

NP Coordination in Australian languages
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1 Introduction - Defining Coordination

Wasow's Generalization: An element in construction with a coordinate constituent must be syntactically construable with each conjunct

Haspelmath's Definition: the term *coordination* refers to syntactic constructions in which two or more units of the same type are combined into a larger unit and still have the same semantic relations with other surrounding elements (Haspelmath 2004:34)

Dik: A coordination is a construction consisting of two or more members which are equivalent as to grammatical function, and bound together at the same level of structural hierarchy by means of a linking device (Dik 1968:25)

Increasing amount of work on coordination in the typological and theoretical literature in recent years but little of it has focussed on Australian languages (e.g. Stassen 2000, Haspelmath (ed) 2004, Haspelmath (to appear), Dalrymple and Kaplan 2000, Johannessen 1998, Sadler 2003, King and Dalrymple 2004, Peterson 2004, etc.). Stassen (2000) includes some Australian language data in his sample, but Haspelmath (ed) (2004) contains no paper on Australian languages (except for some limited discussion of Nunggubuyu in Heath's contribution).

Our aim is to examine (NP) coordination in Australian languages with the following general questions in mind:

- (i) How is coordination to be defined appropriate for the AAL data?;
- (ii) how do we decide which of the data from these languages is to be taken as coordinate?;
- (iii) conversely, what light does data from Australian languages cast on the nature of / definition of what constitutes coordination cross-linguistically?

2 What counts as Coordination

So we need to decide what constitutes coordination for these Australian languages. In some languages there is a specific construction type for coordination so identification is straightforward in these cases.

- (1) *Kanku ya mankada-li wima wangka-yi.*
 boy and girl-ERG song-ABS sing-PRES
 ‘The boys and girls are singing a song.’ (Diyari, Austin 1981: 231)
- (2) *Kuwarri kurrngal ngalyun-pa pirirri-pa partany-karrangu-pa.*
 now many woman-CONJ man-CONJ child-PL-CONJ
 ‘Now there is a big mob of women, men and children.’ (Nyangumarta, Sharp 2004: 156, (4.163))

However, it is well-known that the large majority of Australian languages use simple juxtaposition to encode coordination. These constructions raise some issues for the nature of coordination since they are syntactically similar to a wide variety of other construction types common in Australian languages, all of which also appear to involve juxtaposition of NP elements in the same grammatical function.

- **‘coordination’**

- (3) *niya kurrka-tha barruntha-ya wuran-ki nguku-y.*
 heNOM take-ACT yesterday-LOC food-MLOC water-MLOC
 ‘Yesterday he took (with him) food and water.’ (Kayardild, Evans 1995: 250)

- **‘generic-specific’**

- (4) *dathin-a dangka-a niya wumburung-kuru raa-ja*
 that-NOM man-NOM 3SG.NOM spear-PROP spear-ACT
wanku-ya kulkiji-y.
 elasmobranch-MLOC shark-MLOC
 ‘That man speared a shark with a spear.’ (Kayardild, ibid: 244)

- **‘part-whole’**

- (5) *kawuka jardiyali*
 bundle fighting.stick
 ‘a bundle of fighting sticks’ (Kayardild, ibid: 249)

- **‘inclusory construction’** – see Singer (2001, 2005)

- (6) *nga-rr-a kajakaja warra-ja thaa-th.*
 1-DU-NOM daddyNOM go-ACT return-ACT
 ‘Daddy and I will go’ (lit. ‘we two, including daddy, will go’) (Kayardild, ibid: 249)

- ‘N-N apposition’

- (7) *Garidi-ni bungmanyi-ni gin-amany yanybi.*
 husband.I-ERG old.man.I-ERG 3SG.M.A-P.TWD get
 ‘(Her) old man husband came and got (her).’ (Wambaya, Nordlinger 1998: 133)

- ‘coordination + apposition with pronoun’

- (8) *dathin-a maku-wa bithiin-da bi-l-da warra-j.*
 that-NOM woman-NOM man-NOM 3-PL-NOM go-ACT
 ‘Those men and women are going.’ (Kayardild, ibid: 249)

Clearly these juxtaposition constructions are all associated with distinct semantics – but syntactically, they are all completely consistent with the general definitions of coordination given in section 1 above (except for Dik’s which seems to require an overt coordinator).

