANDLE' in a causative reading. When the verb -*arra* 'PUT' is used, as in (4-54) above, the complex verb focuses on the change of locative relation (with the latter specified by the positional). With -*mili*/ -*angu* 'GET/HANDLE', the focus is on the type of activity or contact that brings about the change in position, as in (4-55) (see also §5.4.1.2).

(4-55) murnunggu-ni **dirrg** ganuny-**mamila** \
string-ERG/INSTR tied.up 3sg:3du-RDP:GET/HANDLE.IMPF

'he tied up the two in chains' (a white station manager, two Aboriginal people who had run away from work) (DM, E19628; recorded by Mark Harvey)

(ii) Coverbs of spatial configuration also combine with the transitive verbs of possession and accompanied motion, *-muwa* 'HAVE', *-uga* 'TAKE', and *-anJama* 'BRING', in a depictive reading. Again, in all attested examples, the coverb aligns with U, that is, the position is predicated of the entity taken, brought, or possessed, as in (4-56).

(4-56) burdunburru **jarlarlang** gana-**ma**-ya
long.neck.turtle hang 3sg:3sg-HAVE-PRS

'he holds the long neck turtle hanging down (from his hands)' (IP, IZA002)

(iii) Coverbs of direction of motion, which show A alignment with some transitive verbs of locomotion (see §4.3.2.1 above), show U alignment with some other transitive verbs, including *-arra* 'PUT', *-mili/ -angu* 'GET/HANDLE' and *-wardgiya* 'THROW'; the resulting complex verbs have a causative reading, as in (4-57).

(4-57) wirib-di **jag** gan-**ardgiya**-ny thanthiya mu- munurru \
dog-ERG go.down 3sg:3sg-THROW-PST DEM <false.start> bee

'the dog has thrown down those bees' (Frog Story) (DBit, E07158)

(iv) Coverbs of change of state and coverbs of ballistic motion regularly combine with various transitive verbs of contact/force in a cause-result interpretation.

(4-58) **lag** yirra-**mila** bilij \
split 1pl.excl:3sg-GET/HANDLE.IMPF tree.species

'we used to split (wood off) the bilij tree' (EH, E17248)

(v) Monovalent coverbs of 'manner of heating', which also combine with the intransitive verb *-irna* 'BURN' (see §4.3.1.1 above), show U alignment with the corresponding transitive verb *-irriga* 'COOK'.

(4-59) jalang=biyang, **bud** gan-**irriga** Namij-ni,
today=NOW cook.on.coals 3sg:3sg-COOK.PST <subsection>-ERG

'today, Namij cooked it on the coals' (long yam) (CP, E09527)

(vi) Coverbs of activity combine with *-mili/ -angu* 'GET/HANDLE' in a causative reading. That is, the Actor of the transitive verb is interpreted as the causer, the Undergoer as the participant that is caused to perform the activity encoded by the

coverb (see (6-27) in §6.3 for an example). Very occasionally, such a causative construction is also found with *-(ma)linyma* 'MAKE'; however, this is not a preferred strategy of causative expression in Jaminjung (see §5.8.3.2).

Again, complex verbs of the type just illustrated, where the single participant of a monovalent coverb shares the Undergoer argument with the second participant of a transitive verb, do not receive a uniform semantic interpretation, but all behave like the complex verb illustrated in Fig. 4-21 with respect to argument sharing.

Fig. 4-21. *Argument sharing of bivalent verb and monovalent coverb aligning with U (ex. 4-58)*

	bilij	*lag*	*yirra-mila*
	tree.species	split	1pl.excl:3sg-GET/HANDLE.IMPF

ABS	NP(ABS)		V

CCV		Coverb	Verb

| | | <entity.splitting> | *lag* |
| | <handler | entity.handled > | *-mili* |

TRANS	A:	U-	trVRoot

At this point the question naturally arises whether the two types of monovalent coverbs – those aligning with A and those aligning with U – correspond semantically to predicates commonly found, in other languages, in an agentive ('unergative') class and an inactive ('unaccusative') class, respectively.

