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An Interesting Couple:
The Semantic Development of Dyad Morphemes

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An interesting couple: the semantic development of dyad morphemes

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0. Introduction

In this paper I examine the patterns of polysemy, and likely diachronic sources, for what (following the Australianist tradition) will be called ‘dyad’ morphemes. These take kin terms like ‘uncle’ or ‘mother’ and derive pair terms of the type ‘uncle and nephew’, ‘mother and child’. In the Australian language Kayardild, for example (Evans 1995), the dyad suffix *-ngarrba* can apply to *kakuju* ‘uncle’¹ to give *kakuju-ngarrba* ‘(be) uncle and nephew’, or to *ngamathu* ‘mother’ to give *ngamathu-ngarrba* ‘(be) mother and child’. This is distinctive from the dual suffix *-yarrngka*, which gives the meaning ‘two of (e.g. the same kin type)’, e.g. *kakuju-yarrngka* ‘two uncles (of the same person)’, e.g. *ngijinda kakuju-yarrngka* ‘my two uncles’. As the bracketed copula in the English translation indicates, dyads may typically be used equally well, syntactically, as predicates (e.g. ‘X and Y *are mother and child*’) or as the directly corresponding argument expressions (‘*Two who are mother and child* are walking along.’).

Semantically, dyad morphemes function like reciprocals applied to kinship terms (with further conversion to argumental use where appropriate). When applied to self-reciprocal or *symmetric*² terms, such as ‘opposite sex sibling’ (the root for which is *kularrin-* in Kayardild), they give true reciprocal expressions: a gloss for the dyad term *kularrin-ngarrba* might be ‘two who call each other “opposite sex sibling”’, or ‘two who are opposite-sex siblings to each other’. However, when applied to terms that are *asymmetric*, i.e. not self-reciprocal, such as Kayardild *ngamathu* ‘mother’, the resultant term cannot be translated with a strict reciprocal expression: *ngamathu-ngarrba* cannot be translated³ as ‘two who call each other *ngamathu* (mother)’, since only one of the two (the younger one) calls the other

ngamathu: the mother herself will call her child *kardu* '(woman's) child'.⁴ To cover these cases we need to formulate our definition of the dyad meaning as follows:

From a kin [or other human relational] term K, a dyad morpheme D derives a new term K-D, with the meaning '[be] two (people), one of whom calls⁵ the other K' or '[be] two (people), such that one is K to the other'.

Most systematic discussion of dyad morphemes has focussed on Australian languages, owing to a combination of their relative prevalence there, and the development of a descriptive tradition that investigates them in some depth. In the course of researching this paper, however, I became aware of functionally and semantically similar morphemes in many other parts of the world, almost invariably described in isolation from any typological reference point. I have incorporated such data as far as I am aware of it, in the hope that a systematic study will encourage other investigators to identify, and investigate in detail, similar constructions in a range of languages. The current state of our research, however, as well as some interesting geographical skewings that I discuss below, such that outside Australia dyad constructions almost exclusively employ reciprocal morphology, means that most of this paper will focus on Australian languages.

To our knowledge the first discussion of the term 'dyadic' in the sense used here (which I shorten to 'dyad') was given by Merlan & Heath (1982), though other Australianist scholars had discussed the same or related phenomena under other names, such as 'kinship proprietives' (e.g. Breen 1976, Blake 1979), 'kinship duals' (Dixon 1972:234-5), 'reciprocal plurals' (Donaldson 1980:104-5), 'collective nouns' (Hercus & White 1973) and 'kinship pairs' (Hercus 1982). In the non-Australianist literature, they have been invariably treated as special cases of reciprocals as applied to kinship nominals – see the examples to be discussed below. Here is Merlan & Heath's definition:

[B]y *dyadic* term we have in mind an expression of the type '(pair of) brothers' or 'father and child', in which the kinship relationship is between the two referents internal to the kin expression. A *plural dyadic* would be of the type '(three or more) brothers' or 'father(s) and children' in which there are at least three designated referents but in which there are no additional complications in the kinship relationship specified in the corresponding dyadic term.' (Merlan & Heath 1982:107)

In this paper I will focus on their first type, which is semantically the most straightforward and is the best attested cross-linguistically. For fuller discussion of more complicated types, see Merlan & Heath's article, and also McGregor (1996) which contains a detailed examination of the many subtypes found in a single language, Gooniyandi, including such elaborations as 'multicentric ternary polyadic kin terms' like *manggan.goomanggan.goolangi* 'group of mothers-in-law and fathers-in-law of various proposituses', 'concentric binary polyadic kin terms' like *gandiyangilangigalangi* 'a man and all his [classificatory] "wife's brothers"', and terms which stipulate the relations of the two referents within the dyad to the speaker or hearer, e.g. *woordoolangi* 'husband / wife pair, such that the man is the (male speaker's) brother, and the woman is his sister-in-law'.

Notes to Introduction.

¹ More precisely, 'maternal uncle', 'paternal uncle' being rendered by *kanthathu*, which also means 'father'. To avoid overloading the reader, kin identifications will only be given at the level of precision needed for the argument of the chapter.

² To render the terminology less cumbersome, throughout this chapter we will use 'symmetric' of kin terms that are self-reciprocal, and 'asymmetric' of kin terms that are non-self-reciprocal.

³ Wolfgang Schultz (p.c.) has suggested it would be possible to get around this by regarding the kin terms as being polysemous between a more specific asymmetric meaning, e.g. uncle, and a more general symmetric one, e.g. uncle and recip. Certainly Australian languages have many more symmetric terms than European languages, for example, so that this proposal is not inherently implausible. However, it would be circular if one only adopted it for dyad uses – in our view, one would want independent evidence for the more general symmetric meaning, outside the dyad construction itself. We shall also see (§3.1) that there are dyad systems that are sensitive to the symmetric/asymmetric distinction, either through restrictions on applicability of the dyad suffix, or the availability of symmetry-sensitive variants; it would be hard to formulate the relevant conditioning factors if one assumes that all terms are potentially symmetric.

⁴ Though we return below to the question of whether a looser formulation of reciprocal semantics, to cover 'asymmetric reciprocity', will allow us save the intuition about reciprocity still holding in some form in these examples.

⁵ This formulation – in this form due originally to Morphy (1983:45) - builds on the insight that calling someone by a kin term can constitute that relation socially, particularly in societies with classificatory kin terms that partition the entire social universe into kin, but it dodges the question of whether dyads build on the forms, and denotational range, of reference or address terms. This opposition is potentially relevant because in many languages kin terms can have somewhat broader denotational ranges when used in address as opposed to reference (see e.g. Evans forthcoming): an example is the Kayardild term *kulakul* ‘mummy’, which can (at least to a baby) be used by a mother as an address term to her child, as well as the more ‘standard’ use as an address term to one’s mother. In languages where the address use is self-reciprocal, but the referential use is not, the two variants of our definition will then make different characterisations of whether strict reciprocity is involved.

Most sources do not go into adequate detail on the uses of the dyad suffix for us to decide this question. However, Donaldson (1980:104-5) explicitly states that ‘the reciprocal use of a kin term in address is a criterion for the possibility of suffixing *-galaydja:N-*’ [the dyad suffix – NE]. On the other hand, in some languages it is clear that dyad terms are based on the reference, not the address form – Harvey (email to NE, 29/1/97) mentions Warray, where for example *a-wulgan-hmiyi* the dyad for ‘pair of brothers’ is based on the reference term *a-wulgan* ‘brother’ rather than the address term *bapba*.

1 The significance of dyad constructions

Dyad morphemes are interesting to studies of polysemy for three main reasons: because of their role as ‘semantic targets’ in certain culture areas, which languages reach to varying degrees; because of the almost complete lack of polysemic overlap between Australian languages and other languages of the world with dyad constructions; and because of a range of problems they pose for universalising theories of grammaticalisation.

1.1 *Dyad constructions as semantic targets*

Dyad categories are sufficiently ubiquitous in Australian languages that we can characterise them as a ‘semantic target’, towards which morphemes extend from a wide range of sources that includes parals, possessives, comitative/proprietary/instrumentals, ablatives and consequential, complements and others. In terms of how areal diffusion can lead to parallel semantic patterning, this study illustrates a clear case of how a single semantic target can be reached through quite widely varying patterns of semantic extension. Before proceeding, however, we need to distinguish a number of degrees of semanticisation:

(a) dedicated dyad morpheme – the language has a dedicated morpheme, without other meanings, expressing exactly the dyad meaning given in our definition above.

(b) semanticised exponent with other meanings – the language employs a polysemous morpheme which, in one of its senses, expresses exactly the dyad meaning; this has been semanticised to the point where it has been freed from context.

(c) context-sensitive implicature – the language has a morpheme which, just in particular contexts (specifiable grammatically or pragmatically), can generate the dyad meaning as an implicature.

(d) semantic overlap – the language has a morpheme whose meaning overlaps with the dyad meaning in some situations, but whose semantics is stated more accurately and parsimoniously using some other definition. For example, in a language in which an affix that means something like ‘and typical accompanying family member’ is attached to the morpheme ‘mother’, this might sometimes give the dyad meaning ‘mother and child’, but it might equally well give the meaning ‘mother and father’, ‘mother and her sister’, etc.¹

In practice these distinctions can be difficult to adjudicate between, and few descriptions are explicit about the best analysis. As we proceed through the paper we will

attempt to clarify some key cases. At the same time, the intergrading of these four situations illustrates some standard pathways by which prototypical dyad morphemes arise.

1.2 Lack of overlap between sources for dyad morphemes in Australia and elsewhere

It is striking that there is practically no polysemic overlap between the apparent source for dyad morphemes from Australia on the one hand, and those found elsewhere in the world. Though fewer than twenty non-Australian cases of dyad constructions are known to us, in all cases where an etymological source is reported, dyads develop as a special case of reciprocal morphology.² This raises the double question of what suppresses the development of dyads from reciprocals in Australia, and of what licenses the other, cross-linguistically unusual, sources of dyad terms in Australian languages. I will argue for the importance of three factors: the near-ubiquitous ‘inclusory construction’, which favours the development of possessor and comitative morphology into dyads, the high incidence of languages with one or more markers for duals, which is a second common source, and the category-specific nature of derivational morphology which disfavour the transfer of reciprocal-marking morphology onto nouns.

1.3 Relevance of dyad constructions to theories of grammaticalisation

A third point of interest flows from the above-mentioned rarity of equivalent constructions around the world. Studies of polysemy in grammar have often made universalising claims regarding the semantic sources of grammatical categories (e.g. unidirectional developments from space to time), and the dyad category provides an interesting entry point for studying cultural influence on grammar through the development of kinship-sensitive categories. If we only include universally grammaticalizable categories in studies of grammaticalisation, we will be unable to develop evolutionary approaches to the emergence of grammar that assign a place to cultural selection (see Evans 2003 for a general discussion of the role of cultural selection in the emergence of grammatical patterning).

In fact, the developmental paths by which dyad constructions evolve also provide a clear counter-example to some additional claims in the grammaticisation literature. It is often said that grammaticisation involves semantic bleaching, yet in some pathways to the dyad construction grammaticisation leads to a more specific meaning *containing* the original

meaning plus further elements that were once part of the pragmatic or syntactic context, as implicatures or constructional contributions become grammaticalised. Consider the evolution of dyads from comitatives: the dyad meaning is essentially a paraphrase of the intermediate step ‘group of two, one **having** the other as **K**’. Here only the bolded section represents the original semantics; the specification of cardinality, and the specification that the relation holds within the dyad group, both represent added semantics originally generated by implicature in the original constructional context. Further, it is often held that grammaticisation is accompanied by shifts to the speaker’s perspective. Yet in the semantic change exemplified by this shift from dual to dyad meaning, the shift is from possibly egocentric reckoning of the propositus – brother-having could mean ‘including (my) brother’ – to one where egocentric reckoning is ruled out, the brother relation holding *within* the dyad group (see §5.2 for examples).

Notes to Section 1

¹ Dahl & Koptjevskaja-Tamm (2001:207) mention the affinity between kin terms and ‘associative plural’ suffixes, which have roughly this semantic effect: ‘a large number of typologically different languages has a regular way of building constructions with the general meaning ‘X + those surrounding X’ – so-called ‘associative plurals’. The examples they cite (Lezgian, Kpelle) give meanings like ‘mother and those with her’, ‘Suna-Xala and her family’. A slightly different case of semantic overlap, that comes close to a dyad meaning, is discussed by Bradley (2001) for a number of languages of South-East Asia, which insert kin terms K in a frame [Number Family.Group.Classifier Kin.term]. Although in some cases it is possible to get a meaning referentially identical to a dyad (e.g. by a construction like ‘2 Family.Group.Classifier Mother’ for ‘mother and child’), this is an epiphenomenon of the somewhat different meaning ‘family group, of N members, including a K’. The Akha term $sm^{21} ma^{33} za^{21}$ [three FGC mother], for example, can mean ‘mother and two children’ (a plural dyad meaning) but also allows the non-dyad interpretation ‘mother, father, and one child’ (Bradley 2001:4).

² There are a few Melanesian cases in which what I would consider as a dyad morpheme is a dedicated morpheme without any other function such as reciprocal, dual etc.

The first is the isolate language Yeli Dnye, of Rossel Island, south east of the main island of New Guinea (Levinson 2002); a number of apparently dyad kin terms are derived from basic kin terms, usually

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through the addition of a suffix *-mi* but sometimes employing less transparent derivations; *-mi* bears no formal relation to the reciprocal exponent.

The following table shows the dyad terms in Yélí Dnye (excerpted from Levinson 2001), with referent ranges slightly simplified. Not all are in current active use: Levinson describes them as ‘terms in Armstrong 1928, now mostly archaic’.

<i>mbwó</i>	B	<i>mbwémi</i>	‘B & B’
<i>chênê</i>	MB	<i>chimi</i>	‘MB & ZS’
<i>dyémi</i>	WB	<i>dy:eemi</i>	‘WB & ZH’
<i>n:ââ</i>	SW	<i>‘n:eemî</i>	‘SW & HF etc.’, ‘SW & HM’
<i>vyilê</i>	HBW	<i>vyimí</i>	‘woman with BZ or HZ’
<i>mbywé, mbwiyé</i>	WF, WM, DH, WFZ	<i>mbyw:eemi</i>	‘WF & DH, WM & DH’
		<i>ghee</i>	‘M & S/D/ZS/ZD’
		<i>mupwo</i>	‘F & S, MBS & FZS’

On the basis of these examples, it looks like there is a non-productive dyad suffix *-emi/imi*, with some accompanying rather irregular changes including vowel lengthening, change in vowel quality). In addition two of the dyad terms (*ghee* and *mupwo*) appear to be unsegmentable portmanteaux.

In the absence of other functions for this form, or related languages that would allow us to trace the etymology of this suffix, the Rossel evidence is neutral with regard to the continental patterning of dyad sources that we are considering, although it is an interesting example of this typically Australian category occurring in the broader Australasian region.

The second case involves two Oceanic languages of Central Vanuatu, one spoken on the island of Efate and one spoken on Nguna just to its north. In Ngunese (Hans Schmidt, email) there are around twelve dyadic kin terms, including *tamagoreta* ‘sisters’, *tama p~ilata* ‘mother and child’, *tama taita* ‘brothers’, *tamatamata* ‘father and child’, *tama tuata* ‘paternal grandfather and grandchild, daughter-in-law/mother-in-law’ [confirm first meaning], *tama aloata* ‘uncle and nephew/niece’, *tamata sumami* ‘aunt and nephew/niece’, *tama atiata* ‘paternal grandfather and grandchild’, *tama toputa* ‘maternal grandmother and grandchild’, *tama atetata* ‘maternal grandmother and grandchild’, and *tama sulita* ‘(any) grandparent and grandchild’. These are normally used as dyad predicates, e.g. *Ero pei tama taita* [they.two COP ~] ‘they are brothers’, *Krisi goo Iris ero pei*

tamatuata ‘Krisi and Iris are in-laws’. The origin of *tama* is currently unclear, though its resemblance to *tama(ta)* ‘person’ is tantalising and if this proves to be the true etymological source this would represent a non-Australian example of a dyad that is not etymologically related to reciprocal markers. South Efate, spoken just to the south of Nguna, also has some comparable forms. Further research on related languages, currently poorly-known, may be able to resolve this problem.

Further to the south, in New Caledonia, Tinrin (Osumi 1995:104-5) forms plural dyadic terms productively by prefixing the collective marker *nrî-* plus a plural-marking prefix *v-* to the relevant kin-term: cf *nrî-v-ovadrêmwa* ‘fathers and children’, $\sqrt{-drê-}$ ‘father’; *nrî-v-aherre* ‘grandfather(s) and grandchildren’, \sqrt{aherre} ‘grandchild’. In some cases the plural dyadic appears to be suppletive, e.g. *nrî-vîvare* ‘mother(s) and children’ (mother: *nê*; son/daughter: *wù*). Unusually, in Tinrin it appears that most dyadic terms are plural rather than dual. Kin terms with the dual prefix *truu-* mostly function as duals – thus *truu-nê-*, based on the root for ‘mother’, means ‘two mothers’ (also ‘parents’) rather than ‘mother and child’ (Osumi 1995:102), and *truu-drê-* means ‘two fathers’ rather than ‘father and child’, which requires the augmented form *truu-adrêmwa*. However, in the case of the form *truu-aherre* [DU-grandchild], the meaning is listed as dyadic – ‘grandfather and grandson’ – rather than dual (‘two grandchildren’). This would help make sense of the semantics – and leave Tinrin as a further example where dyads are based on reciprocals.

2 Some grammatical characteristics of dyad constructions

Because the semantic developments I discuss in this paper do not occur in a syntactic vacuum, and are often bridged by particular grammatical contexts, it will be useful to outline the main features of constructions in which dyad morphemes are found.

2.1 *Typical contexts of use*

As Merlan and Heath (1982) point out, dyad terms are most typically used either as nominal predicates, as in their Ngalakan examples (1) and (2), or apposed to other referring expressions such as pronouns (3).

(1) `nuru-wač-jamiñ-go?`
Ngk 2du-both-spouse-DYAD
'You two are spouses (husband and wife).'

(2) `buru-wač-yapa-go?-bindi`
Ngk 3du-both-sister-DYAD-really
'They are real sisters (i.e. from the same parents).'

(3) `wac-bolo-pira?`, `yirka-bira?` `marke-go?`,
Ngk both-old.people-du we.exc-du FZ-DYAD

`yiri-jabo,` `mu-wapawapa?` `yirin-ja?-wo?wo`
we(pl)-go givePst.Punc III-dress 3/1exc.nsg-now-givePst.Punc

'The two old ladies, and we two - father's sister and brother's daughter -,
we went. Then he gave us some clothes.'

In clauses with a verb, the commonest uses of dyad terms are to characterise the group composition of travelling groups, as in (3), or to call up the stereotyped prescriptive mode of behaviour between the designated participants as either being followed (4) or disregarded. Note, though, that the same effects can be achieved through the use of dyad NPs as subject

expressions, as in (5) [the kin relation designated by *jambathu* is not a first-choice marriage category].¹

- (4) *Djarburh-ko ke-h-berrma-rrû-niyan*
 Dal WMB-DYAD 3du.opp.sides-R-joke.with-RR-FUT
 ‘A WMB / ZDH pair joke with each other.’
- (5) *Jambathu-ngarrba karndi-ya dun-d.*
 Kay cousin-DYAD wife-NOM husband-NOM
 ‘Those two cousins are married to each other.’

Whatever the construction they occur in, it is common for the cardinality of the group to be specified by other means, whether a co-occurring free or bound pronoun (1, 2, 4), or some other number suffix (2). And, outside simple contexts of nominal predication, the allusion to stereotyped kin behaviour (whether followed or violated) activates attention to the mutual relationships within the group.

2.2 *Dyads and cardinality*

The prototypical dyad term has a cardinality of two in Australian languages. Even though individual grammars may not give ‘two’ as a necessary condition for the application of dyad morphology, every grammar consulted begins its exemplification with groups of two, and examples with groups of two predominate.²

Languages employ a range of strategies for dealing with plurals.

(a) They may simply extend the normal dyad term to cover plural situations – this is the case with Arrernte *-nhenge*, for example (Henderson & Dobson 1994:502) and its Alyawarr cognate *-nheng* (Green 1992:204), as well as the Ngiyambaa ‘reciprocal plural’ (Donaldson 1980:104) defined as ‘two or more people who stand in a reciprocal social or kinship relation to one another’.

(b) Specific plural forms may be derived from the basic dyad forms by reduplication of the root, either complete (e.g. Dyirbal – Dixon 1972:234-5) or partial (Mangarrayi – Merlan & Heath 1982:111-2).

(c) Specific plural forms may be derived from the basic dyad forms by addition of plural affixation, e.g. plural prefixes in Nunggubuyu (Merlan & Heath 1982:108), the

‘multiple’ prefix *garra-* in Ngandi (Heath 1978b), or the pluralizing suffix *-wurr* in Dhuwal (Heath 1982:48), e.g. *bäpa’-manyji* ‘father-dyad; father and child pair’, *bäpa’-manyji-wurr* ‘father(s) and children’.

(d) Special ‘plural dyad’ suffixes may be used, built on the basic dyad form. Thus in Gurindji (McConvell 1982:88) dual dyad terms add *-rlang*, and plural dyad terms add *-rlangkurla*, to the kinship root: cf *jawiji* ‘MF, mDC’; *jawiji-rlang* ‘MF/mDC pair’, *jawiji-rlangkurla* ‘group of at least three persons, one or more of whom is *jawiji* to all the others’.

