Cris Edmonds-Wathen*

Changes in spatial frames of reference use in Iwaidja in different intergenerational contexts

https://doi.org/10.1515/lingvan-2020-0009
Received February 4, 2020; accepted April 22, 2021

Abstract: Research into sociocultural factors affecting the use of spatial frames of reference (FoR) has begun to move away from characterizing FoR choice as inherent to each language, instead emphasizing variation within speech communities, but has so far paid little attention to variation in individual speaker's FoR use with different addressees. This paper reports on differences in two senior adults' use of FoRs in Iwaidja when addressing a peer compared to addressing a child. Performing the Man and Tree task, the speakers made frequent use of geocentric descriptions with their peers, and substantially fewer geocentric descriptions with a child. The study was conducted in a complex multilingual speech environment where younger generations' language use is shifting away from Iwaidja towards English and to other Australian languages. Factors motivating the different FoR choices in child-directed speech may include elements of parentese and accommodation to the children's incomplete acquisition of Iwaidja. The children's contact with English, particularly through schooling, may affect the adults' expectations of the children's acquisition of frames of reference in English. Drawing attention to the impact of the addressee in spatial speech, this study adds to understanding sociocultural elements of spatial reference in the context of language contact and shift.

Keywords: Australia; language variation and change; linguistic anthropology; sociotopography; spatial frames of reference

1 Introduction

Typologies of spatial frames of reference have been used to classify languages according to their resources and the preferences of their speakers (e.g. Levinson 2003). Explanations for the development and use of specific frames include the influence of topographic environments on geocentric systems (Palmer 2015). The sociotopographic model proposes that engagement with the environment in daily activities influences frame of reference use, with studies focussing on variation between groups of speakers of the same language (Palmer et al. 2017). Research into intergenerational changes in uses of frames of reference in contexts of language shift has moved away from characterizing frame of reference use as inherent to each language, focussing instead on speaker or group preference (Adamou 2017; Cerqueglini 2018 and this vol.; Meakins 2011). Although much elicitation of spatial language is conducted through paired speaker-in-interaction tasks, little attention thus far has been given to variation in frame of reference use of individual speakers with different interlocutors. This paper reports on differences between senior adults' uses of frames of reference in Iwaidja when talking with a peer and with a child. This study adds to the understanding of the sociocultural elements of spatial reference, in a context of language contact and shift, by considering the impact of addressee on spatial language.

***Corresponding author: Cris Edmonds-Wathen**, College of Indigenous Futures, Education and Arts, Charles Darwin University, Darwin, Australia, E-mail: cris.edmonds-wathen@cdu.edu.au. https://orcid.org/0000-0002-0444-2100

2 Intergenerational variation in uses of spatial frames of reference

There are diverse typologies of spatial frames of reference which overlap in various ways but at times contradict (Bohnemeyer and Tucker 2013; O'Meara and Báez 2011). In this paper, references are classified as *intrinsic* when the referential anchor, that part of the scene which is considered fixed in relation to the others (Danziger 2010), is internal to the figure-ground array. This can be determined by rotation tests: intrinsic descriptions hold under rotation both of the speech participant and of the whole figure-ground array (Danziger's 'object-centred' frame). If the referential anchor is external to the figure-ground array, references can be classified as either *geocentric* (descriptions hold under rotation of speech participant and ground but not array – Danziger's absolute frame) or *egocentric,* which includes both Danziger's relative and direct frames (Bohnemeyer and Tucker 2013; O'Meara and Báez 2011; Palmer et al. 2017).

Some psychologists have posited that children acquire egocentric spatial frames of reference before geocentric (Johnston and Slobin 1979; Piaget and Inhelder 1948), but studies of diverse languages have shown that developmental paths are language-specific (Brown and Levinson 2000; De León 1994; Haun et al. 2006). Brown and Levinson (2000) propose that child acquisition of spatial language is interactional and motivated by social and environmental language ecology. Haun et al. (2006) claim an inherited bias towards environment-centred processing and that egocentric representations of space are more difficult for children to learn than geocentric representations, and are mastered at a later age. This is substantiated by Shusterman and Li's (2016) findings that 4 year old English-speaking children easily learnt novel geocentric words but found egocentric left-right more difficult than egocentric front-back and geocentric terms, despite English preferencing relative egocentric expression.

