

# WORD ORDER IN A FREE WORD ORDER LANGUAGE THE CASE OF JIWARLI

Peter Austin

## ABSTRACT

*A topic of some debate in the recent syntactic literature is 'free word order' or nonconfigurationality. Australian Aboriginal languages have been claimed to represent paradigm examples of non-configurational or flat' languages (Hale for War/pin, Blake for Kalkatungu). Recent work in the generative paradigm by Jelinek, Speas, and Baker, and by functionalists Payne and Mithun has explored the issue of the connection between configurationality and freedom of word order. Mithun 1987 /1992] has shown convincingly that some languages have pragmatically, rather than syntactically, determined word order. She (and Jelinek) have noted a correlation between pragmatically determined order and the presence of bound pronominals in the clause, arguing that the pronominal affixes are to be taken as the arguments of the predicate, and that the freely ordered nominals are adjuncts. This paper explores data from Jiwari, an Aboriginal language of Western Australia, to see if it exhibits characteristics that are accounted for by this approach. I will show that Jiwari has all the hallmarks of non-configurationality and pragmatically conditioned word order, but lacks bound pronominals, suggesting that the correlation claimed by Mithun and Jelinek is not as straightforward as has been presented. I will argue that freedom of word order in Jiwari is related to.. the importance of transitivity within the language, certain complexities in the case—marking system (especially the fact that transitive object case marking varies according to clause type), and the role of the switch—reference system in keeping track of reference cross—clausally.<sup>1</sup>*

## 1. Introduction

It has been argued in the recent syntactic literature that certain Australian Aboriginal languages, of which Warlpiri is presented as a typical example, have a different pattern of syntactic organisation from that generally seen in more familiar (European) languages. This has resulted in some challenges to the accepted notions of language universals. Chomsky 1965 argued that human languages demonstrate two types of (cross—linguistic) universals:

---

<sup>1</sup> Earlier versions of this paper were presented at the University of California Santa Barbara, La Trobe University, the University of Sydney, and Xerox Palo Alto Research Centre. I am grateful to the audiences at these presentations for helpful comments and criticism, not all of which I have been able to take into account. I am especially grateful to Marianne Mithun, Sandra Thompson and Bill Foley for lengthy discussions on the pragmatics of word order. They are not to be held responsible for errors I have made in applying their ideas to Jiwari. The first written version of this paper was prepared while I was a visiting researcher at Xerox Palo Alto Research Centre and the Center for the Study of Language and Information, Stanford University; I wish to thank PARC and CSLI, and particularly my sponsor Joan Bresnan, for financial and logistic support. My research on Western Australian languages has been supported by grants from the Department of Anthropology, University of Western Australia, School of Humanities, La Trobe University, Australian Research Grants Scheme, and the Australian Institute of Aboriginal and Torres Strait Islander Studies. My greatest debt is to the late Jack Butler who taught me Jiwari and provided all the data on which this account of his language is based.

1. **substantive universals** — according to Chomsky (1965:28), “items of a particular kind in any language must be drawn from a fixed class of items”. Application of this in syntax requires, for example, that languages employ syntactic categories drawn from a fixed set (which includes Noun, Verb and Pre/Postposition); and
2. **formal universals** — these relate, according to Chomsky (1965:29), to “the character of the rules that appear in grammars and the ways in which they can be interconnected”. In syntax, formal universals would include such things as the X-bar theory (a particular means of expressing head—dependent relations in phrase structure), the existence of transformations (Move Alpha in Government—Binding theory (Chomsky 1981, 1986)), and constraints on movement (originally stated as the so-called ‘Ross island constraints’, and later as subjacency) or alternatively constraints on representations (principles A, B and C of the binding theory in the Government—Binding model).

The existence of phrase structure (PS) rules and phrasal categories has been long accepted in syntax (witness the emphasis placed on immediate constituent analysis by post-Bloomfieldian structuralists), as has the conception of syntactically basic word order. This is equally true outside the generative tradition where a whole industry of ‘word order universals’ has been created, prompted by the research of Joseph Greenberg. Within generative grammar, phrase structure conceptions and the existence of alternative word orders has been accounted for by the mechanism of SYNTACTIC TRANSFORMATIONS, deformations of some deep or intermediate structure to achieve a description of surface structure distributional facts.

### 3. The Configurationality Parameter

In 1979 Kenneth Hale challenged this conception of formal syntactic universals by arguing that Warlpiri, an Aboriginal language of central Australia, demonstrated no evidence of phrase structure organisation (i.e. no evidence for syntactic categories beyond the word level), and no evidence of transformational operations (see also Nash 1985, Laughren 1989, Simpson 1983, 1991). Warlpiri has a number of syntactic characteristics that make it radically different from the conception of syntax deriving from the study of European languages such as English:

1. word order at the clause level is free<sup>2</sup> — any arrangement or rearrangement of words in Warlpiri sentences results in no change in linguistic meaning. There is no ‘syntactically neutral’ ordering of subject, objects and verbs;
2. elements which can be thought of as a single semantic unit (say nominal heads and their associated demonstratives and modifiers) can be, and often are, represented DISCONTINUOUSLY within the clause. Warlpiri has a rich system of nominal case marking and it is generally true that discontinuous nominal expressions with the same morphological marking can be interpreted as semantic units (so-called split NP syntax’). Hale in his early work argues that in fact there is no evidence for syntactic categories in Warlpiri beyond the word level (no phrases, and hence no role for X-bar theory), and his most radical conception is that Warlpiri syntax has a single rule:

E - W\*

---

<sup>2</sup> The only exception is that non-null monosyllabic auxiliaries plus their associated bound pronominals must follow the first clause level constituent. Disyllabic auxiliaries (plus bound pronouns) can be clause initial or follow the first constituent (see Hale 1982, Swartz 1988:152).

That is, an expression (sentence) Consists of a string of words. There are sets of semantic well-formedness conditions which ensure the filtering of illicit structures which this rule schema overgenerates, but in Hale's conception, these are not part of the syntax proper;<sup>3</sup>

3. nominals are freely omissible from Warlpiri clauses — missing nominals are interpreted as third person definite reference. Additionally, there are sets of pronominal subject and object markers affixed to the verbal auxiliary complex whose presence makes the overt expression of pronominal arguments in the clause optional.

These three characteristics (free word order, no phrase structure, freely missing arguments) challenge the basic conceptions of grammatical theory proposed by Chomsky as the 'government—binding theory' (see Chomsky 1981, 1982, 1986).<sup>4</sup> Central to government—binding theory is the conception of the PROJECTION PRINCIPLE which says in essence that syntactic entities present at one level of syntactic structure must be present at all levels.<sup>5</sup> The projection principle requires that there be no syntactic 'gaps' and sanctions the concept of abstract syntactic categories, or 'empty categories' (which are of several types within government—binding theory, namely NP-trace, wh-trace, PRO and pro), and necessitates the existence of the syntactic movement rule Move Alpha (which is central to the theory). This is because lexical argument structure is projected onto surface structure and hence 'missing' surface elements must be analysed as sanctioned empty categories.

Chomsky 1981 abandoned the earlier conception of language universals (substantive and formal) and substituted in place of it a conception of CORE GRAMMAR — a system of syntactic principles each of which is subject to some variation. This variation is termed PARAMETRIC VARIATION and is formulated in such a way that syntactic parameters exist to encapsulate cross— linguistic variability within a finite range. An example of one such parameter is the 'pro-drop parameter' (Chomsky 1981), proposed to account for languages which allow omission of subject NPs. In G—B, grammatical relations are associated with NP structural positions. Thus subject is [NP, S] and this position is governed by INFL (the inflection node incorporating tense and AGR, or agreement). It has been suggested that if the agreement (in person, number and perhaps other features) is sufficiently 'rich' then the governed subject position need not be filled by an overt lexical NP.<sup>6</sup>

Another proposed parameter is the CONFIGURATIONALITY PARAMETER, that is, the issue of whether or not a language exhibits phrase structure and Move Alpha (and consequent anaphor—antecedent binding asymmetries). The exact conception of the configurationality parameter has been the subject of some debate among government—binding theorists. Hale 1983 argues that the configurationality parameter should be couched in terms of the level of syntactic structure at which the projection principle holds, as follows:

---

<sup>3</sup> Hale has backed away from this most radical position in his later work — see Nathan 1986 for discussion.

