

Constraints on noun phrase discontinuity in an Australian language: the role of prosody and information structure*

Eva Schultze-Berndt and Candide Simard

University of Manchester and School of Oriental and African Studies

ACCEPTED FOR PUBLICATION IN *LINGUISTICS*, 09 November 2011.

Abstract

Discontinuous noun phrases have posed a long-standing challenge for syntactic analysis. While there exists increasing evidence that discontinuous NPs are associated with specific information structure constellations cross-linguistically, Australian languages continue to be presented in the literature as radically non-configurational, with unlimited freedom of word order. We argue for Jaminjung, an Australian language of the Mirndi family, that once true NP discontinuity is carefully distinguished from other, superficially similar constructions, it is in fact highly constrained and can be described in terms of very specific information structure categories. The first of these, contrastive argument focus on an NP containing a given element, is widely attested cross-linguistically. The second, sentence focus, has only rarely been associated with noun phrase discontinuity in the literature. We show that the two types can be distinguished on prosodic grounds. Our account of both types challenges some previous analyses which rely on different information structure values for the parts of the discontinuous NP. The findings underscore the importance of taking into account prosodic information and discourse context in the syntactic analysis of spoken language.

Keywords: information structure, noun phrase discontinuity, prosody, configurationality, word order, Australian languages

1. Introduction

The existence of discontinuous phrases has always been regarded as a challenge to syntactic models which are based on a strictly hierarchical arrangement of constituents. More generally, they run counter to the assumption on which those models are ultimately based, that elements which are computed together to achieve a semantic interpretation (e.g. which allow the hearer to construe a single referent) should be contiguous and form a single constituent. In other words, they violate the principle of diagrammatic iconicity first formulated by Behaghel (1932: 4), which can be paraphrased as “entities that are closer together functionally, conceptually, or cognitively are kept closer together at the level of the code, in its temporal or spatial dimension” (Givón 2001: 34–35). The challenge posed by discontinuous constituents is twofold. The first challenge is to explain why some languages are more restrictive with respect to discontinuity than others. The second is to establish the motivations for and constraints on discontinuity in the languages where it does occur. As for the latter, the principle of diagrammatic iconicity leads one to expect that violations of contiguity will be less frequent than contiguous orders, and will be exploited for specific functions.

Research on noun phrase discontinuity in European (and more recently, some non-European) languages has shown that this is indeed the case. Discontinuous noun phrases do not occur randomly, but tend to be limited to specific, cross-linguistically recurrent contexts related to the information structure values of the discontinuous elements (e.g. Siewierska 1984; Fanselow 1988; Dahlstrom 1987; Reinholtz 1999; De Kuthy 2002; Fanselow and Āavar 2002; Fanselow and Féry 2006; Kazenin 2009). In contrast, studies of Australian languages have tended to assume an unconstrained freedom of word order and constituent order, and to present syntactic analyses that would be compatible with, or provide an explanation of, such a degree of freedom, thereby concentrating on the first rather than the second of the challenges mentioned above. This preoccupation can be traced back to the debate on “non-configurationality”, a syntactic parameter encompassing a non-hierarchical, i.e. flat, syntactic structure as well as free word order on the clause level, as first proposed by Hale (1981b, 1983) for Warlpiri. A further development of this approach, known as the pronominal argument hypothesis, suggested that lexical nouns are independently linked to (overt or null) pronominal arguments as adjuncts or secondary predicates (Baker 2001; Jelinek 1984; Laughren 1989; Speas 1990: 165–170), thus allowing for a semantic interpretation without the existence of a phrasal category noun phrase. For such accounts to be

convincing, clause-level constituent order and discontinuities alike had to be presented as more or less unconstrained. Subsequent work has challenged this monolithic notion of non-configurationality, and in particular the link between pronominal arguments, free constituent order on the clause level, and the existence of discontinuous NPs (Austin and Bresnan 1996; Nordlinger 1998; Reinholtz 1999; Austin 2001; Legate 2002). Still, references to “Australian-style non-configurationality” or “radically free”, i.e. apparently unconstrained, word order are found even in the most recent literature; some examples, representing diverse research traditions, are Rijkhoff (2002: 256), Pensalfini (2004: 362), Bender (2008: 4), and Donohue (2011: 501). In at least one case, a language, Kayardild, for which strong constraints on noun phrase discontinuity had been described (Evans 1995: 249) has subsequently been cited as a language without discontinuous noun phrases (Nordlinger 1998: 40, 90; Pensalfini 2004: 366), presumably because of the assumption that only unconstrained discontinuity counts as “real” discontinuity in the case of an Australian language. Studies of Australian languages addressing the second challenge, such as McGregor’s (1997) study of the discourse contexts of discontinuous NPs, which points to information structure as a crucial factor for the occurrence of this phenomenon, have thus been the exception rather than the norm (see Sections 3.4 and 4 for further references and discussion). Moreover, the label of noun phrase discontinuity has been applied to superficially similar phenomena such as external possession and afterthoughts which at closer look should be kept distinct from discontinuity proper (see Sections 3 and 4.3).

In this paper, we investigate noun phrase discontinuity in Jaminjung, a non-Pama-Nyungan language of Northern Australia, on the background of cross-linguistic findings on this construction type. A detailed investigation of the prosodic contours (as well as the semantic and pragmatic functions) associated with non-contiguous nominal elements enables us to distinguish true cases of discontinuity from apparent cases which are instances of different constructions. We find that noun phrase discontinuity, when delimited in this way, is highly infrequent in Jaminjung discourse, and can indeed be explained in terms of specific information structure configurations. One of these configurations – contrastive argument focus on an NP containing a given element – is frequently associated with noun phrase discontinuity cross-linguistically. The second, sentence focus, has not been widely recognised in the literature as an information structure category associated with noun phrase discontinuity. Moreover, this phenomenon challenges accounts which motivate discontinuous NPs by different information structure values of the discontinuous elements.

In the presentation of our findings we assume, with Lambrecht (1994: 5), that information structure is a part of grammar concerned with the presentation of a proposition rather than with its content, i.e. with the pragmatic structuring of a proposition in such a way as to anchor it in the common ground between speaker and hearer and to highlight the additional information it provides (see further Section 4). This structuring can be achieved by either morphosyntactic or prosodic means or a combination of the two; thus, we regard both prosody and syntax as potentially constitutive of grammatical constructions (Michaelis and Lambrecht 1996; Lambrecht 1994, 2004). While the association of information structure categories with grammatical constructions is language-specific, it follows universal tendencies such as the marking of focus by prosodic prominence within a focus domain, and is motivated by oppositions between different information structure categories in any individual language (Lambrecht 1994: 26–29). The conviction that both prosody and syntax are ultimately exploited for communicative functions is also the fundamental tenet of the Parallel Encoding and Target Approximation (PENTA) model (Xu, 2005) on which our prosodic analyses are based (see Simard 2010 for details); the surface pitch contour can in fact be the result of the simultaneous encoding of multiple communicative functions.¹

The remainder of the paper is structured as follows. After presenting some background information on Jaminjung and its main grammatical characteristics (Section 2.1), we discuss the structure of contiguous noun phrases in Jaminjung, arguing that such a phrase-level category does indeed exist in this language (Section 2.2). In Section 3, we establish, on syntactic, prosodic, and functional grounds, a distinction between true discontinuity and apparent discontinuity as manifest in such constructions as prosodically detached NPs (afterthoughts), secondary predicates, and part-whole constructions. We also present the results of a quantitative investigation of true discontinuous NPs (Section 3.4). In Section 4, we argue that most discontinuous NPs in Jaminjung are instances of one of two construction types which can be distinguished on syntacto-pragmatic and prosodic grounds, one a subtype of the contrastive argument focus construction (Section 4.1), the other a subtype of the sentence focus or “thetic” construction (Section 4.2). In Section 4.3 we briefly address the issue of split topicalisation constructions which are absent in Jaminjung as discontinuities; in any case we argue that these are not discontinuous constituents. Section 5 presents a concluding discussion, addressing the implications of the findings for syntactic models of discontinuity.

2. Noun phrase structure in Jaminjung: an overview

2.1 Background information

The language name Jaminjung is used here for two named varieties, Jaminjung and Ngaliwuru, which are mutually intelligible, with mainly lexical differences. Together with a somewhat more distantly related variety, Nungali, already no longer spoken, they belong to the small Jaminjungan (or Western Mirndi) subgroup of the geographically discontinuous Mirndi family (Harvey 2008). The traditional country of the Jaminjung, Ngaliwuru and Nungali is located north and south of the Victoria River around the present-day township of Timber Creek, in the north-west of the Northern Territory. The remaining few elderly speakers are however scattered throughout a number of settlements in a larger area. As will be evident in some of the examples below, code-switching and borrowing from Kriol, an English-lexified creole which is now the lingua franca of a large area in Northern Australia and the first language of many younger people, are common (Schultze-Berndt 2007).

All data discussed here come from fieldwork conducted by both authors in the period of 1993 to 2009, with the exception of one text generously made available to us by Mark Harvey. Most examples in the general discussion, and all examples of discontinuous noun phrases, come from texts including fictitious scenarios, mythical and historical narratives, procedural texts, and conversations, but also utterances or small discourses elicited by means of presenting a verbal or non-verbal context. This enabled us to investigate the prosodic contours of natural speech and to reliably judge the pragmatic contexts in which discontinuous noun phrases appear. Examples are followed by the speaker's initials and, in the case of recorded examples, the file name under which the texts can be found in the DoBeS archive.

Jaminjung has “free” word order, i.e. word order is not used to distinguish the grammatical roles of arguments, but is conditioned by information structure. For example, NPs in the domain of contrastive argument focus occupy the first position in an intonation unit, only preceded by sentence topics (see further Section 4.1). Arguments can be freely omitted (“zero-anaphora”), and one or two core arguments are cross-referenced by pronominal prefixes on inflecting verbs. In addition, the grammatical role of noun phrases is indicated by case marking. This follows an ergative-absolutive pattern, with optional ergative marking for nominals of all subclasses including pronouns. Like many languages of the area (Dixon 2001; McGregor 2002; Schultze-Berndt 2000, 2003), Jaminjung has two predicative parts of

speech: a closed class of inflecting verbs (with approximately 30 members, depending on the variety and speaker), and an open class of uninflecting verbs, also termed “coverbs” or “preverbs” in the literature. In finite clauses, inflecting verbs may occur as simple predicates or form complex predicates with an uninflecting verb; in some types of subordinate clause, uninflecting verbs function as the main predicate. Complex predicates, like noun phrases, usually exhibit contiguity, but may be discontinuous as well.

2.2 The phrasal status of noun phrases

Nominals as a part of speech can be identified, in Jaminjung, by their ability to occur in constituents with a referential function and to take all case markers. Jaminjung has no definite or indefinite articles; thus, it has no obligatory determiner category; however, only nouns (including common nouns, proper nouns, and kinship terms) can occur with demonstratives and function as entity-referring expressions, i.e. as heads of noun phrases.² Quantifiers and nominals denoting properties (i.e. those with an “adjectival” semantics), as well as demonstratives and possessive pronouns, can function both as modifiers or as heads in a noun phrase (provided the referent entity is understood from context), as shown in (1).

- (1) *[thanthiya gujugu ba-rriga mindag!]*
 DEM big IMP-cook 1DU.INCL.OBL
 ‘Cook that big one for you and me!’ (referring to one of two fish just caught)
 [DB/ES96_A02_A01]

This last property has been an important part of the argument for a “flat” syntactic structure of other Australian languages: since nominals from each subclass, including those that are translation equivalents of adjectives in other languages, can stand on their own in referential function, there is no syntactic need for a joint construal, and hence no need for a phrasal category “noun phrase”.

For Jaminjung, three main arguments, two morphosyntactic and the third prosodic, can be adduced for the existence of a phrasal category noun phrase in the non-discontinuous cases (i.e. nominals in immediate contiguity and without any intervening prosodic phrase boundary, which jointly serve to establish a single referent). The first argument concerns word order constraints. Head and modifier can appear in either

order, as illustrated in (2) and (3), although property expressions most commonly follow the entity-denoting head.