Changes in frame of reference use in different generational groups have been reported in contexts of language change or shift. In particular, shifts from geocentric to egocentric preferences in speech have been described for younger speakers of Negev Arabic (Cerqueglini this vol.) and of Gurindji Kriol (Meakins 2011). However in cognitive tasks speakers still favour geocentric strategies and younger Gurindji Kriol speakers appear to be replacing older cardinal terms with landmark terms (Dunn et al. 2021). Influence from colonial languages, introduction of literacy in previously non-literate societies, and shifts to urban living may be influencing such changes (Cerqueglini 2018 and this vol.; Meakins and Algy 2016; Palmer et al. 2017). Conversely, education in Spanish, a colonial language, may be strengthening geocentric cognitive representations of bilingual Ngigua-Spanish speakers (Calderon et al. 2019).

3 Context: Iwaidja at Minjilang

Iwaidja is an Australian non-Pama-Nyungan language predominantly spoken at Minjilang on Croker Island. The most widely spoken languages at Minjilang are Iwaidja, Mawng, Kunwinjku and English. As with other small scale multilingual communities of the region, receptive multilingualism is a well-established norm, with children expected to participate in conversations where they are addressed in multiple languages but not necessarily to respond in all those languages (Singer and Harris 2016). The dense and diverse multilingualism within the small speaker communities means that homogenous groups of speakers cannot be found – any grouping of participants in linguistic research will be diverse in attributes such as linguistic repertoire. Language use at Minjilang is shifting away from Iwaidja, the main language of the Traditional Owners, towards English and to other Australian languages such as Mawng and Kunwinjku, and Iwaidja is seriously endangered (Mailhammer and Caudal 2019). The language of instruction in the school is English.

Iwaidja speakers have access to intrinsic, geocentric and egocentric frames of reference. Iwaidja has a range of geocentric terms that can be used in both small- and large-scale space, including east (sunrise) and west (sunset) terms, an inland/mainland–deep ocean axis dependent on speaker location on the small island, and a wind direction axis. Iwaidja speakers are also frequent users of the intrinsic frame of reference and, unusually for Australia, some are occasional users of the relative, see Section 6.1. Spatial verbs in Iwaidja take

an optional prefix indicating directionality, away from a deictic centre (glossed AWAY) or towards it (glossed TO). Without this prefix the directionality is considered neutral (Pym and Larrimore 1979).

4 Methodology

4.1 Study and participants

As part of a larger study into uses of spatial frames of reference in Iwaidja, data were first collected with four pairs of senior fluent Iwaidja speakers. Seven senior Iwaidja speakers, aged from early sixties to early eighties, performed the Director role in the Man and Tree game, a card-matching barrier activity for two participants designed to elicit preferred uses of spatial frames of reference in speech (Pederson et al. 1998). There were four women and three men (a fourth man only performed the Matcher role). Rapid language shift at Minjilang meant that no fluent child speakers of Iwaidja could be found. Six children with receptive knowledge of Iwaidja paired with five adults who spoke Iwaidja with them (two siblings worked together with one parent).

Two adults worked both with a peer and with a child who was their own child or grandchild. The adults were in their early sixties at the time of the study, spoke English fairly well, and had attended school in English. Both peers were more elderly than the speakers, the main language of day-to-day interaction between speakers and peers was Iwaidja, and the peers had little English or formal education. Both children had some receptive understanding of Iwaidja, but the main language of daily interaction between them and the adult was another language. Speaker A1 was a man who typically used Kunwinjku talking with his son. Speaker A2 was a woman who typically used English or Mawng talking with her grandson, for whom she was primary caregiver. Both children also participated in tasks with another child, choosing to speak English, showing likely influences from Iwaidja in their spatial reference strategies (Edmonds-Wathen 2014). Child1, A1's son, was 12 years old at the time of the task. He spoke Kunwinjku, Mawng and English and was an academically proficient regular school attender. Child2, A2's grandson, was 8 years old. His preferred languages were Mawng and English and he was an irregular school attender. The adults used Iwaidja in the task with the children as per the study's goal to document Iwaidja.