<sup>4</sup> For introductory accounts see Haegemann 1991, Horrocks 1987, Sells 1987, and van Riemsdijk & Williams 1986.

<sup>5</sup> The projection principle is itself usually stated in terms of a further principle, the theta criterion, which deals with predicate—argument semantic relations (or thematic (theta) roles) stating that such theta roles must be uniquely assigned at a given level of syntactic structure. Roughly stated, the projection principle says that the theta criterion holds at all levels of syntax.

<sup>6</sup> It is unclear how one determines necessary and sufficient conditions on 'richness' in this account. Also, note that it does not generalise to omissibility of transitive objects or other arguments (e.g. indirect object) since INFL (or strictly AGR) does not govern these structural positions (object NP being defined as [NP, VP] and governed by the verb, for instance).

1. **configurational languages** — the projection principle holds at lexical structure (**i.** the level which reflects the theta marking properties of lexical items) **AND** surface structure;
2. **non—configurational languages** — the projection principle holds at lexical structure only.

From this it follows that abstract elements like PRO, pro and trace, are NOT REQUIRED in languages like Warlpiri (nor is the rule of Move Alpha). Theta marking properties of verbs are represented by argument arrays at lexical structure, but not necessarily at the surface syntactic level. Thus, ‘missing’ elements are not necessarily empty categories.

Jelinek 1984 argues against Hale’s approach (and its weakening of the tenets of government—binding theory),<sup>7</sup> and instead takes as her starting point the existence of clitic pronominals attached to the auxiliary in Warlpiri. She argues (Jelinek 1984:73) that for Warlpiri (and other languages termed by her ‘W-type non-configurational’) that the ARGUMENT positions of a predicate are filled by the bound pronominal clitics (subject and object, which obligatorily attach to the auxiliary). Free nominals, where they occur overtly in the clause, are taken to be adjuncts to the verb complex with its (morphologically) bound arguments (‘adstructural elements’). That is, the association between nouns and verbs is looser than the traditional subject—predicate and verb—object conceptions. Omission and free ordering of adjuncts is possible because essential argument information is represented in the clause by the pronominal agreement markers.<sup>8</sup> Speas 1990 and Baker 1991, 1992 have developed variants of this approach, however they too concur with Jelinek in emphasising the role of the bound pronouns as licensing free word order and other non-configurational characteristics.

We may note in passing that these ideas are neither unique nor original to Jelinek but have appeared in the literature on ‘free word order’ languages a number of times. For example, Steele (1978:611) notes that: “we can say that if a language has free word order, it will have person agreement. Conversely, if a language has no person agreement, it will not have free word order”. Further, she goes on to tentatively propose precisely the same conclusion put forward by Jelinek six years later, namely (Steele 1978:6 14):

“copy agreement and free word order are both manifestations of the fact that in languages which exhibit either the sentence is composed of a verb and the grammatical elements which pertain to the sentence. The noun subject and the noun object are in some undefined sense appositives to the sentence (or perhaps sentences in their own right).”

---

<sup>7</sup> Hale’s ideas result in a weaker, much less constrained grammatical theory. In principle, his weakening of the projection principle allows a range of possible grammars not sanctioned by the conception in Chomsky 1981. Thus, there could be languages in which the projection principle holds at surface structure but not lexical structure, or at some intermediate syntactic level but not other levels, and so on.

<sup>8</sup> The claimed correlation is not without exceptions, even in languages with bound pronouns. Blake (1983:14.) observes that in Kalkatungu: [w]here an auxiliary particle is used, the cross-referencing forms are obligatory. In other instances the use of cross-referencing forms instead of or as well as free nominals is optional and not too frequent.’ Similarly, Bresnan and Mchombo (1987:742fn2) point out that: “Jelinek’s analysis of Warlpiri is itself problematic” as it relates to the relationship between the so-called pronominal arguments and the nominal adjuncts. They quote Simpson’s 1983 study which shows that Jelinek’s analysis is not applicable to non-finite clauses, which have no auxiliary element and no bound pronouns, yet show the same lexically determined case-marking patterns for nominals as finite clauses (which do have auxiliaries and bound pronouns).

Earlier sources for these ideas include Boas 1911 and von Humboldt (1836:130ff), neither of whom is mentioned by Steele, or Jelinek (or by Mithun 1986 in her discussion of the pragmatics of word order in such languages — see below).<sup>9</sup> Similar ideas appear also in Bresnan and Mchombo 1987 who argue that in certain Bantu languages the bound pronominal markers are pronouns and function as arguments filling the verb's lexical requirements (Steele (1989:543) calls this the pronominal argument' view) — this is always true for subjects and may be for objects.

Hale (1992:78) has proposed a revision of Jelinek et al.'s analysis that:

“makes crucial reference to the fact that Waripiri possesses a rich system of case and complementizers and assumes that case and agreement, both rich in Waripiri, are expressions of a single system related to the ‘visibility’ requirement for the assignment of thematic roles.”

Essentially, he proposes that NP arguments are not directly governed by the verb, but by their case category, which serves to make the NP ‘visible for the assignment of thematic roles to it by the verb. He distinguishes between a lexical projection (“an unambiguous projection of the lexical category, say V, introducing its arguments in an asymmetrical arrangement of specifier and complement”) and a functional projection (“the case-projection (or case-and-agreement projection), with parallel organization of argument positions, each identified with the corresponding position in the [lexical] theta-projection”). The functional projection is not inherently asymmetrical and hence allows freedom of order, as well as exhibiting no evidence of subject/object binding asymmetries. For Hale, the difference between English and Waripiri then is that English expresses arguments overtly within the lexical projection, while Waripiri L expresses them only in the functional projection. There would thus be no evidence for c-command or movement in a language like Waripiri.

In summary, in all these accounts there are two types of typologically distinct languages: non-configurational that rely on verb agreement morphology to express syntactic relations, and configurational that rely on phrase structure.

### **3. Pragmatically Determined Order**

Alongside this generative syntax research has been interest in ‘free word order’ languages by more typologically oriented linguists. Studies by Blake (1979, 1983, 1987), Payne 1987 and Mithun (1986, 1987), have challenged the conception of ‘basic’ word order, arguing that there are languages with NO ‘basic’ syntactically—determined word order, and that in these languages word order is pragmatically determined (see also Heath 1986, Kilham 1987).<sup>10</sup> Mithun's research (1986, 1987) has demonstrated clearly that pragmatic principles play a fundamental role in word order determination in the languages she examined. Her evidence comes from a range of languages, including Coos, Cayuga and Ngandi, the last from northern Australia. Summarizing somewhat, the basic idea she proposes is the ‘newsworthiness principle’: the pragmatically most important items, those with the most immediate discourse impact, come first in the clause, and the elements which follow are distributed in order of decreasing newsworthiness. Thus, Mithun (1987:304) states:

.

---

<sup>9</sup> I am grateful to William Foley for bringing the Boas and von Humboldt references to my attention

<sup>10</sup> A point with which Jelinek would seem to agree, cf. Jelinek (1984:73 item 72c), although she does not make it clear precisely what she intends by the term pragmatic

“word order in these languages is thus based on pragmatic considerations, on the relative newsworthiness of the constituents to the discourse. An element may be newsworthy because it represents significant new information, because it introduces a new topic, or because it points out a significant contrast.”

Note here the apparent reversal of the widely accepted view (based largely on research on European languages such as Czech and Russian) that pragmatic principles favour a topic—comment or theme—rheme order. In the traditional account sentence constituents are ordered in terms of increasing ‘communicative dynamism, moving from the known (topic or theme) at the beginning of the sentence to the unknown or new (comment or rheme) at the end.

Mithun is not alone in proposing this reversal of pragmatic prominence, nor is she the first to do so. Stute 1986 and Burgess 1986 (both originally written in 1976-77, according to Grimes’ introduction to the volume that contains them) argue that similar principles apply in the South American Indian languages Gavião and Xavante (see also Payne 1990). As Grimes (1986:2) notes, in these two languages:

“we have good evidence that the least predictable part of what a speaker is saying actually comes at the beginning. Most sentences get into more and more predictable material as they go on. Even though other languages related to these organize their information in the more popular way of putting what can be presupposed before what is being focussed on informationally, at least we can see now that starting with high redundancy is not a necessary strategy for communication. These two languages seem to be enough, for example, to call into question claims about the universal psychological validity of beginning with what is known and going on to what is unknown.”