- (2) *[mulanggirrng mali hambag nganthi-yu*
 fierce thing be.nuisance 2SG>3SG-say/do.PST
 ‘(Try and run away!) You disturbed a **dangerous** thing!’ (From a scene in the Frog Story where a dog jumps up at a beehive and eventually causes it to fall down and the bees to chase him) [DR/ES96_A02_02]

- (3) *yan-ba=mindag=gun [thanthu wirib mulanggirrng]*
 IRR:3SG>1-bite=1DU.INCL=CONTR DEM dog fierce
 ‘It might really bite you and me, that aggressive dog!’ [IP/ES97_A03_06]

Demonstratives and heads, likewise, can occur in either order (examples can be seen in (6) to (9) below). However, if both a demonstrative and a property expression or possessive pronoun in modifying function co-occur with an entity-denoting head, word order is virtually restricted to the possibilities illustrated in (3) and (4) (Demonstrative–Head–Modifier and Head–Demonstrative–Modifier, respectively). Rare examples of demonstratives preceding pronominal modifiers or following postnominal modifiers are also attested in the corpus, but the demonstrative cannot follow a pronominal modifier, at least not in a noun phrase interpretation (5).

- (4) *gabarl ga-ruma-ny=ngarrgu [jarlig janju wuju]*
 come.close 3SG-come-PST=1SG.OBL child DEM small
 ‘He came close to me, that little child.’ [JM/ES97_A04_02]

- (5) **[mulanggirrng thanthu wirib]*
 fierce DEM dog
 ‘that fierce dog’ (fine if interpreted as ascriptive verbless clause: ‘that dog is fierce’)

The second morphosyntactic argument is built on the observation that the noun phrase is the domain of case marking. The position of the case marker is “free” (in the terminology of Dench and Evans 1988: 5), that is, it may follow any constituent of a noun phrase. Optionally only one, or more than one constituent within the noun phrase

may be marked. This is illustrated with the ergative marker appearing on the initial subconstituent in the second line of (6), on both subconstituents in (7), and only on the second subconstituent in (8) and (9), irrespective of the order of elements within the NP. Because of this variability, the case markers are analysed as clitics here.

- (6) *gan-ijja-ny* ... *[thanthiya=ni gurang]* \
- 3SG>3SG-spear-PST DEM=ERG older.man
- ‘He speared him ... that old man.’ (from a mythological narrative)
- [PW/ES01_A01_01]

- (7) *yaniny-ba=biyang* *[thanthiya=ni munuwi=ni]* \
- IRR:3SG>2SG-bite=SEQ DEM=ERG bee=ERG
- ‘They might bite you, those bees!’ (from a Frog Story) [DR/ES96_A02_A02]

- (8) *dayibmi=binyji yirr-anyi,*
- fish.with.net=only 1PL.EXCL-go.IPFV
- dayibmi=binyji=wung* *[thanthiya garlarr=ni]* \
- fish.with.net=only=RESTR DEM net=ERG/INST
- ‘(Before fishing lines got introduced) we just used to go fishing with a net, just fishing with that (previously mentioned) net.’ [EH/ES08_A04_02]

- (9) *wirriny gan-angu* *paiet thanthiya=ni* \
- turn 3SG>3SG-get/handle.PST pilot DEM=ERG
- ‘That pilot turned it (the plane).’ [IP/ES01_A03_02]

The fact that case only has to be marked once can be used as evidence for the phrasal status of noun phrases. If the syntactic structure were completely flat, the grammatical function of each individual nominal would have to be flagged, that is, one would expect consistent case marking on each and every one of the nominal constituents (see McGregor [1997: 87] for a similar argument).

The final argument for the phrasal status of (contiguous) noun phrases is a prosodic one: they usually coincide with a prosodic phrase. Four levels of prosodic constituency can be distinguished in Jaminjung: prosodic words, prosodic phrases, intonation units (IUs), and prosodic sentences (i.e. prosodically coherent sequences of

IUs). Prosodic phrases are delimited, and marked as coherent units of grammar, by a slight pitch reset at the left edge and lowering of pitch and final syllable lengthening at the right edge, strategies that are well-attested cross-linguistically (for English, see e.g. Selkirk 2003; Wichmann 2000; Wightman et al. 1992). The marking of prosodic phrases is contrasted with that of prosodic words and that of the larger units – intonation units and prosodic sentences – at the left edge by a small pitch reset which causes an interruption in the declination line. This reset does not occur in prosodic words, while it is much greater in intonation units and prosodic sentences. At the right edge, phrases are bounded by final pitch lowering and syllable lengthening, again not observed in prosodic words and much greater in the larger units. Additionally, prosodic phrases may be followed by a short pause while intonation units are more likely to do so, and prosodic sentences always are. Moreover, intonation units frequently end in creaky phonation, while phrasal constituents do not. For details and full justification, based on a quantitative study of prosody in Jaminjung, see Simard (2010: 146–165).

Prosodic constituents are illustrated in (10) to (12); all of these examples represent complete intonation units, and prosodic phrases are marked by square brackets. The corresponding figures (Figures 1 to 3) show both the wave form and the pitch track.³ The first tier of the text in these figures shows the parsing into syllables, the second the division into prosodic words, and the third shows prosodic phrases.

In example (10) (Figure 1), each prosodic phrase consists of two prosodic words. On prosodic grounds, we interpret the complex NP in initial position, *thanthubiya ngayin*, as a single phrase, in the same way that the complex predicate consisting of an uninflecting and an inflecting verb, *bunburr burangga*, forms a single phrase. Both phrases display an initial pitch reset (on syllables /*than/* and /*bun/*) and final syllable lengthening and lowering (on syllables /*yin/* and /*ga/*). The overall prosodic contour in this IU is characteristic of a topic-comment structure with prosodic prominence on the first syllable of the focus domain (see further Section 4), here /*bun/* in *bunburr* (as indicated by the arrow in the figure). The correlates of prosodic prominence associated with focus that are most visible in the pitch track are wider pitch excursion, longer duration and a falling pitch contour.

- (10) [*thanthu=biya* *ngayin*]_{NP/TOP} [*bunburr* *burr-angga*]_{CP/COM}
 DEM=SEQ meat/animal many.take.off 3PL-go.PRS
 ‘Those animals all take off.’ [CP/ES97_A03_01]

INSERT Figure 1

Examples (11) and (12) show IUs containing multiple NPs, simple and complex, which immediately follow each other. In (11) (Figure 2), a simple NP, *langinybina*, is followed by a complex NP, *jayiny ngarrgina*. There is a pitch reset on the first syllable of *jayiny*, shown by an arrow in the figure, but not on *ngarrgina*, which belongs to the same phrase.

- (11) *[burduj ga-jga-ny] [langiny-bina] [jayiny ngarrgina]*
 go.up 3SG-go-PST tree-ALL daughter's.child 1SG:POSS
 'He climbed up the tree, my grandchild.' [IP/ES96_A09_02]

INSERT Figure 2

Example (12) (Figure 3) shows two complex and two simple NPs. It illustrates pitch resets on the first syllables of the NPs *mama ngarrgina*, *ngagaj* (see Section 3.3 below on part-whole expressions), and *gaburrgad*, a single word NP in adverbial function.⁴

- (12) *en [thanthu=ni swing] [mama ngarrgina]*
 and DEM=ERG swing uncle 1SG:POSS
*[ngagaj] [bag gana] [gaburrgad] *
 back break 3SG>3SG:chop.PST yesterday
 'And that swing hit my uncle (a child) in the back "breaking" it,
 yesterday.' [IP/ES96_A09_02]

INSERT Figure 3

In this section, we have argued that a phrasal category NP exists in Jaminjung, despite relative freedom in the order of head, modifiers and demonstrative within the NP. First, the order is not entirely free; for example, demonstratives may not intervene between a modifier and a following head. Second, case marking (and also the positioning of other clitics, not discussed here) applies at the level of the phrase, i.e. case markers may follow any or all of the elements in a noun phrase. Third, syntactic phrasing has a prosodic correlate, and prosodic phrases can be distinguished both from prosodic words and from higher-level prosodic constituents.

It is beyond the scope of this paper to fully address the first of the challenges mentioned in Section 1, the question of which general syntactic characteristics of a language are responsible for the availability of discontinuous structures. We can however conclude that the findings for Jaminjung do not lend support to the claim originally associated with the parameter of non-configurationality, that is, the absence of a phrasal category noun phrase – the idea being that there are other mechanisms (e.g. case agreement, or overt or silent pronominal arguments) which enable the coreferential construal of nominals, and that therefore their contiguity or non-contiguity is irrelevant.

However, the findings are compatible with the suggestion that discontinuity of modifiers and head nouns (as opposed to “extraction” of maximal projections such as PPs from within a noun phrase, as found in German) is linked to the possibility for semantically attributive constituents to appear without an overt head (Austin and Bresnan 1996: 231). Our findings also support claims that link the occurrence of discontinuous NPs to the absence of obligatory grammaticalised determiners, in particular definite articles (interpreted as the absence of a category DP by Bošković 2005, 2008, 2009) which has, for example, been observed within Slavic languages and for the development of Latin to Romance languages (Ledgeway 2010; Vincent 1997). In a functionalist interpretation, noun phrases that lack obligatory determiners are less entrenched as contiguous structures or, in Himmelmann’s (1997: 134–157) terminology, have less salient gestalt properties than NPs with obligatory determiners, resulting in the possibility of separation of nominal elements in joint construal.

Still, according to the principle of diagrammatic iconicity, such a separation, even if acceptable in a given language, should not occur at random. Before we investigate (in Section 4) the constraints on noun phrase discontinuity in Jaminjung, we will discuss, in the following Section 3, cases of superficial appearance of nominals in joint referential construal which are not discontinuous NPs.

3. Identification of discontinuous noun phrases

We will now present syntactic, prosodic, and functional arguments for a distinction between genuine discontinuous noun phrases and three constructions which resemble them, or have been analysed as instances of noun phrase discontinuity in the literature. Specifically, we will examine afterthoughts, i.e. prosodically detached NPs which show referential overlap with an NP in the preceding intonation unit (Section 3.1), secondary predicates (Section 3.2), and part-whole constructions (Section 3.3). Having thus

Eva Schultze-Berndt 11/1/12 12:57

Deleted: -

delimited the object of investigation, we will also present the results of a frequency count of those true discontinuous NPs in a sample of texts (Section 3.4).

3.1 Prosodically dislocated noun phrases (afterthoughts)

It is very likely that the notion of unconstrained discontinuity in Australian languages has been so long-lived partly because prosodic information has not been taken into account to a sufficient extent. More specifically, nominals in the function of afterthought which are prosodically detached from the remainder of the clause – which are indeed very frequent in texts – in many cases could be analysed as parts of discontinuous noun phrases if prosodic information was ignored. In fact, the terms “apposition” and “adjunct”, which have often been applied to the relationship between the discontinuous nominals (or the relationship between these and an overt or empty pronominal element), appear to be partly motivated by the possibility of a prosodic break, but have been generalised to all instances of referential overlap when invoked in the analysis of “non-configurational” structures. A prosodic difference is probably also at the core of the distinction between an argumental (“merged” or “restrictive”) and predicative (“unmerged” or “non-restrictive”) interpretation of discontinuous noun phrases as proposed by Hale (1981b, 1983: 38). However, as in the case of (13), a Warlpiri example repeatedly cited in the literature, it is often impossible to tell from examples provided in discussions of discontinuity whether they were uttered with a prosodic break before one of the elements of a “discontinuous” phrase.

Warlpiri (Ngumpin-Yapa, PN)

- (13) *maliki-rli Ø-ji yarlku-rnu wiri-ngki*
dog-ERG PRF-1.OBJ bite-PST big-ERG
a. ‘The/a big dog bit me.’ (merged interpretation)
b. ‘The/a dog bit me and it was big.’ (unmerged interpretation)
(Hale 1983: 38)

In our analysis of Jaminjung, we follow those authors (e.g. Bowe 1990: 49–50; Legate 2002: 114; McGregor 1997; Merlan 1994: 241–242) who, for other Australian languages, have argued for a distinction between prosodically detached nominal elements and discontinuous nominals occurring within a single intonation contour by distinguishing strictly between discontinuous noun phrases and afterthoughts.