4.2 Man and Tree task

The study used the Senghas version of the Man and Tree task, two identical sets of 16 cards showing photos of a small toy man and tree in all possible arrangements of the man and tree in the horizontal plane at right angles (Terrill and Burenhult 2008). The cards are named *Rxy*, where *x* refers to the *facing* direction or *orientation* of the man and *y* to where he *stands* in relation to the tree. For example, *Rx1* refers to any card where the man is in the background of the photo, and the tree is in the foreground.

The participants sit side by side to preserve geocentric orientation with a barrier between them, each with a set of the cards. After choosing one card at random, the Director describes it to the Matcher, who finds the matching card from their own set. The Matcher can ask questions. Since the toy man is oriented by virtue of its facets (front, back, sides), it tends to operate as the *figure* in descriptions, while the tree serves as the referential *ground* (Talmy 1983). Descriptions can convey either standing or facing information; exhaustive descriptions, sufficient to disambiguate a card from all others, need to include facing information.

The adult-adult sessions were facilitated in Iwaidja by Bruce Birch, a linguist based at Minjilang. Each adult Director described between 13 and 16 cards of the 16-card set. I gave instructions for the child–adult sessions in English. A reduced set was used for the child–adult sessions which varied between six cards (transverse axis only) to 12 cards (both sagittal and transverse axes but excluding those where the man and tree are arranged on the sagittal axis with the man facing left or right, i.e. *R21*, *R23*, *R41* and *R43*). This reduced the complexity of the task and time taken to complete but means that direct quantified comparisons between the different sessions cannot be made.

5 Analytical framework

Descriptions analysed as egocentric include *relative* descriptions where the point of view and body of the speaker are projected to relate the figure to the ground, such as *wakaldakan maruj* 'on the left side'. They also include descriptions using the *speech act participants as landmarks (SAP-landmarks)* such as *arrungbayan* 'he's looking at us' and *wakaldakan jumung nuyi yukbani* 'the side where you are sitting'. Although these are landmarks, they are egocentric and therefore distinct from geocentric landmarks.

Descriptions analysed as geocentric include those using the absolute terms such as cardinal directions and wind directions, topographic landscape directions (such as *manandi* 'mainland') and local toponyms. Toponyms are not typically treated as geocentric, but are classified together here, based on their shared behaviour in rotation tests of the figure-ground array (see Section 2). Due to the small data set, types of geocentric descriptions are not distinguished. It is arguable how abstract the cardinals in Iwaidja are. On a small island, places names at the periphery of the island may function in as wide a range of circumstances as the more abstract cardinals. For example, *Murdululi* 'Cape Croker', the northernmost part of Croker Island, is directly north from Minjilang, the main settlement on the island, and is always more or less to the north of a speaker in Croker Island. In the larger study, evidence for its extended meaning of 'north' includes being used by one speaker in Darwin to refer to the north direction, while being northeast from where the speaker was sitting several hundred kilometres away.

The intrinsic and relative frames of reference in Iwaidja share vocabulary, particularly *wurdaka* 'in front', *warrwak* 'behind', *maruj* 'left' and *nurlinurli* 'right'. Iwaidja shares with Tamil a tendency to *ascribe intrinsic reference* to unfaceted objects in a symmetrical manner: to paraphrase Pederson (2006: 428), if the tree is in front of the man, it is sensible that the man is also behind the tree, as in card *R44* (Figure 1). Similarly, in *R42*, the man can be considered to be in front of the tree, since it is behind him.