There is no straightforward answer to this question. Some types of monovalent coverbs, notably the coverbs of change of state and of ballistic motion, always show U alignment and fit the characteristics of inactive ('unaccusative') predicates semantically. Coverbs of manner of motion and coverbs of activity, on the other hand, always show A alignment except in some combinations with transitive verbs which clearly have an 'indirect causative' reading and do not entail that the Undergoer is inactive, so these are good candidates for an agentive ('unergative') class. Yet other coverbs, however, e.g. the positionals and coverbs of path, can show both U and A alignment depending on the verb they combine with. Positionals have been shown to vary in their predicate class assignment in other languages as well (see Levin & Rappaport Hovav 1995: 126ff.).

4.3.2.3 Bivalent coverbs

In the case of bivalent coverbs combining with bivalent verbs, we find a complete overlap in their argument structure. Both central participants share the A and U slots provided by the transitive verb, and any lexical argument, if present, that is cross-referenced by these bound pronominals.

Since the bivalent coverbs are those found to be restricted to the combination with transitive verbs (except with the two intransitive verbs that can function as auxiliaries), one would expect them to be more specialised in meaning, and therefore allowing less variability in the kinds of verbs they combine with. This prediction is indeed borne out by the data. A number of these coverbs are even restricted to cooccurrence with just one generic verb, but others are more variable. The types of combinations that are attested include the following:

(i) Coverbs of caused contact and effect, like *mam* in (4-60), and coverbs of 'pushing', combine with verbs of contact/force, and occasionally with other verbs like *-uga* 'TAKE'.

(4-60)   ngabulu   **mam**   gani-**wa**   ngiya,
        breast   hold.with.tight.grip   3sg:3sg-BITE.PST   PROX

        'it bit her here on the breast with a tight grip' (IP, F03408)

(ii) Coverbs of induced ballistic motion combine with the verbs *-wardgiya* 'THROW' or with *-yu(nggu)* 'SAY/DO' (in its reading of 'throw, release', see §5.6.1.4).

(4-61)   **jubbany**   ba-**wardgiya**   jarrawul
        spit   IMP-THROW   saliva

        'spit out (your spittle)' (NG, FRA183)

(iii) Coverbs of induced change of location like *jarr* 'put down a single thing' are found with *-arra* 'PUT', and occasionally with verbs of accompanied loco-motion. Argument sharing of a bivalent verb with a bivalent coverb was illustrated for this combination in Fig. 4-3 in §4.1.3.

(iv) Coverbs of 'holding', like *durd* 'hold a single thing' combine with the verbs *-muwa* 'HAVE', *-uga* 'TAKE', *-mili/ -angu* 'GET/HANDLE' or *-arra* 'PUT'.

(4-62)   **durd**   gan-**angu**=rndi=biya <u>treile</u>
        hold.one   3sg:3sg-GET/HANDLE-PST=SFOC1=NOW   trailer

        gujarding-guluwa-ni   ngarrgina   Nawurla,
        mother-KIN2-ERG/INSTR   1sg:POSS   <subsection>

        'she picked up the trailer, your mother did, my Nawurla' (IP, F03832)

(v) Quite a number of bivalent coverbs are restricted to occurrence with a single transitive verb (or sometimes two verbs). An example is the combination of a bivalent coverb of ingestion, *burlug* 'drink', with the verb -*minda* 'EAT'.

(4-63)   gugu   **burlug**   nga-**minda**-ny,
         water   drink   1sg:3sg-EAT-PST

         'I drank water' (JM, NUN238)

Often, in this case, the semantic contribution of the coverb and the verb is difficult to evaluate. An example is the coverb *gardaj* 'grind' in (4-64), classified as coverb of induced change of configuration, which exclusively combines with -*arra* 'PUT'.