(e) there may be distinct and unrelated forms for dual and plural dyads. This is the case in Jiwari (Austin 1993), where dual dyad terms add *-karra* to the kinship root, while plural dyad terms add *-parnti*: *kantharri* ‘MM’, *kantharri-yarra* ‘MM with DD’, *kantharri-parnti* ‘group of MM(s) with DDs’.

In all cases but the last, the methods for forming plural terms emphasise the prototypicality of two as the preferred cardinality, since there are many languages that derive plural dyads from base duals, but none where derivation proceeds in the reverse direction. This runs against the very strong cross-linguistic preference, found with duals elsewhere in the grammar system, for duals to be marked with respect to plurals, and often formally derived from them as well (Corbett 2000:38-50).

To complete the issue of number, we raise the possibility that in certain contexts dyad terms can refer to single people. This possibility was first pointed out by O’Grady and Mooney (1973:9-10), who wrote, for Nyangumarta, that

‘[A]though dual terms in spontaneous utterances generally seem to denote two people, *kurtal-karra* ... has in one instance been defined as a woman (singular) ‘after she has had a child’ ... Perhaps, then, the dual-plural terminology may in the case of some or all of the terms, or in the case of certain contexts, denote unity rather than duality of plurality: a single individual with the property of possessing certain kin, or of being in company with certain kin.’³

Consider next the Mayali term *-ngei-go*, ‘name-DYAD’, which means ‘sharing the same name’. This normally refers to sets of two or more, as in *bani-ngei-go* [they.2-name-DYAD] ‘they two are namesakes’. But in some syntactic contexts - in particular, where one member of the dyad is represented by a possessive pronoun - it may have singular reference, as in *arduk ngei-go* ‘my namesake’, whose singular cardinality may be established by the use of a singular verb, e.g. *arduk ngei-go ga-mre* [my namesake (s)he-comes] ‘my namesake is coming’.

As a third example, Merlan & Heath (1982:119) discuss the Mara dyad term *ŋiri-miyaŋgay*, which literally means ‘we two (exclusive)-younger.brother’s.wife and husband’s.elder.brother dyad’, that is ‘we two are in a brother-in-law/sister-in-law.relationship’. However, used as the subject of a verb with third person singular subject, as in (6), this expression can be given the ‘practical meaning’ ‘she (my younger brother’s wife)’. Note, though, that Mara is a language in which some dyad terms have no simplex counterparts, and this particular example is one case of this.

- (6) *ŋiri-miyaŋgay wu-ŋini*
 Mar 1exc.du-yBW:DYAD (s)he went
 ‘My younger brother’s wife went.’ [Merlan & Heath 119]

I will return, in §5, to examples of semantic extension from subset > set, mediated by the ‘inclusory construction’, in which free pronouns or pronominal affixes represent the whole set, while an apposed NP represents part of the set: basically the use of a construction like *X they-went* to mean ‘they, including X, went’ or ‘(s)he and X went’. The Mara example just given exemplifies the opposite process, i.e. the use of the apposed NP to designate a background set, from which reference is picked out by a more restrictive pronoun. Such set > subset shifts are rare, and I am unaware of examples beyond those just discussed.

Dyad terms, then, are prototypically dual (a link we examine in detail in §4), but in particular circumstances may have their cardinality extended upwards, or, more rarely, contracted to a singular referent. What remains the same, whatever the cardinality, is the focus on a kinship relation that determines the mutual relationship between two individuals, and it is to the issue of mutuality and reciprocity that we now turn.

Notes to Section 2

¹ A question that has yet to be addressed in Australian linguistics concerns the exact semantic and syntactic status of these expressions, as used in verbal clauses: do they form referring expressions functioning as arguments (e.g. ‘*the uncle and nephew went*’), or ascriptive secondary predicates (‘*the two of them went, (as/being/despite being) uncle and nephew*’). Hale (1983) showed that Warlpiri systematically allows both argumental and predicate types of readings for nominal expressions, and the same goes for many other

Australian languages, with the constructional resources that distinguish between readings often being extremely subtle. While the choice between these interpretations undoubtedly plays a role in the semantic developments discussed in this chapter, our main claims are compatible with either analysis, and the glosses we use for dyad terms (e.g. ‘uncle/nephew dyad’) are non-committal with respect to predicate vs argumental interpretations.

² This is in interesting contrast to Bradley’s discussion of ‘family group classifiers’ in South-East Asian languages, where groups of cardinality two are in a distinct minority.

³ Janet Sharpe, however, (email to NE, 6/2/03) has pointed out a possible alternative analysis of this form. In Nyangumarta there is a second nominal suffix *-karra* (or a second sense, depending on one’s analysis) that indicates activity or involvement, e.g. *mijimiji-karra* [gold-~] ‘involved in the mining of gold’, *maparn-karra* [magic-~] ‘involved with healing or working magic’. It is possible that a mother just giving birth, especially if to a female child, could be referred to as ‘involved in daughtering’ or ‘involved in (the birth of) a daughter’. This would remove this apparent example of a singular use of the dyad. Note, though, that it is likely that these meanings are linked in any case – see §4.3 for some possible semantic changes involving the form *-garra/-karra* in Pama-Nyungan – so that a bridging context in which cardinality is reanalyzed from singular to dual may be a key point in the shift of this suffix’s meaning from ‘complement, accompanying activity’ to ‘dyad’.

3 Dyad constructions as extended reciprocals

Dyad constructions are closely related to reciprocals – a fact that is particularly obvious when the kin term they are attached to is symmetric. In this section we first look at how a range of languages deal with the asymmetric cases (§3.1), concentrating at this stage on dyad semantics regardless of whether there is formal overlap with reciprocal marking. In §3.2 we contextualize these restrictions within the sorts of extensions found with reciprocals more generally, canonically with verbs and two-place locational expressions. In §3.3 we then survey a range of languages that extend canonical reciprocal marking to cover dyads. The majority of these are spoken outside Australia, and with the exception of the Rossel Island language and a couple of languages of Vanuatu, they cover all known cases of dyad constructions outside Australia, suggesting that reciprocals are a ‘natural’ source for dyads. In §3.4 we focus on the few known cases of reciprocal morphemes doubling as dyads in Australian languages.

3.1 *Restrictions based on symmetry of kin relation*

As stated above, dyads function like reciprocals applied to kin terms. If English had dyads, ‘cousin-DYAD’ could be characterised by the strict reciprocal ‘two who call each other cousin’. However ‘uncle-DYAD’, based on an asymmetric term, could not be paraphrased as ‘two who call each other uncle’, but rather as ‘uncle and nephew/niece’, which is why I proposed the alternative definition ‘two, such that one calls the other K’ – here, ‘two, such that one calls the other uncle’.

In fact, some languages partly or wholly restrict the use of dyad-like suffixes to symmetric kinship terms. The north-east Caucasian language Adyghe (Rogava & Keresheva 1966:276-77) is an example: the verbal reciprocal prefix *ze-* is extended to ‘nouns, which can express reciprocal relationships’, including ‘brother’, ‘age-mate’, ‘comrade’, ‘neighbour’ and ‘acquaintance’, but no examples with asymmetrical relationships are listed.

In Dyirbal (Dixon 1972:234-5), the direct addition of the ‘kinship dual’ suffix *-jirr* to a kin term is essentially restricted, for the normal register, to symmetric terms, such as *ngagi* ‘mother’s father (and reciprocal)’, *mugu* ‘mother’s older brother (and reciprocal)’, *ngagi-jirr*

‘maternal grandfather and grandchild’, *mugu-jirr* ‘mother’s elder brother with younger sister’s child’. The only exception, in the normal style, is for the relation between ‘junior’ and ‘senior’ cross-cousins, where ‘junior’ vs ‘senior’ is determined by the relative age of the linking relatives – thus *waymin* is ‘mother’s elder brother’s daughter, father’s elder sister’s daughter etc.’ while *guyugan* is ‘mother’s younger brother’s daughter, father’s younger sister’s daughter’. *-jirr* is also used for dyads formed between such people; interestingly, cross-cousin terms are self-reciprocal in most Australian languages, raising the possibility that the use of *-jirr* here may precede the differentiation of the cross-cousin terms into asymmetric, seniority-sensitive pairs. A second exception, but this time in the special polite register known as *Nyalal*, is a term whose ordinary-register equivalent is asymmetric – *bimu* ‘father’s elder brother, father’s elder sister, mother’s elder sister’s husband’ – but which may combine with *-jirr* to give *bimujir* ‘two people in *bimu* reciprocal relation’.

Other means are used to derive dyad terms from the remaining asymmetric terms. For *nguma* ‘father, father’s younger brother’, there is an alternative stem, *ngumay*, to which the suffix *-girr*¹² can be added to give a dyad: *ngumaygirr* ‘two people who are in *nguma/galbin* relation, e.g. a father and child (son or daughter)’. For a second asymmetric term – *yabu* ‘mother, mother’s younger sister’ – there is a dyad term *ginagirr*, which combines *-girr* with a suppletive base, *gina*, not found elsewhere. For the other asymmetric terms, however, no dyad at all exists. *Dyirbal*, then, restricts the use of the productive dyad suffix to symmetric terms, has a distinct and non-productive dyad suffix for use with asymmetric terms, uses non-standard or suppletive roots for asymmetric terms (irregularly expanded root for *ngumay*; suppletive root *gina* instead of expected *yabu*), and indeed restricts the productivity of asymmetric dyads.

Ngiyambaa is another language where dyads favour symmetric relations. On Donaldson’s (1980:104-5) account, there are a couple of cases where asymmetric relations can bear the dyad suffix³ *-galaydja:N-* ‘group of brothers’ and ‘group of sisters’ attach it to the ‘older brother’ or ‘older sister’ term, and ‘mother and daughter pair’ is built on the root *guni:N-* ‘mother’ – but ‘[o]therwise the reciprocal use of a kin term in address is a criterion for the possibility of suffixing *-galaydja:N-*’ (p. 104).

A fourth example of a language whose dyad constructions are sensitive to symmetry is *Bininj Gun-wok* (Mayali). This language has two morphemes – *-go* and *-migen* – which are added to kin terms to form dyads. Table 1 gives some examples; note that in the case of *wurdyau*, *-go* is added to a simplified root from which *wurd* ‘child’ has been dropped. As

this shows, *-go* is found exclusively with asymmetric kin terms, and *-migen* exclusively with symmetric ones. (See §4.3 below for the semantic range of *-go/-ko* in other Gunwinyguan languages).

Kinship root	Derivative with <i>-go</i>	Derivative with <i>-migen</i>
<i>wurdyau</i> ‘(woman’s) child’ (cf <i>karrard</i> ‘mother’)	<i>yau-go</i> ‘mother-child pair’	
<i>beiwurd</i> ‘(man’s) child’ (cf <i>ngabbard</i> ‘father’)	<i>bei-go</i> ‘father-child pair’	
<i>gakkak</i> ‘mother’s mother; (woman’s) daughter’s child’		<i>gakkak-migen</i> ‘MM with DC’
<i>mawah</i> ‘father’s father; (man’s) son’s child’		<i>mawah-migen</i> ‘father’s father with his son’s child’

Table 1: Symmetric and asymmetric dyads in Biniñj Gun-wok (Evans 2003a)

Perhaps the most elegant example of a language which at the same time groups together symmetric and asymmetric dyads, and distinguishes them as sub-types, is Ainu (Tamura 2000:205-6). Though our data is incomplete, it appears from Tamura’s grammar that both symmetric and asymmetric kin terms form dyads by prefixing the verbal reciprocal marker *u-*; additionally, however, asymmetric kin terms suffix *-kor* ‘have’, while symmetric ones use a different construction without the ‘have’ suffix’, using either no suffix or the copular *-ne*:

Verbal recip	Symmetric dyad	Asymmetric dyad
<i>u-nukar</i> RECIP-look.at ‘see each other’	<i>u-utari</i> RECIP-relative/relation ‘people related to each other’	<i>u-po-kor</i> RECIP-son-have ‘to be parent and son’
<i>u-kasuy</i> RECIP-assist ‘give and take assistance’	<i>u-irwak-ne</i> RECIP-siblings-COP ‘to be siblings’	<i>u-unu-kor</i> RECIP-mother-have ‘to be mother and child’

Table 2: Symmetric and asymmetric dyads as reciprocal subtypes in Ainu

§3. Dyad constructions as extended reciprocals

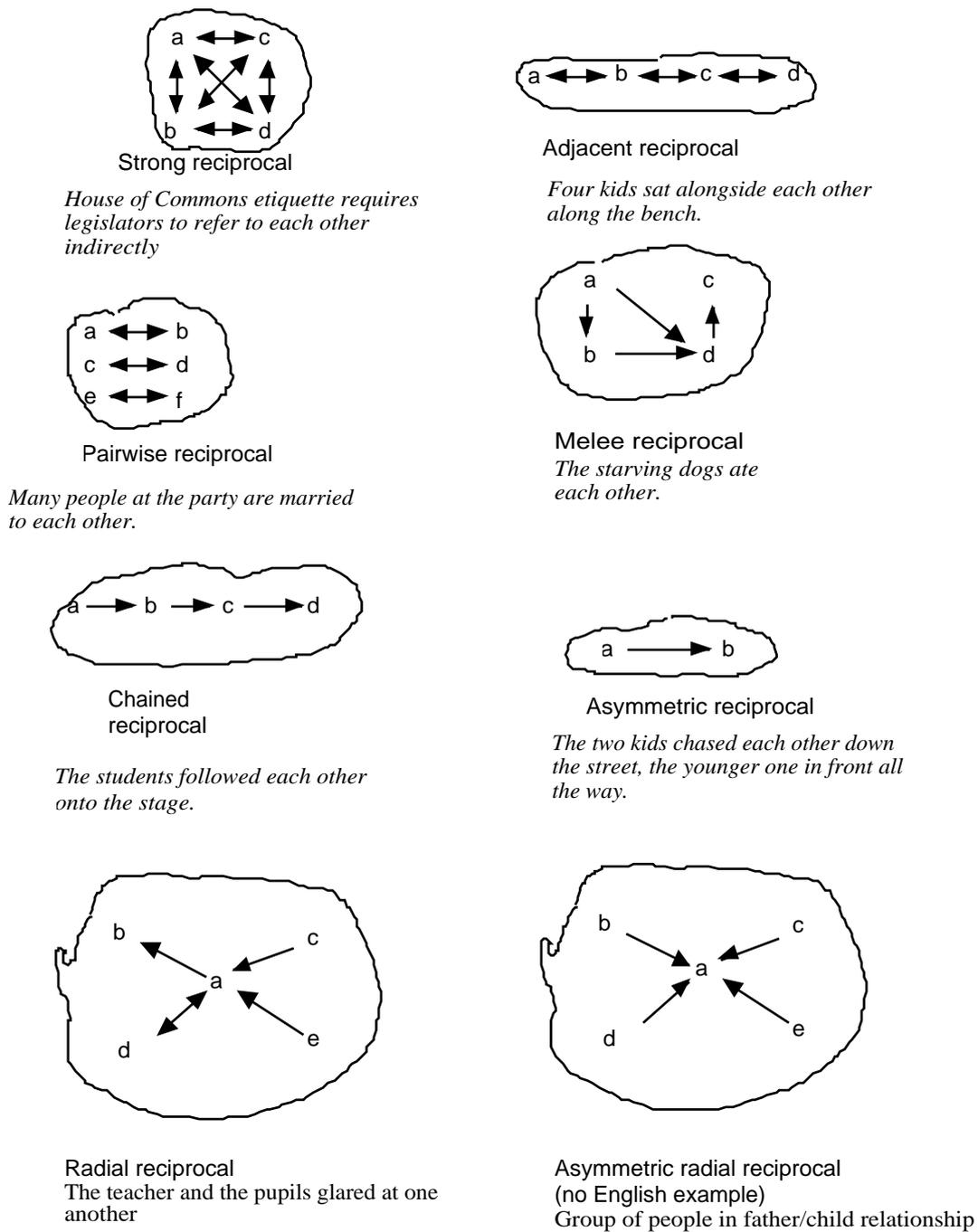


Figure 1. Types of reciprocal

In canonical situations, or ‘strict reciprocals’, there is complete commutativity of the relevant predicate: A Vs B and B Vs A. The reciprocation may be completely simultaneous, as in

PAIRWISE RECIPROCAL:

(10) *gari-gari-langi*

GNY wife-wife-DYAD

‘group of people who are pairwise related as man to wife (irrespective of the relationships between the separate members of the pairs)’

(11) *ngaboo-ngaboo-langi*

GNY father-father-DYAD

‘group who are pairwise related by father-child relationships, irrespective of the relationships among the members of different pairs’ (McGregor 1996)

Radial reciprocals are the normal semantic interpretation of plural dyad terms, i.e. a group made up of a relative plus further individuals each calling that relative K. Descriptions of plural dyads in some languages specify that the ‘centre’ for such radial reciprocals be the senior relative. Thus in Dyirbal (Dixon 1972:234-5), reduplication of a kinship root can be used to imply inclusion of more than one member of the younger generation in the pair, e.g. *ngagingagijirr* ‘man with two or more of his DC’, *ngumangumaygirr* ‘man with 2 or more of his own, or of his elder brother’s children’. (Note that the reduplication process takes the root for the senior term as input. Further evidence for the senior focus of the Dyirbal terms, despite the semantic facts that it is the junior members that are non-singular, comes from the choice of noun class for the expression: this depends on the sex of the member of the OLDER generation, e.g. *ginaginagirr* might refer to a woman accompanied by her six sons, but would always take the feminine noun class marker *balan*.) So far I have not found a description of plural dyads that explicitly mentions the acceptability of the reverse situation, i.e. where there is a single junior relative and more than one senior relative (e.g. someone and two of their (classificatory) ‘fathers’, such as a boy, his father, and his father’s brother), though this remains logically possible.

The remaining extension of the reciprocal to consider is the ‘converse reciprocal’. This is rare with verb-based reciprocals, though sporadically attested in a number of languages. (12) – (17) give examples from English, Tolai, Wari and Kxoe respectively.⁴ There tends to be significant inter-speaker variation in how acceptable the converse interpretation is: not all native speakers accept the converse reading of (12), for example, and in general the acceptability of converse reciprocal readings appears to depend on subtle judgments regarding ‘mutual involvement’ above and beyond the physical actions being described.

- (12) (a) *Pip and Lee chased each other down the street.*
 (b) *The woman and the burglar chased each other down the street.*
 [Both admit a strict reciprocal interpretation for all speakers; but not all speakers accept the converse interpretation. More speakers accept a converse interpretation for (a), when told it is a game involving two children.]

- (13) [From a review in the Guardian weekly of Patrice Chéreau's film *Intimacy*, about a pair of lovers]
Then they were lying against each other, on top of each other, inside each other.

- (14) *They put the plates on top of one another in the cupboard.*
 [All speakers accept a chained reciprocal interpretation (3 or more plates); some also accept a converse reciprocal (with 2 plates)]

- (15) *Nam ra tutana i vilau. A tabaran i ga*
 Tolai DEM ART man he flee ART ghost he TA

mur-tadav ia. Di ga var-korot.
 follow-got.to him they:duTA RECIP-chase

'The man fled. The ghost followed him and chased him while the man tried to escape.' (Lit. 'the two performed the action of chasing') (Mosel 1984:147)

- (16) *Je win mo'o ta' ca 'ira*
 Wari' emph:3n same run:s...lead 1s:rf 3sm prog:past

'Ao quep xucucun
 sound.of.creeping touch RR:3pm

'He (the man) was just about ready to run. He (the villager) sneaked up on him and caught him.' (lit. '...they caught each other.') (Everett & Kern 1997:193)

- (17) *Á-ta Córò-tcà hĩĩ-ku- a-hĩ .*
 Kxoe thus rock.monitor-3masc.du do-REC-II-PAST

'This Rock-Monitor has done to the other (i.e. Polecat).' (Kilian-Hatz 1999:124/30; Kilian-Hatz 2001)

In each of the above examples, standard reciprocal constructions (in terms of form) are extended to converse situations. I know of no language that employs special forms for converse reciprocals of verbs, and no language where converse reciprocals, with verbs, are more than a marginal phenomenon – for Tolai and Wari, only a single example is given for each language (for Kxoe, Kilian-Hatz gives some half-dozen examples), and for English the type is not recognized in the otherwise-comprehensive discussions of semantic possibilities by Langendoen (1982), Higginbotham (1980), and Dalrymple et al (1998). (The closest example I know of is in Malagasy, as described by Keenan & Razafimamonjy (n.d, f.n. 3), where in addition to the standard reciprocal construction, marked by verbal affix and plural subject, there is a ‘weak reciprocal’, where the reciprocal verbal affix combines with a singular subject, the remaining participant being represented by a ‘with’ phrase. On Keenan & Razafimamonjy’s account, this fails to entail a strict reciprocal interpretation, but at the same time does not disallow it.)

Dyad constructions can now be seen more clearly to fall within the general polysemic range of reciprocals more generally: when based on symmetric roots, they are simply strict reciprocals, and when based on asymmetric roots, they are converse reciprocals. English, Tolai, Wari and Kxoe can all express both types by the same construction, with canonical two-place verbs. For this reason it makes sense to treat dyads as ‘generalized reciprocals’, subsuming both the strict and the asymmetric senses. Nonetheless, it is worth noting several ways in which dyads seem more receptive to asymmetry than do reciprocals of canonical verbal expressions: (a) some languages (see above) have distinct constructions or morphemes for symmetric and asymmetric kin relations, whereas I have yet to discover a language that does this for canonical verbs (b) overall, extensions to asymmetric cases seem commoner and easier with kinship relations than with verbs: for a number of languages I have examined (e.g. Koyukon Athapaskan, Tiriyo), there is a single form for verbal reciprocals and for dyads, yet asymmetric uses are only reported with kin dyads, and I know of no language where a reciprocal morpheme shared between canonical verbal and kinship roots allows asymmetric readings with the former but not with the latter.