Out of context, descriptions using these terms were often ambiguous as to frame of reference. *Warrkbi wurdaka* 'man is in front' can mean 'the man is in front (closer to me than the tree)' – analysed as relative, or 'the man is in front (because the tree is behind him)' – analysed as intrinsic. Hence context and rotation tests were used to determine the frame of reference. Descriptions of cards *R11* and *R13* using *wurdaka* 'in front' and *warrwak* 'behind' were classified as ambiguous because both these frames of reference are possible in the context and agree with each other – that is, in *R11* the man is both intrinsically behind the tree, and behind it from a reflectional relative perspective (Figure 2). Descriptions using *maruj* 'left' and *nurlinurli* 'right' were usually

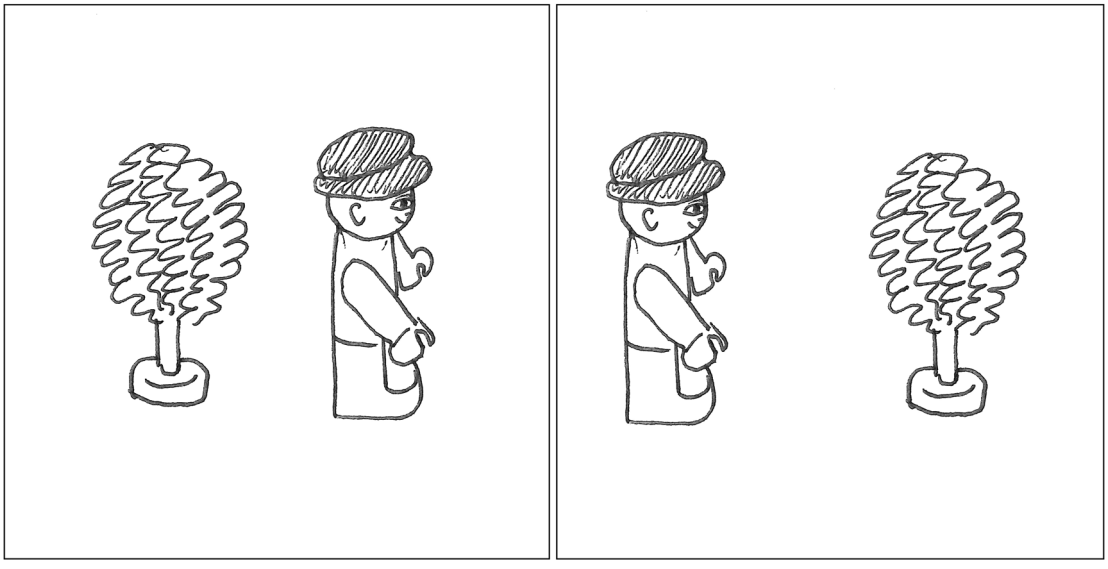

Figure 1: Cards *R42* and *R44*.

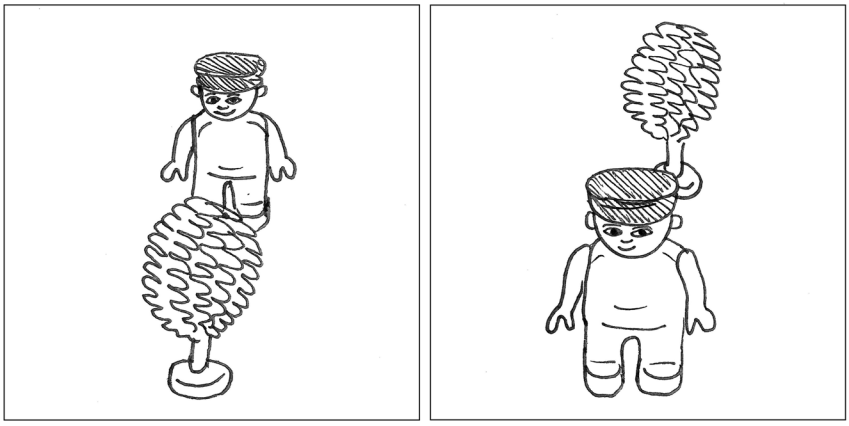

Figure 2: Cards *R11* and *R13*.

disambiguable by context. Descriptions that used the orientation of the man with respect to the tree were classified as intrinsic, such as *rukung kirrwarda* 'he gave it his back' and *rayan ba arlirr* 'he is looking at the tree'.