(4-64)   gayayi   alrait,   yirri   **gardaj**   yirr-**arra**-nyi,
         waterlily.seeds all.right   1pl.excl   grind   1pl.excl:3sg-PUT-IMPF

         'the lily seeds all right, we used to grind them' (IP, E17326)

4.3.2.4 Argument sharing of bivalent verbs with more than one coverb

The same principles of argument sharing apply in the case where more than one coverb combines with a single verb, as was already illustrated for monovalent verbs and monovalent coverbs in §4.3.1.1. The data on multiple coverbs do not allow definitive generalisations on the conditions of their occurrence, but there seem to be no restrictions in terms of shared valency of coverbs. That is to say, more than one coverb can combine with the same verb as long as they are both semantically compatible with one another and with the verb. The coverbs may differ in semantic valency as long as their participants fully overlap with, or are included in, the participant set of the verb. Total overlap, i.e. a combination of two bivalent coverbs, is rare but attested; *waj* 'leave' and *jarr* 'put down' in (4-65) are both bivalent.

(4-65)   murag-ngarna **waj jarr**   yiny-**ngunga**-ny
         shade-ASSOC   leave put.down.one   1du.excl:3sg-LEAVE-PST

         'we two put the camera down, leaving it' (DR, D27015)

Argument sharing of two monovalent coverbs with a bivalent verb was illustrated in (4-50) above with the coverbs *wamam* 'facing' and *warrng-warrng* 'walking', both aligning with the A argument of the verb -*arrga* 'APPROACH'.

An example of incomplete overlap of the participants of two coverbs is shown in (4-66). Here, a monovalent coverb of change of state aligning with U, *ning* 'break off', and a bivalent coverb of contact and effect, *barr* 'smash against', are both combined with the same verb, -*ma* 'HIT'. This is represented in Fig. 4-22. Because the absolute noun phrase represents a body part, it has to be assumed

that it is linked to the Undergoer argument through a Part-Whole-Construction as outlined in §4.2.3.1.

(4-66) **ning'**=biji   yirri-**ma**   gurunyung   **barr** \
        break.off=ONLY   1pl.excl:3sg-HIT.PST   head   smash

       'we just killed it, smashing its head' (a flying fox who had bitten a woman) (IP, F03426)

Fig. 4-22. *Argument sharing of bivalent verb and both a monovalent coverb aligning with U and a bivalent coverb (ex. 4-66)*
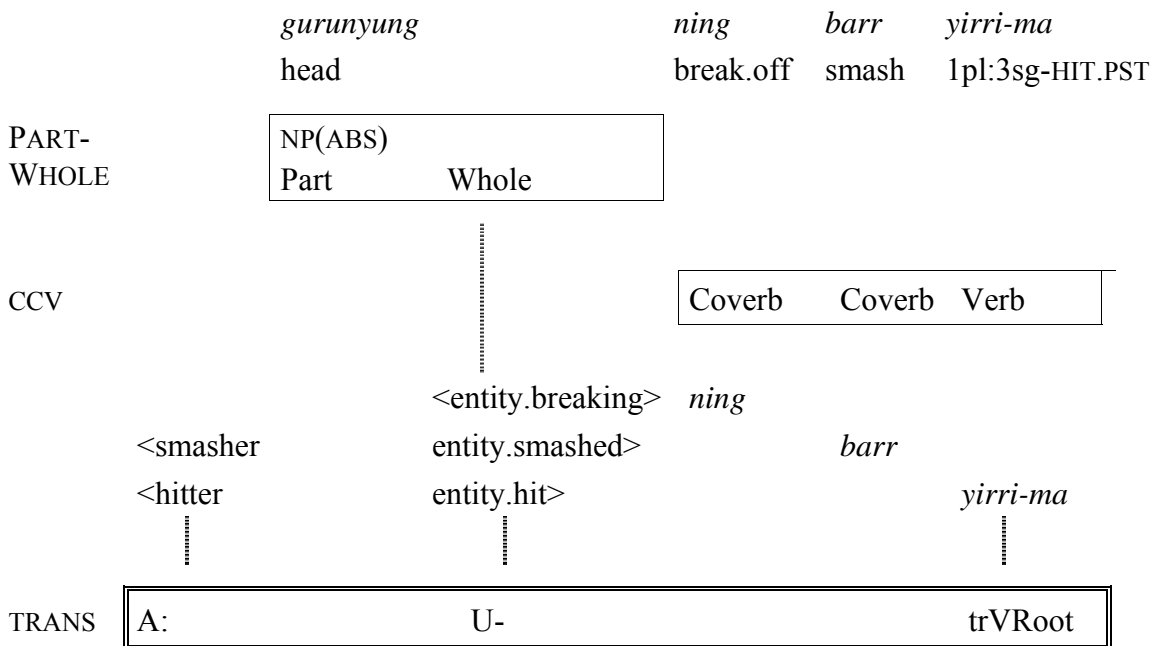
4.3.2.5 Argument sharing of bivalent verbs with trivalent coverbs