3.3 *Dyads and reciprocal morphology*

Now that we have established the semantic connections between dyads and generalized reciprocal semantics, we survey a range of languages from around the world that employ reciprocal morphology for dyads, and that take both symmetric and asymmetric kinship roots as input. Viewed in terms of what the reciprocal morpheme can combine with, we may recognize four types:

- (a) kinship expressions are encoded as verbs, which then take regular reciprocal morphology
- (b) a single set of reciprocal markers combines with several word classes in a productive way, including reciprocal objects of verbs and reciprocal possessors of nominals, and kinship dyads are treated as reciprocally possessed nominals
- (c) reciprocal morphology is normally restricted to verbs, but is exceptionally extended to nominal roots just when it is used as a dyad.
- (d) the language has a weak or non-existent noun/verb distinction, and reciprocal markers simply apply to any two-place predicate; in such a language the difference between dyads and canonical reciprocals would vanish. The lack of clearly-argued cases of such languages means we don't have a definitive example of this, though I mention a suggestive example from Tagalog below.

3.3.1 WITH KINSHIP VERBS

A number of languages around the world express kinship relations by two-place verbs (see Evans 2000a). In the purest case, the verbs simply mean 'be K to' (e.g. be father to), but more common is for kin verbs to mean 'call K' or 'have as a K'. So far I have found no examples of dyad uses in languages with pure kinship verbs, but Dalabon (Australian; Gunwinyguan) and |Gui (Khoisan) are both examples of languages with denominal verbs of the type 'call K': Dalabon adds a verbalizing suffix *-ngandung*⁵ to nominal kin roots, and |Gui simply derives the kinship verb by zero conversion, adding verbal affixes directly to the nominal root.

|Gui examples in which the reciprocal combines with kinship verbs to form dyads were given above (7, 8), where I mentioned that while all speakers accept the use of the reciprocal with symmetric kin terms, only some speakers accept it with asymmetrics. A Dalabon example (from Evans, Merlan & Tukumba forthcoming) is (18a); note that it illustrates both nominal dyad use (*wawurd-ko* and *wulkun-ko*; the suffix *-ko* will be discussed

in §4.3 below) and an asymmetric use of the reflexive/reciprocal suffix on a kinship verb . (This example was offered in the context of supplying a dictionary definition, in Dalabon, for the nominal dyad term *wawurd-ko*). (18b) gives an example from Nunggubuyu, also used with an asymmetric kinship expression; Heath (1984:233) points out that ‘a.. somewhat uncommon... functional alternative to Dyadic terms is the use of a reciprocal form of a kin-term verb’. (18c) and (18d) give two examples from Gurrgoni (Green 2002): the first is based on the verbal predicate *bami-rremi* ‘head-bash’ with a suffix *-nydyi-* that is cognate with reciprocals in other Australian languages, though the productive Gurr-goni reciprocal construction uses the reflexive *-yi-* , and the second employs intransitivised forms of verbal referential kin terms to refer to a group of people between whom the designated relation holds.

(18a) *Wawurd-ko,* *wulkun-ko,* *kanh bale-wawurd-ngandu-rr-un,*
DAL elder.brother-DY younger.brother-DY that 3plS.SUB-eB-call-RR-NP

kanh kah-yin, *dalabon-walûng.*
that 3R-doNP Dalabon-ABL

‘In Dalabon, *wawurdko* or *wulkunko* means that they call each other brother.’

(18b) *wuru=muruyung-ga-nyji:-na*
NUN 3ma.du=eB-FAC-RECIP-NPST2
‘They are brothers’, lit. ‘the two of them call each other older brother’ (Heath 1984:239)

(18c) *arr-bami-rremi-nydjyi-ni*
GON we.two-head-bash-?RECIP-PRECONTEMPORARY
‘We are two people who call each other *gakak*, i.e. MM/WDC or MMB/mZDC’

(18d) *gondu-pu awurr-ba-yi-ni*
GON arm-SUFF they-bite-REFL(/RECIP)-PRECONTEMP
‘They are a group of people who are mamam (cross-cousin, mother’s father or man’s daughter’s children) to each other.’

Apart from these examples, I know of no Australian language that employs reciprocal morphology on verbs to form dyad expressions. Within the existing Dalabon corpus this is the only example – the normal method is to use nominal suffixes, a method I discuss in §4 and §5 below – and in Nunggubuyu (Heath 1984:239) again nominal suffixes are the normal method of forming dyads, with only a single example being cited of a reciprocalized kinship verb being used with dyad sense (plus one further example with ‘marry’). In Gurr-goni, likewise, most dyad terms are formed from nominals, using the suffix *-go*, borrowed from Kunwinjku.⁶

3.3.2 DYADS AND RECIPROCAL POSSESSOR MARKING

A number of northern Athabaskan languages have a series of prefixes which can combine with a series of word classes. Applied to verbs, they typically mark objects; applied to positionals or nominals, they mark possession. Alongside forms meaning ‘me; my’, ‘you; your’, ‘him/her/it; his/her/its’ (giving the object meaning first, then the possessor meaning), are forms meaning ‘each other; each other’s’. Lake Trembleur Carrier (Poser 1998) and Fort George Carrier (Poser 1999) are two languages with such a system; Koyukon Athabaskan is another (Jette & Jones 2000, Krauss 2000). (19) exemplifies the use of the reciprocal prefix *nee* ʒ as a verbal object, (20) and (21) its use as a possessive prefix, respectively with locationals and with nouns.

(19a) *nee* ʒ--*ts’oodetunh*
KOY RECIP-we.are.holding
‘we are holding each other’

(19b) *nee* ʒ--*ts’eenol’aan’*
KOY RECIP-we.saw
‘we saw each other’

(20) *nee* ʒ--*tleekk’e dodaaleslo*
KOY RECIP-top I.piled.them
‘I piled them on top of each other’

(21) *nee* ʒ--*ghaale’*
KOY RECIP-pack
‘each other’s packs’. Cf *seghaale#* ‘my pack’

Applying this suffix to kin terms is thus part of a regular pattern of possessor marking. However, what is special is the way it can be used both with symmetric kin terms (i.e. with strict reciprocal semantics) and with asymmetric ones. Krauss (2000:817) characterises this distinctiveness as follows:

‘Another trait of all kin terms is that they can take the reciprocal possessive prefix (*nee* ʒ in LU; in C *nee* ʒ before consonants, *ne* ʒ before vowels) in a special sense, e.g. *nee* ʒ*soo* ‘grandmother and grandchild’, *nee* ʒ*to* ‘father and child’, *ne* ʒ*ooghe* ‘older brothers and younger sibling’, *nee* ʒ*kkun* ‘husband and wife, married couple’, even though in these cases the meaning is usually not literally ‘each other’s’ as it would be in *nee* ʒ*kkun* *ts’enle’aanh* ‘we see each other’s husband (I see yours and you see mine). In these special reciprocal kin terms the root for the older or male relative tends ordinarily to be used, but *nee* ʒ*koye* ‘grandchild and grandparent’, *nee* ʒ*ketl’e* ‘younger brother and older sibling’, *nee* ʒ*ot* ‘wife and husband’ can be used for emphasis, or where the younger or female is the dominant or providing relative’.

A very similar extension of reciprocal possessor marking to dyad terms is found in Lake Trembleur Carrier (Poser 1999). Among the many examples of dyad kin terms in which the morpheme *lh-* (corresponding to the final segment of Koyukon *nee* ʒ) and the plural suffix *-ke* surround a kinship root are *lhbizyanke* ‘paternal aunt together with her child’ (cf *bizyan* ‘paternal aunt’); *lhak’ike* ‘maternal aunt together with her child’ (cf *ak’i* ‘maternal aunt’), *lhghundanke* ‘father-in-law with son-in-law’ (cf *ghundan* ‘son-in-law’), *lhghuskene* ‘married couple’, *lhkike* ‘husband and wife’ (cf *ki* ‘husband’), *lhk’ekoo* ‘relatives together’ (cf *k’ekoo* ‘relatives’), *lhtaike* ‘paternal uncle together with his child’ (cf *tai* ‘paternal uncle’), *lht’udinkene* ‘twins’, *lhts’eke* ‘father and daughter’ (cf *ts’e* ‘man’s daughter’), *lhuz’eke* and *lhye’ke* ‘father and son’ (cf *ye* ‘son of man or woman’). For a few other kinship roots, the same structure has one of two other meanings. With two roots, it gives a plural dyad meaning: *lhyazke* ‘family, daughter and mother, mother and her children’ (cf *yats’e* ‘woman’s daughter’), *lhzitke* ‘female cousins on the maternal side’. And for a few other examples it means ‘group who are all K’ rather than ‘group such that one member is K to another’. Examples of this are: *lhanoskene* ‘wives of the same man’, *lhchulke* ‘paternal nephews’, *lhdiske* ‘paternal nieces’, *lhtsooke* ‘maternal nieces, maternal nephews’.⁷

To my knowledge, no Australian language employs reciprocal possessive affixes for forming dyad terms.

a suffix *-n* (elsewhere the marker of third person singular possessors). Examples are given in Table 3.

Form	Meaning	Simplex kin term
<i>atum~ap~on</i>	‘be related as grandparent and grandchild’	<i>m~ap~on</i> ‘grandchild’
<i>atum~odei</i>	‘be related as woman and her BW or HZ’	?
<i>atmegan</i>	‘related as husband and wife’	<i>ega-</i> ‘wife’
<i>atmetpon</i>	‘related as man and ZH/WB’	? <i>etpo</i> ‘grandparent’
<i>atimñilvan</i>	‘related as a man and his ZC or a woman and her mother’s children’	?

Table 3. Predicate dyad expressions in Anejom (Lynch p.c. & 2000)

Though this suffix is monofunctional in Anejom, John Lynch (p.c.) points out its resemblance to the reciprocal marker *-atu-*, used with verbs on another language of Vanuatu, Lenakel, though with two problems for positing cognacy: the fact that in Lenakel it is a suffix rather than a prefix as in Anejom, and the fact that, under normal sound correspondences between the two languages, the formal resemblance is too close. Further research on the historical morphology and phonology of these and related languages is needed before we can know definitively if this is a case of cognacy between a dyad marker in one language and a reciprocal in another; in the meantime, synchronically, *at(u)-* is more conservatively analysed as a dedicated dyad marker in Anejom.

KXOE.

Kxoe (Khoisan) is related to |Gui (see above), and has a reciprocal suffix *-ku* probably cognate with |Gui *-kua*. Used on verbs, it can function either as a canonical reciprocal (27), a

converse (17 above), or as a collective marker (Kilian-Hatz 2001). But it may also be used on kinship and other human-relational nouns, with a dyad meaning, whether the nouns are symmetrical (e.g. *héwà*- ‘age mate’) or asymmetrical (as with the younger sibling term in 28). Unlike in |Gui, where the kin terms its cognate occurs with are verbs, in Kxoe they are demonstrably nouns: *-ku*, used on a verb, is followed by agreement and tense markers, whereas when used on a nominal it may occur in final position, or optionally be followed by a person-gender-number suffix.

(27) Ngò màa n≠gá-hè //áò ndóo-ku-a-tè ?
 Kxoe Q why matter-3.f.sg 2.m.du hate-REC-I-PRES
 ‘Why do you hate each other?’ (Kilian-Hatz 1999:250/258)

(28) Khám kúri-ku, khám dàmà-kú, khám n//góri-ku,
 Kxoe 1.C.du family-REC 1.C.du y.sib-RECIP 1.C.du ZC-RECIP

khám kũi-kx'ei-ku !

1.C.du mother's.brother's.child-REC

‘We are related (lit. family to each other), we are siblings, we are grandfather and grandchild, we are uncle and niece.’ (Kilian-Hatz 1999:49/54)

(d) RECIPROCAL IN LANGUAGES WITHOUT A CLEAR NOUN-VERB DISTINCTION.

Tagalog is an example of a language where the status of the noun-verb distinction has often been called into question (see e.g. Schachter 1985, Himmelmann 1991), though the dispute is far from resolved. While the marking of reciprocal relations in Tagalog is not straightforward, one means of encoding reciprocals is the prefix *mag-*, e.g. *mag-hiwalay* ‘separate (from each other)’. This same prefix also combines with some kin and other social relations terms to give dyad expressions: examples *mag-amá* ‘father and child’ < *amá* ‘father’, and *mag-panginoón* ‘master and servant’ < *panginoón* ‘lord, master’. Advocates of a single-class analysis of Tagalog could, in such cases, argue that this represents the simple application of reciprocal semantics to a predicate in both types of case, though as we saw above the use of basically

verbal reciprocal morphology with nominals to form dyad expressions is far from unknown, including in many Austronesian languages of the Oceanic subgroup.

3.4 *Geographical distribution of reciprocal marking extended to dyads*

As the preceding examples show, languages from many parts of the world form dyad expressions with the reciprocal marker – sometimes applying it to kinship verbs, more often applying it to nouns of kinship and other human relations: Tiriyó (South America), several northern Athabaskan languages, Ainu, Adyghe in the Caucasus, several Oceanic languages, and Kxoe and |Gui in southern Africa.¹⁰ In fact, with the exception of the Rossel Island language Yeli Dnye, an isolate spoken off the S.E. tip of Papua New Guinea (Levinson MS) which has a non-productive dyad suffix with no other known function (see §1, Endnote 1), and some cases of dyads in Vanuatu and New Caledonia discussed above, all non-Australian examples of dyad constructions that I have been able to find employ reciprocal morphology (possibly supplemented with additional material, is in the cases of Ainu and Fijian discussed above).

It is therefore striking that there are practically no clear examples of a morpheme sharing reciprocal and dyad functions in Australian languages, with the sole exception of the example with Dalabon kinship verbs discussed above. The closest examples I know of are:

(a) the recent extension, in Djinang, of an original dyad suffix *-manyji* on nouns to become a reciprocal and ‘mutualis’ marker *inyji* preceding verbs, via semantic reanalysis shifting the scope of reciprocation ‘from the nominal to the predicate which followed’ (Waters 1989:89). Djinang, a suffixing Yolngu language in close contact with non-Pama-Nyungan prefixing languages to its west, is in the process of developing a number of proposed elements to the verb, which are clearly innovative within the Yolngu group, and the comparative evidence from other Yolngu languages clearly establishes the original function of this morpheme as a dyad or dual suffix (see below), so at best this is an example of an original dyad extending to more generalized reciprocal uses.

(b) the existence, in several languages, of dyad suffixes of form *-ntjVrrv*, such as Arrernte *-ntjerre*, for which one might argue cognacy with widespread verbal reciprocal suffixes in *-(n)tjVrrV*, such as the Kulin verbal reciprocal *-dherra*, Kalkatungu *-nthiti*, Tiwi *-athirri*. Apart from the phonological looseness of fit, though, there are two main problems with this. First, the lack of any single language demonstrating the use of a related form on

both nouns and verbs (or of any verbal reciprocal affix with nouns, for that matter). Second, there is a more persuasive set of cognates (discussed by McConvell 1997:224-5) among languages with kin term pairs of the type {K, *K-njarr/ntharr/nyarr*}, where K designates a senior term and *K-ntharr* its junior converse, or else just with a junior term *in -njarr*: McConvell cites Djabugay *gami* ‘MM/FF’, *gamindjarr* ‘grandchild’, Bundjalung/Gidabal *gami-dharr* ‘woman’s grandchild’, Gurindji *kami-nyjarr* ‘woman’s daughter’s child’, and Yolngu *gami-nyarr* ‘daughter’s child’. The deeper origins of this suffix are not known. Given these considerations, the best one could say about a possible reciprocal origin for the Arandic dyad *-ntjVrrv* is that it is one hypothesis among several, and has only circumstantial support.

Australian languages, then, form a striking contrast with virtually all other languages in the world possessing a dyad category, in the lack of any synchronic or diachronic link between dyad and reciprocal morphemes. In the next sections we look at the other side of the coin: nominal categories which extend to dyads in Australian languages, but nowhere else.

Notes to §3

¹ The lexicon in the back of Dixon (1972) gives the bracketed increment ‘(n~~da~~)’ (which would be written *-nyja* in current orthography) after many of these terms, and after their definitions gives ‘(and reciprocal)’, which might be taken to suggest that the increment is added to get the reciprocal (junior kin) reading. However, subsequent research (Dixon forthcoming, p.c.) has shown that the increment actually means ‘country belonging to X’, e.g. *bulunyja* ‘father’s father’s country’ – cf *bulu* ‘father’s father and reciprocal’. See Dixon 1989 for a more recent published statement of the Dyirbal kinship system.

² A formally identical suffix is found in *Gidabal* with the meaning ‘class’ – attached to ‘red gum’, it means ‘red gum class of tree’; attached to ‘nose’ it means ‘person with injured nose’, and, most relevantly, attached to *gawang* ‘mother’s mother’ it gives the form *gawanggirr* ‘mother’s mother’s brother class of person’ (Geytenbeek & Geytenbeek 1971:10).

³ As mentioned in Endnote 3, it took some time for terminology to stabilize; Donaldson used the term ‘reciprocal plurals’ but her characterisation is consistent with our use of ‘dyad’.

⁴ See also Horton (1939:117) for a further example in the Bantu language *Luvale*, where a reciprocal (lit. ‘they are chasing one another’) is used of the situation where one is running and another pursuing.

⁵ Diachronically, the Dalabon construction results from a resegmentation of original [K-ngan]-dung ([K-my]-call, i.e. ‘call “my K”’) to [K-]ngandung ‘call K’ – cf the productive nominal possessive suffix *-ngan* ‘my’. Reanalysis has resulted in prosodic regrouping (ngandung is now a single unit for purposes of stress assignment) and semantic reanalysis, so that *ngandung* is invariant whatever the person of the subject and object.

⁶ One possible further example is in the Gunwinyguan language Warray, where a few dyad terms add a formative *-hmiyi* to a kin term, e.g. *bapba* ‘brother’, *a-wulgan-hmiyi* ‘pair of brothers’ (cf *wulkûn* ‘brother’ in Dalabon, another Gunwinyguan language). Now *-miyi* is the reflexive form of verbs in one class, the m class; there has in the history of Gunwinyguan been some tendency to neutralize reflexive and reciprocal meanings (see Alpher, Evans and Harvey forthcoming), and apparently cognate verbs in *-hme* are used as denominal kin terms with the meaning ‘call K’ in another Gunwinyguan language, Bininj Gun-wok (Evans 2003a: 343); *-hmi* also functions as a denominaliser in Warray (Harvey 1996:127). A possible source for these Warray forms is thus as a reflexive/reciprocal denominal expression ‘call each other K’. Unfortunately our information on Warray (now extinct) is insufficient to know whether it had denominal kin verbs of the Bininj Gun-wok type, or whether it ever did in fact extend the reflexive morpheme into reciprocal situations, leaving two gaps in this argument.

⁷ Underlining here indicates a lamino-dental fricative.

⁸ The same prefix can give chained or asymmetric readings with a number of locationals, e.g. *ë-epinë* ‘one under the other’, *ëi-wenae_to* ‘one after the other’, and *ë-epoe* ‘one over the other’ (Meira 1999:378-9), though it is not clear from the examples whether this is possible with sets of two, as well as the obviously chained examples of higher cardinality.

⁹ The availability of these collective and conversive senses has led some analysts to avoid the term reciprocal in favour of ‘collective’ (Dixon 1988, on Boumaa Fijian) or ‘plurality of relations’ (Lichtenberk 1999).

¹⁰ Additional languages wnot discussed here for lack of space include Southern Paiute (Sapir 1930:109-110), Abaza (Tabulova 1976, Nedjalkov 1991:287), and possibly Yukaghir (Krejnovich 1958, 1982, Nedjalkov 1991, Maslova 1999) though it’s not clear that the resultant expressions there are really dyads (the derivative of older sister, for example, means ‘(all) older sisters together’, according to Nedjalkov). Eastern Pomo (McClendon 1996) has a suffix on kin terms that McClendon describes as a ‘kinship reciprocal’, but the examples she gives are insufficient to determine its exact contribution – an alternative analysis would be that it is actually a passive of kinship verbs (i.e. from a verb ‘be mother’s father to’ it forms a derived verb meaning ‘be ‘mother’s fathered’’, i.e. be daughter’s son to) – more information is needed on this and other

Pomoan languages. Marianne Mithun (email to NE) also suggests that reciprocals of asymmetric kin terms in Mohawk may be possible, with a dyad sense, though this needed checking at the time of her email.

4 Dyad constructions and duals

As mentioned in §2.2, dual is clearly the unmarked cardinality for constructions in Australian languages. It is thus no surprise that in many languages there is a close formal relation between the marking of duals and dyads, or examples of forms with an ‘arbitrary dual’ meaning in one language and a dyad meaning in another. (29a,b) and (30a,b) illustrate suffixes allowing both dual and dyad senses in Bininj Gun-wok *-ko/-go* and Pintupi *-rarra* respectively; (31a,b) compare the form *-manyji*, which has a dual sense in Ritharrngu and a dyad sense in the closely related Djapu; and (32a,b) illustrate the form *-garra/-karra* (the difference between *k* and *g* is purely orthographic) which has a dyad meaning in Jiwarli and the meaning ‘one of a pair’ in Dyirbal.

(29a) *dabbarrabbolk-ko*

BGW old.person-DU

‘Two old people’

(29b) *Bani-bei-go*

BGW they.two-child.of.male-DYAD

‘They two are a father / child pair.’

(30a) *yumari-rarra=ngkamarra-limpalura-∅* *yiti-wana-∅* *wati pitjinpa*

Pin WM-relator¹⁸-AVO=AVO-1duAV-3sgS side-along-NOM across going

‘To avoid his mother-in-law and her brother’ [i.e. two people, each in the *yumari* category] (Hansen & Hansen 1978:96-7)

(30b) *pitjala=na-pulanya* *ngalangu* *kurri-rarra-ngka*

Pin have:gone=1sgS-3duA ate spouse-relator-ACC

‘After going to that married couple I ate with them.’