6 Results

Directors frequently provided multiple descriptions for a single card, using multiple frames of reference. Sometimes terminology was repeated, sometimes a single lexical item was used (e.g. 'east'), sometimes both lexical items from a pair were used (e.g. 'east' and 'west') and sometimes more than one strategy was used within each frame of reference (e.g. both cardinal directions and wind directions). However, use of each frame of reference has been counted once only for each speaker per card, resulting in an analysis of which strategies were used for how many (and which) cards. Given the nature of the data set, this better represents the phenomena of interest than a frequency analysis across sessions. A summary of the frame of reference uses of the Iwaidja adult with their peers is shown in Table 1. Counts and percentages relate to the proportion of described cards for which each speaker used each strategy; percentages total more than 100% since speakers frequently used more than one strategy per card. The egocentric counts are the total of cards for which relative and SAP-landmark terms were used (total is less than sum where both strategies used about same card). For example, A1 described 13 cards. He used geocentric strategies for all 13 (100% of his total set of 13), egocentric for 5 (38%), ambiguous for 5 (38%), and intrinsic for 10 (77%). Of the five cards for which he used egocentric strategies, he used relative for 4 (31%) and SAP-landmark for 4 (31%) – that is, for 3 of those 5 cards he used both relative and SAP-landmark strategies.

These figures are presented to enable comparison with the child-directed speech. For a more comprehensive qualitative analysis see Edmonds-Wathen (2012). With their peers, most adult Iwaidja speakers made geocentric and intrinsic descriptions frequently and few relative egocentric descriptions. Male speakers were more likely to use absolute terms than female. One pair of female speakers, MM and JW favoured SAP-landmark strategies with less use of geocentric and intrinsic strategies.

The most noticeable difference between the two adults with their peers and with the children was that both the adults more frequently used geocentric strategies with their peers than the children. Table 2 shows a summary of strategies, with counts and percentages calculated in the same way as for Table 1.

6.1 A1 to peer

A1 performed the Man and Tree task first with a male peer, describing 13 cards of the 16. A1 used absolute cardinal terms for all cards, using multiple terms for each cardinal direction. A1 also used a range of body parts

Table 1: Adult Iwaidja speakers frame of reference strategies.

	Male			Female				Totals		
	A1	**CM**	**KM**	**A2**	**RG**	**MM**	**JW**	**Male**	**Female**	**All**
Number of cards described	13	16	16	16	15	16	16	45	63	108
Geocentric	13 (100%)	16 (100%)	15 (94%)	7 (44%)	10 (67%)	8 (50%)	2 (13%)	44 (98%)	27 (43%)	71 (66%)
Egocentric	5 (38%)	6 (38%)	2 (13%)	8 (50%)	1 (7%)	11 (69%)	11 (69%)	13 (29%)	31 (49%)	44 (41%)
Relative	4 (31%)	3 (19%)	2 (13%)	3 (19%)	1 (7%)	2 (13%)	3 (19%)	9 (20%)	9 (14)%	18 (17)%
SAP-landmark	4 (31%)	4 (25%)	0 (0%)	6 (38%)	0 (0%)	9 (56%)	10 (63%)	8 (18)%	25 (40)%	33 (31)%
Ambiguous	4 (31%)	4 (25%)	3 (19%)	2 (13%)	2 (13%)	2 (13%)	6 (38%)	11 (24)%	12 (19)%	23 (21)%
Intrinsic	10 (77%)	15 (94%)	16 (100%)	12 (75%)	13 (87%)	5 (31%)	5 (31%)	41 (91)%	35 (56)%	76 (70)%

Table 2: A1 and A2 frame of reference strategies directing peer and child.

	A1		A2	
	To peer	**To child**	**To peer**	**To child**
Number of cards described	13	11	16	6
Geocentric	13 (100%)	1 (9%)	7 (44%)	0 (0%)
Egocentric	5 (30%)	9 (82%)	8 (50%)	4 (67%)
Relative	4 (31%)	9 (82%)	3 (19%)	1 (17%)
SAP-landmark	4 (31%)	6 (55%)	6 (38%)	3 (50%)
Ambiguous	4 (31%)	2 (18%)	2 (13%)	2 (33%)
Intrinsic	10 (77%)	3 (27%)	12 (75%)	4 (67%)

in intrinsic descriptions and used *wurdaka* 'in front' and *warrwak* 'behind' both intrinsically (three cards) and ambiguously (four cards). A1 had impaired vision due to cataracts, and had difficulty distinguishing between the front and back of the man. This was apparent in his descriptions of *R31*, which he thought was like *R11*, and of *R33*, which he thought was like *R13* (see Figure 3), therefore his uses of those terms for those cards have also been analysed as ambiguous.