As already indicated in §4.1.3, bivalent verbs may combine with trivalent coverbs, to form complex verbs which behave like trivalent simple verbs. That is, these complex verbs allow for a second absolutive argument, not cross-referenced on the verb.

There are only a few trivalent coverbs of this type; all are classified as 'coverbs of transfer' in §6.15. One is the coverb *nyilng* 'promise s.o. a wife' which combines with -*ma* 'HIT' in its reading of 'totally affect' (see §6.15.1 for an example). Two trivalent coverbs of transfer of a message, *yanggi* 'ask' and *yurrg* 'show, teach', combine with -*arra* 'PUT ' in its reading of 'transfer of a message'. The coverb *yanggi* 'ask', in addition to the 'speaker' and the 'addressee', has a propositional participant – the 'proposition asked' – which is usually represented by a quotation, as in (4-67).

(4-67)   nga-ngu   dalwag
         1sg:3sg-GET/HANDLE.PST   rock.cod

         ngarrgina-ni ngaba-rni   **yanggi**   gan-k**arra**-ny
         1sg:POSS-ERG brother-ERG ask   3sg:1sg-PUT-PST

         "mindi-mindi-ya   dalwag"
         1du.incl:3sg-EAT-PRS   rock.cod

         'I caught a rock cod, and my brother asked me: "let's eat rock cod"'
         (MMc, TIM112-3)

Argument sharing for the coverb *yurrg* 'show, teach' was already illustrated in Fig. 4-4 in §4.1.3.

Theoretically, bivalent verbs could also form trivalent complex verbs in combination with bivalent coverbs, through partial overlap of their participants. However, we would then expect these coverbs to also occur in other combinations which do not allow for a third core argument. Combinations of this type have not been found; all the coverbs listed in this section always allow for the expression of three core arguments.

4.3.3   Argument sharing with trivalent verbs

In analogy to the situation observed with bivalent verbs, coverbs of any valency (monovalent, bivalent or trivalent) should be able to combine with trivalent verbs. All these patterns are indeed found, but since complex verbs formed with trivalent verbs are very rare, there are not many instances of each type in the data, and more research is needed to determine whether the cases attested are representative of regular patterns, and whether they exhaust all possibilities.

4.3.3.1 Monovalent coverbs

The possibility of a monovalent coverb aligning with a trivalent verb is only marginally represented in the data. The change of state coverb *burrb* 'finish, to do all', the directional coverb *buru* 'go back, return', and the coverb of ballistic motion *lawu* 'spill' (4-68), may combine with *-ngarna* 'GIVE'.

(4-68)   yeah, ngabuny-**ngarna**=biya   <u>na:</u> ..   **lawu** \
         yes   1sg:FUT:2du-GIVE=NOW   NOW   spill

         'yes, I will pour it for you two' (IP, F03726)

The coverb *burrb* 'finish, to do all' is also attested with *-yungga* 'TAKE AWAY'. The coverb always aligns with the 'secondary object', i.e. its only participant is represented by the absolutive noun phrase that is not cross-referenced on the verb (4-69). This is schematically represented in Fig. 4-23.