Similar ideas to these may be found in the ordering principles proposed independently by Blake (1979, 1983, 1987), who suggests that for some Australian Aboriginal languages the usual sentence order is:

(focus) — topic (rest of) comment

Here ‘topic’ refers to what is being talked about, and ‘comment’ is what is said about the topic. ‘Focus’ is to be understood as: “the most important part of the comment, the essential part, that most resistant to ellipsis” (Blake 1983:153). The only difference between the approaches of Mithun and Blake appears to be that Blake distinguishes focus from new topics, whereas Mithun does not.<sup>11</sup> The test for ‘most newsworthy constituent’ put forward by Mithun is identical to the test for ‘focus’ proposed by Blake, namely in question—answer pairs the “most important constituent of an answer will occur first” (Mithun 1987:304, Blake 1979:115, 1983:154, 1987:156).

---

<sup>11</sup> Blake bases his account entirely on sentences where argument nominals are fully represented in the clause. Swartz (1988:154) criticizes Blake for not considering non-elliptical sentences in his account. He states that: “[b]y defining topic and focus as he has, Blake has excluded the possibility that this tendency to ‘push to the front’ is a unitary phenomenon. Would it not be preferable to be able to state that whatever motivates such fronting does so without necessitating the somewhat arbitrary labelling of topic and focus?”

Swartz 1987, 1988 has shown that Warlpiri too has pragmatically determined word order. Swartz (1988:154) argues that initial position in the sentence in Warlpiri is pragmatically significant and that this is where topical material is placed:

“sentence topics are overt syntactic arguments which, assuming they are preceded by sentential conjunctions or discourse-level particles, occupy the pragmatically-prominent first constituent position in the sentence nucleus. Sentence topics are restricted to arguments filling the grammatical functions of subject, object and indirect object if they occur. The unitary principle which motivates the placing of syntactic constituents into this position is what has been called *prominence*.”

Swartz proposes that Warlpiri word order can be captured by the formula:

(sentence topic) — [verb phrase — (remainder of comment)]

It seems that Swartz’s concept of ‘prominence’ coincides with Mithun’s ‘most newsworthy’. Swartz (1987:42—43) concludes that:

“Warlpiri too is a pragmatically ordered language. By that is meant that there is no basic word order in Warlpiri from which all other orderings are variations. Rather, given that the primary case relations are between the verb and pronominal affixes, and given that major constituent noun phrases serving as subject, object and indirect object are relatively rare, every occurrence, and the subsequent positioning, of such noun phrases represents a marked phenomenon determined by the pragmatic requirements of the surrounding discourse.”

Hale (1992:76) has accepted Swartz’s arguments here (along with Mithun’s observations on the pragmatic ordering of Coos, Cayuga and Ngandi).

Mithun 1986, 1987 has stressed the apparent correlation (mentioned by Swartz 1987 in the quotation above) between seeming freedom of word order (i.e. pragmatic not syntactic determination of word order) and the presence of bound pronominal affixes on the verb or associated auxiliary element (see discussion of the ‘pronominal argument’ approach of Jelinek’s et al, above). Mithun (1986:15) states this correlation explicitly:<sup>12</sup>

“the recurring coincidence of full sets of overt pronominal affixes and pragmatically based constituent ordering is too pervasive to be an accident. It may be the case that languages with full sets of bound pronouns can retain a basic, neutral, syntactically based constituent order indefinitely, either because speakers never overindulged in dislocation, or because of the well known sensitivity of word order to external influences. The opposite does not seem to occur, however. It appears that all languages with purely pragmatically determined rheme—theme order, establish core grammatical relations within their verbs, between verb stems and overt bound pronouns.”

This position is repeated again in Mithun (1987:324):

“[a] crucial feature of purely pragmatically ordering languages may be the nature of the relationship between the verb and associated constituents. In highly polysynthetic languages ... with obligatory pronominal marking of arguments, it is THE PRONOUNS which bear the primary case relations of arguments to the predication, not external noun phrases. The associated noun phrases serve as appositives to the pronominal affixes, rather than directly as subject and direct objects.”

---

<sup>12</sup> Note the diachronic speculation inherent in this quotation.

If this view is correct, there cannot be languages with pragmatically determined word order (following the principles proposed by Mithun) WHICH LACK BOUND PRONOUNS. In the following sections I show that such languages DO exist and that Jiwarli, spoken in Western Australia is one such. I will then address the issue of how grammatical and semantic functions in Jiwarli are expressed.

## 4. Jiwarli

### 4.1 Introduction

Jiwarli is an Aboriginal language traditionally spoken in the north-west of Western Australian inland from the town of Carnarvon (see maps in Austin 1981a, 1988b, 1992b).<sup>13</sup> It is closely related to three neighbouring languages: Thiin, Warriyangka and Tharrkari (comprising the Mantharta subgroup — see Austin 1981a, 1988a), and less closely related to its western neighbours Payungu, Purduna and Thalanyji (members of the Kanyara subgroup). The languages appear syntactically to be identical in all major respects to Jiwarli's. Among Jiwarli more distant relatives is Warlpiri, which, as noted above, has been claimed to be non-configurational.

Morphologically, Jiwarli shows a rich system of case marking of the split—ergative type (see Dixon 1979, Silverstein 1976); the distribution of formal marking is determined by inherent lexical content (animacy) of the marked nominal:

- (i) the first person singular pronoun *ngatha* (and optionally the second person pronoun *nhurra*) inflects on a nominative/accusative pattern, i.e. there is one form (nominative for intransitive and transitive subject functions (abbreviated following Dixon 1979 as S and A respectively), and a different form (accusative) for transitive object (O) function;<sup>14</sup>
- (ii) inanimate nominals and demonstratives inflect ergative/absolute, i.e. there is one form (ergative) for A function, and a different form (absolute) for S and O functions;
- (iii) all other nominals have three separate forms for A, S, and O functions.

Nominals in the examples below exemplify these various types of case syncretism.<sup>15</sup> Notice also that in Jiwarli ALL nominals bear case regardless of whether they are adjacent<sup>16</sup> or separated (forming discontinuous expressions — see discussion of examples (11-13) below). Case is formally marked locally depending on the animacy of the nominal referent.

---

<sup>13</sup> Until 1978 the language was unrecorded; between 1981 and 1985 I worked intensively on it with the last fluent speaker, Jack Butler, who died in 1986. The corpus consists of some seventy texts (see Butler and Austin 1987) plus a large amount of elicited data. All the Jiwarli data is available for study at the Australian Institute of Aboriginal and Torres Strait Islander Studies, Canberra. In the example sentences below, a source for each is given: T prefaces the text number, and s precedes the sentence number.

<sup>14</sup> In Tharrkari both first person singular pronoun *ngadha* and the second person singular pronoun *nhurra* obligatorily inflect nominative/accusative.

<sup>15</sup> The case marking pattern described here is that which applies in main clauses; different patterns apply certain dependent clause types — see Austin 1988a for details and the discussion in 5 below.

<sup>16</sup> Contrast this with languages such as Warlpiri (see Hale 1982) and Diyari (see Austin 1981b:94) where adjacent nominals forming a semantic unit bear case on the last element only.



In addition to these core cases, there are cases with semantic functions: dative, locative allative, ablative and causal (see Austin 1992a,b for details). For all cases, morphological marking is assigned to each nominal of a single semantic constituent (corresponding to a notional noun phrase), not simply the last in a sequence of adjacent nominals as in Warlpiri. Additionally, certain adnominal modifiers, especially possessives, are marked twice for case, taking both their own case (such as dative marking possession) and the case of the modified head nominal (see Austin (in press) for details).