[i.e. two, each spouse to the other]

(31a) *ḍiŋʔ-maŋjiʔ*

Rit woman-Du

‘two women’ (Heath 1980:33)

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(32b) *manda* *bäpa-‘manydji* *wapthu-n-dja*
Djp 3duNOM father-DYAD(ABS) jump-UNM-PRO
 ‘Father and child jumped up and down.’ (Morphy 1983:46)

(33a) *kunyan-karra*
Jiw elder.sister-DYAD
 ‘pair of sisters’ (Austin 1993)

(33b) *Burrbula-garra* *bani-nyu*
Dyi Burrbula-one.of.a.pair come-NF
 ‘Burrbula and another person are coming.’

This might suggest that duals are a natural source for dyads – but in fact we shall find that in each case, the evidence points to the original meaning either being the dyad sense, or some more specialised type of dual such as ‘one of a pair’ or ‘complementary member of a pair’, with the simple ‘arbitrary dual’ meaning being a later development.

Duals are in fact a far from homogeneous category semantically, and before proceeding we need to discuss some crucial semantic distinctions – see Rukeyser (1997) for a detailed and enlightening survey, partly drawn on below. Following Rukeyser, I will use the term ‘dual’ (or ‘extended dual’ where unclarity would arise) to cover all these subtypes, and designate as ‘arbitrary duals’ the situation where there are two arbitrary representatives of a category without any particular relation to each other.

Languages often extend duals well beyond the simple counting of objects, or have special formal categories for particular subtypes, such as the paral duals found in Breton (Trépos 1965:70) and Tokharian (Winter 1962) for natural pairs of equivalent entities such as pairs of eyes or ears: contrast Breton *daou zorn* ‘two hands (any arbitrary two)’, *daouam* ‘pair of hands’. Constructions employing duals for non-equivalent pairs united by symmetric opposition, or (asymmetric) complementarity are also attested (again I follow Rukeyser’s typology and examples). The dual may be used with a superordinate term applying to both denoted elements, as with Classical Arabic examples like *al-‘atyabâni*, lit. ‘the two excellents’ to denote ‘food and drink’, *al-‘ahmarâni* ‘the two reds’ to denote ‘wine and meat’, or *al-misrâni* ‘the two cities’ to denote Basrah and Kufah. It may be added to one proper noun in a conventionally opposed pair to denote the whole pair, as with Sanskrit *āditṃyā* ‘the two

Adityas: Mithra and Varuna’. Alternatively, it may be added to one noun of an opposed or complementary pair, again to denote the whole pair, as with the Classical Arabic *al’abawâni* ‘father (and mother)’, built on the first member of an opposed (but not converse) pair, or Sanskrit *āulūkhālāu* ‘mortar and pestle’ built on the root denoting the first member (‘mortar’) of a complementary pair.

At the level of oppositional parals, whether symmetric or asymmetric, Rukeyser’s generally useful typology fails to make an important distinction: is the root relational (e.g. a kin term), or absolute (e.g. excellent, pestle). Neglecting this leads her to lump dyads in with other categories. She treats symmetric terms like Nunggubuyu *a-muri-ji* ‘father’s father / (brother’s) son’s child pair’ (cf \sqrt{muri} ‘FF; (B)SC’ as equivalent to Classical Arabic *al’atyabâni*, lit. ‘the two excellents’, despite the difference in form of paraphrase: with a reciprocal of the root itself in the case of relationals ‘two who are *muri* to each other’, but with a non-reciprocal quality predicate plus a reciprocal of the predicate ‘opposite’ in the other: ‘two things, each excellent, that are opposite to each other’. Similar remarks apply, though with less force, to her treatment of ‘asymmetric common oppositional parals’, which groups together Sanskrit *āulūkhālāu* ‘mortar and pestle’ and the Ritharngu asymmetric *ba:pa-ka?* ‘a father and child pair’. How serious a problem this second conflation is depends on whether ‘mortar’ is treated as an absolute noun or a (possibly implicit) relational, i.e. ‘mortar for something’: if a relational treatment is adopted, one could propose parallel definitions – ‘two such that one is father/mortar to the other’ – but this seems forced given that it is logically possible to construct a mortar without any corresponding pestle, whereas it is impossible to be a father without a corresponding child existing.

A further dimension to duals is the possibility of specifying only one element and projecting the second by implication. This is close to Delbrück’s (1893) notion of an elliptical dual, depending on how one translates the relevant expressions. If *āulūkhālāu* [mortar-dual] really means ‘mortar and pestle’, then it is an asymmetric common oppositional paral, as discussed above. But what if it means ‘mortar (which is normally part of a mortar-pestle set)’, in which case it actually has singular cardinality, with an ‘evoked duality’. Certain formally dual constructions in Australian languages function in this way, reminiscent of the use of dyads with singular cardinality – an example is the use of the dual/ suffix *-ko* in Bininj Gunwok, on a few stems, to denote singulars forming part of a clear pair – *ngey-ko* ‘namesake’ (as well as the ‘pair of namesakes’ meaning given in §2.2 above), *dird-ko* [moon-DYAD] ‘moonlight’ (i.e. what generally accompanies the moon), and *wularri-ko* ‘season of the westerly wind, conditions accompanying the westerly wind [*wularri*]’.

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A further type of dual found in several Australian languages – termed a ‘dual of arbitrary opposition’ by Rukeyser – can be exemplified by the Dyirbal suffix *-garra* ‘one of a pair’, which can either combine with a single expression, as in (32a above), or on each of two expressions (34):

- (34) *Burrbula-garra* *Badibadi-garra* *baninyu*
 Dyi Burrbula-one.of.a.pair Badibadi-one.of.a.pair come-NF
 ‘Burrbula, being one of a pair, and Badibadi, being one of a pair, are coming.’

Ngiyambaa *-bula*: has a similar function when attached to proper nouns (Donaldson 1980:102-3), e.g. *Mamie-gam-bula*: ‘Mamie, together with one other person’, though the examples with it attached to common nouns seem to have a straightforward arbitrary dual interpretation: *miri-bula*: ‘pair of dogs’, *bura:y-bula*: ‘pair of children’.

A single form often takes in a number of the above types. I now turn to four cases where there a single form spans both dyads and other types of dual senses, either within a single language or across a series of related languages. Interestingly, in only one of these cases does the direction of development appear to be from canonical dual to dyad: that of the suffix *-wiy* in Warluwarric (§4.4), though even there the change is merely incipient. In the case of Gunwinyguan *-ko* (§4.1) and Yolngu *-manyji* (§4.2) the direction of change seems to run from dyad, through other types of parals, to rare availability as an arbitrary dual, and in the case of the widespread morpheme *-garra* (§4.3) the most likely direction of development appears to be from ‘one of a pair / natural pair’ to dyad on the one hand, and (occasional) arbitrary dual on the other.

4.1 Gunwinyguan *-ko/-go*

The suffix *-ko/-go*, found in a number of languages of Arnhem Land (with phonological changes to *-kuwah*¹⁹ in Rembarrnga, *-ko?* in Ngalakgan, and to *-ka?* in Ritharrngu, and voicing/length alternations in Ngalakgan; the original form was probably *-koɻ*), takes in a number of dual types in many languages that have it.²⁰

In both Dalabon and Bininj Gun-wok (closely related languages of the Central Gunwinyguan branch), *-ko* has a dyad meaning when attached to certain kin terms (in each

language there are several exponents of the dyad category), as well as additional other senses basically determinable from the meaning of the noun stem. (35), (4) and (29b) above illustrate the dyad senses.

- (35) *Be-ko* *keh-bo-n*
Dal mS-DYAD 3du.opposite.sides-go-NP
 'A father and son pair are going along.'

In Dalabon this suffix may also go on proper nouns like subsection terms (36), and on non-relational terms denoting animal terms (37), where it appears to have a simple arbitrary dual meaning:²¹

- (36) *Kodjok-ko*
Dal kodjok-DU
 'two Kodjoks' (i.e. boys in Kodjok subsection)

- (37) *Rolu-ko* *barra-h-nomu-rrû-n*
Dal dog-DU 3du-R-sniff-RR-PRES
 'The two dogs are sniffing each other.'

In Bininj Gun-wok, *-ko* is also occasionally found with non-dyadic terms such as *dabbarrabolk-ko* 'two old men' (29a above). It offers further senses as well. Attached to nouns denoting activities or entities which may serve to link people together, it means 'two people, who have N in common, who are related to or interact with each other via N'. Examples are *rid-ko* 'two who fight (each other)', based on the root *rid* 'fight, trouble', and *ngey-ko* 'namesakes', based on the root *ngey* 'name'. This is reminiscent of the 'oppositional parals' exemplified by the Classical Arabic 'the two excellents' discussed above, but in contrast to that example (applied to food and drink), a reciprocal relationship is projected between the two entities.

Some *-ko* suffixed expressions in Bininj Gun-wok are in fact singulars, referring to an element that regularly accompanies the noun denoted by the suffix. Examples are Kunwinjku *dird-ko* 'shadow of moon' [moon-~], and the Eastern Kunwinjku season names *kunkurra-ko* 'windy season' [wind-~] and *wularri-ko* 'westerly wind season' [westerly.wind-~]. This sense only appears when the root denotes meteorological or celestial entities.

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For both Bininj Gun-wok and Dalabon, the *-ko* suffix is polysemous between a number of dual-type meanings, with the selection being predictable from the semantics of the root it attaches to. This makes it difficult to say which meaning is primary. However, in other Gunwinyguan languages with cognate suffixes, the dyadic meaning is the dominant or only meaning reported. It is the only meaning reported for Rembarrnga *-kuwah* (38), and Ngandi *-ko?* (39); for Ngalakgan *-ko?* ~ *-go?* (40) it is virtually the only meaning reported, except that it may attach to ‘skin, subsection (marriage class)’ (40b), to give the related meaning ‘pair who are in the right subsections to allow marriage’. In Ritharrngu, the form *-ka?* (41), borrowed from Gunwinyguan (probably Ngandi – see Heath (1978b)) likewise only has a dyadic meaning.

(38) *yandabbarrama kek-kuwah yarranbayabbah-yawminj.*
 Rem we two uncle-DYAD 3pl/1du-spearPP
 ‘Us two, uncle and nephew, they threw spears at us.’

(39) *nyarra-ko?* *yawuyu-ko?*
 Nga father-DYAD brother-DYAD
 ‘father and son/daughter’ ‘pair of brothers’

(40) (a) *marke-go?* (b) *yi-wac-malk-go?*
 Ngk FZ-DYAD 1.inc-both-skin-DYAD
 ‘father’s sister and brother’s child’ ‘We’re correct (for each other).’
 (Merlan 1983:20) (Merlan 1983:53)

(41) *ba:pa-ka?*
 Rith father-DYAD
 ‘father & child’

Interestingly, Rembarrnga, Ngalakgan and Ngandi all have an alternative dual suffix, e.g. *-barrah-* in Rembarrnga – whereas neither Dalabon and Bininj Gun-wok do. Moreover, the formal resemblances between these duals (as well as with other dual suffixes in less closely related languages, such as Mangarrayi *-yarra-* (non-kin) and *-wurra-* (kin)) suggest they are original rather than innovated. This suggests that the direction of extension in Dalabon and Bininj Gun-wok has been from dyad to dual rather than the other way around, though

unfortunately we so far lack any other cognates of the form –ko? which would help us establish its original meaning.

4.2 Yolngu – ‘*manyji*’²²

The Yolngu subgroup lie immediately to the east of Gunwinyguan in north-East Arnhem Land, and share a number of areal features with them, but are not closely related – they are a Pama-Nyungan enclave surrounded by non-Pama-Nyungan languages from several families, including Gunwinyguan. They provide a clear example where comparative evidence shows the extension of an original dyad suffix to a broader dual meaning in one language.

In most Yolngu languages the nominal suffix – ‘*manydji*’ is either exclusively a dyad suffix, or is primarily a dyad suffix with some related extensions to other kinds of pairing.

For the southern Yolngu languages Djapu (Morphy 1983) and Gupapuyngu (Van der Wal 1992:66-67) only dyad uses are described (31b), though Van der Wal mentions a metaphorical use of the term *dhuway* ‘*manydji*’ [husband-DYAD] in which the basic meaning of ‘husband and wife’ is extended to describe the relationship between languages and clans in opposite moieties (and hence as prescribed sources for marriage partners). For Djamparrpuyngu, aka Dhuwal, Heath (1980:22) only describes a dyad use, but the more detailed description in Wilkinson (1991:171-2), while still characterising its semantics as basically dyadic, adds a few other examples of pairs of humans united by shared activities or desires: *mangutji* ‘*manydji*’ ‘sweethearts, lovers’ (*mangutji* ‘eye’), *djukarrngu* ‘*manydji*’ ‘good/close friends of the same sex’ (*djukarrngu* ‘good/close friend’), *goyurr* ‘*manydji*’ ‘friends, companions in the sense that they always go about together’ (*goyurr* ‘travels, movements; way of moving’).

In Djinang (Waters 1989:99-89) most examples with –*manydji* are dyadic kin terms, built on kinship nouns as roots, but there is a single further term *mil-manydji* [eye-DYAD] ‘pair of lovers’. In all these languages, then – which represent two out the three branches of the Yolngu group, since Djapu and Gupapuyungu belong to the southern Yolngu branch and Djinang belongs to the eastern Yolngu branch²³ – the semantics of – ‘*manydji*’ is clearly focussed on a dyad meaning.

In one southern Yolngu variety, however, namely Ritharrngu, – ‘*manydji*’ has not a dyad but a dual meaning: the examples given in Heath’s grammar (1980:33) include ‘two women’, ‘two kangaroos’ and ‘two stones’ (all given out of context, unfortunately). The

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dyad meaning is expressed, instead, by the suffix *-ka?*, borrowed from Gunwinyguan *-ko?* (see above; Ritharrngu, like all Yolngu languages, lacks mid vowels so *o > a* is regular).

Interestingly, though *-‘manyji* can clearly be reconstructed back to proto-Yolngu with a dyadic meaning, it is unclear that an ‘arbitrary dual’ nominal suffix can be reconstructed – the treatment of arbitrary duals varies from language to language. Djinang lacks a nominal dual entirely, opposing nominative \emptyset to plural *-pili ~ -wili* and paucal (also useable as a dual) *-mirrpili*. In Djapu, a new arbitrary dual nominal is being grammaticalised from the free third person dual pronoun *manda*, which is undergoing a functional split into pronoun and ‘number marking postnoun’ forms, and has reached the point where it can cooccur with coreferential personal pronoun, e.g. *daramu manda manda marci-n* ‘the two men went’, in which the first occurrence is a postnoun after the noun *daramu* ‘man’, and the second is a free pronoun. Morphy (1983:47) discusses the difficulty of distinguishing these two uses in Djapu, though in some cases one can appeal to differences in case-marking: when used as a number marking postnoun in transitive subject function, for example, *manda* takes ergative *-l*, whereas it takes the \emptyset nominative ending when used as a pronoun.

Ritharrngu appears to have adopted another strategy, by borrowing the *-ka?* from Gunwinyguan, and shifting the semantics of its erstwhile dyad to the arbitrary dual.

Table 3 summarises the hypothesised developments:

Language	Arbitrary Dual	Dyadic
proto Yolngu	None	- ‘ <i>manydji</i>
Djinang	None, but can be covered by new paucal category <i>-mirrpili</i>	- ‘ <i>manydji</i>
Djapu	Ongoing grammaticalisation from 3du pronoun <i>manda</i>	- ‘ <i>manydji</i>
Djamparrpuyngu	Ongoing grammaticalisation from 3du pronoun <i>manda</i>	- ‘ <i>manydji</i>
Ritharrngu	- ‘ <i>manydji</i>	<i>-ka?</i> (< Ngandi <i>-ko?</i>)

Table 3 Development of dyad and arbitrary nominal duals in the Yolngu languages

4.3 -garra/-karra and its cognates in Pama-Nyungan

I now pass to a third formative, widespread in Pama-Nyungan, which has dyad meanings in some languages and a string of related meanings in others. Dench (1997) has already discussed the uses of this morpheme as a dyad in Pilbara languages of the Kanyara and Mantharta groups (exemplified by 32b above, from Jiwarli), and its relation to a number of the other forms given below. We extend his discussion with some additional material and analysis. Table 2 summarizes the semantic range of apparent cognate sets of this morpheme in Pama-Nyungan;²⁴ a question mark precedes forms where a difference in the initial consonant makes cognacy indecisive.

Language	Form(s)	Function(s)	Source
Ngayarda (e.g. Panyjima, Nyamal)	-karra /C_ ~ -yarra /i_ ~ -warra /u_ ~ -rra / a_	Dyadic Nyamal: 'defining characteristic of situation', e.g. <i>warrkamu paru-karra</i> 'spinfex work' Panyjima: 'unifying, X is together with Y as a unit'	Dench (1991, 1997) Dench (1997), Austin (1993, 2000)
Mantharta (e.g. Jiwarli)	-karra (invariant)		
Walmatjari	-karra	manner suffix, which 'qualifies the action of the main verb by describing the manner in which the action was carried out'	Hudson 1978:35
Warlpiri	-karra	'simultaneous action (subordinate clauses)'	Simpson (1991)
WD: Yankunytjatjara	? -ra /V_ [μμμ] -rara/V_ [μμ] -kira/C_		Goddard (1982)
WD: Pintupi	? -rarra(n)-	grouping of two (<i>rarra</i>) or more (<i>rarran</i>)	Hansen & Hansen (1978)
WD: Kukatja	? -rarra	dyad	Valiquette (1993)
WD: Martutjarra	? -rarra	'coupling suffix' ²⁵	Marsh (1992: 298-9)
Nyangumarta	-karra	dyad	O'Grady & Mooney (1973)

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Dyirbal	- <i>garra</i>	‘one of a pair’	Dixon (1972)
Guugu Yimidhirr	- <i>garra</i>	‘collective plural; with kin terms indicates ‘that several people stand in the same relation to a single other’	Haviland (1979:55)
Ngiyambaa	- <i>gara</i>	‘sensory evidence’ (nominal clitic)	Donaldson (1980)
Yanyuwa	- <i>garra</i>	dyad	Kirton (1971)
Bularnu / Warluwarra	- <i>mugara</i>	dyad	Breen (1976)
Gidabal	- <i>garra:</i>	pluralizer, e.g. <i>ma:mang-garra:</i> ‘fathers’	Geytenbeek & Geytenbeek (1971:11)

Table 4 Possible cognates of *-karra/-garra* in Pama-Nyungan

The treatment of such a semantically complex set is obviously not straightforward. I offer one interpretation below. Though it is obviously possible that some of the forms may not be true cognates and are only accidental formal resemblances, it is plausible to relate all of them through the changes diagrammed in Figure 2 below.

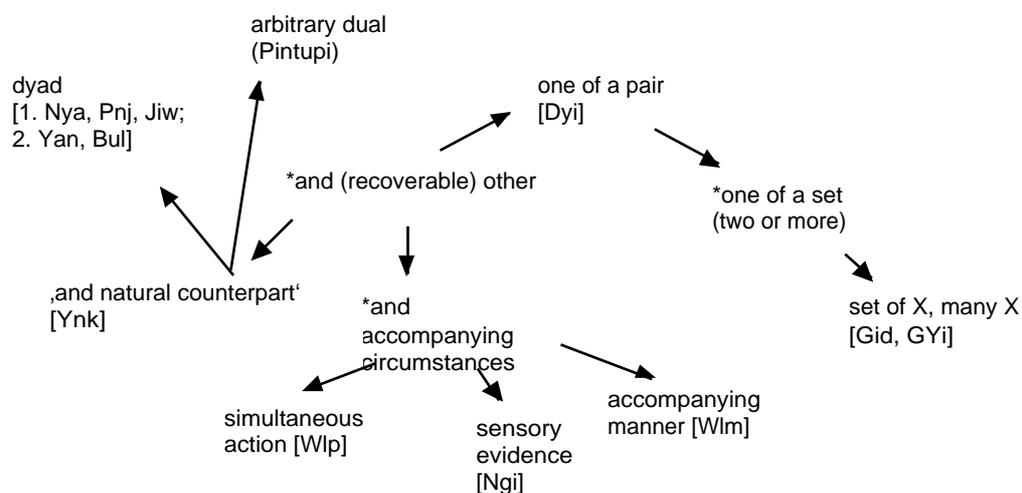


Figure 2. Postulated pathway of semantic development for Pama-Nyungan **-garra*

First, to the formal correspondences. The *g* and *k* are merely orthographic variants, and the *r* in Yankunytjatjara and Ngiyambaa represents the same phoneme (alveolar trill) as the *rr* in the

other languages. The long final vowel in *Gidabal* cannot be accounted for (except by assuming it is original and has been lost in the remaining languages). Apart from this the only formally problematic suffixes are

(a) the *Ngayarda* forms, which have invariant and morphophonemically alternating doublets (with the dyad more variable). With *Dench* (1997), I do not consider this an obstacle to postulating cognacy: it is possible that the more lexical of the two (the dyad) has been subject to greater assimilatory changes than the more inflectional version. In fact, the lenitions are regular for nominal inflections, so it is the invariance of *-karra* which poses the greater problem.

(b) the *Western Desert* forms require us to account for several changes: weakening of additional *k* to retroflex continuant *r* after vowels in *dimoraics* – presumably a case of lenition comparable to the *Ngayarda* dyad; further syncope of the first syllable after vowel-final *trimoraics*; and fronting of the first vowel *a* to *i* in the *kira* allomorph. At present we lack independent evidence for all of these alternations, so the *WD* forms are the most problematic formally, but are retained here provisionally because of their close semantic connection.