(4-69)   **burrb** bun-**yungga**-ny   marlayi-ni,
          finish 3pl:1sg-TAKE.AWAY-PST   woman-ERG

          minyga=warra   bilij
          what's.it.called=DOUBT   ashes

          'the women took all of it from me, what's it called, ashes'[80] (ER,
          MIX051)

Fig. 4-23. *Argument sharing of a monovalent coverb with a trivalent verb (ex. 4-69)*

4.3.3.2 **Bivalent coverbs**

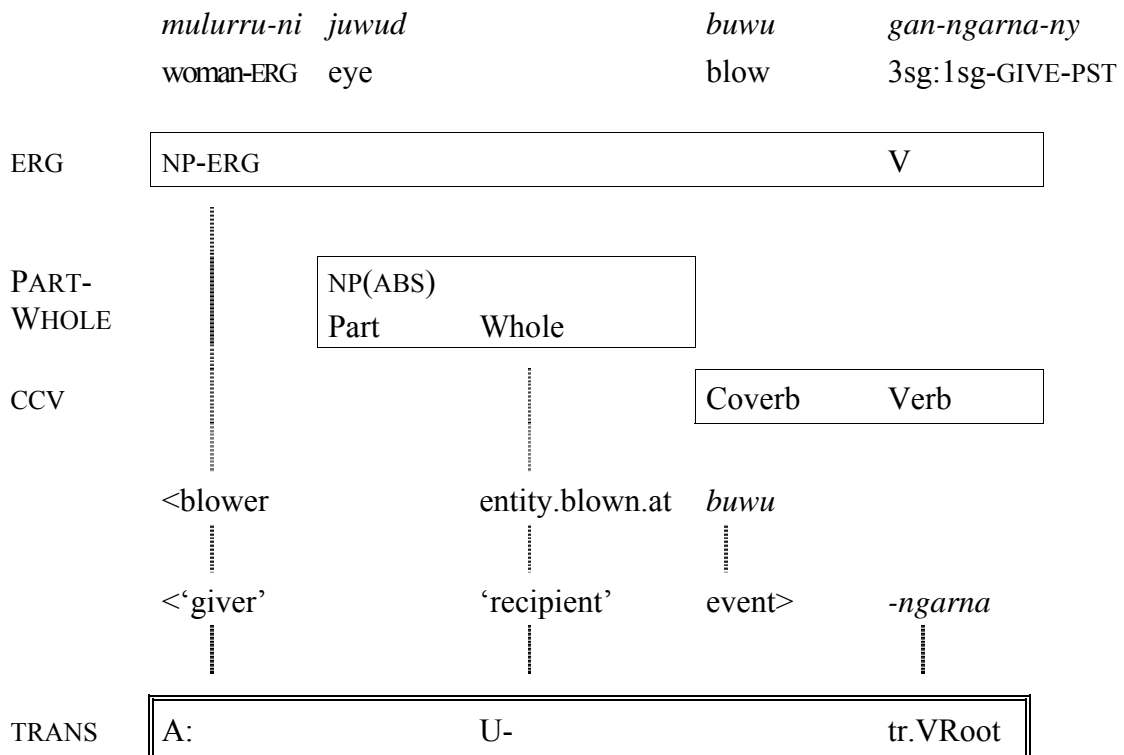Examples of bivalent coverbs combining with trivalent verbs are also very rare. The only attested type of argument sharing is that of a bivalent coverb aligning with the 'recipient' and 'entity given' participants of the verb (4-70). This is also represented in Fig. 4-23.

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[80]   Ashes from certain trees are a valued commodity, since they can be mixed with chewing tobacco.

(4-70)   ngayug=biya   ti=binji   ba-wun-**ngarna**   **burlug** \
          1sg=NOW   tea=ONLY   IMP-2du:1sg-GIVE   drink

          'me, give me only tea to drink, you two' (DB, E02055)

Fig. 4-24. *Argument sharing of a bivalent coverb with a trivalent verb (ex. 4-70)*

There also exists a different type of combination of *-ngarna* with bivalent co-verbs. The verb, in this case, has a secondary sense of 'direct action at someone', and has an event participant metaphorically filling the role of the 'thing given' (see §5.7.1.4 for details). This event participant is filled by a coverb, which specifies the kind of effect on the 'recipient'. Consequently, the coverb has to be bivalent, and its two participants fill the same argument slots as the 'giver' and the 'recipient' participant of the verb. This type of complex verb, then, behaves syntactically like a bivalent simple verb, that is, it allows for two core arguments, while *-ngarna* as a simple verb allows for three core arguments. An example is given in (4-71), and its argument structure is represented in Fig. 4-25.