Jiwarli and its neighbours have sets of first, second, and third person pronouns, and make great use of demonstratives for establishing third person nominal reference. However, these languages have NO bound pronouns or agreement markers, unlike the Western Desert language and Warlpiri spoken to their east (see the maps in Blake 1977 and Dixon 1980:364 for the geographical distribution of bound pronominals in Australia). Like them, however, nominals are freely omissible in texts and it is relatively rare to *fmd*, for example, a transitive verb and its associated argument nominals all overtly expressed (see Table 1 below). There is thus widespread zero anaphora in discourse. It is evident then that at least as far as omissibility is concerned, the correlation with the presence of bound pronouns observed by Mithun and Jelinek et al. does not hold for Jiwarli and its neighbours. In the following sections we will examine the word order component of configurationality.

#### 4.2 Word order

Even a cursory study of Jiwarli texts shows that word order appears to be free. Taking simple transitive clauses, we find examples in the text corpus of all possible orderings of subjects, objects and verbs. Consider the following examples. Iii (1) we have A V O order:<sup>17</sup>

- (1) *Pulhapayara—lu kanya—nyja pirru ngunha.*  
 [name]—erg carry—past meat:acc that:acc  
 ‘Pulhapayara carried that meat.’ [T4Os3]

Note that the ergative case is assigned to A while the O, being inanimate, is unmarked. The same ordering is seen in (2), but here A is unmarked and O takes an accusative suffix:<sup>18</sup>

- (2) *Ngatha tharta—laartu ngurru—martu—nha pirru—ngku.*  
 I:erg feed—usit old man—group—acc meat—erg  
 ‘I used to feed the old men with meat.’ [T41s99j]

In (3) we have A OV order:<sup>19</sup>

<sup>17</sup> The Jiwarli transcription adopted here follows general Australianist principles: *th/nh/lh* represent lamino—dental stop, nasal and lateral, *j/ny/ly* represent lamino—palatals, *rt/rn/rl* represent apico—domals (retroflexes). The velar nasal is *ng*. The symbol *r* stands for a post—alveolar continuant and *rr* for a tap. In homorganic nasal—stop clusters the digraph for point of articulation is written once only, thus *nh* plus *th* is *nth* (not *nhth*) and *rn* plus *rt* is *rnt* (not *rnrt*). Abbreviations used in the morpheme—by—morpheme glosses are: acc — accusative; allat — allative; caus — causative; comit — comitative; dat — dative; def — definite; erg — ergative; fut — future; imper — imperative; imperfDS — imperfective different—subject; imperfSS — imperfective same—subject; inchoat — inchoative; intent — intensive; bc — locative; perfDS — perfective different—subject; perfSS — perfective same—subject; p1 — plural; pres — present tense; purpDS — different subject; purpSS — purposive same—subject; spec — specific; tr — transitivity; usit — usitative. A colon separates non-segmentable morpheme glosses.

<sup>18</sup> Notice in this example the ergative case marked nominal *pirru* which has instrumental function.

<sup>19</sup> In this example we have inalienable possession which is coded in Jiwarli by placing the possessor and the possessed nominal in the same grammatical function and marking each accordingly. The possessed body—

- (3) *Ngatha nhurra—nha murrurpa mana—ra.*  
 I:erg you—acc cicatrice:acc get—fut  
 ‘I will get you cicatrices.’ [T44s7]

Initial O is seen in the next three examples. In (4) we have O A V order (additionally O is ‘split so that the demonstrative is initial and the head nominal and the possessive are final in the clause — see below for further discussion):

- (4) *Yinha nhurra parlura—rni—nma payipa nganaju.*  
 this:acc you:erg full—caus—imper pipe:acc me dat:acc  
 ‘You fill up this pipe of mine!’ [T52s11]

Example (5) shows O V A, as does (6); notice the difference in case marking in these examples due to animacy differences:

- (5) *Yawarnu wantha—rrartu ngatha.*  
 windbreak:acc put—usit I:erg  
 ‘I used to put down a windbreak.’ [T52s40]
- (6) *Piji—nha manhartana—nha wanka—rla—rninyja ngulu—pa martaru—lu.*  
 many—acc man—acc live—make—past thaterg—spec gum—erg  
 ‘That gum has cured many people.’ [T46s16]

Verb—initial transitive clauses also appear in the texts, as in (7) which is V A O:

- (7) *Jimpingka—rninyja ngatha—thu wirta—nyjarri—nha.*  
 carry—past I:erg—def boy—pl—acc  
 ‘I carried the boys on my back.’ [T41s121]

and (8) which is V O A:

- (8) *Warn nhanya—ra ngatha—nha ngunhi—pa kajalpu—lu.*  
 not see—flit I—acc there—spec emu—erg  
 ‘The emu will not see me there.’ [T45s11]

For clauses with intransitive verbs, both S V and V S orders occur. Example (9) is and (10) is V S:

- (9) *Wuru ngunha panyji—nyja martura—rru.*  
 stick:nom that:nom break—past middle—now  
 ‘The stick broke in the middle.’ [T40s131]
- (10) *Ngurnta—ja ngunha—pa kurlkanyurri—ngu—rru.*  
 lie—past that:nom—spec think—imperfSS—now  
 ‘He lay down thinking.’ [T40s15]

These examples are quite typical and have not been specially selected to illustrate the word orders found. I have chosen them in order to show that constituent order is not sensitive to the grammatical status of subjects and objects, nor to agent/patient semantic roles, nor to the morphological patterns of case marking. In elicitation, speakers allow free reordering of sentence constituents without any change in linguistic meaning.

In addition to this, Jiwarli demonstrates other characteristics typically associated with non-configurational languages. Thus it allows quite freely so-called ‘split-NP’ constructions (see

---

part is inflected as an inanimate nominal (and hence bears no case suffix in this example), while the animate possessor bears an accusative case suffix.

Hale 1982, Nash 1985, Dahlstrom 1987). That is, it is possible and not uncommon to find nominal constituents which are semantically related (say as head—modifier, or possessor—possessed) separated by other sentence constituents. Consider the following example (in contrast to example (3) above) where a possessor and its possessed body part are separated by the verb (for further discussion see Austin in press):

- (11) *Juru—ngku ngatha—nha kulypa—jipa—rninyja parna.*  
 sun—erg I—acc be sore—tr—past head:acc  
 ‘The sun made my head sore.’ [T19s3]

Also, it is possible for demonstratives, head nouns, and modifiers to be separated, as in (see also (4) above):

- (12) *Kutharra—rru ngunha ngurnta—inha jiluru.*  
 two:nom—now that:nom lie—pres egg:nom  
 ‘Now two eggs are lying (there).’ [T45s9]

and:

- (13) *Karla wantha—nma--rni jarnpa juma.*  
 fire:acc give—imper—hence light:acc small:acc  
 ‘Give me a small fire light.’ [T52s15]

Examples such as these are quite typical of Jiwarli, and, it seems, many other Australian languages. Thus, Dixon (1977:269) commenting on split-NPs in Yidiny (north Queensland) observes that: “one word will occur before the verb .. and the remainder after the verb”. Further, he notes (Dixon 1977:270):

“[t]he part of an NP which precedes the verb is normally a generic noun or a deictic, with specific noun, adjective etc coming later in the sentence. It seems as if the event is first outlined through a general description of the participants, and then of the action; once this is completed, referential details can be filled in.”

See also McGregor 1989 for further relevant discussion of splitting in Gooniyandi.

The final non-configurational characteristic of Jiwarli is frequent omission of argument nominals. In texts, it is relatively common to find clauses consisting of just verbs (both transitive and intransitive), or transitive verbs with just one (but not both) of their arguments. Examples of such ‘incomplete’ clauses are the following. Firstly, we have a transitive clause with an 0 nominal (*karla* ‘fire’) but no A:

- (14) *Papa—ngka tharrpa—rninyja karla.*  
 water—loc insert—past fire:acc  
 ‘(He) put the fire in the water.’ [T38s73]

and secondly a transitive clause with an A but no 0:

- (15) *Yalha—ngka wantha—rrka nganthurra—lu marrungku—lu.*  
 ground—loc put—fut we pl—erg for ever—erg  
 ‘We will put (them) in the ground for ever.’ [T39s21]

Sentences consisting of the verb without any overtly expressed arguments also occur, as in the transitive clause:

- (16) *Wirntupinya—nyja—rru.*  
 kill—past—now  
 ‘(They) killed (him).’ [T37s26]

An intransitive example is:

- (17) *Nyajurri—nyja*                      *parlirri—rarringu—rru.*  
 turn—past come                      back—intent—now  
 ‘(He) turned (and) came back.’ [T38s77]

Clearly, Jiwarli shows the full range of typical non-configurational characteristics. It is also clear that word order is not syntactically determined, either by categorical status grammatical functions or thematic roles. What it is that influences the relative ordering of constituents is the focus of the next section.

