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Title: Dyad constructions

Abstract

Dyad constructions provide a way of referring to pairs or groups of people based on the social relationship they share, but so far they have escaped systematization within general linguistics. This article defines and exemplifies the various kinds of dyad construction, distinguishes them from related categories (reciprocals, duals, associative duals, family group classifiers, additive co-compounds), and examines their geographical distribution.

Dyad constructions form, from kin and other relational expressions, terms denoting pairs of the type 'uncle and nephew(s)', 'mother and child(ren)'. They may be formed by morphological derivation – cf Kayardild (Australian) *ngamathu* 'mother'; *ngamathu-ngarrba* 'mother and child' – or may be unanalyseable lexical roots, such as Mianmin (Papuan) *lum* 'father and child'. Dyad constructions may be related, formally, to reciprocals, duals, or proprietive or possessive constructions, or may involve dedicated morphemes or unanalyseable lexical stems. They have a skewed geographic distribution, with a hotbed in Oceania and the Western Pacific, sporadic occurrence in North, Central and East Asia and western North America, and only occasional attestation elsewhere (Amazonia; the European periphery, and Southern Africa).

1. Initial definition and exemplification

Dyad constructions denote relationally-linked groups of the type 'pair/group of brothers', 'mother and child(ren)', 'teacher/student pair' (see Evans 2003a for sources of all unreferenced data or terminology in this article). They may be formed by morphological derivation, as with Kayardild (Australian) *ngamathu-ngarrba* 'mother and child' < *ngamathu* 'mother', or they may be unanalyseable lexical roots, such as Mianmin (Papuan) *lum* 'father and child' (Smith & Wesson 1974). Though they most commonly refer to pairs, as in the above examples, they may also refer to larger groups, e.g. Mianmin *lum-wal* 'father and children'. Though the above languages have dedicated dyad forms, it is more common for dyadic constructions to overlap formally with other categories, most commonly reciprocals, proprietive or possessive constructions, or pair markers (§3). Where a dual-plural contrast exists, the dual dyad is usually formally unmarked (§4). Dyad constructions display a notably skewed geographical distribution, being concentrated in the language families of the Western Pacific, with only scattered occurrences elsewhere (§5).

Typically, languages with dyad constructions can form them both from symmetric (self-converse) terms like English 'cousin' (X is Y's cousin ↔ Y is X's cousin), and from asymmetric terms like English 'mother' (X is Y's mother <-/-> Y is X's mother), using the same constructional pattern. Kayardild *ngamathu-ngarrba* above has an asymmetric root; while *kularrin-ngarrba* 'brother and sister pair', derives from the symmetric *kularrin-da* 'opposite sex sibling'. Although, cross-linguistically, there is

some preference for the senior term to be employed, as with *ngamathu-ngarrb*, this is not always the case.

Though kin and other relational terms are most commonly nominals, in some languages they are expressed by verbs instead, so that some dyad constructions are verbs instead of nouns, e.g. ǀGui (Khoisan) ≠goa?okuaha 'be each other's cross-cousins; pair of cross-cousins', based on the symmetric kinship verb =goa?o 'have as cross-cousin', and ǀkoãkuaha 'be parent and child', based on the verb ǀkoã 'have as child' (Ono in prep.) Regardless of whether they are nouns or verbs, it is commonest for dyad expressions to be used predicatively, as in 'they two sister-DYAD' for 'they two are sisters'. In many languages dyad terms may take appropriate pronominal affixation, e.g. Bininj Gun-wok *guni-yau-go* [2du-child.of.female-DYAD] 'you two, mother and child' or *bani-bei-go* [3du-child.of.male-DYAD] 'they two, father and child'. Where this is obligatory, some grammars treat such dyad terms as kinship-sensitive pronouns rather than nouns affixed for pronominal information, as with Whitehead's (2004:229) analysis of Menya (Angan, Papuan) *yä-mät-qiye* 'we two ((who) are) father and son', *qe-mät-aŋgi* 'you two ((who) are) father and son', illustrating pronominal circumfixation around the dyad root *mät* 'father and son'. Though the Menya system could probably be analysed either as dyad-sensitive pronouns or as pronominally circumfixed dyad nouns, once the dyad-denoting material becomes sufficiently reduced and/or formally divorced from meaningful kin roots, or the pronominal terms form a distinct class from nominal dyads, then only the former analysis is plausible: this is the case for Adnjamathanha (Australian; Hercus & White 1973, Schebeck 1973) where pronominal terms like ŋatlaka 'we two (woman and child)' belong to distinct word-classes to nominal dyad terms like ŋaminãka 'mother (or mother's brother) and child'.