(4-71)   mulurru-ni   **buwu**   gan-**ngarna**-ny   juwud
          old.woman-ERG   blow.with.mouth   3sg:1sg-GIVE-PST   eye

          'The old woman blew (the dirt off) my eye.' (DM, Fieldnotes Mark Harvey)

Fig. 4-25. *Argument structure of complex verbs formed with* -ngarna *'GIVE' in its sense of 'direct action at' (ex. 4-71)*

	mulurru-ni	*juwud*	*buwu*	*gan-ngarna-ny*
	woman-ERG	eye	blow	3sg:1sg-GIVE-PST

ERG	NP-ERG			V

PART-
WHOLE

	NP(ABS)		
	Part	Whole	

CCV

		Coverb	Verb

	<blower	entity.blown.at	*buwu*	

	<'giver'	'recipient'	event>	*-ngarna*

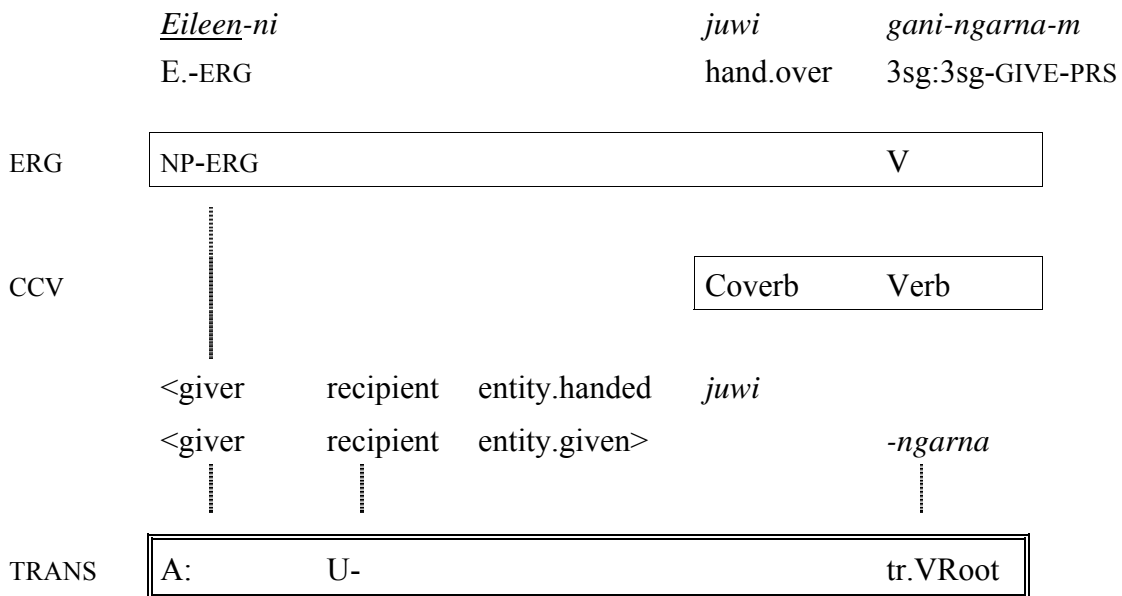| TRANS	A:	U-		tr.VRoot

4.3.3.3 Trivalent coverbs

In combinations of a trivalent coverb and a trivalent verb, the participant roles of verb and coverb overlap completely. This is only attested for the coverb of transfer *juwi* 'hand over, pass over' with *-ngarna* 'GIVE', exemplified in (4-72) and illustrated in Fig. *5-26*.