### 4.3 A text study

An examination of Jiwarli texts reveals interesting patterns in the distribution of the alternative word order patterns. A study of one long traditional text (Text 38 in Butler and Austin 1987 gives the figures in Table 1 (similar figures obtain for other narrative texts in the corpus):

TABLE 1: **Text count — Willy Wagtail Text**

INTRANSITIVE

	Number	%	% (discounting V alone)
SV	25	61	71
VS	10	24	29
V	6	15	—
	<hr/> 41	<hr/> 100	<hr/> 100

TRANSITIVE

Complete

Incomplete

		VO	10
AVO	5	OV	6
OAV	3	VA	1
AOV	2*	AV	1
OVA	1	V	4
	<hr/> 11		<hr/> 22

\* both instances occur in the question ‘Who fire will get?’

For intransitive clauses, approximately sixty percent are S V order and twenty five percent are V S order; a significant proportion (fifteen percent) comprise just V alone. If we discount the V clauses, then S V is about two thirds and V S one third of instances. These figures are comparable to those given in Swartz’s 1988 study of word order in Warlpiri. He examined ten written and five spoken texts and discovered that 44% of all intransitive sentences in oral texts are elliptical (missing an S NP). Further, S V sentences outnumber V S sentences by almost two to one. (Swartz’s data, reorganized and with % frequencies calculated by the present author is to be found in Appendix 1).

For transitive clauses in Jiwarli the picture is more complex. The number of complete transitive clauses with both A and O overtly expressed is half the number of incomplete clauses, that is, two thirds of transitive clauses have at least one argument missing (Swartz 1988 found that 83% of Waripiri transitive clauses are elliptical). Complete clauses appear to be equally A V O and O A V, and incomplete clauses are about half V O and another quarter O V (in both instances A is missing). Patterns with just A and V or V alone are quite minor. Interestingly, Swartz 1988 found that of the 17% of Waripiri transitive sentences in oral texts that were not elliptical, 56% are A V O and 21% O V A (ie. fully 77% have the two arguments separated by the verb). Patterns with A O V, V A O and V O A are extremely rare in Waripiri (and OAV is non-existent in Swartz's data). As Swartz (1988:159) remarks: "I would be reluctant on the basis of this data to posit any order as basic for Waripiri".

We may ask then what occasions the patterns of S V/V S for intransitive clauses and (A) V O/O (A) V for transitive clauses in Jiwarli?

In order to answer this question we will examine extracts from several narrative texts in some detail. The texts selected are representative of two major types in the Jiwarli corpus: traditional mythological narratives (Texts 40 and 38), and personal historical narratives (Text 52).

It will be evident in examining the text extracts that positions early in the clause, and especially initial position, are pragmatically important in Jiwarli. Initial position is particularly prominent since it serves a number of functions:

1. it is the position in which temporal adverbs such as *kuwarti* 'now, today' occur, serving as scene setters. It is also the position for connectives such as *parru* 'and then' and *ngurnuparnti* 'after that';
2. it is the position where exclamations and vocatives occur (see line 7 in Text 52 below);
3. it is the position in which NEW TOPICS of a piece of text are introduced. Typically, Jiwarli text episodes are bounded by the introduction of new topics in sentence—initial position; these topics continue as agents or actors in subsequent sentences but are left UNEXPRESSED in these sentences. This accounts for the majority of incomplete sentences which contain just intransitive verbs, or transitive verbs with an O (but no A);
4. it is the position in which significant NEW INFORMATION is introduced. This includes the following categories:
  - a. new or important actions or events contributing to the main story line
  - b. new locations where events take place
  - c. new non-topics (typically new transitive object nominals)

The placing of new information in initial position accounts for the high number of V S intransitive clauses, and the numbers of O V and V O transitive clauses (non-expression of the A in such clauses being covered as part of 3 above);

5. it is the position in which TOPICS ARE REESTABLISHED (or reintroduced) after a period of retirement or being placed in the background. This is especially clear where a text involves interchange between two or more participants (see the extract from Text 38 discussed below). Note that where a topic is being reestablished (typically as an A in a transitive clause) and at the same time a new action or event occurs, then the new participant or event outranks the old topic. This accounts for most O V A and O A V sentence types;

6. it is the position where CONTRAST is made. To contrast location, action or event, O agents, the relevant verb or nominal participant is placed in initial position.

Each of these points is illustrated in the following discussion.

Consider first the following extract from Text 40 which is a traditional myth explaining the origins of the Emu constellation. In line 3 of the text the main protagonist, the mythological being Pulhapayara, is introduced and a series of actions involving him begin. The new topic is introduced in initial position, followed by the action he carries out — the resulting sentence has A V O word order. Line 4 introduces a new event, the stealing of the emu carried by Puthapayara from the fire where he had intended to cook it. The agent in this sentence is unspecified<sup>20</sup> and a V O order results. Notice that the unspecified agent cannot be Pulhapayara (that is, it is not the case that the A is unexpressed for reasons of topic continuity) because it does not make sense that he would steal the emu after cooking it.

In line 5 Pulhapayara is reintroduced by means of the initial demonstrative *ngunha*, and then what follows is the new action in the story line (giving an S V sentence). The following sequence of five lines all have a missing subject (S or A) who must be interpreted as the topic Puthapayara.<sup>21</sup> In line 8 an important location and participant (the ashes) is introduced, as is the stick which is significant later. Notice that the order within the O nominals in this clause is ‘top’ (modifier) ‘that’ (demonstrative) and ‘ashes’ (head), with ‘stick’ intervening between the last two. Sentences like this account for the O V clause type.

In line 9 the stick (introduced in the previous line as an instrument) becomes a topic and is placed in initial position. The A continues to be unexpressed (and hence can be interpreted as the continuing agent Pulhapayara) and the sentence has O V order. Notice the string of locative expressions at the end of the sentence. Lines 10 and 11 continue with the unexpressed agent but in 12 the stick is revived as a topic (in S function) in initial position and the sentence is S V. Line 13 repeats line 12 for emphasis, adding the modifier ‘middle’ at the end. In line 14 the topic shifts back to Pulhapayara who is reintroduced by the initial demonstrative; the new action by him in 15 is placed initially and the demonstrative follows, giving V S order.<sup>22</sup>

#### Extract from Text 40 — Emu

3	<i>Pulhapayara—lu</i> [name]—erg	<i>kanya—nyja</i> carry—past	<i>pirru</i> meat:acc	<i>ngunha</i> that:acc	
	‘Pulhapayara carried that meat.’				
4	<i>Mujiya—rninyja</i> steal—past	<i>kajalpu</i> emu:acc	<i>ngarri—ngka</i> ash—loc	<i>kampa—rninyjalu</i> cook—perfSS	
	‘(Someone) stole the emu after (he) had cooked (it) in the ashes.’				

<sup>20</sup> Jack Butler could not remember the name of the protagonist who stole the emu and so he is left unexpressed throughout the text.

<sup>21</sup> Notice that the person who steals the emu is the same as the one who cooks it — this is coded through the same—subject switch—reference marker attached to the perfective dependent verb.

<sup>22</sup> One of the functions of the verb suffix glossed as intent in lines 6, 7 (and 10) is to indicate a series of actions in sequence by a single agent. Verbs marked by this suffix typically do not have an overt subject. Further examples occur in the extract from Text 38 discussed below see also Austin 1992b; the construction is also discussed in Austin W92a).