Let us now consider the most likely series of semantic changes to give the above range.

The dyad senses are found in two locations.

Firstly, there is a series of occurrences among languages in the western half of the continent, whether due to common inheritance of a once-off extension at the level of *Nyungic* (a grouping that includes *Ngayarda*, *Mantharta*, and *Western Desert*, but that not all accept) or due to mutual areal influence among closely related languages. Moreover, in almost all of these languages²⁶ the dyad sense coexists with another sense having to do with complementarity – another entity that one can expect to go with the affixed root. Getting from ‘natural complement’ or ‘natural accompaniment’ to dyad is not a big step semantically – arguably the natural complement of ‘uncle’ is ‘nephew’, etc., and in any case we have already seen that *Bininj Gun-wok* *-ko/-go* includes both ‘complement’ and ‘dyad’ in its semantic range. Indeed, *Goddard* (1982:72), who glosses all instances as ‘pair’, postulates a single underlying meaning to cover these cases:

'A noun with this suffix denotes a pair consisting of the person or thing referred to by the stem noun, together with its natural counterpart...

The stem is usually a kin relationship noun, in which case the other element of the pair is understood to be a person in the complementary relationship.

§4. Dyad constructions and duals

Occasionally the stem noun refers to an animal or plant, in which case the other element of the pair is understood to be a similar animal or plant, e.g. the plains kangaroo and the hills kangaroo, or the quondong and the wild plum, or the long-eared bandicoot and the banded ant-eater. I have recorded one instance of *nyaa-rara* what-PAIR, said by a person trying to remember what 'went with' a certain type of grass, i.e. what type of grass resembled it. [Goddard 1982 :72]

And it is this 'complementary pair' meaning which most naturally links the western *-garra* forms to those in the east.

Secondly, in languages of the Warluwarric group, in the south-western Gulf of Carpentaria, there are dyads in *-garra* or *-arra* in Yanyuwa (Kirton 1971) and in *-mugara* in Bularnu/Warluwarra (Breen 1976). In these languages these appear to be dedicated morphemes. (There are also some dyads in *garra* or *arra* in the non-Pama-Nyungan language Mara, which adjoins Yanyuwa. Although some look like possible loans, e.g. Marra *manggigarra* HZ/(w)BW dyad ?< Yanyuwa *majgarra* 'H/W dyad', in most cases the complete word forms do not match closely, so if they are loans they are direct loans of the morpheme rather than the complete word.) Given the wide separation of this group from the western languages discussed above, it seems most likely that this is an independent semantic development.

The Dyirbal 'one of a pair' meaning needs a double shift: the weakening from 'expected complement of a pair' to 'any other arbitrary one of a pair', and the contraction of cardinality from two to one as one member of the pair is foregrounded. Note in regard to this second change that in at least two western languages it is possible to use the cognate form with singulars. The possibility of using the Nyangumarta form *kurntalkarra* with a singular was discussed in §2.2 above; while for Yankunytjatjara Goddard gives examples of use with a singular referent:

(42) *argul̩i* *nyanga-tja* *mayi* *mulapa...*
Ynk wild.plum this-EVIDENT food true

mangaṭa-pur̩iny *nyara-tja* *mangaṭa-ra*
quondong-SIMILAR(NOM) over.there-EVIDENT quondong-PAIR

'The wild plum is truly a bush-food. It's similar to the quondong.
It's one of a pair with the quondong.'

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Semantic developments to an arbitrary dual meaning are surprisingly rare. Pintupi appears to furnish the only example (see (30a) above), and this is arguably a contextual reading rather than a stable sense (certainly that's how the Hansens analyse it). The example they give suggests that duals arise from dyads, just on kin terms, by taking an 'outsider' as the anchor, rather than a referent of the two kin denoted by the noun phrase.

The plural senses found with Guugu-Yimidhirr and Gidabal may represent developments from an original meaning closer to the Dyirbal sense 'and other', most plausibly via a stage in which – unlike Dyirbal – it is not specified whether there are one or more others, then to an 'and others' sense, and finally from 'N and others' to 'N and others similar', whence 'N plural'.

As indicated, not all of the above developments can be regarded as equally plausible or well-established. For the purposes of this section, however, the following should be emphasised:

(a) it is clear that the dual readings, as exemplified by Pintupi, are extremely restricted, and likely that they are recent developments

(b) likewise, the geographical restriction in scope of the dyad senses, with occurrence in the western languages and a seemingly independent development (in combination with an inner suffix *-mu-*) in Bularnu/Warluwarra, along with the plausibility of deriving dyad senses from a more general 'pair' or 'natural complement' sense, suggests that the dyad sense, too, is not original

(c) a meaning of 'natural counterpart of X' appears the most plausible original meaning for the nominal suffix *-garra*, with it able to give expressions of cardinality one (X's complement) or two (X and its complement) according to context, as we saw for Yankunytjatjara.

The evidence thus points to the arbitrary dual sense of Pama-Nyungan *-garra*, like that of Gunwinyguan *-ko/-go* and Yolngu *-manyji*, as being a relatively recent development, though unlike the Gunwinyguan and Yolngu cases, where an original dyad sense appears the most plausible, the original sense of *-garra* had a more general 'complement of' meaning.

4.4 Southern Warluwarric *-wiy(a)*

A suffix *-wiy(a)* or *-wiy(i)* is found in all the Southern Warluwarric languages (i.e. Warluwarra, Wakaya, Bularnu and Injilarrji), but not in the (typologically very different, and non-contiguous) northern Warluwarric language Yanyuwa.²⁷ In all but one of these languages, its usage is exclusively dual: examples are Warluwarra *yughu-wiya-nha* [stick-DU-ACC] ‘two sticks’, *ngathangu-wiya barlu-wiya* [1sgGEN-DU son-DU] ‘my two sons’ (Breen forthcoming: 1102), Wakaya *wura-wiy* [dog-DU] ‘two dogs’, *yinda-wiy* [your-DU] ‘your two’, *kerewa-wiy* [child-DU] ‘two children’ (Breen forthcoming: 287-8), Bularnu *garali-wiya muga-wiya* [child-DU good-DU] ‘two good kids’ and *warayi-wiya-gu ... gutjiya-gu*²⁸ [dog-DU-ERG ... two-ERG] ‘two dogs (ERG)’ (Breen forthcoming: 708) and Injilarrji *kijii-wi wara-wiyi* [two-DU dog-DU] ‘two dogs’ and *ngatha-wiyi bali-wiyi* [my-DU that-DU] ‘my two’ (Breen forthcoming: 512-3). And in all these languages but Wakaya, dyadic terms are formed with the suffix *-mugarra*, which is built on the suffix *-garra* discussed in the last section, and is likely to be the proto-Warluwarric dyad suffix since the form *-garra* is found with dyad meaning in Yanyuwa as well.

In Wakaya, however, the suffix *-wiy* may also be used in a couple of dyadic expressions, though in neither case are they based on an isolable kin root. The relevant examples are *yimardewiy* ‘father and son, father and daughter, mother and daughter, uncle and nephew’ (no isolable root **yimarde*) and *wubarra-wiy* ‘husband and wife, married couple’ (again, no root *wubarra* occurs outside the dual or plural dyadic forms). The restriction of *-wiy* to dual function in all but one of the southern Warluwarric languages, and the use of an alternative form for dyads in all but one Warluwarric language, suggest that the original function of *-wiy* was exclusively as a dual, in opposition to dyad *-(mu)garra*, but that just in Wakaya *-wiy* has begun to be extended its function to take in dyad senses as well. Because it is restricted to suppletive roots, however, it is not yet a true dyad suffix: it occurs in dyad expressions, but does not derive dyads from independent kinship roots. This is thus an incipient case where the directionality of semantic change has begun to move from dual to dyad.

4.5 Dyad – dual links – summary

Perhaps surprisingly, our survey reveals no fully convincing example of dyads developing from duals, but occasional examples either of developments in the other direction – from dyad

§4. Dyad constructions and duals

to dual, in the case of Gunwinyguan *-ko/-go*, and Yolngu *-manyji*, plus an incipient example in Wakaya where an original dual suffix now occurs in two dyad expressions, that are however not based on isolable roots.

For the sake of completeness two further cases of postulated developments from dual to dyad should be mentioned.

Breen (1976:294) mentions the Gugadj suffix *-tyira*, which he terms a ‘kin proprietive’ (equivalent to our ‘dyad’ – see below), as exemplified by *kañil-tyira* [elder.sister-DYAD] ‘two sisters’, and *pul-tyira* [father-DYAD] ‘father and son’. He goes on to point out its formal resemblance to the widespread word for ‘two’, *kujarra* (*kutyara* in the orthography he uses), and suggests that the Gugadj dyad ‘is possibly derived from the proto-form for two’. This is certainly not implausible, but two reservations must be pointed out before it can be accepted as proved. First, he only cites a ‘proto-form’ (without imputing it to any particular proto-language, though Pama-Nyungan would now be a good candidate), and does not establish that such a form exists in Gugadj, nor that a dual *-tyara* is used there. Second, even if this does derive ultimately from the number two, there may have been an intermediate step during which it functioned as a proprietive (as Breen himself mentions, citing a suggestion of Hale’s that ‘having’ or proprietive affixes may be derived from earlier forms of the numeral two’ (Breen 1976:294). If that were the case, this would not count as a direct development from dual to kinship dyad, but rather from ‘two’ to ‘proprietive’ to ‘dyad’, with the extension from proprietive to dyad exemplifying a common pattern we discuss in the next section.

The second case concerns the Arrernte dyad suffix *-nhenge*. Though this appears synchronically to be monofunctional, it has been claimed by Strehlow (1944:77) (who transcribed it as *ṇṇṇṇ*) to derive from an ancient dual, though he does not give examples of a dual use and merely states that ‘the dual proper, for all practical purposes, has become obsolete, and is to-day found only in the archaic chants and in a few common person nouns where the dual conveys a special shade of meaning which would be absent from the plural’. The examples he gives in support of the latter type are all dyads: ‘twins’, ‘mother and baby’, ‘father(s) and son(s)’, and ‘two brothers’. It is difficult to evaluate his statement, which may reflect his general tendency to project an Indo-European diachronic trajectory onto Arrernte, but it would be interesting to see whether comparative work supports this hypothesis.

Notes to §4

¹⁸ I retain Hansen & Hansen's gloss, 'relator', which they characterise as follows. In Pintupi (Hansen & Hansen 1978:96-7) '[t]he relator (-*rarra*) is used for grouping two relatives and (-*rarran*) for grouping three or more'; in examples they use the glosses 'two' and 'few' according to the number of referents. The Hansens' examples, which all involve kin terms of more general relationship terms like *tjampati* 'taboo relative', include both cases where the 'relator' suffix is functioning as a dual or plural (counting equivalent relationships) and cases where it is functioning as a dyad suffix, denoting a group within which the relationship holds.

¹⁹ The *h* in Rembarrnga represents a glottal stop, so it is in fact closer to the Ngalakgan and Ritharrngu forms than it looks. 'Vowel breaking' of *o* to *uwa* is also claimed to be a regular process in Rembarrnga (Harvey in press), though it remains possible that *-kuwa?* is in fact the original form, with subsequent development *uwa* > *o*. Depending on the language at issue, *k/g* are either orthographic variants of one another (Bininj Gunwok), or represent phonemically distinct allomorphic variants conditioned by metrical features of the host word (Ngalakgan). For discussions of what appear to be borrowed forms of this suffix into languages of the neighbouring Maningrida family – though it also remains a possible case of common inheritance – see §6.3.

²⁰ Heath (1978a:91) argues that the Nunggubuyu dyad *-(y)ij* is also cognate, via the development *-koɿ* > *-goɿ* > *-woɿ* > *-woɿ̣* > *-wiɿ̣* > *-yiɿ̣*.

²¹ Note though, that both my examples with 'arbitrary dual' *-ko* do not completely rule out a paral reading – in one case, it was in reference to 'two sand goannas – a male and a female one', and in the example with the two dogs they are engaged in reciprocal sniffing.

²² It is remotely possible that *-manyji* is an old (stranded deverbal) reciprocal of a verb of form <kin>-*'ma* 'call K', with *-nyji* being the old reciprocal marker, the whole structure and the reciprocal suffix being borrowed from Nunggubuyu just to the south. In support of this scenario, Nunggubuyu *ma*- thematic verbs have reciprocal stems in *-manyji*, and some other Gunwinyguan languages, such as Bininj Gunwok, form delocutive kinship verbs (call K) with a reflex of this thematic. Against it, in Nunggubuyu delocutive kinship verbs are formed with a different thematic (*-ga* ~ *-wa*), and the exact mechanism by which the suffix would be borrowed, and reanalyzed from verbal to nominal kinship suffix, is hard to delineate.

²³ Unfortunately we currently lack information on how dyads are expressed in the third, ‘northern’ branch of Yolngu – e.g. in Nhangu.

²⁴ There are some tantalising formal matches in non-Pama-Nyungan. In Mara (Heath 1981) the system of dyad terms is morphologically complex, with many unrelated exponents and suppletive forms (as well as kin types for which there are dyads but no corresponding simplex term). Within this paradigm (see Heath 1981:111) several dyad terms end in *-gara*: *ɭambar-gara* ‘WF/DH’ (based on the Kriol term *lambara* ‘WF’), *ɲumbanara* ‘ZH/WB’ (this form is widespread – see §6.2 – and may be a loan), *manɟigara* ‘HZ/fBW’ and *magara* ‘MB/ZS’, the roots of the latter two terms not occurring elsewhere. While the first two terms may be loans, this is likely in the case of the latter two, so that *-gara* may in fact be an old dyad suffix in Mara. If so, then it is either an independent development from that found in the Pilbara, or else the semantic scenario given below would need to be modified, so as to assign a dyad meaning to this morpheme before the Pama-Nyungan split.

Further possible cognates, though semantically more problematic, are the Kayardild (and Tangkic more generally) possessive/genitive suffix *-karra(n)* (related to the ‘complement / pair’ suffix by co-presence of possessor and possessed?), and the verbal plural prefix *karra-* in a number of Gunwinyguan languages, including Dalabon and Ngandi (most likely deriving from incorporation of a free nominal). However, the combinatoric and semantic discrepancies are too great for us to attempt to unify them in the discussion given here.

²⁵ Examples given by Marsh include: *nyamurarra* ‘a grandfather and a grandchild’, *nyupararra* ‘a married couple’ < *nyupa* ‘spouse’, *jurturarra* ‘two sisters’, *mamararra* ‘a father and his child’.

²⁷ Warluwarric is currently the most widely used term for this group of languages, but Breen himself prefers to use the term Ngarna for the group, based on the distinctive first person singular form *ngarna*.

²⁸ I use ‘...’ to represent omitted material not cited here: the phrase is a discontinuous constituent.

5 Dyads and the inclusory construction: comitatives and possessed nouns

We now pass to two related sources for dyad morphemes, possessor-marking and comitative/proprietives, each signalling one pole of a relationship of possession or accompaniment – more generally, of co-occurrence. In each case, I will show, nouns bearing one of these markers, originally construed as indicating one subset of a larger set, are placed in constructions where other constructional elements – preeminently apposed pronouns or pronominal affixes – specify the full set in the following way:

$\text{Pron}_{\{x, (\dots), z\}}$	N_x	‘X, (...) and Z’	Pure inclusory construction
$\text{Pron}_{\{x, (\dots), z\}}$	N_{possd}	‘X, (...) and his/her R’	Possessed inclusory construction
$\text{Pron}_{\{x, (\dots), z\}}$	N_{com}	‘X, (...) with Y’	Comitative inclusory construction

Through the common occurrence of possessor or comitative-marked nominals in these set/subset or ‘inclusory’ constructions (see Singer 2001 for a survey of this construction in Australian languages), the semantic contribution originally emanating from the complete construction – in particular, with the superset pronoun – becomes associated with an enriched semantics for the affix itself: ‘his/her K’ becomes ‘a pair/group, including someone and his/her K’, and ‘with (his/her) K’ becomes ‘a pair/group, made up of someone with his/her K’.

We discuss possessor oriented cases first, in §5.1, then pass to comitative-oriented cases in §5.2. (Various language-specific patterns of case syncretism mean that in some cases individual grammars will label the relevant case as ‘proprietive’ or ‘instrumental’ rather than ‘comitative’, but in each case a comitative meaning is included in the semantic range.)

§5.1 *Dyads from affixes marking possessor relations*

In a number of languages there is formal overlap or identity between suffixes marking a noun as possessed (typically by third person singular), and dyad markers. Breen (1976:292ff), the first to point this out,²⁶ gave clear examples from the Pama-Nyungan languages Gog-Nar and Wakaya (Warluwarric) which are repeated here.

§5. *Dyads and inclusory constructions*

First consider Gog-Nar, in which the suffix *-m̩araŋk* can be attached to kinship nouns: in some context, it marks them as possessed by a third person (46), while in others, it derives dyads (47). (I substitute the glosses ‘3possd’ and ‘DYAD’ for Breen’s gloss ‘kp’ [kin proprietive], which he uses in both instances; I retain the (unexplained) discrepancies in word-boundary divisions in Breen’s article). Note that in (47) – the only dyad example Breen gives – the third dual pronoun *p̩laŋ* is present, and this may be a prerequisite for the dyad reading. Unfortunately the Gog Nar data is too limited for us to test this, but we will return to comparable data from Dalabon below.

(46) *ŋi̩-m̩araŋk*

Gog father-3possd

‘his father’ (Breen 1976:292)

(47) *mu̩tók m̩araŋk pu̩rəm kanaŋk karim p̩laŋ*

Gog eB DY there now fight-PRES they.DU

‘The two brothers are fighting.’

Wakaya, a Warluwarric language spoken a few hundred kilometres to the west of Gog-Nar, though still in the general Gulf Region, presents a more complicated case. In Wagaya, the suffix *ŋəŋɖu* (masc) or *ŋəŋɖi* (non masc) may either mark kin possessed by a third person (48, 49), or may function as a dyad marker (50, 51). In the latter case it may be followed by a further ‘non-singular’ affix *-gəra* and a dual or plural suffix, as appropriate; though Breen presents these as optional, in fact all his dyad examples contain at least the number marker.²⁷ This suggests that Wagaya is an example of a language where the set cardinality is given by an affix to the dyad-suffixed word, rather than a separate pronoun.

(48) *dyirəwə-niz-bulu irdyad-əg lələ-ŋəŋd-an*
 Wak spear-PST-that spear-OP EB-3m.possd-ABL
 'He speared that fellow on account of his brother.'

(49) *gərəwa-la-ŋ im-əl gunə-ndiy mimi:mə-ŋəŋdu*
 Wak child-OP-me thisOP call-PRES MF-3m.possd
 'This child calls me grandfather.' (i.e. his grandfather)

(50) *lələ-ŋəŋda-wiy*
 Wak EB-DYAD-DU
 'Two brothers.'

(51) *mimi:mə-ŋəŋdə-gəra-wiy*
 Wak MF-DYAD-NON.SG-DU
 'We're grandfather and grandson (or granddaughter).'

Breen's Gog-Nar and Wakaya examples establish that a single form can double as a marker of a third person possessor, and as a dyad. In all the examples he gives, dyad meanings only occur in the presence of a further marker – free pronoun in (47); suffix in (50) and (51) – which specifies the cardinality of what is effectively a superset. These examples suggest that the bridging context for the emergence of a dyad meaning is the inclusory construction, with the superset pronoun or affix specifying the group, and the possessed kin noun specifying one component. We show this schematically in (52): the $\langle \rangle$ encloses semantic material given by the construction (i.e. the inclusory construction), and the square brackets enclose the material added by inferencing based on a knowledge of the kinship system. Note also that the contextually enriched version given in (b) involves a restriction on the antecedent for the third person possessor, from any possible recoverable third person, to the other member of the superset denoted by the pronoun.

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- (52) [they.two father-his]
 superset kin-3possd
 (a) ‘they two_{h,i}, including his_{i/j} father_h’ +> [implicates]
 (b) ‘they two_{h,i}, <comprising> [a son_i and] his_{i} father_h’

This account, though plausible, and consistent with Breen’s Gog-Nar and Wakaya data, leaves open the question of how semanticised the dyad meaning has become: is it independently available with the relevant morpheme in any context, or does it only appear when there is a pronoun or other superset-constructing marker to supply the cardinality for the dyad group? In the latter case, one would say that there is a construction which, as a gestalt, can give a dyad meaning – though even here, one needs to distinguish (a) availability of the dyad meaning as one option for the construction, along with others, such as ‘they two, including his (i.e. someone else’s) brother’ (b) conventionalisation of the construction as a whole such that it forces a dyad reading. What is likely, of course, is that in a development from an originally monosemous possessor suffix to a polysemous suffix allowing both third person possessor and dyad meanings, there would be progression from (a), through (b), to a stage (c) of true polysemy that does not require the inclusory construction to supply the context.

The relevant evidence needed to choose between these positions is subtle, and depends on whether a dyad reading is available outside the inclusory context, on the degree to which dyad readings are productively available for other possessor suffixes used in the same construction, and on the interpretation of the possessor suffix as anaphorically open or fixed to the other member of the dyad. I turn now to a similar construction in Dalabon, for which we have evidence bearing on the first two of these questions (not yet on the third): we shall see that for some kinship roots the dyad sense of the third person suffix *-no* appears to have become semanticised, while for other roots it only takes on a dyad reading in inclusory contexts.