Afterthoughts can be defined as constituents which are added after a sentence is completed (as indicated by a boundary intonation contour and usually a pause), in order to disambiguate potentially unclear reference, to elaborate on the description of a referent in the preceding intonation unit, or to correct a previous description; see e.g. Chafe (1994: 142), Auer (1996), Birner and Ward (1998), and Averintseva-Klisch (2008a, 2008b). From the definition of afterthoughts above it follows that they are focal constituents. It also follows that afterthoughts are NPs in their own right (albeit construed as coreferential, or overlapping in reference, with a constituent of the main clause), rather than forming a (discontinuous) single NP with a preceding element.

For Jaminjung, the above analysis is confirmed by the observation that the afterthought constituent can exhibit any of the structures otherwise associated with predicative noun phrases, irrespective of the structure and lexical content of the coreferential NP in the preceding intonation unit. In other words, unlike in the case of truly discontinuous NPs (see Section 4), a “merger” of the two coreferential NPs in a continuous constituent (without deletion) would not necessarily result in a well-formed noun phrase. For example, while the two coreferential NPs in (14) could indeed appear as parts of a single noun phrase, e.g. *mulurru ngarrgina=yirram* ‘my two women’, in (15), the noun in the main intonation unit (*buyud* ‘sand’) re-appears as the head of the NP serving as an afterthought, but with additional information specifying the type of referent. A merged version here would not be well-formed unless the repeated element was omitted. Similarly, in (16), the borrowed noun *log* in the main intonation unit is replaced by the Jaminjung *langiny* as part of an afterthought, again with additional specification; both would not normally be combined in a single NP. Example (16) also shows the possibility of “stacking” afterthoughts to add further specification to the referent, and illustrates the option of omitting case marking information in the afterthought.

- (14) *mulurru=yirram* *ngawuny-nganjama-ny* \ *ngarrgina=yirram* \ *warag=gu* \
 older.woman=pair 1SG>3DU-bring-PST 1SG:POSS=pair work=DAT
 ‘I brought along these two women, “my two” (i.e. the pair associated with me), to
 work (with them).’ [JM/ES08_A08_01]

- (15) *buyud=biyang* *jabul=ni* *burr-angu=rrgu=rndi* \
 sand=SEQ shovel=INST 3PL>3SG-get/handle.PST=1SG.OBL=SFOC

buj-mawu ***buyud*** \

bush-DWELLER sand

‘They got sand for me with a shovel, the bush kind of sand.’ [IP/ES97_03_02]

(16) *burduj buny-angga log=gi* \ .. *langiny gujugu* \ .. *larrman* \

many 3DU-go.PRS log=LOC tree/wood big dry

‘The two go up on a log, a big tree, a dry one.’ [Frog Story, DP/ES96_A07_01]

INSERT Figure 4

Prosodically, afterthoughts are characterised by a pitch reset corresponding to that of the left boundary of other intonation units, a fall on the first or second syllable corresponding to that of other focused constituents, and a (typically falling) overall contour corresponding to that of declarative clauses, but also a higher pitch register than that of the normal declarative contour. The afterthought contour is illustrated in Figure 4 for example (15), and in Figure 5 for (17). The same contour is found with other secondary prosodic units, e.g. uninflecting verbs prosodically detached from the main clause (Simard 2010: 331–340).⁵

(17) *lubayi yirra-ma-ya ngiyawula* \ .. *guju~gujungu* \

many 1PL.EXCL>3SG-have-PRS PROX PL~big

‘We have many (of them) here, big ones.’ (remark on the occurrence of a certain small marsupial species in the area.) [IP/ES97_A03_01]

INSERT Figure 5

The function of “afterthought” closely corresponds to Type B of discontinuous NPs identified by McGregor (1997: 88), defined in terms of the presence of a prosodic break between the two discontinuous elements, and “motivated by the need to provide further information regarding something mentioned in the previous unit, and simultaneously give prominence to that additional information.” As outlined above, we argue, however, that such constructions do not qualify as discontinuous NPs at all. Rather, we analyse them as independent NPs which are construed as overlapping in reference with the preceding NP and as co-dependent on the same predicate.

3.2 *Secondary predicates*

According to some versions of the pronominal argument hypothesis (e.g. Speas 1990; Baker 2001), overt nominal expressions in non-configurational languages should be analysed as secondary predicates, at least for languages of the Warlpiri type as opposed to “scrambling” languages. The main arguments in support of the secondary predicate analysis are, first, that this type of structure is needed, in any case, to account for certain constructions, and second, that all nominals are really adjectival, i.e. “good predicates” and “bad arguments”, because of the lack of a distinction between nouns and adjectives (see Section 2.2). Various authors (Austin and Bresnan 1996; Nordlinger 1998: 40–43; Schultze-Berndt 2006) have pointed out problems with the generalisation of a secondary predication analysis to all NPs; a distinction between the two construction types is also (if rather implicitly) made by Legate (2002: 114). These problems include the necessity to lift the cross-linguistically observed restriction on depictive secondary predicate constituents to expressions of temporary properties (stage-level predicates), the observation that subclasses of nominals in some languages may actually be restricted to functioning as true secondary predicates, and, most importantly, the blurring of a fundamental functional distinction between establishing reference and predication, thus extending the notion of secondary predication far beyond its traditional meaning. An intermediate position, held e.g. by Nash (1986), Simpson (1991), and Nordlinger (1998: 111), is to analyze only non-restrictive attributes (Hale’s “unmerged interpretation” of discontinuous noun phrases) as secondary predicates.

We maintain a distinction between nominals in referential function and (depictive) secondary predicates, with a more traditional, restrictive definition of the latter. The following criteria (taken from Schultze-Berndt and Himmelmann 2004) can be adduced to distinguish depictive secondary predicates from modifiers in a noun phrase. First, depictives do not serve to establish reference or add to the description of a referent, but rather have a predicative function: they predicate a state of affairs which holds within the time frame of the state of affairs expressed by the main predicate. Second, depictives exhibit an information structure value which is correlated with their syntactic position as predicative adjuncts: they are always in focus and are thus expected to be prosodically marked as such. This is not to say that in a language with discontinuous NPs it is necessarily straightforward to distinguish between depictive secondary predicates and attributive modifiers, since the distinction cannot be drawn in

terms of word order alone (Dench and Evans 1988: 14; Schultze-Berndt and Himmelmann 2004). The ambiguity is illustrated in (18) and (19). According to the functional criterion, both are instances of a depictive secondary predicate construction, i.e. the (b) reading rather than the (a) reading is the felicitous one. In (18), the context favours reading (b), since the falling of the fruit had already been discussed and therefore there was no need to establish the identity of the referents.

- (18) *jarlag=biyang jag ga-rdba-ny mangarra *
 good=SEQ go.down 3SG-fall-PST plant.food
 (a) #‘A good/ripe fruit fell down.’ (discontinuous NP reading)
 (b) ‘The fruit fell down ripe.’ (secondary predicate reading) [DP/
 ES95_A09_02]

In (19), it would be redundant pragmatically to predicate the nakedness of the referent established in the first NP by means of the uninflecting verb *bunthug* ‘empty-handed, with nothing’ and later add a discontinuous modifier restricting the reference to someone who is without clothes, as in the (a) reading. In other words, *mali-marnany* ‘without clothes’ is an adjunct in predicative function, i.e. a (depictive) secondary predicate, rather than part of a discontinuous NP; again, the (b) reading is the more appropriate one.

- (19) *Namij wuju bunthug ga-ngga mali-marnany*
 kin.term small empty.handed 3SG-go.PRS thing/clothes-PRIV
 (a) # ‘Little Namij without clothes is going naked.’ (discontinuous NP reading)
 (b) ‘Little Namij is going naked without clothes.’ (secondary predicate reading)
 [DP/ES94_A11_05]

A prosodic distinction between secondary predicates and discontinuous modifiers in Australian languages has been suggested by Austin (1981: 108), McGregor (1992: 316) and Hale (1994: 193). Unfortunately, relevant examples of depictive secondary predicates are too rare in our Jaminjung data to investigate their prosodic properties and to compare them with discontinuous NPs; this issue will be left for further research.

3.3 Part-Whole expressions

The preferred way to predicate an event or state of a body part in many Australian languages is to treat its possessor as a core argument, i.e. as an external possessor (Blake 1987: 94–96; Dixon 1980: 293; Harvey 1996; McGregor 1985, 1996b, 1999). In head-marking (or double-marking) languages like Jaminjung it is the possessor (whether overtly represented by an NP or not) which is the “syntactically active” argument in that it is represented by a pronominal prefix, as illustrated in (21) and (22) below.

Examples similar to (20) are sometimes analysed as examples of discontinuous NPs, e.g. by Austin and Bresnan (1996: 245) and Austin (2001: 312, example 11); in this case *jurruny ngayug* would be construed as NP equivalent to ‘my hands’.

- (20) *jurruny*=*gun* *wajim* *nga-mili-ji* *ngayug*, *ba-ngawu*
arm=CONTR wash:TR 1SG-get/handle-REFL 1SG IMP-see
‘I wash my hands, look!’ [PW/ES fieldnotes]

We propose, however, a distinction between discontinuous noun phrases and part-whole expressions of this type. As for the syntactic status of the body part expression, we follow authors such as McGregor (1985: 210), Harvey (1996), and Schultze-Berndt (2006) in considering them neither as part of the same noun phrase as the possessor nor as “secondary predicates” (as has been suggested by Hale [1981a]). Rather, we consider examples such as (20) as instances of a distinct external possessor construction where *ngayug* and *jurruny* are independent NPs and the latter is licensed by the semantic relationship of meronymy to the former; its function is to specify the locus of the possessor’s involvement in the event. This analysis is further supported by the fact that in Jaminjung, a possessive pronoun as part of a (continuous or discontinuous) NP would appear with possessive morphology, i.e. *ngarr-gina* ‘1SG-POSS’ rather than *ngayug* ‘1SG(ABS)’.

A similar issue arises in the case of qualifying expressions which could be analysed as modifiers of the body part expression in a discontinuous noun phrase, such as *jarlag* ‘good’ in (21) and *thudbung* ‘short’ in (22).

(21) *jarlag nga-yu burru*

good 1SG-be.PRS belly

(a) ??‘I am a good belly.’ (NP reading)

(b) ‘I am happy’ / ‘I am good/well with respect to (my) belly.’ (predicative reading) [DP/ES fieldnotes]

(22) *thanthu=biya thudbung na-w-ijga miri*

DEM=SEQ short 2SG-POT-go leg

(a) ?? ‘You will then go around (with respect to) this short leg.’ (NP reading)

(b) ‘You will then go around short with respect to (your) leg.’, i.e. ‘short-legged’ (predicative reading) [ER/ES97_V01_01]

As the sets of potential translations show, the NP analysis (the (a) reading in both examples) results in a semantically anomalous interpretation. An analysis along the lines of the (b) readings, on the other hand, captures the intended interpretation for both expressions. Here the qualifying expressions is not part of an NP but rather a part of the main predicate in combination with a semantically generic stative or motion verb in copula-like function, which is applied to the possessor, with the body part specified as the locus. Consequently, despite superficial resemblances, combinations of external possessor and body part expressions are also not considered as instances of discontinuous noun phrases here.

3.4 Text frequency of discontinuous noun phrases

In Sections 3.1 to 3.3 we have distinguished discontinuous noun phrases from three similar but distinct construction types: afterthoughts, depictive secondary predicates, and part-whole expressions. We thus consider as discontinuous noun phrases only those Jaminjung expressions meeting the following two criteria: first, two (or more) nominal elements are uttered under a single intonation contour, but are separated by other, distinct constituents, thus corresponding to Type A of discontinuous NPs identified by McGregor (1997: 95). Second, these elements contribute to the description of a single referent and admit only a “merged” interpretation, i.e. an interpretation equivalent to that of an NP whose subconstituents are contiguous to one another. It is these expressions whose syntactic and prosodic characteristics and functions will be discussed

in Section 4, and which are regarded as discontinuous NPs for the purposes of our frequency count.