- 5 *Ngunha yana—nyja ngurnta—nhu—rru kumpa—yi.*  
that:nom go—past lie—imperfSS—now sit—purpSS  
'He went to lie down.'
- 6 *Kururri—rarringu.*  
wake—intent  
'(He) woke up.'
- 7 *Yana—rarringu ngurlu—pa ngarri—rla.*  
go—intent that allat—spec ash—allat  
'(He) went to those ashes.'
- 8 *Yirrara—thu **ngunha** **wuru—ngku** **ngarri** kala—rni—rninyja.*  
top:acc—clef that:acc stick—erg ash:acc like this—caus—past  
'(He) made the ashes on top go like this with a stick.'
- 9 *Wuru ngunha tharrpa—rninyja ngarti—ngka kajalpu—la*  
stick:acc that:acc insert—past inside—loc emu—loc  
*ngarri—ngka ngurnta—iniya—la.*  
ash—loc lie—imperfDs—loc  
'(He) inserted the stick inside the emu lying in the ashes.'
- 10 *Jikalpa—lkarringu—rru.*  
lift—intent—now  
'(He) lifted (it).'
- 11 *Pampa—rru kumpa—ja jikalpa—rnu.*  
cannot sit—past lift—imperfSS  
'(He) couldn't lift it.'
- 12 *Wuru—thu ngunha panyji—nyja—rru.*  
stick:nom—def that:nom break—past—now  
'The stick broke.'
- 13 *Wuru ngunha panyji—nyja martura—rru.*  
stick:nom that:nom break—past middle :nom—now  
'The stick broke in the middle.'
- 14 *Ngunha—pa—thu warni—nyja yarnara—rru.*  
that:nom—spec—def fall—past on back—now  
'He fell on his back.'
- 15 *Ngurnta—ja ngunha—pa kurlkanyurri—ngu—rru.*  
lie—past that:nom—spec think—imperfss—now  
'He lay down thinking.'

This example illustrates a common discourse organisation in Jiwarli with a single main protagonist. The same organisation is seen in the following extract which comes from near the beginning of Text 38. This is another mythological text and it deals with the stealing of fire by Willy Wagtail. The following extract concerns a series of actions carried out by Willy Wagtail after he has been left in camp by the people to mind their children. Willy Wagtail dispatches the children to punish the people for not feeding him, and then steals the fire.

## Extract from Text 38 — Willy Wagtail

- 31 *Jintijinti* *kumpa—ja* *ngarlpurri—ngu—rru* *thartu—jaka*  
 willy wagtail:nom sit—past run—imperfss—now dish—comit:nom  
*papa—wu—rru* *mana—ngu.*  
 water—dat—now get—imperfss  
 ‘Willy wagtail ran with a dish to get water.’
- 32 *Parna—ngka—ji—rru* *ngarlpurri—rarri* *puntha—ru*  
 head—loc—agent—now run—intent douse—purpss  
*thanipurta—ria* *thanamana—ngu—rru* *papa—wu* *ngunha—pa*  
 fireplace—allat carry—imperfSS—now water-dat that:nom—spec  
*thanipurtu—wu—thu* *papa—jaka* *purtanyma—rnu—rru.*  
 fireplace—dat—def water—comit:nom extinguish—imperfSS—now  
 ‘(He) ran with (it) on his head to douse the fireplaces, carrying water  
 extinguishing the fireplaces with water.’
- 33 *Mana—rarringu* *kayanu* *ngunha* *wuwarta* *karla.*  
 get—intent one:acc that:acc firestick:acc fire:acc  
 ‘(He) got one fire—stick.’
- 34 *Ngarlpurri—rarringu* *kumpa—yi* *ngula* *papa—ngka*  
 run—intent live—purpSS that loc water—loc  
*thanarti—la* *jurrujurru—la—rru.*  
 sea—loc Jurrujurru—loc—now  
 ‘(He) ran to stay by the seaside at Jurrujurru.’

Sentences 32, 33 and 34 are all transitive but the topical A is not expressed.

Later in this text there occurs a section which involves two main participants and an interchange between them. This section occurs when the people send Peregrine falcon to the place where Willy Wagtail is camped in order that he might get the fire back. The interchange between the protagonists is signalled by their placement in initial position; new actions by the same agent involve the non-expression of the subject (S or A) as we have seen.

- 69 *Kaji* *nhurra* *yana—ma* *mana—ngku* *ngurlu* *karla—rla.*  
 try you:nom go—imper get—purpSS that allat fire—allat  
 ‘You try to go and get the fire.’
- 70 *Nganthurra—ju* *wirntu—rri—rarringu* *nyirnta* *kamu—nyjarri.*  
 we pb—excl:nom dead—inchoat—intent here hungry—pl:nom  
 ‘We hungry ones could die here.’
- 71 *Kurukurura* *ngunha* *ngarlpurri—nyja.*  
 Peregrine falcon:nom that run—past  
 ‘Peregrine falcon ran.’
- 72 *Jintijinti—lu* *nhanya—nyja—rni* *ngunha* *nhuku—rru.*  
 willie wagtail—erg see—past—hence that:acc near—now  
 ‘Willy wagtail saw him close by.’
- 73 *Papa—ngka* *tharrpa—rninyja* *karla.*  
 water—loc insert—past fire:acc  
 ‘(He) put the fire in the water.’



- 74 *Kurukurura* *ngunha yana—nyja thanarti—la ngula.*  
Peregrine falcon:nom that:nom go—past sea—loc that loc  
‘Peregrine falcon went out to sea.’
- 75 *Jintijinti—lu parru—nthu—rru jikalpa—rninyja.*  
willy wagtail—erg and then—again—now hold up—past  
‘Willy wagtail held (it) up again.’
- 76 *Kurukurura yijarra yana—nyja.*  
Peregrine falcon:nom past go—past  
‘Peregrine falcon went past.’
- 77 *Nyajurri—nyja parliirri—rarringu—rru.*  
turn—past come back—intent—now  
‘(He) turned (and) came back.’
- 78 *Ngarlu—ngka yana—nyja—rni papa—ngka—thu*  
stomach—loc come—past—hence water—loc—def  
*nhukuwila—rri—ngu—rru.*  
close—inchoat—imperfSS—now  
‘(He) came on the surface of the water, getting closer.’
- 79 *Jintijinti—lu jikalpa—rninyja karla.*  
willy wagtail—erg hold up—past fire  
‘Willy wagtail held up the fire.’
- 80 *Kurukurura—lu jarnpi—rninyja—rru karla.*  
Peregrine falcon—erg snatch—past—now fire:acc  
‘Peregrine falcon snatched the fire.’
- 81 *Parliirri—rarringu kurukurura ngurlu wirripuka—rla—rru*  
come back—intent Peregrine falcon:nom that allat many—allat— now  
*karla—wu thintirni—rnu—rru*  
fire—dat knock together—imperfss—now  
‘Peregrine falcon came back to the mob, knocking the fire together.’
- 82 *Wirripuka mangkapurtu—rri—nyja—rru.*  
many:nom glad-inchoat-past-now  
‘The mob were glad.’
- 83 *Tharla—rninyja—rru kurukurura—nha thurnti—ngku.*  
feed—past—now Peregrine falcon—acc vegetable food-erg  
‘(They) fed Peregrine falcon with food.’

In line 69 Peregrine falcon is implored by the people to try to go and get the fire. The particle *kaji* ‘try’ is initial, followed by the second person address pronoun *nhurra*, and the imperative verb *yanama*. In line 70 the people explain that ‘we’ (topic) might die here — notice the modifier ‘hungry’ is placed at the end of the sentence, it is old information and relates to the topic ‘we’. Line 71 has Peregrine falcon as topic (and S V order), while line 72 introduces Willy Wagtail (and has A V O order). Line 73 relates to continuing action by this same topic and introduces the new location, the water, into which he inserts the fire stick. In line 74 f switches back to Peregrine falcon (S V again), and in 75 back to Willy Wagtail (A V, but no O — the firestick having been established in line 73). Attention switches back to Peregrine falcon in 76, who continues as topic in 77 and 78 (neither of which has an overt subject). In line 79 the other protagonist is in initial position, and in 80 Peregrine falcon is contrasted

with him through an exactly parallel sentence construction (A V 0). In 61 the new action of returning is placed in the position of prominence (V S order results), while the locational goal and subsidiary information follow. In 82 the mob' become topic and is continued (unexpressed) in 83 which is a V O (incomplete) sentence. This completes this particular section of the narrative.

It is clear then that Jiwari demonstrates a range of properties that show it to be both non-configurational and to have pragmatically determined word order. It does not however have the bound pronominals that it is typologically predicted to have in order for verb argument structure to be unambiguously expressed and interpreted. In the next section we examine what the significance of this is.