While the symmetric use aligns dyad expressions with reciprocals, asymmetric uses are much more widespread with dyad expressions than with canonical reciprocals, which are generally limited in their ability to be used in asymmetrical situations like 'the plates were stacked on top of one another'. Descriptions of what are here considered dyad constructions frequently mention their seemingly anomalous use of reciprocal with asymmetric kin terms, e.g. in basing a dyad term for 'pair of brothers' on the term for 'older brother' in many languages of the world. Within the Oceanicist tradition attempts to cover both symmetric and asymmetric situations have favoured a monosemous analysis as 'plurality of relations' (Lichtenberk 1999) instead of reciprocity, which subsumes both dyadic uses like Fijian vei-taci-ni 'pair of same sex siblings' (< taci 'younger sibling'), and other verbal uses like Fijian vei-'oti 'be involved in activity of (hair cutting)' (without specifying who is cutting and who is being cut).

Nonetheless, there are some languages, such as Adyghe (N.W. Caucasian), which restrict dyad terms to nouns expressing symmetric relations, such as 'brother' or 'age-mate'; in such languages dyads grade into referentialized reciprocals. There are also languages, such as Bininj Gun-wok, which use different formatives according to whether the base relation is symmetric or asymmetric: cf *bei-go* 'father-child pair' (<√*bei* '(man's) child') shows the dyad use of *-go* on asymmetric terms, while *gakkak-migen* 'mother's mother/ daughter's child pair', shows the use of the distinct suffix *-migen* with the symmetric term *gakkak* 'uterine grandkin; mother's mother; (woman's) daughter's child'. These data necessitate a three-way classification of dyad constructions into symmetric, asymmetric, and unrestricted, definable as follows.

*symmetric dyad: 'two (people), such that **each** calls the other K'*
*asymmetric dyad: 'two (people), such that **only one** calls the other K'*
*unrestricted dyad: 'two (people), such that **at least one** calls the other K'*

The unrestricted dyad is the most general, and can be used in either of the other two situations; unless otherwise mentioned below, all examples will involve unrestricted dyads. McGregor (1996) discusses more complex types in Gooniyandi, including terms which stipulate the relations of the two referents within the dyad to the speaker or hearer, e.g. 'husband/wife pair, such that the man is the speaker's brother, and the woman is his sister-in-law', and 'multicentric ternary polyadic kin terms' like 'group of mothers-in-law and fathers-in-law of various proposituses'.

Drawing together examples we have already discussed, we can see that dyad terms are attested within three word-classes cross-linguistically. Most commonly they are nouns, as with the Kayardild and Mianmin examples above. Occasionally they are verbs, as was exemplified for ǀGui. Finally, they may be pronouns, as in most languages of the Angan family (Papuan) and in Adnjamathanha, reflecting a shift from nominal dyad terms prefixed for pronominal categories, to reanalysis as primarily pronominal term. In some cases, these may then develop further into pronouns sensitive to more abstract kin-based categories like generational harmonicity, patrilinearity or matrilinearity (Evans 2003b). Finally, dyad expressions may be multi-word phrases, with a special word inducing the dyad reading, as in Pileni (Austronesian) *thau tungane* 'brother and sister' (*thau* 'dyad', *tungane* 'opposite sex sibling'), further quantifiable with plural marker *nghi* to give *nghi thau tungane* 'brothers and sisters' (Næss p.c.).

2. Terminology
Dyad constructions have only recently been recognized as a distinct, named category, probably reflecting the virtual absence of dyad terms in Indo-European and Semitic languages, with the exception of Icelandic terms like fe∂gar 'father and son', fe∂gin 'father and daughter', mæ∂gin 'mother and son', mæ∂gur 'mother and daughter'.