We manually coded all complex (i.e. multi-word) NPs for contiguity or discontinuity in a sample of 24 texts from the genres mentioned in Section 1, amounting to just over 4000 intonation units in total (excluding all utterances by the interviewer), and representing 11 speakers. Noun phrases containing a (single) Kriol word were counted if and only if they were embedded in a clause with a Jaminjung simple or complex predicate, in which case the Kriol word was considered as an insertional code-switch or borrowing which could be treated on a par with a Jaminjung word. Of the total of 253 multi-word noun phrases found in these texts, only 21, or just over 8%, were discontinuous. If anything, this figure overestimates the overall frequency, since a subset of the texts were selected because they did feature discontinuous NPs. Moreover, this figure only indicates the ratio of discontinuous NPs to contiguous multi-word NPs. Judging from the results of a frequency count on the basis of a smaller dataset, NPs consisting of a single word are approximately seven times more frequent than multi-word NPs. Thus, the ratio of discontinuous NPs to all NPs in discourse amounts to no more than approximately 1%.

These findings correspond to statements made in some grammatical descriptions of other Australian languages regarding the low frequency of this construction, e.g. McGregor (1996a: 52) for Nyulnyul, Rumsey (2000: 118) for Bunuba, and Evans (1995: 249) for Kayardild. The only explicit quantitative statement that we are aware of is provided by McGregor (1997: 92) for Gooniyandi (also based on a sample of texts); in his count, the percentage of discontinuous NPs of all multi-word NPs is 17%, and 3% of all (including single-word) NPs. However, the figure for Gooniyandi also includes prosodically detached elements (McGregor's Type B discontinuity; see Section 3.1), so ultimately the figures for discontinuity under a single intonation contour are probably quite comparable.

Thus, even Australian languages including Jaminjung, rather than exhibiting rampant discontinuities as one would expect from a “non-configurational” language, by and large adhere to the principle of diagrammatic iconicity. In other words, the overwhelming majority of noun phrases conform to the expectation of contiguity. Given these findings, we would expect those rare deviations from the iconicity principle to not appear randomly, but rather to be employed for very specific discourse effects. It is these functions that we turn to in the next section.

4. Syntactic, prosodic and functional characteristics of discontinuous noun phrases

Cases of discontinuous NPs in Jaminjung, as defined in the preceding section, fall into two main patterns associated with two different functions. They are used to signal either contrastive argument focus where the contrastive element is a modifier (Section 4.1), or sentence focus (Section 4.2). Admittedly, while the majority of our examples of discontinuous NPs fit into these two categories, not all of them do. We thus present here the two cases for which robust generalisations in terms of syntax, semantics, pragmatic functions, and prosodic properties emerge from the data. Examples come from a wider set of data (including some conversational data) than the texts included in the frequency count (Section 3.4). Before embarking on this discussion, however, it will be useful to clarify the information structural notions used in the analysis. In line with most of the literature on the subject, we regard the categories below as discrete rather than scalar.

A view that is widely agreed on today is that the notions of “topic” and “focus” on the one hand, and those of “accessibility” (“new” and “given” information) on the other need to be distinguished, and jointly form the basis for the analysis of marking of information structure (Chafe 1976; Lambrecht 1994; Krifka 2007). Topic is defined here as “sentence topic”, i.e. as an overt expression referring to the entity (or state of affairs) that a given sentence is about. Cross-linguistically, sentence topics tend to be at the left or right periphery of the clause, and may be syntactically and/or prosodically marked as included in the basic clause or external to it (as left- or right-dislocated topics).

As for focus, we will follow Lambrecht (1994: 213) in defining it as “[t]he semantic component of a pragmatically structured proposition whereby the assertion differs from the presupposition”. This definition is compatible with the one of focus as indicating the “presence of alternatives that are relevant for the interpretation of linguistic expressions” (Krifka [2007: 18], in turn based on Rooth [1985, 1992]). In other words, a focussed constituent presents information to the addressee which is unpredictable in the discourse situation.

The above categories encapsulate the idea of a pragmatic relation between referents and propositions (Lambrecht 1994: 49); they have to be distinguished from those describing the “activation state” of referents. The activation states of “given” and “new”, more accurately represented as a scale of “accessibility”, relate to the presence of the referent in the common ground of speaker and hearer, depending on previous

mention in discourse, or, alternatively, on the nonlinguistic context. “Given” information is often correlated with topical status, and “new” information with focus, but not strictly so (which will be relevant for our analysis in Section 4.1). For example, it is possible for an accessible referent to be the intended item in a set of alternatives, i.e. to have focal status (as in e.g. *He is the thief*).

As is well known, the scope of a focal constituent can vary; commonly, it is the entire non-topical part of the clause, i.e. the “comment”, that is in focus (“predicate focus”). The focal constituent can also be a single noun phrase (“argument focus”, see Section 4.1) or an entire clause (“sentence focus”; see section 4.2 below). A further distinction can be made between functional subtypes of focus (see e.g. Dik 1997, E. Kiss 1998, Drubig and Schaffar 2001). Information focus is found e.g. in an answer to a constituent question or in new comments on an established topic. Contrastive focus “identifies a subset within a set of contextually given alternatives” (Drubig and Schaffar 2001: 1079); this category will be of particular relevance for the analysis presented in the next section.⁶ Cross-linguistically, focus is associated with prosodic prominence within the focus domain and, alternatively or additionally, with a dedicated position for focused constituents, morphological markers, or constructions such as clefts, in particular for narrow focus. On the basis of these definitions, we will now move on to the analysis of the two main types of discontinuous noun phrases in Jaminjung.

4.1 Contrastive argument focus

Discontinuous NPs of the first type found in Jaminjung all encode contrastive argument focus where a modifier is the element contributing to the contrastive interpretation (in a fashion to be made more explicit below). Without exception, discontinuous NPs of this type consist of only two grammatical words which immediately precede and follow a verbal predicate.⁷ Typically, the first, preverbal word serves as a modifier (in semantic terms); the second word is the semantic head (for an alternative word order, see example (28)). The modifier can be a quantifier (23), a possessive pronoun (24), or an attributive property expression (25). In the examples, a focal accent is marked by ^; we will return to the prosodic characteristics of this type of discontinuous NP in more detail below.

Example (23) is from a mythical narrative which accounts for the differences in physical characteristics and reproductive behaviour between two large birds, emu and brolga. Here, the number of their offspring is explicitly contrasted.

- (23) *^jirrama ganuny-ma-ya jarlig,*
 two 3SG>3DU-have-PRS child
*gumurrinyji orait. ^bardawurru gana-ma-ya \.. jarlig^δ *
 emu all.right many 3SG>3SG-have-PRS child
 ‘She (the brologa) has **two** children. The emu, all right, she has **many**, children that
 is.’ [DM/MH96_A19_01]

Example (24) comes from a spontaneous interaction that took place during an elicitation session. The speaker had been approached for money by a bystander, but refused the request by observing that the same person had previously actually given money to someone else.

- (24) *^janyungbari baibdola nganthi-ngarna-ny,*
 another five.dollar 2SG>3SG-give-PST
*^ngunggina nganthi-bila mangarra *
 2SG:POSS 2SG>3SG-POT:get/handle.IPFV plant.food
 ‘You gave someone **else** five dollars, (when) you should have gotten
your food.’ [DB/ES97_A02_03]

Example (25) is from a fictitious conversation (triggered by elicitation questions) between the speaker and a dog owner; the preceding utterance is a request to the dog owner to tie up the dog since it is threatening to bite people. Thus, the dog, but not its property of fierceness, has been mentioned explicitly in the previous discourse. The expression is contrastive in the sense that the property of fierceness distinguishes the dog referred to from alternative types of dog.

- (25) *^mulanggirr ngantha-ma-ya wirib *
 fierce 2SG>3SG-have-PRS dog
 ‘You have a **dangerous** dog!’ [IP/ES97_A06_03]

Another relatively frequent pattern, analysed here as a subtype of the general “contrastive focus” pattern, is a discontinuous “wh-phrase”, i.e. the combination of an interrogative and an entity or property expression where the interrogative is a variable for a specific subset of the set denoted by the second expression (i.e. ‘which/what [kind

of] X’). The utterance in (26) occurs in the context of a narrative about the speaker’s close encounter with a centipede. At this stage of the narrative, the speaker has been bitten in the finger but is trying to figure out what bit her, since she had already shaken off the animal. Example (26) is direct speech within the narrative, addressed to the speaker’s children.

(26) [^]*nganthan*=*gun* *diwu* *nga-yu* *nguntharlng* \

what=CONTR throw 1SG>3SG-say/do.PST heavy

‘What heavy (thing) did I throw away?!’ [IP/ES97_A03_02]

In equivalent expressions in English (e.g. the English translations of the examples), the noun phrase is contiguous, but the modifier carries a contrastive accent, while the head does not exhibit prosodic prominence (this is often referred to as “deaccenting” in the literature). Prosodically, the Jaminjung expressions have very similar characteristics. The pitch tracks of (25) and (26), shown in Figures 6 and 7, illustrate the general pattern. The contrastive modifier in first position carries the main prominence of the utterance and has falling pitch associated with its left edge. In (25), the preverbal modifier prosodically marked in this way is *mulanggirr*; in (26), it is the interrogative *nganthan*. The second element of the discontinuous noun phrase carries no prominence, as illustrated by the postverbal nominals *wirib* in (25) and *nguntharlng* in (26). This prosodic pattern, which can be characterised as prosodically cohesive in the sense of Fanselow and Féry (2006), was consistent across all functionally equivalent examples in our sample.

INSERT Figure 6

INSERT Figure 7

The prosodic pattern associated with the preverbal part of the discontinuous NP in these examples conforms to that generally used to mark contrastive argument focus in Jaminjung. NPs in the domain of contrastive argument focus occupy the first position in the corresponding intonation unit, and exhibit a falling contour (Simard 2010: 281–286).⁹ This is illustrated in (27) and the accompanying Figure 8 (another example is the first clause of (24)). The speakers are talking about goannas to the linguist who asks if the latter behave like echidnas, i.e. whether they eat ants. The speaker negates this and

provides the correct information: it is frogs, grasshoppers and other small animals that goannas eat.

(27) *na i..* *^malara* *ga-ngga* *thawaya,* *barlman=nguji*
 no 3SG frog 3SG-go.PRS eating grasshopper=PLASS

‘(Kriol) no, it -- (Jam.) it is frogs that it eats, grasshoppers and others.’ [IP/ES97_A02_01]

INSERT Figure 8

Thus, it is usually the preverbal part of the discontinuous NP that exhibits the characteristics of a (contiguous) noun phrase in the domain of contrastive argument focus. However, the reverse pattern is also attested.¹⁰ Prior to the utterance in (28), tents had been mentioned several times as part of an account of living conditions in the early day of the settlement where the speaker was living, and she had explicitly mentioned that the tents in the beginning had been small. Thus, the size of the tents is contrastive information. Prosodically, in this example, the head appears preverbally, but does not receive prosodic prominence, while the modifier does, as shown in Figure 9.

(28) *bulayi* *yirra-ma-na* *^guju~gujugu* *na *
 fly/tent 1PL.EXCL-have-IPFV PL~big SEQ

‘We had **big** tents then.’ [DB/ES96_A10_02]

INSERT Figure 9

The use of discontinuous NPs (including split interrogative phrases) in contrastive discourse contexts of exactly the kind just illustrated for Jaminjung is very common cross-linguistically. It was described in a pioneering paper by Siewierska (1984) for Polish, and subsequently e.g. by Dahlstrom (1987) for Fox, by Reinholtz (1999: 208) for Swampy Cree (both Algonquian languages), by Fanselow and Ćavar (2002) for Croatian, and by Kazenin (2009) for Lak (Nagh-Dagestania), Circassian (Abkhaz-Adyghe) and Nogai (Turkic) as well as Russian and Finnish. Examples from an even wider range of languages can be found in Rijkhoff (2002: 258) and Fanselow and Féry (2006).