## 5. Jiwari from a typological perspective

As we have noted, generative linguists as well as language typologists have claimed that languages with syntactically free, pragmatically determined word order must have bound pronominals or agreement markers (coded on the verb or in some other inflectional location) in order that predicate—argument relations may be recovered. Jiwari, however, seems to have the required characteristics of syntactically free word order, but does not have the associated pronominals.

I believe that the discussion to date in the syntactic literature has overlooked languages like Jiwari because it has focussed exclusively on languages which, according to the typology developed in Nichols 1986, are head—marking. In such languages, predicate—argument relations are coded on the head of the clause, typically the verb. Jiwari, however, is a thorough—going dependent—marking language and this, together with a number of other morphosyntactic characteristics that it demonstrates, enables the pragmatic use of word order. We examine these characteristics in turn.

### 5.1 Dependent—marking

As we noted above, Jiwari has a split—ergative case marking system which clearly distinguishes between nominals bearing various grammatical relations (S, A, O and so on). All elements which form a 'semantic constituent' carry case. This is unlike languages such as Warlpiri and Diyari where adjacent nominals forming a semantic unit carry case on the last element only. Such 'affix spreading' is a feature of all Jiwari morphology — non-case affixes (such as number marking, comitative ('having'), privative ('lacking') etc.) also appear on all semantically linked nominals in Jiwari and related languages. Thus, we have examples such as the following from Tharrkari showing agreement for the comitative:

- (18) *Ngunha yana—ca yurnu—warri kutharra—arri mura—arri*  
 that:nom go—past this dat—comit:nom two—comit:nom son—comit:norr  
 'The one with those two sons went.'

Additionally, dependents agree in case with the semantic head that they modify — comitatives and genitive adnominal modifiers carry the case of the modified head; adverbs and adjuncts take ergative case in transitive clauses also (see Austin 1992a)<sup>23</sup>. The following is an example of genitive double case marking (see Austin (in press) for further details):

<sup>23</sup> Head—marking is found only with a set of four bound personal possessive suffixes added to kinship terms, e.g. *kurta-ju* elder brother-my. All other affixation is marked on the dependent rather than the head.

- (19) *Parru-nthu-rru*      *ngunha*      *yanga-rninyja*      *ngulu-pa*  
 and then-again-now      that:acc      chase-past      that erg-spec  
*jarntira-wu-lu*      *thuthu-ngku.*  
 old woman-dat-erg      dog-erg  
 ‘That old woman’s dog chased him again.’ [T18s1]

Case marking also varies for clause type. The case marking system described above applies in main clauses, however, in nominalisations and various sorts of dependent clauses transitive object marking involves suspension of the main clause split—ergative system and its replacement with dative or allative case (see Austin 1992a). Because of this, objects of dependent clauses may be separated from their verb and even ‘mixed’ with main clause nominals. Consider the following example where dative case marks the object of an imperfective-same subject verb:

- (20) *Minga-nyjarri-yi-rru*      *nhurra*      *thika-rnu*      *kumpa-ma.*  
 ant-pl-dat-now      you:nom      eat-imperfSS      sit-imper  
 ‘You sit down eating ants!’ [T35s291]

Notice the word order in this example. The first word *minganyjarriyirru* is in the dative case because it is the transitive object of the dependent imperfSS verb *thikarnu*. The second word *nhurra* is the subject of the last word *kumpama* since it is inflected for intransitive subject function, not ergative as would be required if it were the subject of the dependent transitive verb. The dependencies between verbs and their arguments cross, however the dependencies are recoverable because of the case marking.

## 5.2 Transitivity

Jiwarli clearly distinguishes predicates according to several types. Verbs are strictly classified into one of four lexical classes: intransitive (taking just an S nominal subject), extended intransitive (taking S and dative case-marked complement), transitive (taking A and O), and ditransitive (taking A and two O nominals). Verbs also fall into four morphologically determined conjugations (which do not correlate exactly with transitivity). There are only a handful of homophonous transitive and intransitive roots, but even for these the difference in transitivity relates to a difference in verb conjugation. For example, *tharrpa*— ‘to enter’ is an intransitive root which belongs to the *yi* conjugation, whereas *tharrpa-* ‘to insert’ is a transitive root that is in the *ru* conjugation. It is thus possible to tell from the verb morphology whether the transitive or intransitive root is intended. It also means that although the split-ergative case marking formally under-determines syntactic function for most nominals (collapsing S and O for all non-animates etc.), the function is disambiguated in combination with the lexical class of the verb (thus a transitive verb will rule out S, for example).

## 5.3 Switch—reference

Jiwarli has a system of switch—reference: dependent verb affixes that signal (non-)coreference of subjects across clauses. In switch—reference clauses subject argument functions may remain unfilled — such ‘missing subjects’ are understood to be coreferential with arguments in the controlling clause. Case is marked on the dependent verb following the switch-reference morphology, and it is possible to calculate how the argument positions of the dependent clause are saturated, and what interclausal semantic (anaphoric) relations hold. Consider the following example of an imperfective-different subject clause (marking relative present tense). The presence of the accusative case suffix on the dependent verb means that

its missing subject must be understood as coreferential with ('controlled by') the referent of the transitive object main clause:

- (21) *Tharla-nma yinha julyu-nha kamu-rri-ya-nha.*  
feed-imper this:acc old man-acc hunger-inchoat-imperfDS-acc  
'Feed this old man who is becoming hungry!' [T13s1]

The interactions between the switch-reference morphology and case marking are discussed in more detail in Austin 1992a, however, it will be clear even from this example that the inflectional morphology of Jiwari plays an important role in signalling grammatical functions.

## 6. Conclusions

Jiwari is a language which has all the features of a proto-typical non-configurational language with freedom of word order serving pragmatic functions. However it is different from other non-configurational languages discussed in the literature to date in being thoroughly dependent marking. Claims in the literature that there is a correlation between syntactically free word order and bound pronominal marking (a characteristic of head-marking languages) are proven to be false by the Jiwari data.

It is important to see that freedom of word order to serve pragmatic functions is orthogonal to head/dependent—marking. It is necessary to take a wider syntactic perspective on the issue, and to recognise that in thorough—going dependent marking languages such as Jiwari and its relatives a central role in signalling grammatical functions is played by the system of inflectional morphology (including case marking and switch-reference). This, together with strict lexical transitivity, means that predicate argument relations, thematic roles, and interclausal anaphoric relations can be determined from the shapes of words, leaving their order to serve pragmatic purposes in organising discourse.

## REFERENCES

- Austin, Peter. 1981a. Proto-Kanyara and proto-Mantharta historical phonology. *Lingua* 54:41-77.  
Austin, Peter. 1981b. *A grammar of Diyari, South Australia*. Cambridge: University Press  
Austin, Peter. 1988a. Classification of southern Pilbara languages. *Papers in Australian linguistics* 17, 1—17. Canberra: Pacific Linguistics.  
Austin, Peter. 1988b. Aboriginal languages of the Gascoyne—Ashburton region. *La Trobe University Working Papers in Linguistics* 1:43—63.  
Austin, Peter. 1992a. Cases and clauses in Jiwari, Western Australia. La Trobe University, MS  
Austin, Peter. 1992b. A reference grammar of the Mantharta languages. La Trobe University, MS.  
Austin, Peter. In press. Double case marking in Kanyara and Mantharta languages. In Frans Plank (ed.) *Agreement by Suffixaufnahme*. [preliminary version in *La Trobe University Working Papers in Linguistics* 4:19-35.]  
Baker, Mark. 1991. Some subject/object non-asymmetries in Mohawk. *Natural Language and Linguistic Theory* 9:537—576.  
Baker, Mark. 1992. The polysynthesis parameter. McGill University, MS.