The first defined use of the term, using the longer variant *dyadic,* was by Merlan & Heath (1982:107), who apply it to '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'; they also introduce *plural dyadic* for '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'. To allow for the existence of non-kin dyads (e.g. teacher/pupil pair), 'kin' should really be replaced by 'relational'. Other terms for the same phenomenon have included 'kinship proprietive', 'kinship duals', 'reciprocal plurals', 'collective nouns', 'kin quantifiers' (Smith & Weston 1974), 'group pronouns' (Oates & Oates 1968), 'group genders' (Lloyd 1970), or 'correlative kin terms' (Daniel 2000). This huge terminological variation has retarded the cross-linguistic comparison of the phenomenon.

3. Related categories

In many languages dyad constructions overlap in meaning and form with various other categories – reciprocals, duals, associative dual/plural, family group classifiers, and additive co-compounds. To qualify as dyads, there must be tests that show them to be semantically or combinatorially distinct morphemes despite their etymological relationship – in Mangarayi, where -yi indicates both 'having' and the dyad relationship, the effects on number and word class are different: ŋugu-yi [water-having] is an adjective, inheriting the number of its head, whereas baḍa-yi [father-dyad] is a dual noun.

Their relation to *reciprocals* has already been mentioned; in contrast to reciprocals, though, dyads typically refer rather than predicate, and are used much more commonly in asymmetric situations.

Because dyads typically denote pairs, they partly overlap with *duals*, particularly with the 'oppositional paral' subtype. However, whereas duals of kin terms calculate the relationship 'outside' the pair, dyads calculate the relationship within it. English 'two cousins' is ambiguous – it includes the dual 'two (of my) cousins', translatable into Kayardild by the dual *jambathu-yarrngka*, and the dyad 'two cousins (of each other)', translatable by the dyad *jambathu-ngarrba*.

Associative duals or plurals (Moravcsik 2003), such as Japanese *Tanaka-tachi*, derive expressions meaning 'X and associates', which in some contexts (e.g. mother-ASSOC.PL) may allow readings like 'mother and her children', but this is only one of several available readings. A further difference from dyads is that associative duals or plurals can be based on proper names in addition to kin terms. Similar points differentiate dyads from 'elliptical duals' (food and [wine]) or certain sorts of pairing construction like Vedic mitr..váru.(u) 'Mitra and Varuna', which, unlike dyads, do not require any designated relationship to hold within the pair. Though it would be possible to subsume dyads under a broader label that includes these other pairings, this would miss the point that many languages have constructions specialised just for the dyad meaning, which thus requires a term and a systematization.

Family group classifiers (Bradley 2001) combine numerals with a Family.Group.Classifier (FGC) to derive expressions meaning 'group of [Number] saliently including an elder relative who is K to someone else in the group'. Consider the Akha 'family group classifier' $ma^{33}za^{21}$, derivable from $a^{21}ma^{33}$ 'mother' plus za^{21} 'child' (though not all FGCs are so transparently derivable). Combined with 'two' this gives the meaning 'mother and child', i.e. with cardinality two these are identical to dyads. But once the group is larger, other non-dyadic readings are allowed: sm^{21} $ma^{33}za^{21}$ [three FGC.including.mother] could mean 'mother and two children', but also 'mother, father and one child': only the first reading would be available with a true dyad construction. As a result, family group classifiers have a referential range identical to dyad expressions when they combine with the number 'two', but only overlap partially when combined with larger numbers.