To take a concrete theory, in LFG coordinate structures are represented as a set at f-structure as shown schematically below.

$$(9) \left[\text{OBJ} \left\{ \begin{array}{l} \left[\begin{array}{ll} \text{PRED} & \text{'FOOD'} \end{array} \right] \\ \text{NUM} & \text{SG} \\ \text{PERS} & 3 \end{array} \right\} \left\{ \begin{array}{l} \left[\begin{array}{ll} \text{PRED} & \text{'WATER'} \end{array} \right] \\ \text{NUM} & \text{SG} \\ \text{PERS} & 3 \end{array} \right\} \right]$$

Would this be a suitable syntactic representation for all these different types of juxtaposition?

Yes, but agreement features will differ.

- (10) *Pala-nga ngatu jarri-nya-pinti-ngi, mima-nikinyi-yi puluku,*
 that-LOC stationary INCH-NM-ASS-LOC wait.for-IMP-3PL.SUB 3DU.DAT
kujarra kangkuru-jirri waraja yalapara.
 two kangaroo-DU one goanna.
 ‘And there, on the finishing line, the two kangaroos and one goanna waited for those two.’ (Nyangumarta:Sharp 2004: 315, (9.61))

(11) **coordination**

$$\left[\begin{array}{l} \text{PERS } 3 \\ \text{NUM } \text{PL} \\ \left\{ \begin{array}{l} \left[\text{PRED } \text{'GOANNA'} \right] \\ \text{NUM } \text{SG} \\ \left[\text{PERS } 3 \right] \end{array} \right\} \\ \left\{ \begin{array}{l} \left[\text{PRED } \text{'KANGAROO'} \right] \\ \text{NUM } \text{DUAL} \\ \left[\text{PERS } 3 \right] \end{array} \right\} \end{array} \right]$$

(12) **apposition**

$$\left[\begin{array}{l} \text{PERS } 3 \\ \text{NUM } \text{SG} \\ \left\{ \begin{array}{l} \left[\text{PRED } \text{'HUSBAND'} \right] \\ \text{NUM } \text{SG} \\ \left[\text{PERS } 3 \right] \end{array} \right\} \\ \left\{ \begin{array}{l} \left[\text{PRED } \text{'OLD.MAN'} \right] \\ \text{NUM } \text{SG} \\ \left[\text{PERS } 3 \right] \end{array} \right\} \end{array} \right]$$

(13) **inclusory**

$$\left[\begin{array}{l} \text{INDEX } \left[\begin{array}{l} \text{PERS } 1 \\ \text{NUM } \text{DUAL} \end{array} \right] \\ \left\{ \begin{array}{l} \left[\text{PRED } \text{'DADDY'} \right] \\ \text{INDEX } \left[\begin{array}{l} \text{NUM } \text{SG} \\ \text{PERS } 3 \end{array} \right] \end{array} \right\} \\ \left\{ \begin{array}{l} \left[\text{PRED } \text{'PRO'} \right] \\ \text{INDEX } \left[\begin{array}{l} \text{NUM } \text{DUAL} \\ \text{PERS } 1 \end{array} \right] \end{array} \right\} \end{array} \right]$$

Note that in the case of the inclusory (with the pronominal argument overt), the features of the set overall are identical to the features of one member of the set.

In the case of “true” coordination, other syntactic processes/elements target the set of resolved features, whereas in the case of juxtapositions and inclusories, these processes do not target the resolved features.

Summary:

The data from these languages raise the possibility that the structural properties commonly associated with coordination could hold for other types of constructions as well - the only distinguishing syntactic property of coordination would then be feature resolution. Further research may provide evidence of distinguishing properties for some or all of these languages.