A1's four uses of relative strategies were all relative uses of *maruj* 'left' and *nurlinurli* 'right'. Three were for the first three cards. The pair had great difficulty matching the third card, *R42* (see Figure 1), including a discussion about which side was left and which right. A1's clarifying explanation is shown in (1), using both geocentric and SAP-landmark egocentric strategies. The matcher was sitting to A1's left.

(1) a. *wuka* *nurlinurli* *karlu* *ngabi*
LOC right NEG 1SG
'Right is not my side,'

b. *nurlinurli* *yaw-akaldakan* *ruka* *nuyi*
right AWAY.3SG-on.side DEM 2SG
'right is your side'

c. *lda* *maruj* *jamin* *yawa-kaldakan* *ruka* *walim* *ba* *arlirr*
CONJ left 3SG.RECP AWAY.3SG-on.side DEM south ART tree
'and left is the side that's south where the tree is'

d. *lda* *warrkbi* *w-akaldakan* *wuka* *nuyi* *ang-bani*
CONJ man 3SG-on.side LOC 2SG 2SG.sit
'and the man is on the side where you are sitting.'
(A1 to peer, card *R42*)

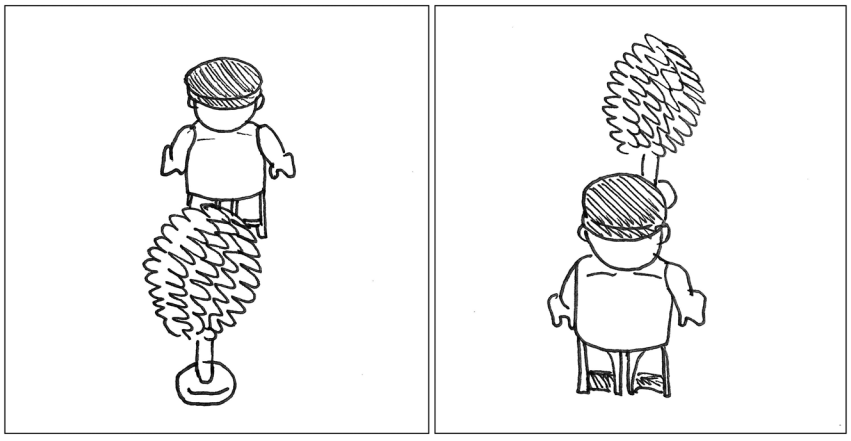

Figure 3: Cards *R31* and *R33*

A1 did not again initiate the use of *maruj* 'left' and *nurlinurli* 'right'. For card *R11* (Figure 2), his peer asked whether the man was on the right or left, to which A1 replied *mardan nurlinurli* 'a little bit right', showing sensitivity to the figure's slight offset on the sagittal axis.

6.2 A1 to child

With his son, A1's strategies changed greatly. From the reduced set of 12, he described 11 cards. The son asked questions in Kunwinjku. A1 answered in a mixture of Iwaidja, Kunwinjku and English, but initiated descriptions in Iwaidja. Compared to directing his peer, A1 decreased his use of geocentric and intrinsic descriptions with his son and increased his use of relative egocentric descriptions.

A1 used *wurdaka* 'in front' and *warrwak* 'behind' descriptions for the first three cards described, which had the man and tree standing in the sagittal axis. Two of these uses were coded as ambiguous relative-intrinsic, the third as relative. A1's lack of clearly intrinsic uses of these terms with his son suggest relative use for the ambiguous cards.

A1 used an absolute term only once, in a standing description of the fourth card, *R44*, see (2).

(2)

ari	*wuka*	*w-akaldakan*	*w-urrying*	*manyij*	*arlirr*
3SG.stand	LOC	3SG-on.side	3SG-go.into.water	sun	tree

'It's standing on the west side, (the) tree.'
(A1 to Child1, card *R44*)

This was not immediately successful; A1 then used relative *maruj* 'left' and *nurlinurli* 'right' to describe the standing position of the man and tree that card and for all following cards on which they were arranged on the lateral axis, see (3).