There is considerable evidence that the same functional motivation also holds for discontinuous NPs in other Australian languages. For Warlpiri, Laughren (1984: cited in Legate 2002: 117), Legate (2002: 281-282) and Simpson (2007) provide examples of discontinuous contrastive modifiers and NP-internal interrogatives, respectively, which parallel the Jaminjung examples in (23) to (28). Evans (1995: 249) describes discontinuous NPs in Kayardild as restricted to cases where “the speaker assumes that several entities suit the label offered by the entity nominal, and emphasises that the qualifier helps find the right referent” or where “the degree or number of the adjectival attribute” is emphasised. A similar restriction is observed by Dench (1991: 181–182, 186) for Panyjima and supported with similar examples. McGregor (1997) and Merlan (1994: 241–242), for Gooniyandi and Wardaman, respectively, also link the discontinuous parts of NPs to different information structure values, again providing (at least some) examples of the same type.

The basic intuition underlying an account of these constructions in terms of specific information structure characteristics has been formulated in various ways in the literature. The variation is related to discrepancies found more generally in the analysis of complex contrastive focus constructions of this kind. For example, Siewierska (1984) in her analysis of Polish describes the elements within a discontinuous NP in these contexts as distributed over focus and topic. De Kuthy (2002: 149) claims that discontinuous NPs in German involve a distribution over focus and background; the same terminology is used by Fanselow and Lenertová (2010: 198) for equivalent contrastive constructions in Czech. Kazenin (2009: 394, 399), for several Turkic and Caucasian languages, speaks of focused adjectives or focused “left parts” of a noun phrase, and Fanselow and Féry (2006: 5) analyse discontinuous phrases of this type – which they identify in a number of languages – as exhibiting “narrow focus on the left part with givenness on the right part”. Similarly, for Wardaman, Merlan (1994: 242) describes one element of the discontinuous NP as “more fully presupposed” and the other as “more in-focus”, and McGregor (1997: 96) claims that in Gooniyandi, “phrasal discontinuity permits a theme to simultaneously bear the unmarked focus of information.”

Assigning discrete information structure values like focus and topic to the subconstituents of a single phrase (or in any case, constituents which jointly specify a single referent) is inherently problematic, however. As several authors have pointed out, a modifier within a noun phrase cannot constitute a focus domain on its own. Szendrői (2010: 869–870) explicitly argues against the notion of a noun phrase (DP) internal

topic-focus partition, but similar points are made by Lambrecht (1994) and Breul (2004: 154–156).

Lambrecht (1994: 216) illustrates this point with the example reproduced here as (29). What the addressee is being informed of is not the color of a shirt but the identity of the item that has been bought, hence (b) is not a possible answer in English (while it is a perfectly possible answer to the question *What color is your shirt?*).¹¹ In other words, assuming a definition of focus as indicating the presence of alternatives, the possible alternatives evoked by the question in (29) are not *green, blue, orange, loganberry* ... but *the green/blue/orange/loganberry shirt*.

(29) *Which shirt did you buy? – a) The GREEN one. b) *GREEN.*

Still, there is a clear sense in which the shirt in the answer to (29) is old information, and the emphasis is on the color term. The solution to the puzzle is the distinction, already introduced above, between information structure role (topical or focal), on the one hand, and accessibility (“given” or “new”) on the other hand. Accessibility, or presence in the common ground of speaker and hearer, depends on previous mention in discourse, or, alternatively, on the nonlinguistic context. It is therefore possible to find given subconstituents inside a focal constituent (cf. Krifka 2007: 39–40, Szendrői 2010: 869). This is precisely the constellation in the contrastive utterances in (23) to (28). Semantically, it is only the modifier, not the entire NP, which contributes to an explicit or implicit contrastive relationship (since the head is given and identical for all alternatives), but the entire NP is in focus because only entire NPs can identify the correct referent out of a set of alternatives.

We have now arrived at a more precise characterisation of one of the discourse contexts in which discontinuous NPs in Jaminjung (and other languages) are found, which at the same time suggests a motivation for the otherwise entirely anti-iconic phenomenon of discontinuity: the focused nature of the noun phrase makes it natural for it to assume focus position, usually the initial position in an intonation unit (following any overt topical constituents). On the other hand, the accessible or “given” nature of one of the elements of the noun phrase naturally makes it resist being marked as prominent either by its position or by a prosodic contour normally associated with focus. This is akin to the account given by Fanselow and Cavar (2002), who claim that “the XP-split construction is grammatical only if a single XP must fulfill two different positional requirements defined by pragmatic constraints on order” (Fanselow and

Ćavar 2002: 85). However, the features these authors propose as responsible for the ordering are purely relational (e.g. [+wh], [+focus], [+link-topic]) rather than focality vs. givenness, and would therefore require a partition of the NP/DP in terms of focus and topic. Additional problems for their analysis will be pointed out in Section 4.2.

It appears that both the absence of prosodic prominence (i.e. what has been referred to as “deaccenting”) and the distribution of the NP over both focus and non-focus position are cross-linguistically available strategies.¹² “Contrastive argument focus where the focus domain contains a given element” is a highly specific information structure configuration; from a functional-typological perspective, it is therefore not surprising that it is associated with a specific, infrequent syntactic and prosodic pattern. We analyse discontinuous NPs of this type as a single phrasal construction which is distributed over the pre- and postverbal position. In the canonical subtype of this construction (i.e. excluding cases such as (28)), the first element inherits the general properties of the contrastive argument focus construction, i.e. the preverbal position of the focused constituent and the prosodic prominence achieved by a falling contour (see example (27) and the corresponding pitch track in Figure 8). Discontinuity of the focal constituent is the only property specific to this construction over and above the contrastive focus construction, and can be taken to signal givenness of the second, non-prominent element.

4.2 Sentence focus

We now turn to the second discourse context which, in Jaminjung, frequently triggers discontinuous noun phrases. These are out-of-the-blue or “all-new” statements, typically used to introduce a new participant into the discourse universe. More specifically, they alert the hearer to the presence or appearance of an entity with a particular property, or in a particular quantity (since otherwise no multi-word NP would be required). A typical example is (30), uttered upon the appearance of a tourist boat on the Victoria River, seen from the river bank.

- (30) *jarndu ga-ram luba mangurn=mij!*
 boat 3SG-come.PRS big white.person=COM
 ‘There comes a big boat with white people!’ [overheard, DR/ES fieldnotes
 23/08/2005]

The investigation of this second type of discontinuous NP is hampered by the fact that such a context rarely arises in a fieldwork situation, at least – as in the case of (30) – not during a recording session. This may explain why this function of discontinuous NPs has rarely been reported in the literature. Attempts to elicit discontinuous NPs by evoking all-new contexts of this kind proved unsuccessful, mainly because there are several other strategies for introducing new participants into the discourse universe, and single-word NPs are generally preferred. Fortunately, occasional examples can be found in recordings, for example as direct speech within a narrative.

These examples are of a different type, both formally and functionally, from those discussed in Section 4.1. While again the two elements of the NP straddle the verbal predicate, a locative/deictic element is also included in the “NP bracket” in some cases, e.g. in (33) and (34). The preferred order of elements is not modifier-head but head-modifier; in addition, examples of generic and specific nominal and of demonstrative and noun are also found, as in (33) and (36). In terms of their function, there is no sense (considering the context of these utterances) in which one of the elements of the discontinuous NP contributes to a contrastive interpretation. There certainly is no sense in which either of the elements is accessible/“given”.

An investigation of the prosodic properties of this type of discontinuous NP (which has to remain tentative because of the scarcity of recorded examples with good sound quality) also reveals a difference: there is no equivalent of “deaccenting”; both discontinuous nominals receive a prosodic prominence, as the pitch tracks shown in Figures 10 and 11 illustrate. In fact, all constituents in the sentence receive a prominence, including the verbal predicate. This prosodic pattern conforms to the general pattern described for “all-new” sentences in Jaminjung by Simard (2010: 225-233), established on the basis of examples (mostly) not involving a discontinuous NP, such as (31) (Figure 10). Here, all constituents receive a (small) prominence, a contour that differs from that of the topic-comment construction in which the first syllable of the comment is much more prosodically salient than that of the topic in IU-initial position.

- (31) *jarlig* *yugung* *ga-ram*
 child run 3SG-come.PRS
 ‘A child comes running.’ (out-of-the-blue utterance, elicited with
 picture stimuli) [JoJ/CS07_65_01]

INSERT Figure 10

Turning now to examples of discontinuity, (32) comes from a narrative triggered by photos of some of the speaker’s family members building a shed. It includes an account of how they warned one of the women involved of the approaching wind so that she would climb up the structure and fasten the roof. Quite a few parallel examples (announcing a strong rain or wind approaching, with a discontinuous NP) are found in our field notes not accompanied by a recording.

- (32) “*burduj ba-jga gabardag!*
 go.up IMP-go quick
burdaj ga-ram=ngardi gujugu! yaniny-ma!”
 wind 3SG-come.PRS=SFOC big IRR:3SG>2SG-hit
yirri-yu=nu=biyang.
 1PL.EXCL>3SG-say/do.PST=3SG.OBL=SEQ
 “‘Climb up quickly! A big wind is coming! It might hit you!’ we said to
 her.’ [IP/ES97_A03_10]

Example (33) (Figure 11) is from a narrative elicited with the Frog Story picture book (Mayer 1969) and represents a fictitious utterance of the little boy directed to his dog, upon encountering the frog that they had been looking for, who now is accompanied by a partner and baby frogs.

- (33) “*girrb girrb gani-yu=nu majani,*
 quiet quiet 3SG>3SG-say/do.PST=3SG.OBL maybe
ngayiny=gun ngiya jalwany burru-yu malara!”
 animal=CONTR PROX talking 3PL-be.PRS frog
 “‘ah, quiet, quiet!’ he maybe said to him, ‘frog animals are talking here!’”
 [DBit/ES96_A07_01]

INSERT Figure 11

The next example, (34) (Figure 12) is a real-life out-of-the-blue utterance of one of several speakers involved in an elicitation session, upon noticing three clouds in the sky (which is reasonably newsworthy information in the middle of the dry season). The

utterance in brackets overlaps with an utterance by a second speaker who was talking about an unrelated matter; therefore it is a reasonable guess that the speaker did not necessarily assume ‘cloud’ to be “given” for the utterance in the second line.

- (34) [*yina mawarn ga-ram*] \
 DIST cloud 3SG-come.PRS
mawarn=gun yina ga-yu murrgun \
 cloud=CONTR DIST 3SG-be.PRS three
 ‘[There are clouds coming ...], there are three clouds!’ [DP/ES99_V02_01]

INSERT Figure 12

Examples (30) to (34) above are typical of “thetic” or sentence focus utterances in that the predicate is an intransitive verb of existence or appearance, which is employed in order to introduce a new entity into the universe of discourse. The same function is, however, sometimes fulfilled by transitive clauses.

In (35) (Figure 13), the speaker resumes a narrative about the foundation days of her small community after an interruption, prompted by the researcher’s question “and you only had tents here?” The answer, involving the transitive verb *-ma* ‘have’, serves to predicate the existence of entities of a particular kind (small tents) at a particular time in the history of the community, rather than making a statement about the possessors (the people in the community at the time) or the size of the tents. This example can be compared with (28) (discussed in Section 4.1) from the same text, at a point in the narrative where the tents have been mentioned repeatedly and big tents are contrasted with the previously available small ones, and where the modifier clearly receives the most salient prosodic prominence.

- (35) *bulayi yirra-ma-na wuju~wuju* \
 fly/tent 1PL.EXCL>3SG-have-IPFV PL~small
 ‘We had small tents.’ [DB/ES96_A10_02]

INSERT Figure 13

Like (33) above, the following example (36) also involves a discontinuous generic-specific combination. While again a transitive verb (*-mili* ‘get, handle, catch’) is employed, the clause does serve to introduce a new discourse entity, bush food, of which instances are subsequently listed (the list beginning with *wayida* ‘bush yam’ is continued in the following intonation units). It is plausible that identification of a new discourse entity would be aided by the use of both a generic and a specific term, explaining the repeated discontinuous appearance of such combinations in utterances of the sentence focus type. Prosodically, example (36) is a less straightforward case of equal distribution of prominences since a salient prosodic prominence falls on the demonstrative *yinawurla*. However, there clearly is no contrastive accent associated with either of the discontinuous constituents *mangarra* or *bujngarna*; for this reason, we included this example in the sentence focus category.