3 Symmetry and Parallelism

Definitions of coordination generally refer to some form of syntactic parallelism (as above) - this is captured in the use of sets. Requiring parallelism at just the right level of granularity is a known issue — languages often have coordinate structures which shown parallelism failures of various degrees and definitions need to be flexible enough to accomodate them (and the set notation generally is). This poses the question of whether constituency a necessary condition for viewing something as a coordination. Typical cases of asymmetry include:

- Case mismatches in which only one conjunct satisfies a morphosyntactic requirement placed by an external element (governor)

(14) *Han og meg var sammen om det*
he.NOM and me.ACC were together about it
He and I were in it together (Norwegian, Berntsen and Larsen 1925: 268 cited by Johannessen)

- Single Conjunct Agreement

(15) *'Roeddit ti a'th gi yn cael eich gweld.*
were-2SG you and-2SG dog PT get 2PL see
You and your dog were seen. (Welsh, Sadler 2003)

What sorts of asymmetry do we find in Australian languages?

3.1 Focus Particle on one conjunct

The Wardaman nominal suffix *-warrma* marks the focal member of a pair, generally found with proper names.

(16) *wunggunburr-wo-ndi julay-warrma juni*
3NSG/3NSG-give-PAST July-FC Junie
They gave it to July and Junie (Wardaman, Merlan: 89 (124))

3.2 Case Mismatch

- (17) *Jimmy-nthurr Johnny-n pul ngerngkan thanp-rr-r pul.*
Jimmy-ERG Johnny-DAT 3DU.ERG yesterday kick-RCP-PST 3DU.ERG
'Jimmy and Johnny kicked each other yesterday' (Kuuk Thaayorre, Hall 1972:244, cited in Gaby 2005:3)
- (18) *nga-thu maltha jaramana nga-ci-ka uthantiji maltha ulhi wanhaka-thu*
I-ERG many horse me-DAT- \emptyset own many die sun-ERG
kathirr-iti.
grass-PRIV
'I had a lot of horses but they died with the sun and lack of grass.'
(Kalkatungu, Blake 1979:154)

3.3 Difference in Function

Definitions usually assume that coordination entails that the conjuncts fulfill the same function. But in Tiwi "It is quite common for nominals which function as subject and object respectively to be coordinated" (Osborne: 72)¹

- (19) *ji-pungipa ngarr uwani kayi pithara, purrukuparli*
3SGMASC.SUBJ.PST-hit 3SGMASC? brother in eye Purrukuparli
thaparra
Thapara
He hit his brother in the eye, Purrukuparli and Thapara (Tiwi: Osborne 1974: 72)

3.4 Discontinuous coordination

One of the strongest syntactic constraints in the literature on coordination is Ross's (1967) Coordinate Structure Constraint, which bans the movement of any word or phrase out of a coordinate structure. However, we find plenty of examples of apparently discontinuous coordinate structures in Australian languages.

The majority of the examples we have found so far involve the occurrence of one coordinand (or more?) at the end of the clause – extraposition of a single conjunct is a possibility that Haspelmath (2004) reports as being relatively common cross-linguistically. The following are representative.

¹Example provided unglossed in the source.

- (20) ... *kun-kerri ma-ngi kun-yerrng*
 ... IV-cooking.stone 3/3P.get-PI IV-wood
 ‘... he got cooking stones, and firewood.’ (Bininj Gun-Wok, Evans 2003: 248, (6.64))
- (21) *Ma-wurndan? balaka nyarrma-ga-ma-ngi, ma-berge?-bula*
 VEG-black.plum first we.got.it VEG-green.plum-AND
 ‘We got black plums and green plums.’ (Ngandi, Heath 1978: 128)
- (22) *Kintja-(ng)ku=yana intji-mi-ngi-yu ntiya-(ng)ku tjipa-yi*
 female-ERG=and pelt-FUT-me-they.DU stone-ERG this-ERG
kurlayingu-thu.
 male-ERG
 ‘The girl and boy will both pelt me with stones.’ (Kalkatungu, Blake 2001: 423, (17))
- (23) *Nungka bene-dangwe-rr-inj dird.*
 he 3UAP-argue-RR-PP moon
 He had an argument with the moon (Bininj Gun-wok, Evans 2003: 442 (10.207))

In these cases, there is reason to believe these are not further thoughts (e.g. dual number on the verb in (22) and control of a reciprocal in (23)).