(3) a.

ari	*w-akaldakan*	*maruj*	*baraka*	*warrkbi*
3SG-stand	3SG-on.side	left	DEM	man

'That man is standing on the left side,'

b.

arlirr	*w-akaldakan*	*nurlinurli*
tree	3SG-on.side	right

'the tree is on the right side.'
(A1 to Child1, card *R44*)

The son had earlier initiated the use of 'left' and 'right' about *R33*, the second card, asking in a mix of **Kunwinjku** and English, see (4a), with A1 replying in English, see (4b).

(4) a. ***nawu*** ***baleh*** ***kure*** *left* *or* *right*
DEM.male where LOC ENG ENG ENG
'Is he on the left or right?'
(Child1 to A1, card *R33*)
b. *No, just a little bit right.*
(A1 to Child1, card *R33*)

A1's reply in (4b) again shows sensitivity to the offset in the sagittally arranged cards. With both his peer and with his son, A1 responded to the success or lack thereof of his strategies, desisting from using egocentric 'left' and 'right' with his peer, but introducing them with his son when a geocentric strategy was not successful.

6.3 A2 to peer

A2 performed the Man and Tree task first with a female peer older than herself. She described the 16 cards, using geocentric strategies for 10 cards, more often for facing than for standing descriptions. The absolute terms she used were *abalkbang manyij* 'east' and *wurrying manyij* 'west'. She also used local topographic directions *manandi* 'mainland' and *nimarrk* 'deep ocean' as shown in (5). In Iwaidja the expressions for 'east' and 'west' are lexicalised phrases meaning 'sunrise' and 'sunset', which coincide closely with the cardinal directions in this location close to the equator. East is *abalkbang manyij* 'sun comes out' and west is *wurrying manyij* 'sun goes into water'. On Croker Island both sunrise and sunset are visible over the ocean: speakers have many salient experiences of seeing the sun emerge from the sea in the morning and go back into it in the evening. Meakins and Algy (2016: 498) suggest that Gurindji children's facility with indicating 'east', and to some extent 'west' over the other the cardinal directions also relates to the salience of sunrise.

(5) a. *ruka* *warrkbi* *yaw-uka-n* *manandi*
this man AWAY.3SG-look-NPST mainland
'This one, the man is looking towards the mainland.'
b. *arlirr* *ari* *warrwak* *lda* *warrkbi* *w-urdaka*
tree 3SG.stand behind and man 3SG-in.front
'The tree stands behind and the man is in front.'
(A2 to peer, card *R24*)

(5b) also shows intrinsic use of *wurdaka* 'in front' and *warrwak* 'behind'; in *R24* the man and tree are standing in the lateral axis (Figure 4). A2 also used these terms egocentrically (relatively) for three cards, as well as ambiguously for *R11* and *R13*.

There were six instances of A2 using SAP-landmark strategies to describe the man's orientation (6b), which also shows relative use of *warrwak* 'behind' (6a).

(6) a. *ruka* *arlirr* *w-urdaka* *warrkbi* *warrwak*
this tree 3SG-in.front man behind
'In this one, the tree is in front and the man is behind,'
b. *arrumb-uku-ng* *bungkurryuwu*
3SG>1PL.give-PST nape.of.neck
'with his back to us.'
(A2 to Child2, card *R31*)

With her peer, A2 did not use *maruj* 'left' and *nurlinurli* 'right'. She showed a low rate of differentiation on the lateral axis, and some mirror image confusion. For example, while A2 could perceive the difference in mirror image cards, describing (when asked by the researcher) the relationship between the images in *R24* and *R42* as