Additive co-compounds (Waelchli 2003) compound two expressions referring (inter alia) to stereotypically conjoined entities (e.g. food-wine, father-son). They may include dyad combinations among their possibilities. In some languages special co-compounding patterns are specialised for expressing dyad meanings. Wik-Mungkan (Kilham 1974) forms dyads by combining the word *ma'* 'hand' with a co-compound, e.g. *ma' kaath puk* [hand mother child] 'mother and child', while Cantonese (Mathews p.c.)

forms dyad co-compounds by joining clipped social relationship roots, which can then be combined with a numeral; distinctively from most nominals, no classifier is needed. Examples are *loeng5 mou5-leoi2* [two mother-daughter] 'mother and daughter (as a pair)', where *mou5* is clipped from *mou5-can1* 'mother' or *lou5-mou2* '(old) mum', *saam1 hing1-dai6* [three older.brother-younger.brother] 'three brothers', or, in a sentence:

(1)   *loeng5*   *si1-sang1*   *ahi2dou6*   *tou2leon6*
         two   teacher-student   PROG   discuss
         'Teacher and student are discussing .... '

Dyad constructions, though overlapping in one way or another with each of the above, must therefore be regarded as distinct, even though these alternatives sometimes provide the closest translation equivalents. We can summarize the differences by saying that reciprocals normally predicate rather than refer, that (normal) duals are 'type duals' (i.e. the dualized elements are all equivalent), while associative duals, co-compounds and family group classifiers are all 'group duals', where grouped entities need not be equivalent, but simply happen to occur jointly in the world. Dyads have the special characteristic that the existence of one member, at least in the designated relation (e.g. father), logically entails the existence of the other (e.g. son), and vice versa.

4. Dyads and number

Cross-linguistically, plural is generally considered unmarked with respect to dual, but this relationship is frequently reversed in the case of dyads, with plural dyads built up from dual dyads rather than the reverse. A Paiwan (Formosan) example, which first derives dual dyads by prefixation to the base noun, and then derives plural dyads by reduplication, is aʎak 'child' > maɣaʎak 'parent and child' > maɣaʎaaʎak 'parent and children' (Zeitoun 2003). Several Australian languages, which form dual dyads by suffixation to a base kin term, then require further affixation to get plural dyads, e.g. Dhuwal *bäpa'* 'father', *bäpa'-manyji* 'father and son pair', *bäpa'-manyji-wurr* 'father(s) and children'.

In other languages, dyad forms are equally compatible with both dual and plural readings: Nêlêmwa (Bril 2002:368) derives dyads by circumfixation of *â-..-n* to a base kin term; they can then combine with either dual or plural pronouns, according to the number required: *hliibai â-vabuu-n* 'they two, grandfather and grandchild', *hlaabai â-vabuu-n* 'they, grandfather and grandchildren'.

A tantalising question is whether, through 'subset construal', it is possible to use dyad terms for singular reference, by picking out one individual against the background of a dyadic relationship. A rare example, from the Australian language Mara (Merlan & Heath 1982:119), involves the combination of a dyad subject nominal with a verb with singular subject: thus literal 'we.two-younger.brother's.wife-DYAD she-went' is used for 'my younger brother's wife went', lit. 'she, such that we are co-sisters-in-law, went'. Like most aspects of dyad constructions, we need much more detailed data before we can fully peg out their typological possibilities.

5. Formal realizations and polysemic links

It is rare for languages to have either a 'dedicated' dyad affix, like the Kayardild *-ngarrba* suffix, or 'dedicated' lexical roots referring to dyad pairs, like Mianmin *lum* 'father and child', *hat* 'mother and child'. Dedicated dyad roots seem to be unique to Papuan languages.

More commonly, forms have both dyad and some other function, but with enough distributional or semantic differences to warrant treating the two as distinct morphemes.

Dyads are frequently functional extensions of reciprocal morphemes, often marked by non-standard semantics or combinatorics, or supplementary morphological material. The smallest deviation from basic reciprocal function is found where kinship terms are verbs, as with the |Gui examples above: here we are simply dealing with a regular use of the reciprocal, with expressions that happen to denote kin relationships, plus an irregular tolerance of the reciprocal with asymmetric kin relationships. The Cariban language Tiriyó illustrates a basically verbal reciprocal affix whose only occurrence with nouns is in dyad constructions; Ainu dyad terms share the prefix *u-* with reciprocal verbs but additionally use a 'having' suffix *-kor*, e.g. *u-po-kor* [RECIP-son-have] 'to be parent and son'. Northern Athapaskan languages make use of special reciprocal possessive affixes, as in Koyukon neeɬ-to' 'father and child', literally 'each other's father' (cf neeɬ-ghaale' 'each other's packs').