Dalabon (nonPN, Gunwinyguan) is a language with many options for expressing dyads. We have already encountered its commonest marking option, the suffix *-ko* (§4.1), which is available with many though not all kin roots. In addition, as we saw in §3.2, it occasionally uses the reciprocal with kinship verbs to express dyads. A third option, found with some roots and first reported in Alpher (1982), is to use the third person singular possessor suffix *-no*. (53a) illustrates its possessor use with a non-relational noun, and (53b)

illustrates its dyad use, for a kin noun where speakers assign a dyad meaning to the expression even when given in isolation — or, more precisely, state that it is ambiguous between 3rd possessor and dyad readings.

- (53a) *rolu-no* / *rolu-ngan* / *rolu-ngu*
 Dal dog-3Possd dog-1sgPossd dog-2sgPossd
 ‘his/her dog’ ‘my dog’ ‘your dog’

- (53b) *kakkak-no*
 Dal FF-3Possd/Dyad
 1. ‘his/her father’ 2. ‘father’s father with son’s child’

With other kin terms, however, the dyad meaning can only be induced constructionally through occurrence in an inclusory construction (with the superset being given, in Dalabon, by a pronominal subject or object prefix to the verb). Two illustrative examples are (54) and (55).

- (54) *Kardû kirdikird-no barra-h-du-rr-inj ka-h-kom-djabmirrinj.*
 Dal maybe wife-3POSSD 3du-R-curse-RR-PP 3sg-R-neck-get.stabbedPP
 ‘Like maybe he and his wife / a husband and wife were having an argument and he got stabbed in the neck.’ (i.e. they two, including his wife...)

- (55) *Wulkun-no barrah-nah-dih.*
 Dal eB-his/her they.two-mother-without
 ‘The two of them, brother and sister, have no mother.’

The expressions *kirdikird-no* and *wulkun-no*, though they will be translated in these contexts as ‘husband and wife’ and ‘brother and sister’, do not receive these translations when presented in isolation: Dalabon speakers insist they simply mean ‘his wife’ and ‘his/her older brother’ respectively. Further evidence that the dyad reading here is induced by the construction, rather than semanticised, comes from the fact that you get the same effect even with a second person possessor suffix:

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- (56) *Wulkun-wurd-ngu, wulkundjan-wurd-ngu* *nalah-nah-dih,*
brother-small-your sister-small-your you.pl-mother-without

nalah-marladj-no.
you-orphan-her

‘Together with your younger brother and your younger sister, you have no mother, you are her orphans.’

Recall that, in Dalabon, a dyad suffix *-ko* also exists. It appears to be the case that, if the kinship root is one that combines with *-ko*, then a dyad reading for the corresponding root combined with third possessor suffix *-no* is only available in the context of an inclusory construction – following general principles for determining the semantics of such constructions, even with non-third person possessors as in (56). On the other hand, where no *-ko* suffixed form is available, as is the case with *kakkak* ‘father’s father; parallel grandparent’, then *-no* suffixed forms appear to have a semanticised dyad meaning. Dalabon thus represents a language right on the cusp of semanticising a dyad meaning for an original possessor marker.

§5.2 Dyads from affixes marking accompaniment

Examples of formal resemblances between the proprietive and dyad suffixes have been widely pointed out in the Australianist literature, and proprietives are in fact the commonest diachronic source for dyad morphemes in Australia (using proprietive in the broad sense, which often subsumes comitative in the languages under consideration).

As we saw in §5.1, Breen (1976), in the first typological discussion of the phenomenon, goes so far as to call the dyad category ‘kin proprietive’, and his discussion includes a number of languages where the same form has both proprietive and dyad functions. He includes the following revealing set of Yandruwandha examples, in which the affix *-ŋurru* grades from proprietive (57, 58) to comitative (59, 60) to dyad (61, 62).²⁸

- (57) *marə ŋaṭu paḍrəla* *paḍla-ŋurru*
Ydr hand I hold-PRES sand-PROP

'I've got a handful of sand.'

(58) *n̩arraʃita-ŋurru ʃirri kara n̩unu ʃawa-n̩ana*

Ydr shield-PROP fight maybe he go-PST

'He took his shield; he might expect trouble.'

(59) *pandi-ŋurru n̩unu ʃawa-n̩ana*

Ydr dog-COM he go-PST

'He went with his dog.'

(60) *n̩ipa-ŋurru n̩unu ʃawa-n̩ana*

Ydr spouse-COM he go-PST

'He went there with his wife.'

(61) *ŋuʃu-ŋurru pula ʃirri-n̩ana*

Ydr EB-DYAD 3du fight-PST

'The two brothers were fighting.' fighting.'

(62) *n̩ipa-ŋurru*

Ydr spouse-DYAD

'married couple'

Note that whereas with the comitative (59, 60) the pronoun refers just to the number of the accompanied or owning person, in the dyad construction (61) the pronominal number refers to the superset. This suggests that, as with the possessor construction considered in the previous section, the superset pronoun in inclusory constructions supplies the context for the development of dyad semantics, by specifying the cardinality of the larger group; this time, though, the subset is overtly marked with a proprietive, rather than appearing without marking as in the canonical inclusory construction.

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- (63) [elder.brother-propr they.two]
 kin-propr superset
- (a) ‘they two_{h,i} , with (=including) [someone’s_{i/j}] elder brother_h’ +>
- (b) ‘they two_{h,i} , <comprising> [a younger brother_i] with his_{i} older brother_h’

Similar processes of constructional enrichment plus inference are needed to get the dyad sense to emerge from the inclusory comitative construction as what we saw with the possessor construction considered in the last section. For this version, the ‘with’ is now overtly supplied by the proprietive suffix, but the complementary kin again needs to be supplied. The inference is identical, except that this time it is the possessor element that must be filled in by inference. As with the emergence of dyads from possessor constructions, an important step is the semantic restriction of the possessor to the other member of the dyad.

Diyari (Austin 1981) is a language with an instructive contrast between two morphological means for expressing dyads, both based on morphemes whose original meaning is in the semantic domain of proprietives / instrumentals.

One morpheme, *-mara*, can function either as a dyad²⁹ or as a proprietive meaning ‘having’ or ‘with’. When used as a dyad, pronouns which accompany or anaphorically refer to the dyad expression must be non-singular, and the possessor(s) is interpreted as the other member(s) of the dyad group. The particular polysemy of this morpheme appears to be long-established: the closely related Ngamini has a formally identical morpheme with productive dyad and frozen proprietive meanings (Breen 1976:295) and Arabana-Wangkanguru likewise has an identical morpheme which can function either as a dyad or as a (non-productive) proprietive (Hercus 1994:14, 93). All these languages belong to the Karnic group, at least on the Breen-Hercus classification given in Hercus (1994), so this may be a functional split of long standing (though the role of areal diffusion between these languages cannot be ruled out).

In addition to this well-established and grammaticalised dyad function for proprietive *-mara*, Diyari also has what appears to be an emerging possibility for interpreting the instrumental as an implicated (rather than entailed) dyad reading when used in an inclusory-type construction. In this construction, which is rather like the Russian *my s Ivanom* [we with Ivan:INSTR = ‘Ivan and I’] construction, a subject pronoun (in A or S) function, specifying

the superset, is placed in the same clause as an instrumental-marked noun phrase ‘with human reference’.³⁰ Now when the instrumental marked noun is used, the commonest interpretation is as a dyad, reflecting an inferential process comparable to that given in (63): (64) is an example.

- (64) *pula kaku-yali wapa-yi*
Diy 3duS elder.sister-INSTR go-PRES
‘The two sisters are going.’

But unlike the case with the grammaticalised dyad, (a) the instrumental only gets the dyad interpretation when plugged into this inclusory-type construction, and (b) other interpretations are available. As Austin (1981:122) points out of example (65), ‘The usual interpretation of [such] sentences seems to be that the subject refers to a reciprocal kin pair. However... this is not necessarily the case and a sentence like the following could be uttered by a child seeing his parents walking away’.

- (65) *pula ngapiri-yali wapa-yi*
Diy 3duS father-INSTR go-PRES
‘They (two) are going, (one is) father.’

As with the Dalabon *-no* construction discussed in §5.1 above, then, Diyari illustrates the coexistence in the one language of a grammaticalised dyad morpheme, and a further morpheme which implicates a dyad reading in the context of an inclusory construction, but has not become de pragmaticised to the extent of giving a dyad reading outside this grammatical context.

Returning to the general process by which dyad morphemes semanticize their meaning, an important final step is for them to take on a cardinality of two (or, in some cases, of non-singular more generally) without the need for this to be supplied by the constructional context, in particular the superset pronoun. For the Yandruwandha examples discussed by Breen, this final step has clearly been taken: *niṗə-ṷjurru* can mean ‘husband and wife pair’ even without a superset pronoun being present. Likewise, for the contrasting Diyari morphemes just considered, the dyad morpheme has a non-singular cardinality regardless of

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grammatical context, whereas the instrumental only gets this when used in construction with a non-singular subject pronoun (Austin 1981:122).

A further example of a completed grammaticalisation from 'having' to 'dyad' is discussed by Merlan & Heath (1982:112-3), who point out the formal identity of the dyad and 'having' suffixes in Mangarayi, both *-yi* (a form widespread in the Gunwinyguan languages, sometimes with an additional final glottal stop, with instrumental and proprietary meanings). (66) and (67) illustrate proprietary uses of this suffix.

(66) *mayawa ŋugu-ŋugu-yi wur-ga-ni ø-bega-ø*

Man now having water (redup.) 3DU.took.3sg tobacco

'Now they (Du) were carrying the tobacco, drenched with water.'

(67) *wirilmayin ŋir-bu-b ŋabaranwa banjal-yi.*

Man goanna we.hit.3sg two egg-having

'He and I killed two goannas with (i.e., who had) eggs.'

Their arguments against postulating a unitary analysis for *-yi* are worth quoting in full:

The apparent formal identity of dyadic kin terms with these 'having' constructions raises the question whether the dyadic kin terms really ought to be considered just an instance of this more general construction. In its strong form, this would mean that something like *baɖa-yi* 'Fa and Ch' should be reinterpreted to mean 'having Fa' (i.e., indicating that the referent, here the Ch, is accompanied by or has in his possession his Fa).

This analysis is untenable and can be shown to be false on simple syntactic grounds. If *baɖa-yi* meant 'having Fa' and were syntactically identical to forms like *ŋugu-yi* 'having water', it should be semantically singular (if just one Ch is involved), or semantically dual or plural (if and only if more than one Ch is involved). In fact, however, *baɖa-yi* refers jointly to the Fa and his Ch in a way not found with forms like *ŋugu-yi*, and *baɖa-yi* is cross-referenced by a dual pronominal form when there is exactly one Fa and one Ch. (It is possible that a case could be found in which *baɖa-yi* does mean 'having Fa', e.g. to indicate non-orphan status, but if so this is a distinct construction which should not be confused with dyadic kin terms.) An analysis of dyadic terms as 'having' expressions would be more tenable if one could say 'having Ch' when the Fa is

the reference point, contrasting with 'having Fa' from the Ch's viewpoint, but in fact the only dyadic expression for this pair is *baɬa-yi* with the stem for 'Fa'. It is quite possible that dyadic kin terms are etymologically related to or identical with 'having' expressions, but if so they have evolved and become specialised (syntactically, though not formally) and the two should not be confused synchronically. [Merlan & Heath 1982:112-3]

The discussion in the earlier part of this section should now have established a pathway by which dyad meanings can evolve from 'having' expressions. In fact, morphemes sharing these two functions are so widespread in Australian languages that we cannot exemplify them all here fully – the closely related languages Margany and Gunya in S.W. Queensland are a further example, employing a morpheme *bari/bayi* in both functions (Breen 1981:312-3), though the examples of dyad use have accompanying dual pronouns, and Yir Yoront, in western Cape York (Alpher 1991:102) is a further example, forming dyads by adding the comitative postposition *-lon* to kin terms. For yet other languages there are partial formal overlaps which may or may not indicate doublet status – for example Dixon (1983:460) remarks of Nyawaygi, whose dyad morpheme has the form *-gil*, that its 'similarity to comitative *-gi* may be coincidental'.

Although the pathway spelled out above may be the correct one for some of these, there is at least one other option, which we can exemplify from Warrwa (McGregor 1994: 34-5). In Warrwa there is a 'COMIT2' suffix which may be added to all but one conjunct in a NP – all but the first in (68), and all but the last in (69):

- (68) *kamirda* *ngajanu,* *kuya-rnirl* *jina* *kabayi-nyarri,*
 War mother's.mother my mother-PL her sister:in:law-COMIT2
- kabayi-nyarri* *jina,* *ngirrwanina* *kinya-n*
 sister:in:law-COMIT2 her they:stayed this-LOC

'My grandmother, mothers and sisters-in-laws were sitting there.'

- (69) *kujarra* *ngirrwanin-bili* *waangu-nyarri* *yaaku*
 War two they:stay-du wife-COMIT2 husband
- 'The husband and wife stay together.'

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However, it is possible to omit the unsuffixed conjunct, so that 'in addition to *waangu-nyarri yaaku* 'wife and husband', we find *waangu-nyarri* [wife-COMIT2] 'wife and husband dyad'; and in addition to *baawa-nyarri ibala* 'father and son', we have *ibala-nyarri* 'father and son dyad'.' [McGregor 1994:35]. (Unfortunately, we cannot tell from this passage whether these dyad meanings can be obtained in isolation, or whether they need a superset pronoun to establish the full cardinality). This example, then, suggests that dyad readings of comitatives can also arise through an elliptical construal, where the comitative-suffixed relation noun projects a further conjunct, which by implicature is reconstructed as the reciprocal kin, according to the same reasoning given above for the development of dyad meanings from possessor-marked and comitative nominals in inclusory constructions. The elliptical construal of a missing conjunct in this pathway is more closely akin to the reconstruction of a 'missing complement' as the kin reciprocal in languages developing dyad forms from the suffix *-garra*, discussed in §4.3.

5.3 Constructions as context

Much discussion on degrammaticalisation and semanticisation focusses on the role of general context, including textual environment and mutual encyclopaedic knowledge, in enabling the inferencing mechanisms that supply what start out as contextual readings, and which then get conventionalised to the point where they are freed from the original bridging context and can be simply entailed by the relevant lexeme (see, for example, Evans & Wilkins (2002), Enfield (2003)). But grammatical constructions can also supply the bridging context, and the development of dyad morphemes from possessor-marked and comitative morphemes furnishes a particularly clear example: inclusory constructions, whether they take a comitative or a possessor-marked noun as their subset, supply an easy way of specifying a cardinality for the superset, which then triggers, by inference, the reconstruction of the 'other' kin as the non-mentioned elements of the superset. Although no single language attests every point in this process, the large number of languages that have seen an extension from possessor or comitative to dyad meanings between them illustrate the full range of steps. The fact that inclusory constructions are so widespread in Australia, and that Australian languages appear unique in the world in recruiting dyad morphemes from comitative or possessor-marking sources, suggests that inclusory constructions supplied a typological matrix, in the form of a grammatical bridging context, within which this particular pathway could develop.

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²⁶ Breen's terminology is confusing, however, and we avoid repeating his term 'kinship proprietive', even with the additional specifications he provides. On the one hand he uses, for what we here term a dyad, the term 'non-singular kin proprietive', which he defines in the following way: 'the non-singular kin proprietive is added to a kinship term X to denote that there are two or more people involved, one of whom is in the relationship X to the other(s), the other(s) not being separately specified' (Breen 1976:290). On the other hand he also subsumes, under the term 'kin proprietive', affixes that mark the presence of a first, second or third person possessor of a kin term – for which we shall use the term 'possessor affixes' (see Dahl & Koptjevskaja-Tamm 2001 for evidence that in many languages kinship terms are favoured sites for the marking of possession).

Breen's terminology thus conflates the logically distinct categories of specifying a kin propositus (where the propositus is specified as 1st, 2nd or 3rd person) and constituting a kinship dyad (where the propositus is left vague, within the specified group). Secondly, his usage blurs the two poles of the possessive relation, as marked on the possessed entity: proprietive (marking it as being *in the role of* accompanying, instrument, or owned, without specifying a possessor) and possessor (marking *possessor agreement* on the possessed entity by giving the person / gender/ number specifications of the possessor). Thirdly, instead of defining the category in terms of its own semantics, it promotes one of several semantic connections (with the proprietive) to be a terminologically privileged feature of the category, whereas as we have seen other connections are also found (e.g. with reciprocals, duals, complements and so forth),.

²⁷ There are further complications which we do not discuss here, such as suppletive roots for some dyads – see Breen 1976:293 for details.

²⁸ Breen actually presents the examples in the opposite order. Here we present them in the order which we believe shows the most likely path of semantic development.

²⁹ Austin uses Breen's term 'kinship proprietive', but his definition makes it clear that a dyad meaning is intended: 'a group of people one of whom is called 'N' by the others' (Austin 1981:145).

³⁰ For such nouns, in Diyari, the ergative and instrumental have the same form – leading Austin (1981) to gloss them as ERG – but the fact that a noun so inflected can cooccur with a nominative (i.e. non-ergative) pronoun shows that we are dealing with a distinct case function, so we have replaced Austin's 'ERG' gloss with 'INSTR' in these examples.

6 Other formal options for dyads

To complete our survey, we examine three other formal options for dyads: ablative and causal morphemes, dedicated dyad morphemes (which frequently result from borrowing), and suppletions.

6.1 Ablative and causal morphemes.

I know of three cases of morphemes which span ablative or causal uses on the one hand, and dyad (or plural dyad) uses on the other.

In all the Tangkic languages, the dyad suffix has the same form as the consequential (causal) case: *-ngarrba* in Kayardild and Yukulta, *-ngerr* in Lardil. (70) and (71) illustrate from Kayardild:

(70) *niya warrku-ngarrba bukawa-th*
Kay (s)he sun-CONSEQ die-ACTUAL
'He died because of the sun / after being in the sun.'

(71) *yakukathu-ngarrba dali-j, ngakulda warraj!*
Kay EZ-DYAD:NOM come-IMP we.pl.inc go-IMP
'You pair of sisters come on, let's all go!'

Dench (1997) discusses a number of Pilbara languages, of the Ngayarda and Mantharta families, in which the same form marks ablative/causal relations and what he calls 'group kin terms', which are functionally identical to plural dyads: *-ngarala* or *-ngaala* in Ngayarda languages, and *-parnti* in Mantharta languages. He emphasises the importance of the source relation in characterising the composition of kin-defined groups:

The group's identity is dependent on a particular relation and the whole group is characterised as an extension from that important relation. In a metaphorical sense, the larger group has a smaller group, the group instantiating the important relation, as its source relation. Its character is determined by that relation. (Dench

1997:128)

Another line of approach is suggested by O’Grady and Mooney’s (1973:9-10) comments, cited earlier in §2.2 and repeated here, on the Nyangumarta dyad suffix *-karra*:

‘[A]lthough dual terms in spontaneous utterances generally seem to denote two people, *kurntal-karra* ... has in one instance been defined as a woman (singular) ‘after she has had a child’

In this case, the mother-child dyad which is the normal denotation of *kurntal-karra* only comes into existence *after*, or *because*, the woman has had a child.

These remarks suggest a general line of development that could lead from an ablative or causal sense to a dyad sense, but unfortunately for each of the languages which attest this range, we lack a full set of examples in bridging contexts that leads across the semantic span. We must therefore regard these explanations as plausible, but as yet unproved.

6.2. *Property.*

It was mentioned in §3.1 that in Bininj Gun-wok dyad terms take one of two suffixes: *-go/-ko* (see §4.1) if the kinship root is asymmetric, such as *yau* ‘(woman’s) child’ or *bei* ‘(man’s) child’, and *-migen* if the kinship root is symmetric, such as *gakkak* ‘mother’s mother; (woman’s) daughter’s daughter’.

The suffix *-migen/-miken* is not confined to dyads, however: it has a range of other uses that can be subsumed under the general label ‘property’ or ‘characterisable by [predicate]’, and most commonly derives deverbal adjectives, e.g. *djorrngmiken* ‘straightened (spear shaft)’ from the verb *djorrngme* ‘straighten (e.g. spear)’, but also derives some abstracts, such as *modmiken* ‘peace, peaceful’ from the verb *modme* ‘be silent’. Presumably its extension to dyad uses is because the two quality of relationship between the two individuals is characterized by the kinship relation holding between them.¹⁸

6.3 *Compounding*

Kuku-Yalanji, spoken in Eastern Cape York, has five reported dyad terms (Oates 1992). Two

are difficult to analyse,¹⁹ but three are formed as compounds of two kin terms. The most clearly compositional case is the dyad term for a pair of brothers, which is expressed as *yabayabuju*, a compound of *yaba* ‘older brother’ and *yabaju / jabuju* ‘younger brother’. The other two involve a semantic discrepancy in the second term: *nganjan-manda* ‘father and son together’ and *ngamu-manda* ‘mother and daughter together’ include the expected senior terms *nganjan* ‘father’ and *ngamu* ‘mother’, but *manda* on its own means ‘younger brother’s child’ (of a woman) but ‘younger sister’s grandchild’ (of a man) – this may reflect some semantic change in this term away from an earlier ‘child’ meaning, or an incipient process of grammaticalizing from kin term to dyad marker.

6.4 Languages with dedicated dyad morphemes

A number of languages have dedicated dyad morphemes, i.e. forms that just have dyad meanings. (Of course, if any of the semantic links above are rejected as implausible, that will leave further dedicated dyad morphemes which happen to have semantically unconnected homophones).