- Blake, Barry J. 1979. *A Kalkatungu grammar*. Canberra: Pacific Linguistics B57.
- Blake, Barry J. 1983. Structure and word order in Kalkatungu: the anatomy of a flat language. *Australian Journal of Linguistics*, 3:143—175.
- Blake, Barry J. 1987. *Australian Aboriginal grammar*. London: Croom Helm.
- Boas, Franz. 1911. Chinook. *Handbook of American Indian languages*, 1:599—677. Washington: Government Printer (Bulletin of the Bureau of American Ethnology 40).
- Bresnan, Joan & Sam A. Mchombo. 1987. Topic, pronoun, and agreement in Chicewa. *Language* 63 :741—782.
- Burgess, Eunice. 1986. Focus and Topic in Xavante. In Joseph E. Grimes (ed.) *Sentence initial devices*, 27—41. Arlington: SIL.
- Butler, Jack & Peter Austin. 1987. *Jiwarli Stories*. La Trobe University, MS.
- Chomsky, Noam. 1965. *Aspects of the theory of syntax*. Cambridge, MA: MIT Press.
- Chomsky, Noam. 1981. *Lectures on Government and Binding*. Dordrecht: Foris.
- Chomsky, Noam. 1982. *Some concepts and consequences of the theory of government and binding*. Cambridge, MA: MIT Press.
- Chomsky, Noam. 1986. *Barriers*. Cambridge, MA: MIT Press.
- Dahlstrom, Amy. 1987. Discontinuous constituents in Fox. In P. Kroeber & R. Moore (eds) *Native American languages and grammatical typology*, 53-73. Indiana U Linguistics Club.
- Dahlstrom, Amy. 1988 Independent pronouns in Fox. In William Shipley (ed.) *In honour of Mary Haas: from the Haas festival conference on native American linguistics*, 165—194. Berlin: Mouton de Gruyter.
- Dixon, R.M.W. 1977. *A grammar of Yidiny*. Cambridge: Cambridge University Press.
- Dixon, R.M.W. 1979. Ergativity. *Language* 55 :59—138.
- Dixon, R.M.W. 1980. *The languages of Australia*. Cambridge: Cambridge University Press.
- Grimes, Joseph E. 1986. *Sentence initial devices*. Arlington, Texas: Summer Institute of Linguistics.
- Haegemann, Lilianne. 1991. *An introduction to government and binding theory*. London: Blackwells.
- Hale, Kenneth. 1979. The position of Walbiri in a typology of the base. MIT, MS. (Published by Indiana University Linguistics Club, 1980.)
- Hale, Kenneth. 1982. Some essential features of Waripiri main clauses. In S. Swartz (ed.) *Papers in Waripiri grammar: in memory of Lothar Jagst*, 217—3 15. Work Papers of SIL — AAB. Series A, Volume 6. Berimah, NT: Summer Institute of Linguistics.
- Hale, Kenneth. 1983. Warlpiri and the grammar of non—configurational languages. *Natural Language and Linguistic Theory* 1:5—74.
- Hale, Kenneth. 1989. On non-configurational structures. In Laszlo Maracz & Pieter Muysken (eds) *Configurationality: the typology of asymmetries*, 293—300. Dordrecht: Foris.
- Hale, Kenneth. 1992. Basic word order in two ‘free word order’ languages. In D. Payne (ed.) *Pragmatics of word order flexibility*, 63-82. Amsterdam: John Benjamins.
- Heath, Jeffrey. 1986. Syntactic and lexical aspects of non—configurationality in Nunggubuyu (Australia). *Natural Language and Linguistic Theory* 4:375—408.
- Horrocks, Geoffrey. 1987. *Generative grammar*. London: Longman.
- Humboldt, Wilhelm von. 1836[1988] *On Language: The Diversity of Human Language—Structure and its influence on the Mental Development of Mankind*. Translated by Peter Heath. Cambridge: Cambridge University Press.

- Jelinek, Eloise. 1984. Empty categories and non-configurational languages. *Natural Language and Linguistic Theory* 2:39—76.
- Kitham, Christine A. 1987. Word order in Wik-Mungkan. In Donald C. Laycock & Werner Winter (eds) *A world of language: papers presented to Professor S.A. Wurm on his 65th birthday*, 361—368. Canberra: Pacific Linguistics C—100.
- Laughren, Mary. 1989. The configurationality parameter and Warlpiri. In Laszlo Maracz & Peter Muysken (eds). *Configurationality*, 3 19—353. Dordrecht: Foris.
- McGregor, William 1989 Phrase fracturing in Gooniyandi. In Laszlo Maracz & Peter Muysken (eds) *Configurationality*, 207—222. Dordrecht: Foris.
- Mithun, Marianne. 1986. When zero isnt there. In Vassiliki Nikiforidou, Mary Van Vlay Mary Niepokuj & Deborah Feder (eds) *Proceedings of the twelfth annual meeting of the Berkeley Linguistic Society*, 195—211. Berkeley: University of California.
- Mithun, Marianne. 1987. Is basic word order universal? In Russel S. Tomlin (ed.) *Coherence and grounding in discourse*, 28 1—328. Amsterdam: John Benjamins. [Reprinted in D. Payne (ed.) 1992 *Pragmatics of word order flexibility*, 15-61. Amsterdam: John Benjamins]
- Nash, David. 1985. *Topics in Warlpiri grammar*. New York: Garland.
- Nathan, David. 1986. *Topics in configurationality*. La Trobe University, BA honours thesis.
- Nicholls, Johanna. 1986. Head—marking and dependent—marking grammar. *Language* 62:56 -119.
- Payne, Doris L. 1987. Information structuring in Papago narrative discourse. *Language* 63:783—855.
- Payne, Doris L. 1990 *The pragmatics of word order: typological dimensions of verb initial languages*. Berlin: Mouton de Gruyter.
- Payne, Doris L. 1992 *Pragmatics of word order flexibility*. Amsterdam: John Benjamins.
- Pollard, Carl & Ivan Sag. 1988. *Information.based syntax and semantics, Volume 1: Fundamentals*. Stanford: Center for the Study of Language and Information.
- Riemsdijk, Henk van & Edwin Williams. 1986. *Introduction to the theory of grammar*. Cambridge, MA: MIT Press.
- Sells, Peter 1987 *Lectures on contemporary syntactic theories*. Stanford University: CSLI.
- Silverstein, Michael. 1976. Hierarchy of features and ergativity. In R.M.W. Dixon (ed.) *Grammatical categories in Australian languages*, 112—171. Canberra: Australian Institute of Aboriginal Studies.
- Simpson, Jane. 1983. Aspects of Warlpiri morphology and syntax. Doctoral dissertation, MIT.
- Simpson, Jane. 1991. *Warlpiri morpho-syntax: a lexicalist approach*. Dordrecht: Kluwer.
- Speas, Margaret. 1990 *Phrase structure in natural language*. Dordrecht: Kluwer.
- Steele, Susan. 1978. Word order variation: a typological survey. In Joseph Greenberg (ed.) *Universals of human language, Volume 4. Syntax*, 585—623. Stanford: University Press.
- Steele, Susan. 1989. Subject values. *Language* 65:537—578.
- Stute, Horst. 1986. Constituent order, cohesion, and staging in Gavião. In Joseph E. Grim (ed.) *Sentence initial devices*, 7—25. Arlington, Texas: SIL.
- Swartz, Stephen. 1987. Measuring naturalness in translation by means of a statistical analysis of Warlpiri narrative texts with special emphasis on word order principles. MA thesis, Pacif College of Graduate Studies.
- Swartz, Stephen. 1988. Pragmatic structure and word order in Warlpiri. *Papers in Australian Linguistics* 17, 15 1—166. Canberra: Pacific Linguistics A—71.

## APPENDIX 1

### Warlpiri Word Order

(from Swartz 1988:158, reorganized and % calculated by Peter Austin)

Based on five oral texts (344 clauses)

#### INTRANSITIVE

	Number	%
S V	73	35
V S	39	19
V	91	44
S V S	5	2
	<hr style="width: 50%; margin: 0 auto;"/>	
	208	

#### TRANSITIVE

<b>Complete</b>	Number	% of complete	% of total transitive
A V O	16	56	41
O V A	7	21	5
A O V	3	9	2
V O A	3	9	2
V A O	2	5	1
O A V	0		
	<hr style="width: 50%; margin: 0 auto;"/>		
	34		

<b>Incomplete</b>	Number	% of incomplete	% of total transitive
V	32	31	24
O V	16	16	12
V O	38	37	28
O V O	5	5	4
V A	5	5	4
A V	3	3	2
A V A	3	3	2
	<hr style="width: 50%; margin: 0 auto;"/>		
	102		