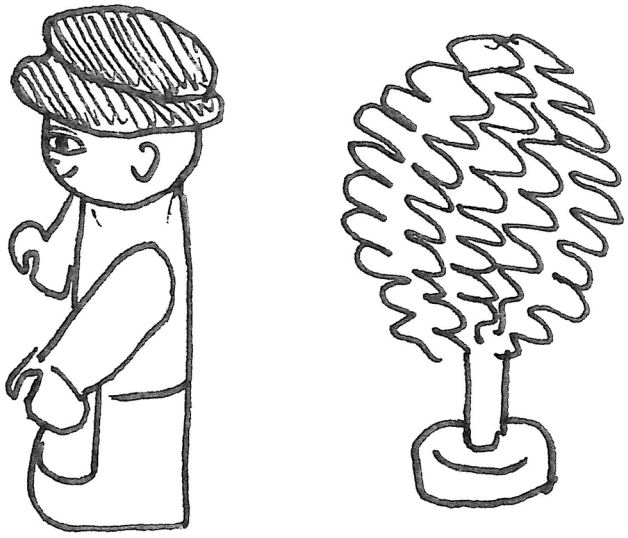

Figure 4: Card *R24*.

rukung rtamburryak lda jamin 'giving their chests to each other (facing each other)', she did not appear to find the difference salient.

6.4 A2 to child

Directing her grandson, A2 described only six cards, showing the man and tree only on the transverse axis. Successful descriptions required less information than when using the full set of cards. A2 used no geocentric terms with her grandson. She used SAP-landmark strategies where the man was facing towards or away from the speech act participants. None of the cards she used provided opportunities for relative uses of *wurdaka* 'in front' and *warrwak* 'behind'. Strikingly, she introduced the English relative right and left for one card, see (7), which is an English sentence with Iwaidja nouns.

(7) *warrkbi* *on* *the* *left* *and* *arlirr* *on* *the* *right*
man ENG ENG ENG ENG tree ENG ENG ENG
'Man on the left and tree on the right.'
(A2 to Child2, card *R42*).

In *R42*, the man is actually on the right, and the tree on the left, opposite to A2's description. An intrinsic interpretation is not possible since the man has his back to the tree. This erroneous use, coupled with her lack of use of the terms with her peer, suggests a lack of familiarity or confidence with the terms. However, her use suggests belief that her grandson would, or might, understand relative references but that she did not think he would understand geocentric references.

7 Discussion and conclusion

The paucity of geocentric terms in child-directed speech contrasts with their frequency in adult-directed speech. Explanations for the observed differences in children-directed and peer-directed speech include accommodation to the interlocutors, which was clearly evident with A1 in his meta-explanation of *left-right* in (1) and his use of relative *left-right* terms with his son, after Child1's initiation of the terms in (4). The adult speakers may not expect the children to have acquired the absolute frame of reference yet, although at 8 and 12, the children were not very young. The children were not fluent Iwaidja speakers, and the speakers typically addressed the children in Kunwinjku or English. The child-directed speech may thus reflect the adults'

expectations of the children's acquisition of frames of reference in English and through schooling, along with incomplete acquisition of Iwaidja. The rapid language shift away from Iwaidja at Minjilang is both to other Australian languages, Kunwinjku and Mawng, and to English. Kunwinjku and Mawng appear to share with Iwaidja some similarities in spatial frames of reference availabilities and in speaker strategy (Edmonds-Wathen 2012, 2014). In this context, it is difficult to identify a normal trajectory of spatial language acquisition or to what extent accommodation to that is part of the adults' strategy. However, this study might hint at a role that older generations may take in change of spatial reference use. A2's unsuccessful attempt at using relative *left* and *right* is indicative of her expectation of Child2's receptive understanding. Cerqueglini (2018 and this vol.) and Meakins (2011) also find generational shifts away from geocentric and towards egocentric strategies in contexts of cultural and linguistic change in contact with relative-dominant languages, new technologies and increased schooling and literacy. This report is also a reminder that studies of language use in paired interaction are just that: studies of the interaction between two participants. Care must be taken when describing individual speaker's preferences, recognising that demonstrated strategies may change with different pairings. Future larger scale studies of spatial language should take pair composition into account, including studies of single speakers with multiple different partners.

Abbreviations

1/2/3	1st/2nd/3rd person
ART	article
AWAY	away from deictic centre
CONJ	conjunction
DEM	demonstrative
ENG	English
LOC	locative
NEG	negative
NPST	non-past
PL	plural
PST	past
RECP	reciprocal

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