A substantial proportion of dedicated dyad morphemes are loans, that have shed their semantic connections in the process of being borrowed. Ritharngu *-ka?* is an example (§4.2): it is a dedicated dyad morpheme in Ritharngu, but in Gunwinyguan languages the source morpheme *-ko(?)* has a range of meanings that takes in dual and complement as well as dyad (though this may not be true of Ngandi, the most likely immediate source).²⁰

An even more widespread example of a dedicated dyad morpheme that has been borrowed into a number of languages along the northern desert fringe is the form *-rlangV* (with some other variants). Three unrelated non-Pama-Nyungan languages that have reflexes of this, despite substantial geographical separation, are Wardaman (southern Top End of the Northern Territory), where it takes the form *-rlang ~ -gurlang*, Gooniyandi (Fitzroy crossing area), where it takes the form *-langi*, and Wambaya (Nordlinger 1998:104, where it takes the forms *-gulanji* (masculine) and *-gulanga* (feminine).²¹ It is likely that the immediate source is a Ngumbin-Yapa language, e.g. Gurindji *-rlang* (dual dyad), pl. dyad *-rlangkurla*; Djaru *-langu* ‘kinship dual’ (Tsunoda 1982:233). An internal source for *-rlang(u)* within Ngumbin-Yapa is suggested by the existence in Warlpiri, alongside dyad *-rlangu* ‘dyad kinship, pair in given relationship’, of a formally identical suffix *-rlangu* ‘too, also for example, even’, which may have given rise to a dyad sense by a route similar to that followed

by the Warrwa comitative, or Pama-Nyungan *-garra*, that is by filling in the obvious missing extra referent in an implied pair of conjuncts. A further Pama-Nyungan language that appears to have borrowed a variant of this form, outside but adjacent to Ngumbin-Yapa, is Warumungu (Simpson & Heath 1982: 25-26), where the form is *kurangi*, e.g. *karnanti-kurangi* ‘mother and child’.²²

Other dedicated dyad morphemes, this time with *-arra*, are found in a number of languages. In Gooniyandi, the ‘spouse’ dyad is an exception to the general pattern of building dyads with *-langi*, and has the form *ngoombarna-rra* (<*ngoombarna* ‘husband’ + *-rra*); a corresponding, also exceptional form is also found in the adjoining Ngumpin-Yapa language Walmajarri, where the regular dyad suffix is *-rlangu*. McGregor (1996:221) suggests the spouse dyad form in *-rra* may have been borrowed into Gooniyandi and Walmajarri from further south and notes that in Kukatja *-rara* is the regular dyad suffix and *ngumparnarra ~ ngumparnarara* are the corresponding (regular) dyad terms.²³ These forms belong to the regular Western Desert dyad use of the **-garra* set discussed in §4.3 – see that section for more details, as well as evidence of further dyad forms in *-(ga)rra* (also possibly loaned) in the non-Pama-Nyungan language Marra.

Apart from loans, further clear cases of dedicated dyad morphemes without functional doublets in any of the languages that have related formatives are:

(1) In the Arandic languages, dyad *-nheng(e)* is widespread, occurring in Mparntwe Arrernte (Wilkins 1989), Eastern and Central Arrernte (Henderson & Dobson 1994), and Alyawarra (Green 1992). It does not appear to have any further function, though Strehlow (1944; see §4.4) claimed it was an old dual.

(2) Ba:gandji (Hercus 1982) is the only other example known to us of an Australian language with a dedicated dyad morpheme for which there is no (current) evidence of it being a loan. In Ba:gandji, including its southern dialect Marawara (Hercus 1982:84), all dyads are formed by adding a suffix *-linja* to the kinship root, after removing a final kinship desinence *-ga* or *-dja*: *gambidja* ‘father’, *gambilinja* ‘father and child’; *ɲamaga* ‘mother’, *ɲamalinja* ‘mother and child’. Hercus does not mention any source for this morpheme.²⁴

(3) *-manyji* (§4.2), in many of the Yolngu languages that have it, is a dedicated dyad morpheme, though as shown it has shifted to a dual meaning in Ritharrngu.

(4) Likewise *-ko* in Gunwinyguan (§4.1) is a dedicated dyad morpheme in several languages that have it (Ngalakgan, Rembarrnga, Ngandi, and Nunggubuyu in the form *-yij*),

though in others (Dalabon, Bininj Gun-wok) it has other uses such as dual and complement.

(5) Dyirbal –*jirr* and Nyawaygi –*gil*.

(6) Ngiyambaa kinship dual –*galaydja:N-*.

(7) Kamu and Matngele have a dedicated dyad prefix *mer-*, e.g. Kamu *mer-akgal* ‘pair of sisters’ (Harvey p.c.), though the speakers Harvey worked with ‘used kin terms bearing this prefix in situations where it was not at all obvious that any dyadic meaning was prominent (cf Heath’s remarks on the use of dyadics in Marra).’ (Harvey, email to N.E. 28/1/97).

The practice of borrowing dyad morphemes (either as independent morphemes, as in the case of Ritharrngu, or as a package with a borrowed kin term, as in Gooniyandi *ngoombarnarra*) shows the role of diffusion in maintaining this meme – this time through direct diffusion. It is interesting that, while almost the whole continent attests to the indirect diffusion of the dyad category, as a semantic target which languages reach in various ways through the semantic extension of other morphemes, all the cases of direct diffusion that I could find were either along the northern desert fringe (out of Ngumbin-Yapa), or at the border of Gunwinyguan and Yolngu – in each case, at the border of Pama-Nyungan and non-Pama-Nyungan languages.

6.5 Suppletives

In many languages, some members of the dyad set are suppletive, and cannot be analysed into a combination of a regular kin root plus a recurrent dyad suffix. In some cases this results from an identifiable borrowing of a dyad term, as a combination of root plus the dyad suffix from some other language – the Gooniyandi dyad spouse term *ngoombarnarra* (§6.2) is such an example, though here only the dyad suffix is suppletive since the root *ngoombarna* occurs independently with the meaning ‘husband’.

In other cases, it is the root that is suppletive. In Mara, for example (Heath 1981:111), the dyad for ‘siblings’ is *ɖaju-ɖaju-ya* ~ *ɖaju-yaɖaju-ya*. Though the suffix *-ya* recurs in several other dyad terms, as well as being yet another example of a dyad that also functions in ‘having’ constructions (Heath 1981:285), the root *ɖaju-ɖ/yaɖaju-* is not found outside this term.

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In the extreme case, one cannot even segment a dyad into root and affix. In Yir Yoront, for example (Alpher 1991:102), most dyads are formed by adding a postposition *-lon* ‘with’ to the kin root, but a few dyad terms are suppletive. Examples are *par+konhuwrr* ‘pair or set of brothers’, and *pam-yalq* ‘pair of distant brothers’. From Alpher’s description of them, it appears that these need to be treated as lexicalised dyad terms without any possible segmentation.

In no language I have examined are there more than a couple of suppletive terms. Clearly, by their nature, they cannot furnish evidence regarding their source: presumably they are often a graveyard for old kin roots and old dyad affixes, along with some erstwhile collective nouns that have been coerced into the dyad system, though in one case (see the Wakaya case discussed in §4.4) they are the only dyad terms to appear, with an innovated use of a dual suffix.

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¹⁸ For an ethnographic treatment of how shared experiences which characterize a shared personal history lead to ‘dyadic names’ between pairs of individuals in Korowai, see Stasch (2002).

¹⁹ These are *manyarrinyu* combining the root *manyarr* ‘wife’ with a suffix of unclear function, and *dajalkira* ‘brother and sister together’, which appears to be suppletive.

²⁰ Dyadic terms in *-go* or a related form are also found in all four languages of the Maningrida family (Green in press) – Gurr-goni, Burarra, Na-kara and Ndjébbana – which is spoken just northeast of Gunwinyguan and in substantial contact with Bininj Gun-wok, Gunbarlang, Dalabon and Rembarrnga.

Gurr-goni examples (R. Green 2002) are the roots $\sqrt{-yawgo}$ ‘mother and child, uncle and nephew’ and *beygo* ‘father and child, aunt and niece/nephew’. These take appropriate pronominal prefixes, e.g. the ‘we two’ prefix *arr-* can be added to derive *arr-beygo* ‘we two are father and child to each other’, or the ‘they’ prefix *awurr-* to the reduplicated root to derive *awurr-beybeygo* ‘they who are fathers and children or aunts and nieces/nephews’.

The exact semantic and formal correspondence to corresponding Bininj Gun-wok dyads, and the fact that the roots *yaw* and *bey* occur independently in BGW but not Gurr-goni, suggests these are clear loans: cf the Gurr-goni kin roots *gika* ‘mother’, *djatja* ‘uncle’, *ngalingi* ‘(woman’s) child’, *bapa* ‘father’, *nguwunji* ‘aunt’ and *yirra* ‘(man’s) child’. Other forms appear to be formed by adding *-go* to borrowed triangular kin terms from BGW: *arr-manjmenggo* ‘we two, in relationship of mother’s father to man’s daughter’s child’. Another possible reflex, though this time with final *u* rather than *a* suggesting it has been borrowed from Burarra, builds on a root not found in Gunwinyguan – *arr-berrku* ‘we two who are husband and wife, or sisters and brothers-in-law’ – cf Burarra $\sqrt{berrkuwa}$ ‘husband and wife; two moiety subsections in “mate” relationship to each other, and who therefore look after each other’s interests in certain social and ceremonial situations’.

Burarra (Glasgow 1994), which is relatively closely related to Gurr-goni, has similar forms but with two interesting twists. The mother and child forms are the same as Gurr-goni, but with final *a*, reflecting the extensive word-final neutralisation of vowels in Burarra, and with appropriate use of pronominal prefixes to give number: *abirriny-yawyawga* ‘mother and child’, *aburr-yawyawga* ‘mother and children’. The father and child dyads, however, involve the form *bureygu* or *bureyguwa* in the dual, reduplicated to *bureybureygu(wa)*

for the plural dyad, and in each case appropriately prefixed. The suffix form, *-gu(wa)*, suggests Rembarnga rather than BGW origin for this form (*-guwa* is the Rembarnga form corresponding to BGW *-go*, with the optional loss of final *-wa* presumably a development postdating the adoption of the form within Burarra). The root, however, is more puzzling: the form *bey* is found in BGW and Dalabon, but I do not know of a Gunwinyguan language with a root *burey*, though it would not be impossible that this is an earlier unreduced form of the root preserved just in this Burarra borrowing.

Phonologically similar forms, but with the vowel *a* instead of *o*, and an inserted *a* before the suffix, also occur in Na-kara: *-yawaka* ‘mother and child’, *-beyaka* ‘father and child’. These appear to be loans that have been phonologically modified – whether in the process of loan adaptation, or through historical changes in Na-kara is unclear – but more work on the historical phonology of these languages is needed before this can be properly understood. (I thank Rebecca Green for sending me the relevant Gurr-goni and Na-kara data, the latter from Bronwyn Eather’s Na-kara dictionary database).

Finally, in Ndjébbana (McKay 2000:164, 331) there are at least half a dozen dyad terms ending in *-ka* or *-kawa*: *birri-yáwaka* ‘uncle and nephew’ (cf the *yawko* and *yawaka* forms exemplified above for the three other Maningrida languages), *birri-yurdunjmakkúkka* ‘two men who call one another *kúdjala* “grannie” reciprocally’, *narra-mómardakka* ‘you (plural) brothers’, *birri-kkúrrngkawa* ‘two men who are in the *djóngok* (poison-cousin) relationship’, *berrkkawa* ‘brother-in-law’ (cognate with Burarra *berrkuwa* described above), and *birri-béyaka* ‘two men who call one another father and son respectively’ (cognate with the *beygo* / *bureyguwa* forms above). The *-kkúrrngkawa* form looks to be based on the Gunwinyguan root $\sqrt{kurrrng}$ ‘mother-in-law/son-in-law [“poison-cousin”] relationship’; while the roots *yurdunjmakkúkka* and *mómarda* don’t have either other derivatives in Ndjébbana, or recognisable cognates elsewhere.

Although the material has been discussed above as pointing to an extensive borrowing process giving rise to loans in all four languages of the Maningrida family, the possibility cannot be excluded that in fact the suffix is an older shared inheritance, going back to the common ancestor of Gunwinyguan and the Maningrida families (this, of course, would not exclude an overlay of more recent loans out of Gunwinyguan). To evaluate this possibility we will need a better understanding of the historical phonology of the Maningrida languages, and a clarification of the genetic relationship between these two families. The answer to the question of whether the Maningrida forms are borrowings or inherited will then have implications for our understanding of their diachronic semantics, since in all the Maningrida languages they are specialised dyad suffixes, lacking the other uses found in most of the Gunwinyguan languages. This falls out easily if they are loans, but if they are shared inheritances it is harder to explain, and would point to the dyad meaning being original, since it is the only one found in both families.

²¹ *-nji* and *-nga* are regular masculine and feminine suffixes in Wambaya.

²² An interesting extended use of this suffix in Warumungu involves it attaching to demonstratives in expressions of resemblance, as in *pani-kurang'awul ngattu kapi purluju* [that-DYAD 3du body and head] 'they resemble each other' (Simpson & Heath 1982: 26, with correction of gloss for *awul*).

²³ Though note that Valiquette (1993) does not list this dyad form in the Kukatja dictionary, even though *ngumparna* is listed with the meaning 'older brother-in-law'.

²⁴ The *-njV-* portion, at least, may be quite old, since Badjala (Bell 2003) on the east coast of Queensland has a dyad form *njuba-nji* for 'married couple'; *njuba* is widespread with the meaning 'spouse'.

7 Australian languages without dyads

In some cases where existing sources do not report dyad terms this may reflect language attrition, incomplete documentation, or a combination of these. Examples are Muruwari (Oates 1988), Woiwurrung (Blake 1991) or Bidyara/Gungabula (Breen 1972). Given the early and overwhelming impact of white settlement in the south-east, this means that the apparent pattern we find there, i.e. of languages lacking a dyad morpheme, could be a genuine areal feature of the pre-contact situation or an artefact of recent history. However, the fact that dyads show up wherever we are lucky enough to have a well-described language from the South-East – e.g. Ngiyambaa (Donaldson 1980) and Ba:gandji (Hercus 1982) – suggests this may be a post-contact artefact rather than an absence in traditional times.

On the other hand, there is at least one further region where dyads appear to be systematically absent: the northern Top End, more specifically the Alligator Rivers, Coburg Peninsula and Bathurst and Melville regions. Many of the languages in this region are sufficiently well-documented that one would expect dyads to have been picked up if they exist, yet appear to lack them: Tiwi (Osborne 1974), Maung (Capell & Hinch 1970), Iwaidja (Pym & Larrimore 1979), Gaagudju (Harvey 2002), Larrakiya (Harvey p.c.) and Limilngan (Harvey p.c.). Interestingly, these same languages diverge typologically from the Australian norm in a number of other ways, both phonological and grammatical (see Evans 2000b), so it may be that the lack of dyad morphemes here is yet another marker of their relative typological divergence.

It also appears that dyads are lacking from two other non-Pama-Nyungan regions: the Kimberley (except insofar as it adjoins the Ngumbin languages to the south, whence as we have seen languages like Gooniyandi have borrowed dyad morphemes), and the Daly Region. The absence of dyad terms from three non-Pama-Nyungan regions, and in particular from those non-Pama-Nyungan families that appear to be the most genetically distant from other Australian languages, both emphasises the extent to which these three regions are in many ways typologically distinct from the ‘Australian norm’, and suggests that the dyad is not a category that has been present right back to ‘proto-Australian’ times.

On the other hand, within the various non-Pama-Nyungan families stretching from Central Arnhem Land eastward to Tangkic, there are well-entrenched, non-borrowed dyad categories: *-ko?* in Gunwinyguan, a series of dyad morphemes in Mara, and *-ngarrba* in Tangkic. These are the non-Pama-Nyungan families, as has been argued elsewhere (see

O'Grady 1979, Evans & Jones 1997, Evans in press), that appear to have the closest links to the Pama-Nyungan languages.

One further region from which dyad markers appear to be systematically lacking is a stretch of the eastern Cape York coast, from Yidiny (around Cairns) beyond Cooktown: Yidiny, Djabugay and Guugu Yimidhirr, all relatively well-described languages, lack any mention of a dyad-type suffix.

8 Dyads as categorial targets in Australia

Dyad meanings appear with remarkable frequency across the Australian continent. Of the languages listed in the Appendix, around two thirds report a dyad category, and this includes languages only described sketchily or from last speakers, some of which may well once have had dyad categories. They form a clear ‘categorial target’ for grammaticalisation, appearing almost everywhere except for the northern Top End, the Daly Region, the northern Kimberleys, and a small area in the Cape York Rainforest. Dyad constructions appear in languages of all typological casts, ranging from head-marking (Bininj Gun-wok, Dalabon) through to dependent-marking (Dyirbal, Kayardild). The phenomenon also largely disregards the genetic groupings found in the continent, except for what looks like a systematic absence from the non-Pama-Nyungan families that appear to be most genetically distant from the rest. In gross terms, then, the whole continent, except for its northwestern fringe, appears as a single categorial convergence zone for the presence of a dyad category. This contrasts with most of the rest of the world, where dyad categories are quite rare, though there are clustered occurrences, in a few languages each, in Northern Athapaskan, Khoisan, and Oceanic, and more isolated examples elsewhere.

There is such diversity in the forms encoding the dyad, that in general the individual forms encoding it do not generally appear to be reconstructable to any great depth. Pama-Nyungan dyads in *-garra* may be one exception, but as discussed in §4.3 it is more plausible that dyad meanings developed independently in two Pama-Nyungan groups from an original ‘complement’ meaning; a second exception are dyads in *-ko/-go*, certainly reconstructable for Gunwinyguan and just possibly reconstructable to a deeper level if the Maningrida forms turn out to be shared inheritances rather than loans from Gunwinyguan.

Indeed, the process of recruiting new dyad forms, where emergent dyad forms that have not been fully semanticised coexist alongside fully semanticised ones, has been pointed out in many cases, such as Dalabon and Diyari, and there are many languages with several exponents of the dyad, sometimes cleaving along semantic lines (as in Bininj Gun-wok or Dyirbal, where they are conditioned by the symmetry or otherwise of the kin-term), sometimes being piggy-backed into the system as part of borrowed dyad terms from other languages (as in Gooniyandi and Walmajarri). Overall, then, one has the impression of a deeply ensconced category undergoing continuous formal renewal.

The apparent diffusion of a dyad category in Australia appears to involve both direct and indirect diffusion.

Direct diffusion of dyad morphemes is typically piggybacked on the diffusion of particular kin terms, i.e. a whole kin term plus dyad suffix is diffused, with possible subsequent extension of the dyad suffix to other terms. Direct diffusion appears to have been particularly common along the Pama-Nyungan / non-Pama-Nyungan boundary, in both directions: out of Ngumbin-Yapa (PN) into a number of separate non-PN languages (Gooniyandi; Wardaman; Wambaya); out of Gunwinyguan (nonPN) into Ritharrngu (Yolngu, PN); and out of Yanyuwa (PN) into Mara (nonPN). Direct borrowing of dyad morphemes almost invariably results in a dedicated dyad morpheme in the borrowing language.

But indirect diffusion of the dyad category appears to be even more common, with languages following a range of strategies to extend the meaning of existing morphemes to cover a dyad sense. (These are distributed rather randomly across the continent – in general one cannot identify particular sources with particular areas). The commonest sources involve:

- possessor morphemes
- ‘having’ morphemes of various types
- complement parals
- source and causal morphemes

In striking contrast to the other parts of the world where dyad constructions are found, extensions from reciprocals are extremely restricted, occurring only in languages with kinship verbs. There are also no really clear cases of extensions from standard duals, though this would be intuitively obvious, and has sometimes been suggested as a source (e.g. Strehlow 1944, Breen 1976) – in the clear cases (Gunwinyguan, Yolngu), the semantic development goes the other way, from dyad to dual.

Again, the patterning of sources in Australia contrasts absolutely with that found elsewhere in the world. Except for one case of dedicated dyad morphemes, in the Rossel Island language, as well as some dyads in Vanuatu whose origins are currently unclear, all other dyad morphemes elsewhere in the world involve special uses of reciprocal morphemes. This raises the question of why Australian languages should be so different in their diachronic sources: at least in the case of possessor and ‘having’ sources, I have argued that the presence of ‘inclusory constructions’ sets up the possibility of inferences that transfer the required

cardinality from the construction to the emerging dyad morpheme. In other words, the use of inclusory constructions is implicated as a grammatical prerequisite, that creates the constructional context within which a particular semantic extension can occur. Even if this is accepted, however, we are left with a puzzle as to why the patterning of sources in Australia is so different from elsewhere in the world.

At the beginning of this paper I mentioned that languages able to express dyad meanings can vary across four degrees to which this is structured into the grammar.

At one extreme there might be a wholly dedicated morpheme, with no other function – around a dozen Australian languages in our sample have this, about half as a result of borrowing.

The second most structured option is to have a clearly ‘semanticised’ dyad morpheme, i.e. one not dependent on pragmatic or grammatical context, with a formally identical morpheme in the language having some other function, such as ‘having’, ‘3rd person possessor’, ‘source’, ‘dual’, ‘reciprocal’ and so on. This is the commonest option overall, and as we have seen, the arguments for distinguishing these as two distinct morphemes vary with the type of polysemy. With having morphemes, for example, the question of number plays an important role (dyads generally requiring non-singular, but ‘having’ morphemes being compatible with the singular); the question of whether the anchor for the expressed kin root must occur inside the NP, or can be sought outside, is also relevant.

Less semanticised are the third and fourth options.

In the third option, it may be possible to generate dyad meanings by implicature in particular contexts, such as co-occurrence with a dual pronoun or pronominal prefix. Diyari and Dalabon furnished examples, with the instrumental and third person possessor suffixes respectively. Interestingly, in each case, the implicated dyad meaning is found alongside a semanticised dyad meaning available with other morphemes.

In the fourth option, dyad meanings may fall out, in particular contexts or combinations, as contextual senses of more general meanings. The ‘pair’ suffix in Yankunytjatjara, at least on Goddard’s analysis, is an example of this; so is the ‘relator’ suffix in another Western Desert dialect, Pintupi.