- (36) *lilaj yirr-inyji:: *
 swim 1PL.EXCL-go.IPFV
*mangarra yirra-mila buj-ngarna yinawurla=biyang \ .. wayida *
 plant.food 1PL.EXCL>3SG-get.IPFV bush-ASSOC DIST=SEQ bush.yam
 ‘We used to swim across, and we used to get food of the bush type over there – bush yam, ...’ (followed by a list of other plants) (from a narrative about traditional ways of hunting) [VP/ES99_V01_06a]

In sentence focus structures, as the term suggests, the whole clause (or intonation unit) is in focus, and “no pragmatic presupposition is formally evoked” (Lambrecht 1994: 233). This often, but not necessarily, means that the participants and the event itself are “new”, i.e. not identifiable by the hearer. The important criterion, however, is that “the entire situation, including all of its participants, is asserted as a unitary whole” (Sasse 1995: 4). The formal correlates of sentence focus attested cross-linguistically (and also within individual languages) are rather heterogeneous; they include verb-fronting, subject accenting, clefting, and the absence of topic markers (Lambrecht 1994: 235, 2000; Sasse 1987, 2006). We propose that discontinuous NPs are one of the strategies in Jaminjung of marking “sentence-focus” or “theticity”. It is not the only strategy (otherwise one would expect examples to be more frequent); other correlates of sentence focus include a segmental marker *=ngardi* which cliticises to the inflecting verb, also illustrated in (32), and, as previously mentioned, a prosodic pattern where a prominence is associated with all phrasal constituents, as in (31) (rather than a strong

prominence on the first word of the focus domain). However, its existence in Jaminjung means that NP discontinuity needs to be added to the list of cross-linguistically available strategies associated with sentence focus, one that has not been explicitly associated in the previous literature with sentence focus status.¹³ We assume that in this case, too, the use of the discontinuity strategy for this particular discourse function is motivated by cross-linguistic principles such as the principle of detopicalisation invoked by Lambrecht (2000); however, a full discussion of this point is outside the scope of this paper (see Schultze-Berndt 2008, in prep.).

To summarise: we propose the existence of a second discontinuous NP construction in Jaminjung which can be distinguished from the discontinuous contrastive argument focus construction on syntactic and prosodic grounds. Syntactically, in the sentence-focus type, the head nominal is in preverbal position whereas in the contrastive argument focus type, the preverbal element is usually the modifier or demonstrative. In the sentence-focus type we also find deictic adverbials intervening between the two elements, in addition to the simple or complex verb. As for their prosodic characteristics, in the contrastive argument focus type only the nominal responsible for the contrastive interpretation (usually the modifier) exhibits a salient prosodic prominence (a falling pitch, as associated with focus more generally in Jaminjung) on its first syllable. In the sentence focus type, all elements (including the verb) receive prosodic prominence. This is typical of sentence focus constructions of different types in Jaminjung and can therefore be regarded as a characteristic inherited from a more general sentence-focus construction. The predicate in this type of construction is most typically a predicate of existence or appearance, but arguably some transitive verbs like ‘have’ or ‘catch’ can also appear in this context, in a similarly existential interpretation. Thus, sentence focus marking should be added to the set of functions cross-linguistically associated with discontinuous noun phrases.

Importantly, the motivation for discontinuity in this case cannot include the stipulation that the two elements have different information structural values, which has been invoked so often in the literature as an explanation of discontinuity (see e.g. Siewierska 1984; McGregor 1997; De Kuthy 2002; Fanselow and Cavar 2002, and further references provided in Section 4.1): in a sentence focus construction, by definition, all constituents are included in the focus domain. This lends support to the view that particular syntactic and prosodic constellations do not necessarily arise out of principles associated with a modular organisation of grammar requiring e.g. movement of a constituent into the position associated with prosodic prominence. Rather, sentence-

level “information packaging” constructions with specific syntactic and prosodic characteristics are part of the repertoire of constructions that speakers have at their disposal to fulfil very specific communicative needs. Jaminjung speakers can thus employ discontinuity (as well as the lack of salient prosodic prominence on any single constituent) as a direct correlate of sentence focus status.

4.3 A note on split topicalisation

For the sake of completeness, we address here another construction which has frequently been analysed as discontinuous NP cross-linguistically, known as Split Topicalisation. In information structure terms, the first element in this construction is a contrastive topic, whereas the second element is focal. This construction is illustrated with an example from German in (37); apart from German and Dutch (DeKuthy 2002; Fanselow 1988; Van Hoof 2006), it has also been described for Slavic languages (Fanselow and Ćavar 2002; Siewierska 1984; Siewierska and Uhlířová 1998), Japanese (Fanselow and Féry 2006: 38), Lak (Kazenin 2009), and various other languages.

- (37) *Zeitungen liest er nur eine – die taz*
 newspaper:PL read:1SG.PRS 3SG.M only one:SG.F DEF.SG.F [name]
 ‘(As for) newspapers, he only reads one – the taz [newspaper name].’
 (Fanselow and Ćavar 2002: 96)

It is highly questionable whether expressions like these are instances of discontinuous NPs at all. It has been observed that in this construction type, both parts have to be autonomous NPs, which do not necessarily combine to form a single grammatical noun phrase: for example, in (37), the plural feature of the “topical” part (‘newspapers’) clashes with the singular on the numeral (‘one’). Thus, constructions of this type are better analysed as instances of a clause-external topic which can be integrated by a semantic relationship (e.g. part of a set, meronymy) with one of the noun phrases in the core clause, as has been suggested e.g. by Nolda (2008). A syntactic analysis of these constructions as involving two distinct NPs with different information structure values from which redundant material is deleted therefore seems appropriate for this construction type. However, the generalisation of this analysis to all discontinuous NPs as proposed in Fanselow and Ćavar’s (2002) “distributed deletion” account is problematic, since as we showed in Sections 4.1 and 4.2, the discontinuous elements in true discontinuous NPs, unlike the ones in split topicalisation structures, do not in fact

have distinct information structure status – at most, the “contrastive” type involves given constituents within a focused NP.

Split topicalisation structures appear to be absent in Jaminjung. The reason for their absence in our dataset, however, may well be that they do not show surface discontinuity. Since preverbal position, usually immediately following topic constituents, is the focal position in Jaminjung, sequences of topical and focal NPs which overlap in reference could be analysed as a single NP if prosodic patterns are not carefully considered. For example, the pitch track of (38) (Figure 14) shows that the second nominal element, *bardawurru*, receives the prominence associated with focus, and the whole utterance has the contour associated with a topic-comment sentence. Again, this shows the importance of a detailed prosodic investigation for syntactic analysis. A more in-depth analysis of the prosody of nominals in contiguity in Jaminjung would help to determine their status as a single NP or distinct NPs in topic and focus position, respectively, and provide a confirmation of this analysis.

- (38) [*jarlig* =*biya*]_{TOP} [*bardawurru*]_{FOC} *gani-ma-ya* \
- child=SEQ many 3SG>3SG-have-PRS
- ‘As for children, she has many (the emu does).’ (or ‘She has many children.’) [DM/MH96_A19_01]

INSERT Figure 14

5. Concluding discussion

In this paper, we investigated the syntax, prosody, discourse function and frequency of discontinuous noun phrases in Jaminjung, a Northern Australian language, as well as the relationship of discontinuous NPs with properties of contiguous noun phrases, and superficially similar but distinct constructions. In Section 2, we showed that (in the non-discontinuous cases) a phrasal category of NP can be identified, both on morphosyntactic and prosodic grounds, and that therefore the existence of discontinuous NPs cannot be explained by assumptions of a completely flat syntactic structure. However, the generalisation that discontinuous non-phrasal modifiers are only possible in languages without obligatory determiners does hold for Jaminjung.

We further argued that true noun phrase discontinuity needs to be distinguished, on prosodic and functional grounds, from cases of apparent discontinuity such as

afterthoughts (Section 3.1), secondary predication (Section 3.2) and part-whole expressions (Section 3.3). We also argued, in Section 4.3, that split topicalisation constructions (which do not occur, at least not as surface “discontinuities”, in Jaminjung) should not be analysed as discontinuous noun phrases. In Section 3.4 we showed that true instances of discontinuous NPs have a very low discourse frequency of around 1% of all noun phrases; this has a correlate in the finding that the majority of tokens can be attributed to very specific categories of information structure which are likewise associated with lower text frequency cross-linguistically.

The first of these information structure constellations – contrastive argument focus – has been widely associated with discontinuous NPs in the literature. In Jaminjung, discontinuous NPs of this type exhibit a focal prosodic contour on only the new element in the discontinuous NP (the modifier in all our examples), which usually (but not always) appears in preverbal position (Section 4.1). We addressed the analysis of this construction type as involving a topical (or backgrounded) and a focal element encountered in the literature, and argued that the entire discontinuous NP is in fact focal, but that a given element is included within it. Thus, in effect, discontinuity serves as an alternative strategy to deaccenting. It has been observed (Fanselow and Féry 2006: 27) that a strategy of discontinuity rather than prosodic marking alone may be preferred because of more general characteristics of a language in terms of its interface between prosody and syntax, more specifically, the existence of a fixed position which is associated with focus and prosodic prominence and which takes priority over a position associated with a grammatical role, hence resulting in “free word order”. This explanation is compatible with the Jaminjung data. Based on our findings we would predict moreover that the distinction between “simple splits” (or “pull splits”), where the word order of the contiguous NP is preserved, and “inverted splits” (where the order of elements is reversed), which has been invoked in some recent works (Fanselow and Cavar 2002; Fanselow and Féry 2006; Kazenin 2009), is irrelevant. Since the basic order of NP-internal constituents for many of the languages discussed in the literature is (semantic) modifier followed by (semantic) head, the term “simple split” in fact seems to refer to the contrastive focus type of discontinuous NP, while “inverted split” refers to the split topicalisation construction (see Section 4.3). Not only is the distinction not applicable in a straightforward way in the case of a language like Jaminjung, where the order of head and modifiers within a contiguous NP is not fixed (see Section 2); it also conceals the functional motivations for the discontinuity. We predict instead that the order of elements in the split NP depends, first, on the position for (contrastive or

exhaustive) focus in the language in question, and second, on which of the nominal elements (usually the modifier) is not “given” in the discourse contexts, since this is the one that will occupy the focus position.

We also argued that discontinuous NPs serve to mark a subtype of sentence focus in Jaminjung; this is a function not prominently associated with noun phrase discontinuity in the literature. As shown in Section 4.2, this type of discontinuity poses an even more serious problem for previous analyses which relied on distinct information structure values for the discontinuous nominal elements, since in this case the entire clause constitutes a single focus domain. Discontinuous NPs of this type exhibit the prosodic contour associated with sentence focus in Jaminjung (equal prosodic prominence on all constituents), and it is usually the semantic head which precedes the predicate. We tentatively predict that this order would be preferred cross-linguistically in discontinuous NPs signalling sentence focus, if other cases of this type come to light: since these NPs in effect serve to introduce a new entity into the discourse universe, the entity-denoting nominal (which serves to identify the intended referent) comes first, followed by the discontinuous modifier.

We adopted a construction-based approach for the analysis of discontinuous NPs which allows us to directly associate the formal characteristics (both syntactic structure and prosodic characteristics) of these two distinct constructions with their distinct discourse functions, even in the case of sentence focus construction where the position of the discontinuous elements cannot be motivated by different information structure values of whatever type. From this monostratal approach follows an analysis of the discontinuous NP as a single phrase whose coherence is established on the basis of semantic dependency (Croft 2001; Langacker 1997; McGregor 1997), rather than a base-generated contiguous hierarchical configuration, with discontinuous NPs generated by movement.

We have shown that noun phrase discontinuity in Jaminjung is highly constrained, provided that one takes into account both prosodic information and the actual discourse contexts in which particular constructions occur (arguably most reliably established on the basis of naturalistic data). Specifically, our findings contribute to mounting cross-linguistic evidence for the insight that discontinuous NPs are employed to express specific categories of information structure. These include the constellation of sentence focus, previously rarely associated with noun phrase discontinuity. While the view that Australian languages are somehow an exception to these cross-linguistic constraints is still widespread, a close inspection of discontinuities

in an Australian language thus shows that it is subject to similar restrictions as “configurational” languages: the principle of diagrammatic iconicity is only violated for specific types of information packaging in discourse.