(4-72) yinaya Eileen-ni=mang gani-**ngarna**-m **juwi** \
          DIST <proper.name>-ERG=SUBORD 3sg:3sg-GIVE-PRS hand.over

'there is E. handing it to him' (materials for making a bough shade) (IP, F03962)

Fig. 5-26. *Argument structure of complex verbs formed with* -ngarna *'GIVE' and a trivalent coverb (ex. 4-72)*

	Eileen-ni				*juwi*	*gani-ngarna-m*
	E.-ERG				hand.over	3sg:3sg-GIVE-PRS

ERG	NP-ERG					V

CCV				Coverb	Verb

	<giver	recipient	entity.handed	*juwi*	
	<giver	recipient	entity.given>		*-ngarna*

TRANS	A:	U-		tr.VRoot

Even taking into account that more combinations may exist which are not attested in the data, there is a very noticeable cline in frequency between complex verbs formed with trivalent verbs and/or trivalent coverbs, and those formed with bivalent or monovalent coverbs. In particular, monovalent coverbs are very versatile in the types of combinations that they may enter into: they may share a single participant with monovalent verbs, or share either an 'Actor' or an 'Undergoer' participant with a bivalent verb (or rarely, a trivalent verb).

4.4   Summary

In this chapter, I have argued for the need to keep morpho-syntactic and semantic argument structure distinct in the analysis of Jaminjung complex verbs. This is because both components of the complex verbs – coverbs and verbs – are semantically relational, i.e. have distinct argument structures on a semantic level, but are integrated with a single set of argument expressions on the morpho-syntactic level. Argument structure of complex verbs was described in terms of argument sharing: semantic participants of coverbs and verbs may share the same morpho-syntactic argument slots, and in fact, there is a restriction on complex verb formation in that coverb and verb have to share at least one argument. If the verb has a propositional participant as part of its semantic valency, a coverb may also fulfil the valency requirements of this verb (§4.2.3.3).

A construction-based approach was developed in §4.1 and §4.2 for the representation of argument sharing. Because of the lack of one-to-one correspondence of

bound pronominal marking and case marking, and other difficulties of distinguishing complements from adjuncts, only core arguments were considered in the definition of semantic valency of verbs and coverbs. Core arguments were defined as comprising both bound pronominal prefixes and absolutive noun phrases. Central semantic participants – i.e. those making up the 'basic' or 'minimal' valency of verbs and coverbs – were defined as those that are either expressed as core arguments, or expressed obligatorily, across constructions. In §4.3, the patterns of argument sharing in complex verbs were presented. Table 4-1 provides a summary of the attested patterns.

Table 4-1. *Patterns of argument sharing in Jaminjung complex verbs*

Verb / Coverb	monovalent	bivalent	trivalent
monovalent	√	√	√
bivalent	only Aux	√	√
trivalent	–	√	√

The generalisations that can be drawn from the attested patterns are in the range predicted by a 'nuclear juncture' analysis of Jaminjung complex predicates (e.g. Foley & Olson 1985): the sets of (central) participants shared by coverb and generic verb have to either fully overlap, or one has to be included in the other. In other words, the syntactic arguments of a complex verb construction correspond to the semantic valency of at least one of the constituent predicates. Usually the predicate with the richer valency is the verb. As we have seen, bivalent transitive verbs frequently combine with both monovalent and bivalent coverbs, and trivalent verbs may combine with monovalent, bivalent or trivalent coverbs. The possibility for a coverb to contribute an extra participant to the complex verb is severely restricted (the complex verb in this case can occur in constructions with an additional argument slot, compared with the constructions that the simple verb may occur in). Combinations of this type were only observed for bivalent coverbs of continuous activity in the progressive construction and in 'lexicalised progressives' with the intransitive verbs *-yu* 'BE' and *-ijga* 'GO' functioning as auxiliary verbs (§4.3.1.2), and for trivalent coverbs with a small number of bivalent transitive verbs (§4.3.2.5).

It should be kept in mind that, despite the different patterns of argument sharing and the different types of semantic relationships between verbs and coverbs that are attested, all complex verbs can be regarded as instantiating a single construction type, the canonical complex verb construction identified in §3.2.