In Kugu Nganhcara NP coordination is expressed “by simply including both NPs in the sentence (they need not be together) along with the appropriate pronoun for the conjoined NP. This pronoun is optionally repeated before each constituent (non-pronominal) NP of the conjunction” (Smith and Johnson 2000: 434).

- (24) *ngaya nga'a-wu pama kunhji nhingurum ngana uwa*
 1SG.NOM fish-DAT man brother 3SG.ABL 1DUEXC.NOM go
 His brother and I are going for fish/ I'm going fishing with his brother (Kugu Nganhcara, Smith and Johnson: 434 (169))
- (25) *nga'a nhangki nganhca wambambanga-nhum.*
 fish game 1PLEXC.NOM stalk.REDUP-HIST
 We used to stalk fish and game (Kugu Nganhcara, Smith and Johnson: 444 (222))

3.5 Wordhood and Coordination

There are some structures which resemble word-internal coordination. In Nyangumarta 2 nominals may form a complex filler of the entity (head) slot within a NP:

NP internal case concord is found in this language but “complex fillers” exhibit only case marking on the final part of the head. Note that the nominal in (26) controls dual agreement on the verb.

- (26) *Pipi-japartu-lu partany kalku-rnikinyi pulu.*
mother-father-ERG child keep-IMPF 3DU.SUB
The mother and the father (the parents) looked after the child (Sharp: 312 (9.50))

Compare the general-specific example in (27) with the compound in (26)

- (27) *Mima-nikinyi-a yi-nganya-ku kuyi-ku kartantarri-ku*
wait.for-IMPF-PURP give-NM-DAT meat-DAT duck-DAT
He (the father) waited for (them) to give him duck meat. (Sharp: 311 (9.46))

One question is whether this is restricted to ‘natural’ coordinations, that is, those in which there is a salient relation between the entities denoted by the conjuncts, which form a conceptual unit or are closely related in meaning. It is sometimes the case that there are distinct strategies for natural and accidental coordination ((Wälchli 2003, Dalrymple and Nikolaeva 2005). Some Australian languages do report differences between natural and accidental coordination (Diyari (Austin 1981), Bininj Gun-wok (Evans 2003)).²

The apparent possibility of word-internal coordination raises interesting representational issues concerning how their syntactic representation is to be related to that of other coordinate structures.

Further challenging cases involve the interaction of coordination with noun incorporation. It appears possible for incorporated nominals to be conjoined with V-external nominal arguments, as noted in Evans (2003).

- (28) *Oo gunak gare yi-yerrng-ma-ng, gun-boi.*
oh fire perhaps 2-wood-get-NP IV-cooking.stone
Well maybe you should get some firewood and cooking stones (Bininj Gun-wok, Evans 2003: 453 (10.253))

The interaction of incorporation with coordination provides another type of challenge to parallelism in coordination:

²Stassen (2000:8) observes that where a language has available both juxtaposition and overt coordinators as strategies, the juxtaposition strategy is often used in more restricted functions, such as natural coordination - Evans (2003) reports the opposite for Bininj Gun-wok.

- (29) *Bene-dalk-mey man-dalk-buk dja kun-dulk, bene-worrhme-ng*
3UAP-grass-getPP VE-grass-dry and IV-stick 3UAP-makie.fire-PP
bene-kinje-ng na-wu wirlarrk.
3UAP-cook-PP MA-DEM goose.egg
Gathering dry grasses and sticks, they made a fire to roast the eggs (ibid.
(10.257)

4 Conclusion

Australian languages raise some potentially interesting issues for the syntactic analysis of NP coordination. These include:

- the possibility that syntactically coordinate structures may map to a range of distinct semantic constructions. A related question here is whether there are other syntactic processes or properties serving to distinguish between various juxtaposed constructions, and what they might be.
- challenges to parallelism/symmetry, and in particular the possibility of discontinuous coordination and the interaction of coordination with Noun Incorporation

Further research is needed to provide sufficient data to investigate these issues in greater detail, and to explore the properties of other types of coordination in Australian languages (e.g. clausal coordination and disjunction).

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