Appendix I: Transcription conventions

\	Final (falling) boundary intonation	., .., ...	Pauses of varying length
/	Final (rising) boundary intonation	-	Morpheme boundary
,	nonfinal boundary intonation	=	Clitic boundary
^	focal accent	~	Separates reduplicated elements
<u>Underline</u>	Kriol words in Jaminjung examples	<...>	Kriol words in pitch track annotations

Appendix II: Abbreviations in interlinear glosses

>	A/Subject acting on P/Object (in pronominal prefixes)	M	Masculine (in German)
ALL	Allative case	OBJ	Object (in Warlpiri)
ASSOC	Associative nominalisation	OBL	Oblique pronominal
COM	Comitative case	PL	Plural
CONTR	Contrastive focus marker	PLASS	Associative plural ('X and others of the same type')
DAT	Dative case	POT	Potential/Future
DEF	Definite article (in German)	POSS	Possessor
DEM	Demonstrative (distance-neutral / recognitional)	PROX	Proximal demonstrative
DIST	Distal demonstrative	PRF	Perfect (in Warlpiri)
DU	Dual	PRIV	Privative ('without, lacking')
ERG	Ergative case	PRS	Present
EXCL	Exclusive pronoun	PST	Past (perfective)
F	Feminine (in German)	REFL	Reflexive/reciprocal
IMP	Imperative	RESTR	Restrictive clitic ('right there')
IPFV	(Past) Imperfective	SEQ	Sequential clitic ('now', 'then', 'on the other hand')
INCL	Inclusive pronoun	SFOC	Sentence focus clitic
INSTR	Instrumental case	SG	Singular
IRR	Irrealis	TR	Transitivity marker (Kriol)
LOC	Locative case		

Notes

-
- * Our heartfelt thanks go to the Jaminjung and Ngaliwuru speakers, many of whom now deceased, who have worked with us over the years on the description and documentation of the language. We gratefully acknowledge the financial support of the Max Planck Society, the Volkswagen Foundation (DoBeS Programme), and the UK Arts and Humanities Research Council (AHRC) for fieldwork on Jaminjung and for the analyses conducted for this paper. Finally, we would like to thank Dina El Zarka and Felicity Meakins for very helpful comments on previous versions of this paper, and Bill McGregor and Yi Xu for general discussion of many of the issues touched upon here.
- ¹ It is not our aim here to argue for this approach in detail, or more generally to enter into the debate about the interface between syntax, prosody, and information structure, although it is our conviction that many of the mismatches between syntax and information structure that have been commented on in the literature (e.g. Fanselow 2008, Fanselow and Levertová 2010) can be explained in ways that do not challenge the syntactic nature of information structure. Apart from cases of truly multifunctional grammatical or prosodic structures (such as subject accenting in English, which is exploited to mark both narrow subject focus and sentence focus), they can arise out of ambiguities in written language that disappear in spoken language, they may be captured by more fine-grained information structure categories, or they reflect the fact that given the same discourse contexts speakers may have more choices over which mode of information packaging to adopt than they have in other domains of grammar.
- ² We follow traditional terminology here in using “NP” rather than “DP” as the term for the maximal phrasal category, and in labelling the semantically central entity-denoting nominal as head if present. If such a nominal is absent, as in example (1), we regard as head the semantically central property expression, possessive expression, etc., although for the purposes of this paper, nothing hinges on assuming either this analysis or the alternative analysis of ellipsis of a head that is understood from context.
- ³ The analysis of the digitised audio data was conducted with the speech analysis software PRAAT, developed and designed by P. Boersma and D. Weenink at the Phonetic Sciences Department of the University of Amsterdam.

-
- ⁴ Note that the Kriol *swing* bears an unusual rising-falling prosody in this example.
- ⁵ Afterthoughts can be distinguished from right-dislocated topics which tend to have referents that are already discourse-active. Prosodically, the latter are characterised by a much smaller pitch excursion, i.e. a “flatter” pitch contour, and a lower register than afterthoughts. Syntactically, right-dislocated topics can be distinguished from afterthoughts in that they usually have a coreferential (free and/or bound) pronominal in the main clause, rather than being coreferential to an NP with a lexical nominal. For this reason, right-dislocated topics are less relevant for the discussion of discontinuous NPs, although an example resembling a discontinuous NP can be found in (23).
- ⁶ Topics can also be contrastive (analysed by many authors as a combination of topic and contrastive focus status), but this category will not be relevant for our argument. Likewise, subtypes of contrastive focus which have been identified in the literature will not be relevant here, e.g. “exhaustive” focus in which the focus denotation is the only one for which the proposition holds true.
- ⁷ Similar restrictions of discontinuous NPs to just two elements have been reported for other languages (McGregor 1997; Siewierska 1984: 62).
- ⁸ The second instance of *jarlig* ‘child’ in this example is analysed as a right-dislocated topic, not as part of a discontinuous NP.
- ⁹ Contrast may in addition be marked segmentally by a contrastive clitic =*gun*, illustrated e.g. in (26).
- ¹⁰ In principle, it should also be possible for a contrastive semantic head to receive prosodic prominence (and in the default case, to occur as the first element of the discontinuous NP), with the modifier as the non-prominent (and usually second) element, as e.g. in ‘they only have a nice GARDEN, but the HOUSE is not nice’ (discontinuous NPs of this kind are cited by Siewierska [1984] for Polish). We did not find examples of this kind in the corpus but do not exclude the possibility of their occurrence; this has to be left for further research.
- ¹¹ In Jaminjung, the (a) and (b) answers may well look identical (and consist of the attributive expression only with no overt head), but the point is that no subconstituent of a multi-word NP can be in focus to the exclusion of other subconstituents.

¹² If both are available in a single language, it may well be the case that they are associated with a further, more subtle functional difference (possibly exhaustivity vs. non-exhaustivity of the alternative set), as evidenced by slightly different felicity conditions; this is suggested by a Czech example discussed in Fanselow and Lenertová (2010: 198). We have not explored this question for Jaminjung.

¹³ Both Siewierska (1984: 60, 66) and McGregor (1997: 96) discuss examples of NP discontinuity which are identified by them as “all-new” clauses introducing a new participant into the discourse universe. However, both authors confer the status of topic/theme to the discontinuous NP in these cases, while according to our analysis, sentence-focus structures have no topic. Similarly, many discussions of PP extraposition in English and German (e.g. Guéron 1980, De Kuthy 2002) recognise the association of these structures with existential clauses introducing new participants into the discourse but do not provide an explicit analysis of them as sentence focus structures.

References

- Auer, Peter. 1996. On the Prosody and Syntax of Turn-continuations. In Elizabeth Couper-Kuhlen & Margaret Selting (eds.), *Prosody in conversation: Interactional studies*. 57–100. Cambridge: Cambridge University Press.
- Austin, Peter. 1981. *A grammar of Diyari, South Australia*. Cambridge: Cambridge University Press.
- Austin, Peter. 2001. Word order in a free word order language: the case of Jiwari. In Jane Simpson, Mary Laughren, Peter Austin, Barry Alpher & David Nash (eds.) *Forty Years on: Ken Hale and Australian Languages*. 305–324. Canberra: Pacific Linguistics.
- Austin, Peter & Joan Bresnan. 1996. Non-Configurationality in Australian Aboriginal Languages. *Natural Language and Linguistic Theory* 14. 215–268.
- Averintseva-Klisch, Maria. 2008a. To the Right of the Clause: Right Dislocation vs. Afterthought. In Cathrine Fabricius-Hansen & Wiebke Ramm (eds.) *'Subordination' versus 'Coordination' in Sentence and Text – from a Cross-Linguistic Perspective*. 217–239. Amsterdam: Benjamins.
- Averintseva-Klisch, Maria. 2008b. *Rechte Satzperipherie im Diskurs: Die NP-Rechtsversetzung im Deutschen*. Tübingen: Universität Tübingen PhD dissertation.
- Baker, Mark. 2001. The Natures of Nonconfigurationality. In Mark Baltin & Chris Collins (eds.) *The Handbook of Contemporary Syntactic Theory*. 407–438. Malden, MA: Blackwell.
- Behaghel, Otto, 1932. *Deutsche Syntax: eine geschichtliche Darstellung*. Vol IV: Wortstellung-Periodenbau. Heidelberg: Carl Winter.
- Bender, Emily M. 2008. Radical Non-Configurationality without Shuffle Operators. *Proceedings of the HPSG08 Conference*, Keihanna, Japan, 2008. <http://www.essex.ac.uk/linguistics/external/hpsg/Conferences/hpsg-2008/abs/bender.pdf>. [Accessed 2 December 2011].
- Birner, Betty J. & Gregory Ward. 1998. *Information Status and Non-Canonical Word Order in English*. Amsterdam: John Benjamins.
- Blake, Barry J. 1987. *Australian Aboriginal Grammar*. London: Croom Helm.
- Bošković, Željko. 2005. On the locality of left branch extraction and the structure of

- NP. *Studia Linguistica* 59. 1–45.
- Bošković, Željko. 2008. What will you have, DP or NP? *Proceedings of the 37th Annual Meeting of the North-East Linguistic Society (NELS), Volume 1*. 101–114.
- Bošković, Željko. 2009. More on the no-DP analysis of article-less languages. *Studia Linguistica* 63. 187–203.
- Bowe, Heather J. 1990. *Categories, constituents and constituent order in Pitjantjatjara: an aboriginal language of Australia*. London.
- Breul, Carsten 2004. *Focus Structure in Generative Grammar. An integrated syntactic, semantic and intonational approach*. Amsterdam: John Benjamins.
- Chafe, Wallace. 1976. Givenness, contrastiveness, definiteness, subjects, topics and point of view. In Charles N. Li (ed.) *Subject and Topic*. 27–55. New York: Academic Press.
- Chafe, Wallace. 1994. *Discourse, consciousness, and time. The flow and displacement of conscious experience in speaking and writing*. Chicago/London: The University of Chicago Press.
- Croft, William. 2001. *Radical Construction Grammar. Syntactic Theory in Typological Perspective*. Oxford: Oxford University Press.
- Dahlstrom, Amy. 1987. Discontinuous Constituents in Fox. In Paul Kroeber & Robert E. Moore (eds.) *Native American Languages and Grammatical Typology*. 53–73. Bloomington: Indiana University Linguistics Club.
- De Kuthy, Kordula. 2002. *Discontinuous NPs in German. A Case Study of the Interaction of Syntax, Semantics, and Pragmatics*. Stanford: CSLI Publications.
- Dench, Alan & Nicholas Evans. 1988. Multiple case-marking in Australian languages. *Australian Journal of Linguistics* (8). 1–47.
- Dench, Alan C. 1991. Panyjima. In R. M. W Dixon & Barry J. Blake (eds.) *Handbook of Australian languages, Volume 4*. 125–243. Melbourne: Oxford University Press Australia.
- Dixon, R.M.W. 1980. *The Languages of Australia*. Cambridge: Cambridge University Press.
- Dixon, R. M. W. 2001. The Australian linguistic area. In Alexandra Y. Aikhenvald & R. M. W. Dixon (eds.) *Areal Diffusion and Genetic inheritance. Problems in comparative linguistics*. 64–104. Oxford: Oxford University Press.
- Donohue, Mark. 2011. Case and configurationality: scrambling or mapping? *Morphology* 21. 499–513.