Two further extensions are from 'having' (comitative or proprietive) suffixes, and from 'possessed' suffixes. These extensions are bridged by contexts where the 'superset' – furnished by inclusory constructions like 'they.two$_{i,j}$ with.son$_j$' for 'they two, including (a) son' or 'they.two his.son' for 'they two$_{i,j}$, including his$_{i,k}$ son$_j$' – transfers its semantics to the noun plus affix combination, with comcomitant restriction on the possessor of the kin to the other member of the pair, i.e. 'they two, (a father)$_i$ with his$_i$ son$_j$'. In other words, the grammaticalization of these markers into dyads occurs when there is a restriction on the possessor such that it must be sought within the NP, or, put differently, within the pair. (Mosel 1984:40 distinguishes this dyad use of 3rd singular possessive *-na* in Tolai as 'derelational').

This is nicely illustrated by Mwotlap (François 2002), where *yoge têta-yô* [Coll.dual diff.sex.sibling-3duPoss] means 'brothers of them two (two sisters)' or 'sisters of them two (two brothers)', with the possessor sought *outside* the denoted sibling set, whereas insertion of the dyad morpheme *matag* into this phrase, giving *yoge matag têta-yô*, forces the possessor to be sought *inside* the group, yielding the dyad reading 'brother-sister pair', i.e. 'opposite siblings of each other'.

Diyari is an example of a language with a true dyad suffix, but also an instrumental (including proprietive use) on the way to grammaticalizing a dyad via an associative dual construction. The suffix *-mara* is only found in dyad expressions like *kaku-mara* [elder.sister-DYAD] 'pair of sisters' or *nhuwa-mara* [spouse-DYAD] 'husband/wife pair', while the 'instumental/ergative' suffix allows either group-internal or group-external possessive readings when combined with a kin term and a pronoun for the superset. Thus – *pula kaku-yali* [they.two elder.sister-INSTR] is attested with the meaning 'pair of sisters', while *pula ngapiri-yali* [they.two father-INSTR] is attested with the meaning 'they two, including his father' (i.e. they two, his father and another, e.g. his mother)'. Dyads formallyidentical to 'having' constructions (associatives, comitatives, proprietives) are also found in Udihe (Tungusic) and Quechua.

The dyad suffix *-(u)ks(e)-* in Finnish, as in *velje-kse-t* [brother-DY-PL] 'brothers (with each other)', *sisar-ukset-t* [sister-DY-PL] 'sisters (of each other); also more generally siblings'), is identical to a denominal suffix 'material for NOUN', as in *aida-kse-t* 'objects (e.g. sticks) for building a fence (*aita*)'; suffixes with a similar functional range are found in Estonian and Sámi.

A further type of extension, is from a morpheme originally meaning 'pair' or 'one of a pair'. See Evans (2003a) for more on these semantic trajectories in Australian languages.

6. Geographical distribution

Dyad constructions show a very skewed geographical patterning, concentrated in language families of the Western Pacific: Australian (>60 languages), Austronesian (> 15 languages, from Taiwan to New Caledonia), Papuan (> 10 languages), as well as parts of east and north Asia, including some Turkic and Uralic languages, and the isolates Ainu and Yukaghir. If one takes 'family group classifiers' into account, there are also many Yi languages of South-East Asia with dyad-like phenomena.

Elsewhere, dyad constructions are sporadically attested in western North America (Koyukon and Carrier within Athabaskan; Pomo, Southern Paiute), Quechua and Cariban (Tiriyó) in South America, the Caucasus (Adyghe) and southern Africa (ǀGui and Kxoe within Khoisan).

It is too early to say whether this interesting geographical skewing is a genuine macro-areal phenomenon, or merely results from the interplay of descriptive traditions for Western Pacific languages in a way that has encouraged linguists from that area to look out for dyad constructions. Given the lack of a systematic typology until now, though, it is likely that dyad constructions have lain undiscovered in many other languages of the world than have been discussed here.

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