Most studies of grammaticalisation have focussed on Kantian categories – categories of space, time, number and causation, for example, that depend on the ‘objective’ world rather than the culturally defined human world that peoples it. Australian languages, with their emphasis on grammaticalising categories dealing with human society, offer the opportunity to

examine grammaticalisation as it applies to these non-Kantian categories (though admittedly the category studied here is derivational rather than inflectional). It may well be the case, as Langacker (1994) has suggested, that such categories only develop through input of speakers who have already developed very substantial competence in other categories of the language. This would make the witness of categories such as those examined here relevant to questions of whether the processes of semantic extension and grammaticalisation are indeed the same for 'cultural' categories in grammar as they are for those dealt with more commonly in studies of grammaticalisation.

Appendix. Dyadic morphemes in sample.

A. Australian languages

The sample is ordered by family-level groupings within Australian, then subgroupings. The groupings are a rough guide only, and within Pama-Nyungan in particular the subgrouping is far from clear, and in places I use areal rather than genetic groupings.

Family	Lg	Form (stand.)	Form (source)	Comments	Related forms
<i>Non Pama-Nyungan Families</i>					
Tiwian	Tiw	No dyad			
Larrakiyan	Lar	No dyad			
Limilngan	Lim	No dyad			
Gaagudju	Gaa	No dyad			
Iwaidjan	Iwa	No dyad			
	Mau	No dyad			
Worrorran	Ung	No dyad			
	Wun	-kute	-gude	Discussed as special use of 'having' suffix; e.g. wife-his-having = 'he and his wife'; status as distinct dyad morpheme not clear	
W. Daly	Mnk	No dyad			
N. Daly	Mlk	No dyad			
E. Daly	Mat	mer-	mer-		
	Kam	mer-	mer-		
S. Daly	Mur	No dyad			
	Tye	No dyad			
Nyulnyulan	Wrw	-nyarri	-nyarri	Also functions as 'comitative 2', attaching to	

Appendix A: Australian languages in Sample

				successive conjuncts	
Burarran	Gon, Bur, Nak, Ndj	-ko / -ka / - ku(wa)	-go / -ga / - gu(wa)	Restricted; may be borrowings. Some reciprocal verb forms also used	
Gunwinyguan	BGW	-ko, -qmiken	-ko/-go, -hmiken/ -hmigen	First form with asymmetrics, second with symmetric. Also has dual and complementary functions	Throughout central and eastern Gunwinyguan
	Dal	-ko, -yi, -no	-ko, -yi, -no	-ko has dual and complement functions; -no 3 rd person possessor, -yi instrumental / proprietive	
	Nga	-koq	-koʔ	Dedicated	
	Ngk	-koq ~ -k:oq	-koʔ ~ goʔ	Dedicated	
	War	-qmiyi	-hmiyi	Dedicated	
	Man	-yi	-yi	Same form functions as proprietive	
	Nun	-yic	-yij	Dedicated dyad; also dyad use possible with reciprocal of kinship verbs	
Maran	Mar	-(a)rr, -la, -rla, - ya, suppletive	-(a)r, -la, -l̩a, - ya	-ya also marks 'having' (p. 285)	
	Wnd	No dyad			
Mindi	Wam	-kulanci ~ - kulanga	-gulanji ~ - gulanga	-nji vs -nga represent masculine vs feminine forms.	

				Adapted loan from Ngumbin-Yapa	
Tangkić	Kay	-ngarrpa	-ngarrba	Same form used for consequential case	
	Yuk	-ngarrpa	-ngarrba	Same form used for consequential case	
	Lrd	-ngerr	-ngerr		
<i>Pama-Nyungan family</i>					
PN: Cape York	YY	lon (postps)	lon	comitative postposition	some kin types have suppletive dyadic forms
	Ura	no dyad			
	Kya	compounding strategy (§6.4)			
	Gyi	no dyad			
	Jab	No dyad			
	Mba	No dyad			
	Nyw	-kil	-gil	Poss. relation to comitative <i>-gi</i>	
	Yid	no dyad			
	War	no dyad			
	Dyi	-cirr, -kirr	- <u>ci</u> ir, gir	Dedicated	
PN: Warluwarric	Bul, Wlw	-mukarra	-mugara	Dedicated dyad	
	Yan	-karra	-ga ^{ra}	Dedicated dyad	some kin dyads have suppletive forms
	Wak	-ngvnhthu (m), ngvnhthi (f)	- <u>ŋ</u> ə ^{ndu} , - <u>ŋ</u> ə ^{ndi}	Also marks 3sg possd. May be followed by further suffix <i>-gəra</i> plus	

Appendix A: Australian languages in Sample

				dual or plural marker Dual – <i>wiy</i> also used as dyad on two terms.	
PN	Bid	no dyadic			
PN: Norman Pama	Gug	-cirra	-tyira		Breen suggests relationship to *kucarra ‘two’ – but see §4.5
PN	Bdj	-nyi	-nyi	Dedicated	
PN	Mur	None reported ¹			
PN	Ydr	-ngurru	- <i>ŋjurru</i>	comitative, proprietive	
PN	Yuw	No dyad			
PP: Karnic	Diy	-mara	- <i>mar̩a</i>	proprietive	Also possible to implicate dyadic reading through use of instrumental in inclusory construction
	Ngm	-mara	- <i>mar̩a</i>	proprietive	
	Ara	-mara	- <i>mar̩a</i>	Occurs in a couple of fixed phrases with meaning ‘having’, e.g. ‘having nothing’, ‘cicatrice having’	Only applies to some kin roots; others take an ‘unknown’ prefix <i>pura</i>
	MaG	-pari/-payi	- <i>bari / bayi</i>	Also functions as ‘concomitant’ marker	
	PP	-marru	-maru	Also functions as	

¹ Though Oates (1976:246) gives one possible example, of *nuwa-yida* [wife-having] glossed in context as ‘a man and his wife’.

				‘concomitant’ marker	
PN: Kalkatungic	Kal	No dyad			
PN: Nhanda	Nha	No dyad			
PN: Victorian	Woi	No dyad			
PN: NSW	Ngi	-kalayca:N-	-galaydja:N-	Dedicated	
	Baa	-liña	-linja	Dedicated	
PN: Flinders Ranges	Adn	-nyi, -na:ka, - wirriwirri	-nji, -nâka, - wiri-wiri	Large number of diff. formatives depending on kin term	
PN: Arandic	Arr	-nhvng(v)	-nheng	Possibly old dual	
	Aly	-nhvng	-nheng	“”	
PN: Western Desert	Pin	-rarra	-rarra	Can function as dyad or dual	
	Ynk	-rarra ~ -rra ~ - kirra	-rara ~ -ra ~ - kira	Pair suffix; dyad is one contextual reading	
	Kuk	-rarra	-rarra	dyadic	
	Mtj	-rarra	-rarra	‘coupling suffix’	
PN: Ngayarda	Pan	-karra ~ -yarra ~ -warra ~ -rra	-karra ~ -yarra ~ -warra ~ -rra	Invariant double -karra function as ‘unifying’ suffix	
PN: Ngumbin- Yapa	Jar Gur Wlp	-langu -rlang -rlangu	-langu -rlang -rlangu	Dedicated Id. form means ‘too, even’	
PN: Warumunguic	Wru	-kurangi	-kurangi	Dedicated, probably loan	
PN: Yolngu	Djp Djn Rit	-qmanyci -qmanyci -kaq	-‘manydji -‘manydji -ka’	Dedicated Dedicated Dedicated, loan	

B. Languages in which verbal reciprocal morphology is extended to kin terms to express dyad semantics

Language	Kinship dyad ex.	Participating kin types (as reported in source)	Verbal ex.	Source
Type 1: kin terms are nominal				
Ainu	<i>u-po-kor</i> RECIP-son-have 'to be parent and son'	parent/son; mother/child 2 symmetrical kin terms (sibling; co-wife) use different construction without the 'have' suffix	<i>nukar</i> 'look at'; <i>u-nukar</i> 'see each other'	Tamura 2000:205-6
Yukaghir			Appears to be restricted to sibling terms: 'Drugie terminy rodstva v etoj forme ne upotrebljauts'ja' (Krejnovich 1982:44). Reciprocal form shared with sociative	Krejnovich 1958, 1982, Nedjalkov 1991, Maslova MS Maslova 1999
Southern Paiute	<i>pavi-</i> 'older brother', <i>na-</i> <i>vavi-ŋwi:</i> 'pair of brothers'	older/younger father/son	brother, <i>kwipa</i> 'hit', 'hit one another'	Sapir 1930:109-110

Adyghe	ʃi 'brother', ze-ʃ-itxəu 'brothers of each other, pair/set of brothers [brat'ja mezhdu soboj]	B, Z. No asymmetrical kin terms, ¹ but other relational nouns and spatial expressions, including 'age-mate', 'comrade', 'neighbour', 'acquaintance', 'near'	jeʃIe 'he knows him', ze-re-ʃIe-x 'they know each other'	Rogava & Keresheva 1966:276-277, Nedjalkov 1991:287
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See also Fijian (23, 24), Tiriyo (22), and To'aba'ita, Tigak, Futunan examples in Lichtenberk (1999)

Type 2: kin terms are nominal; take reciprocal possessive affix

Koyukon Athapaskan	neeL-to' 'father and child', lit. 'each other's father'	Productive through kin vocabulary, also applies to a few other two-place locational expressions, e.g. 'on top of one another'	nee-ts'oodetunh we are holding each other	Jette & Jones 2000, Krauss 2000
Lake Carrier	lh-tse'eke 'father and daughter' (-ke is a plural suffix)	Productive through kin vocabulary	lhk'eke lhotiltselh hukwa'huninzun 'et huwa t'elhonudzeh 'they are getting to know each	Poser 1998

¹ The grammar points out that the 'reciprocal prefix ze- is used also with nouns, which can express reciprocal relationships'.

other because they want
to establish a friendship'

Type 3: kin terms are verbal

Dalabon *wawurdngandung* 'call Found with at least some *nan* 'see', *narrân* 'see Evans, Merlan &
older brother'; kinship verbs with meaning each other' Tukumba forthcoming.
wawurdngandurrun 'call 'call OBJ K'
each other brother'

|Gui - see 7,8

Sources and language abbreviation key

LANGUAGES MENTIONED	Abbrev.	Sources Used
Adnyamathanha	Adn	Schebeck 1973, Hercus & White 1973
Alyawarr	Aly	Green 1992
Arrernte (Eastern and Mparntwe/ Central dialects)	Arr	Wilkins 1989; Henderson and Dobson 1994; Strehlow 1944
Badjala	Bdj	Bell 2003
Bã gandji	Baa	Hercus 1982
Bardi	Brd	Aklif 1999
Bidyara / Gungabula	Bid	Breen 1972
Bininj Gun-wok	BGW	Evans 2003a
Bularnu/Warluwarra	Bul	Breen 1976
Burarra	Bur	Glasgow 1994
Dalabon	Dal	Alpher 1982, Evans, Merlan & Tukumba in press, Evans field notes
Djabugay	Jab	Patz 1991
Djapu	Djp	Morphy 1983
Djinang	Dji	Waters 1989
Dyirbal	Dyi	Dixon 1972
Gaagudju	Gaa	Harvey 2002, p.c.
Gooniyandi	Gny	McGregor 1996
Gurr-goni	Gon	Green 2002
Guugu Yimithirr	Gyi	Haviland 1979
Iwaidja	Iwa	Pym & Larrimore 1979
Jaru	Jar	Tsunoda 1981

Language Abbreviations and Sources

Jiwarli	Jiw	Austin 1993, 2000
Kalkatungu	Kal	Blake 1979
Kamu	Kam	Harvey p.c.
Kayardild	Kay	Evans 1995, fieldnotes
Kukatja	Kuk	Valiquette 1993; Peile 1997
Kuku-Yalanji (Gugu-Yalanji)	Kya	Oates 1992a
Lardil	Lrd	Ngakulumungan Kangka Leman 1997
Larrakiya	Lar	Harvey p.c.
Limilngan	Lim	Harvey p.c.
MalakMalak	Mlk	Birk 1978
Mangarayi	Man	Merlan 1982, Merlan & Heath 1982
Mara	Mar	Heath 1981
Maranungku	Mnk	Tryon 1970
Margu / Gunya	MaG	Breen 1981
Martujarra	Mtj	Marsh 1992
Martuthunira	Mar	Dench 1995, Dench 1997
Matngele	Mat	Harvey p.c.
Maung	Mau	Capell & Hinch 1970
Mbabaram	Mba	Dixon 1991
Muruwari	Mur	Oates 1976, 1988
Na-kara	Nak	Green 2002
Ndjébbana	Ndj	McKay 2002
Ngalakan	Ngk	Merlan 1983
Ngamini	Ngm	Austin 1981
Ngandi	Nga	Heath 1978b
Ngiyampaa	Ngi	Donaldson 1980
Nhanda	Nha	Blevins 2001

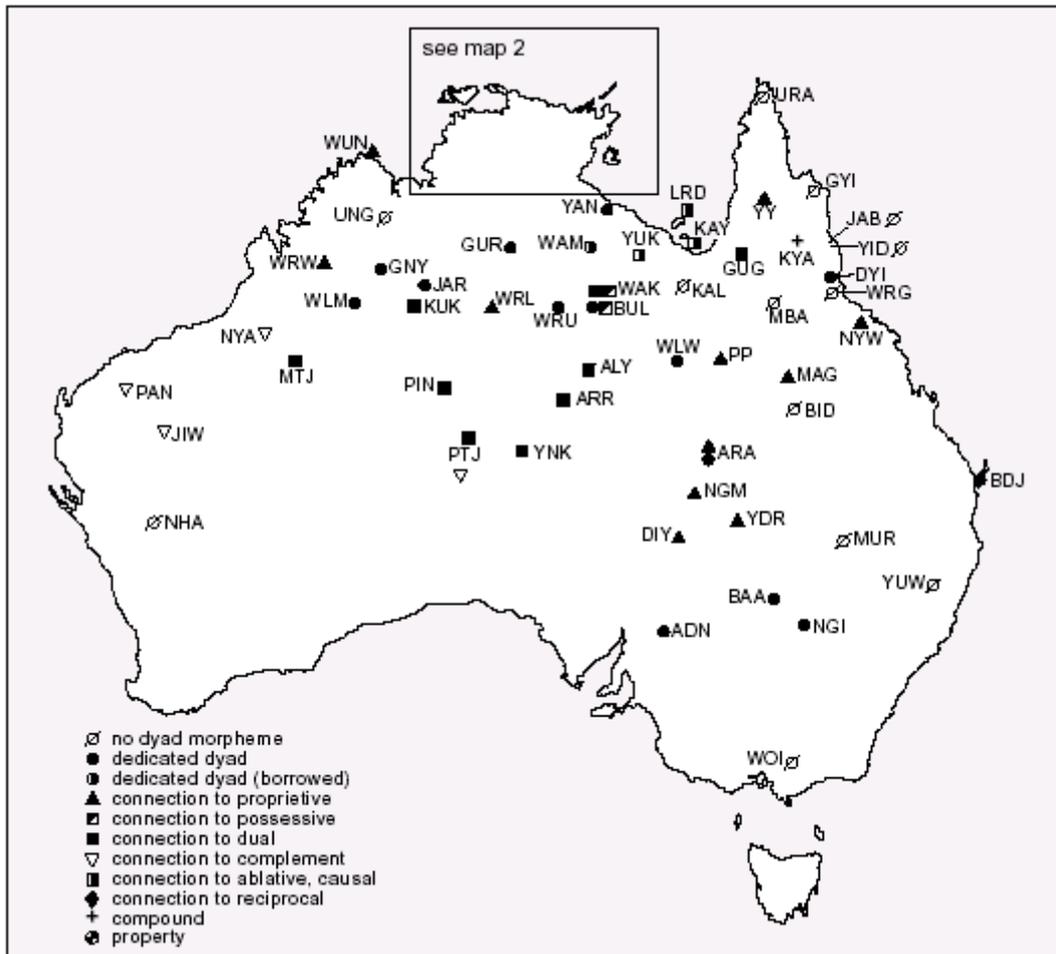
Evans: An interesting couple

Nunggubuyu	Nun	Heath 1982; 1984
Nyamal	Nma	Dench 1997
Nyangumarta	Nya	O'Grady & Mooney 1973
Nyawaygi	Nyw	Dixon 1983
Panyjima	Pan	Dench 1991
Pintupi	Pin	Hansen and Hansen 1978
Pitta-Pitta	PP	Blake 1979b
Tiwi	Tiw	Osborne 1974
Ungarinyin [Ungarinjin]	Ung	Rumsey 1982
Uradhi	Ura	Crowley 1983
Wakaya	Wak	Breen 1976
Walmajarri	Wlm	Hudson 1978
Wambaya	Wam	Nordlinger 1998
Wardaman	Wrd	Merlan 1994
Warlpiri	Wlp	Nash 1986
Warluwarra	Wlw	Breen 1976
Warndarang	Wnd	Heath 1981
Warray	War	Harvey 1986 & p.c.
Warrgamay	Wrg	Dixon 1981
Warrwa	Wrw	McGregor 1994
Warumungu	Wru	Simpson & Heath 1982
Watjarri	Wtj	Douglas 1981
Western Desert		See Kukatja, Pintupi/ Luritja, Pitjantjatjara and Yankunytjatjara.
Woiwurrung	Woi	Blake 1991
Wunambal	Wun	Vaszolyi 1976
Yandruwandha	Ydr	Breen 1976

Language Abbreviations and Sources

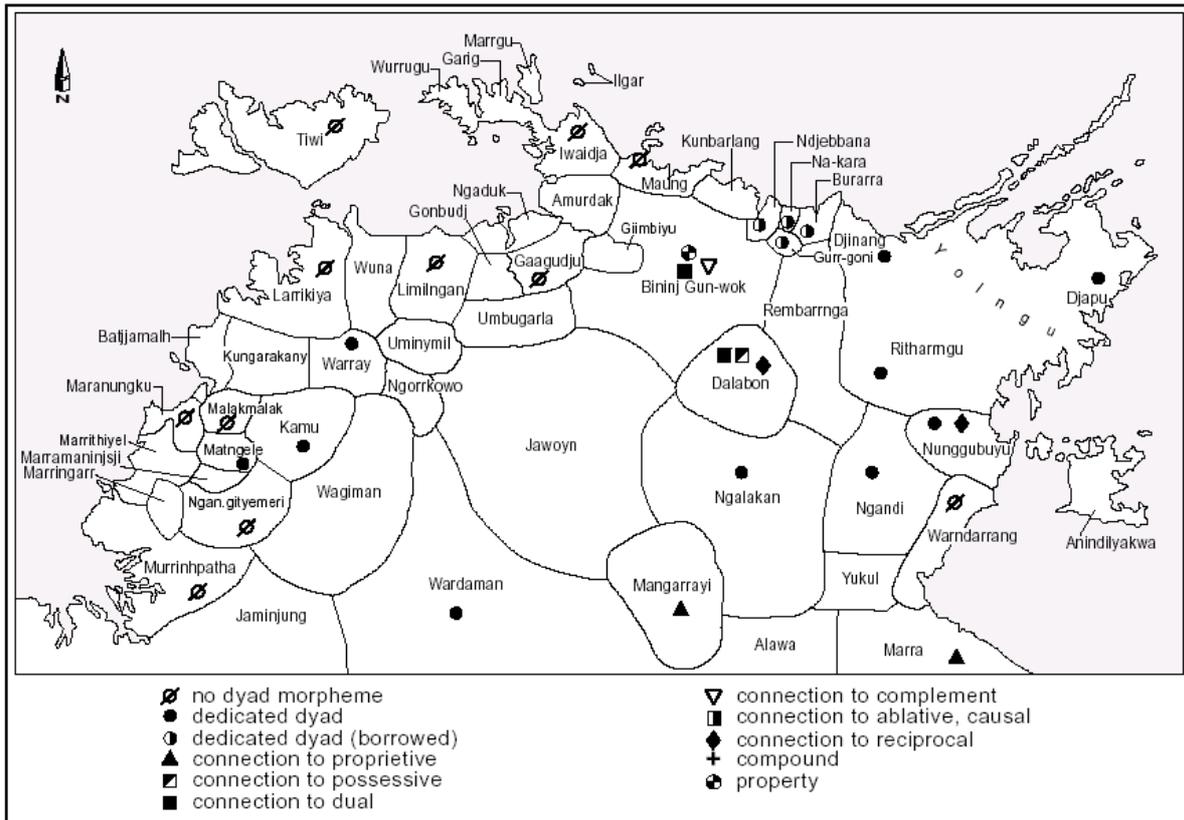
Yankunytjatjara	Ynk	Goddard 1983, 1985
Yanyuwa	Yan	Kirton 1971
Yidiny	Yid	Dixon 1977
Yir Yoront	YY	Alpher 1991
Yukulta	Yuk	Keen 1983
Yuwaalaraay	Yuw	Williams 1980

Map 1: Distribution of Australian languages discussed, showing patterns of polysemy found with attested dyad morphemes.



Maps

Map 2: Distribution of Top End languages discussed, showing patterns of polysemy found with attested dyad morphemes.



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Von 1968 an erschienen die von Prof. Dr. Hansjakob Seiler herausgegebenen Arbeitspapiere des Instituts für Sprachwissenschaft. Nach der Emeritierung von Prof. Dr. Seiler im März 1986 wurde eine neue Folge mit neuer Zählung und dem Zusatz "Neue Folge" (N.F.) begonnen. Herausgeber ist Prof. Dr. Hans-Jürgen Sasse, Institut für Sprachwissenschaft.

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