- Drubig, Hans Bernhard & Wolfram Schaffar. 2001. Focus Constructions. In Martin Haspelmath, Ekkehard König, Wulf Oesterreicher & Wolfgang Raible (eds.), *Language Typology and Language Universals: An International Handbook*, Vol. 2. 1079–1104. Berlin: Walter de Gruyter.
- Evans, Nicholas D. 1995. *A grammar of Kayardild with historical-comparative notes on Tangkic*. Berlin: Mouton de Gruyter.
- Fanselow, Gisbert. 1988. Aufspaltung von NPn und das Problem der "freien" Wortstellung. *Linguistische Berichte* 114. 91–113.
- Fanselow, Gisbert. 2008. In need of mediation: the relation between syntax and information structure. *Acta Linguistica Hungarica* 55. 1–17.
- Fanselow, Gisbert & Damir Čavar. 2002. Distributed Deletion. In Artemis Alexiadou (ed.) *Theoretical Approaches to Universals*. 65–109. Amsterdam: Benjamins.
- Fanselow, Gisbert & Caroline Féry. 2006. Prosodic and Morphosyntactic Aspects of Discontinuous Noun Phrases – a Comparative Perspective. Unpublished Manuscript. Potsdam: University of Potsdam. http://web.uni-frankfurt.de/fb10/fery/publications/Prosodic_and_morphosyntactic_aspects_of_discontinuous_NPs.pdf. [Accessed 24 August 2010]
- Fanselow, Gisbert & Denisa Lenertová. 2010. Left peripheral focus: mismatches between syntax and information structure. *Natural Language and Linguistic Theory* 29. 169–209.
- Givón, Talmy 2001. *Syntax. Volume I*. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Guéron, Jacqueline. 1980. On the syntax and semantics of PP extraposition. *Linguistic Inquiry* 11: 636–678.
- Hale, Kenneth. 1981a. Preliminary remarks on the grammar of part-whole relations in Warlpiri. In Jim Hollyman & Andrew Pawley (eds.) *Studies in Pacific languages and cultures. In honour of Bruce Biggs*. 333–344. Auckland: Linguistics Society of New Zealand.
- Hale, Kenneth. 1981b. On the position of Walbiri in a typology of the base. Bloomington: Indiana University Linguistics Club.
- Hale, Kenneth. 1983. Warlpiri and the Grammar of Non-Configurational Languages. *Natural Language and Linguistic Theory* 1. 5–47.
- Hale, Kenneth. 1994. Core structures and adjunctions in Warlpiri syntax. In Norbert Corver & Henk Van Riemsdijk (eds.) *Studies in Scrambling. Movement and Non-*

- Movement Approaches to Free Word-Order Phenomena*. 185–219. Berlin: Mouton de Gruyter.
- Harvey, Mark. 1996. Body parts in Warray. In Hilary Chappell & William B. McGregor (eds.) *The grammar of inalienability. A typological perspective on body part terms and the part-whole relation*. 111–153. Berlin: Mouton de Gruyter.
- Harvey, Mark. 2008. *Proto Mirndi. A discontinuous language family in northern Australia*. Canberra: Pacific Linguistics.
- Himmelmann, Nikolaus P. 1997. *Deiktikon, Artikel, Nominalphrase. Zur Emergenz syntaktischer Struktur*. Tübingen: Niemeyer.
- Jelinek, Eloise. 1984. Empty categories, case, and configurationality. *Natural Language and Linguistic Theory* 2. 39–76.
- Kazenin, Konstantin. 2009. Discontinuous nominals, linear order, and morphological complexity in languages of the North Caucasus. *Linguistic Typology* 13(3). 391–415.
- Krifka, Manfred. 2007. Basic Notions of Information Structure. In Caroline Féry, Gisbert Fanselow & Manfred Krifka (eds.) *Working Papers of the SFB 632, Interdisciplinary Studies on Information Structure (ISIS) 6*. 13–56. Potsdam: Universitätsverlag Potsdam.
- Lambrecht, Knud. 1994. *Information structure and sentence form. Topic, focus and the mental representations of discourse referents*. Cambridge: Cambridge University Press.
- Lambrecht, Knud. 2000. When subjects behave like objects: an analysis of the merging of S and O in sentence-focus constructions across languages. *Studies in Language* 24(3). 611–682.
- Lambrecht, Knud. 2004. On the interaction of information structure and formal structure in constructions: The case of French right-detached *comme-N*. In Mirjam Fried & Jan-Ola Östman (eds.), *Construction Grammar in a Cross-Language Perspective*. 157–199. Amsterdam: John Benjamins.
- Langacker, Ronald W. 1997. Constituency, dependency, and conceptual grouping. *Cognitive Linguistics* 8. 1–32.
- Laughren, Mary. 1989. The configurationality parameter and Warlpiri. In Laszlo K. Maracz & Peter Muysken (eds.) *Configurationality: The typology of asymmetries*. 319–353. Dordrecht: Foris Publications.

- Laughren, Mary. 1984. Some focus strategies in Warlpiri. Paper presented at the Annual meeting of the Australian Linguistics Society, Alice Springs, 1984.
- Ledgeway, Adam. 2010. Syntactic and morphosyntactic typology and change in Latin and Romance. In Adam Ledgeway, Martin Maiden & John Charles Smith (eds.) *The Cambridge history of the Romance languages*. 382–471. Cambridge: Cambridge University Press.
- Legate, Julie Anne. 2002. *Warlpiri: Theoretical Implications*. Boston, MA: Massachusetts Institute of Technology PhD dissertation.
- Mayer, Mercer. 1994 [1969]. *Frog, where are you?* New York: Dial Books for Young Readers.
- McGregor, William B. 1985. Body parts in Kuniyanti clause grammar. *Australian Journal of Linguistics* 5. 209–232.
- McGregor, William B. 1992. The noun phrase in some Australian languages a reply to Mark Harvey. *Australian Journal of Linguistics* 12. 315–319.
- McGregor, William B. 1996a. *Nyulnyul*. München: Lincom Europa.
- McGregor, William B. 1996b. The grammar of nominal prefixing in Nyulnyul. In Hilary Chappell & William McGregor (eds.), *The grammar of inalienability. A typological perspective on body part terms and the part-whole relation*, 251–292. Berlin: Mouton de Gruyter.
- McGregor, William B. 1997. Functions of noun phrase discontinuity in Gooniyandi. *Functions of Language* 4. 83–114.
- McGregor, William B. 1999. External Possession Constructions in Nyulnyulan Languages. In Doris L. Payne & Immanuel Barshi (eds.), 429–448. Amsterdam: Benjamins.
- McGregor, William B. 2002. *Verb classification in Australian languages*. Berlin: Mouton de Gruyter.
- Merlan, Francesca C. 1994. *A Grammar of Wardaman. A language of the Northern Territory of Australia*. Berlin: Mouton de Gruyter.
- Michaelis, Laura A. & Knud Lambrecht. 1996. Toward a construction-based theory of language function: the case of nominal extraposition. *Language* 72. 215–247.
- Nash, David. 1986. *Topics in Warlpiri grammar*. New York: Garland.
- Nolda, Andreas. 2008. Topic integration: Syntax and semantics of German ‘split topicalization’. In R. Sackmann (ed.) *Explorations in Integrational Linguistics: Four Essays on German, French, and Guarani*. 191–220. Amsterdam: John

- Benjamins.
- Nordlinger, Rachel. 1998. *Constructive Case. Evidence from Australian Languages*. Stanford: CSLI Publications.
- Pensalfini, Rob. 2004. Towards a Typology of Configurationality. *Natural Language and Linguistic Theory* 22. 359–408.
- Reinholtz, Charlotte. 1999. On the characterization of discontinuous constituents: Evidence from Swampy Cree. *International Journal of American Linguistics* 65(2). 201–227.
- Rijkhoff, Jan. 2002. *The Noun Phrase*. Oxford: Oxford University Press.
- Rooth, Mats. 1985. *Association with focus*. Amherst: University of Massachusetts PhD dissertation.
- Rooth, Mats. 1992. A theory of focus interpretation. *Natural Language Semantics* 1. 75–116.
- Rumsey, Alan. 2000. Bunuba. In R.M.W. Dixon & Barry Blake (eds.) *The Handbook of Australian Languages Volume 5: Grammatical Sketches of Bunuba, Ndjebbana and Kukgu Nganhcara*. 34–152. Oxford: Oxford University Press.
- Sasse, Hans-Jürgen. 1987. The thematic/categorical distinction revisited. *Linguistics* 25. 511–580.
- Sasse, Hans-Jürgen. 1995. “Thematicity” and VS order: a case study. *Sprachtypologie und Universalienforschung (STUF)* 53(1). 3–31.
- Sasse, Hans-Jürgen. 2006. Thematicity. In G Bernini & M Schwarz (eds.) *Pragmatic Organization of Discourse in the Languages of Europe*. 255–308. Berlin: Mouton de Gruyter.
- Schultze-Berndt, Eva. 2000. *Simple and complex verbs in Jaminjung: A study of event categorisation in an Australian language*. Nijmegen (NL): University of Nijmegen PhD dissertation.
- Schultze-Berndt, Eva. 2003. Preverbs as an open word class in Northern Australian languages: synchronic and diachronic correlates. In Geert Booij & Jaap van Marle (eds.) *Yearbook of Morphology 2003*. 145–177. Dordrecht: Kluwer.
- Schultze-Berndt, Eva. 2006. Secondary Predicates in Australian Languages. In Martin Everaert & Henk van Riemsdijk (eds.) *The Blackwell Companion to Syntax*. 180–208. Malden, MA: Blackwell.
- Schultze-Berndt, Eva. 2007. Recent grammatical borrowing into an Australian Aboriginal language: The case of Jaminjung and Kriol. In Yaron Matras &

- Jeanette Sakel (eds.) *Grammatical borrowing in cross-linguistic perspective*. 363–386. Berlin: Mouton de Gruyter.
- Schultze-Berndt, Eva. 2008. Discontinuous noun phrases as an iconic strategy of markingthetic clauses. Paper presented at the International conference on Syntax of the World's Languages III, Berlin, 27–29 Sept. 2008.
- Schultze-Berndt, Eva. in prep. When subjects frame the clause: Discontinuous noun phrases as an iconic strategy of markingtheticity. Ms., University of Manchester.
- Schultze-Berndt, Eva & Nikolaus P. Himmelmann. 2004. Depictive secondary predicates in crosslinguistic perspective. *Linguistic Typology* 8(1). 59–131.
- Selkirk, Elisabeth O. 2003. Sentence Phonology. In William Frawley & William Bright (eds.) *International Encyclopedia of Linguistics (2nd edition)*. Oxford: Oxford University Press.
- Siewierska, Anna. 1984. Phrasal discontinuity in Polish. *Australian Journal of Linguistics* 4. 57-71.
- Siewierska, Anna & Ludmila Uhlířová. 1998. An overview of word order in the Slavic languages. In Anna Siewierska (ed.) *Constituent order in the languages of Europe*. 105–149. Berlin: Mouton de Gruyter.
- Simard, Candide. 2010. *The Prosodic Contours of Jaminjung, a language of Northern Australia*. Manchester: University of Manchester PhD dissertation.
- Simpson, Jane. 1991. *Warlpiri Morphosyntax. A lexicalist approach*. Dordrecht: Kluwer.
- Simpson, Jane. 2007. Expressing pragmatic constraints on word order in Warlpiri. In Annie Zaenen, Jane Simpson, Tracy Holloway King, Jane Grimshaw, Joan Maling & Christopher Manning (eds.) *Architecture, rules and preferences: Variations on themes by Joan W. Bresnan*. 403–427. Stanford, CA: CSLI Publications.
- Speas, Margaret J. 1990. The Structure of Warlpiri. *Natural Language and Linguistic Theory* 21. 159–172.
- Szendrői, Kriszta. 2010. A flexible approach to discourse-related word order variations in the DP. *Lingua* 120. 864–878.
- Van Hoof, Hanneke. 2006. Chapter 62: Split Topicalization. In Martin Everaert & Henk van Riemsdijk (eds.) *The Blackwell Companion to Syntax*. 408-462. Malden, MA: Blackwell.

- Vincent, Nigel. 1997. The emergence of the D-system in Romance. In Ans van Kemenade & Nigel Vincent (eds.) *Parameters of Morphosyntactic Change*. 149–169. Cambridge: Cambridge University Press.
- Wang, Bei. 2005. Prosodic realization of split noun phrases in Mandarin Chinese compared in topic and focus contexts. Proceedings of *INTERSPEECH-2005*. Lisbon. 1389–1392.
- Wichmann, Ann. 2000. *Intonation in Text and Discourse*. London: Pearson Education.
- Wightman, C. W., S. Shattuck-Hufnagel, M. Ostendorf & P. J. Price. 1992. Segmental durations in the vicinity of prosodic phrase boundaries. *Journal of the Acoustic Society of America* 91(3). 1707–1717.
- Xu, Yi. 2005. Speech Melody as Articulatorily Implemented Communicative Functions. *Speech Communication* 46. 220–251.