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For contributors

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EDITORIAL

In spite of the recent shift to a strengths-based approach to Aboriginal and Torres Strait Islander studies, we still live with the constant drumbeat of assimilation. What we have now is a strengths-based approach to assimilation. The goal has not changed from the previous deficit discourse approach. It is, still, assimilate for our own good. Some who hold positions of influence and power still endorse the idea that teaching our children their own culture will retard them. In this view, our ways of being and living are not taken seriously. The research we publish is crucial, not only to understanding the situation, but to offering a counter view — one that shows the importance of valuing, maintaining and protecting our ways in this current situation as well as for building the strongest futures.

You will see this in the ‘Our ways to planning’ paper, where Angela Dew, Priya Vaughan, Elizabeth McEntyre and Leanne Dowse report on the development of a guide to working for Aboriginal people with disabilities. They present what they learned about Aboriginal cultures, histories and points of view and make recommendations about effective planning. Their work draws on discussions with Aboriginal people with disabilities, their family members and support workers from five New South Wales communities. Reena Tiwari, John Stephens and Ryan Hooper offer more evidence against the lie that Aboriginal children were removed from their families and communities for their own good. Tiwari, Stephens and Hooper propose an approach to healing that emphasises connections to land, memory and group identity. Importantly, this paper considers Aboriginal agency and impact of the approach on Aboriginal people and communities. David McCallum and Jennifer Laurence’s paper on the power to regulate the lives of ‘protected’ Aborigines living in Victoria in the 1960s also challenges the ‘for their own good’ narrative. The story they tell should be a warning against approaches to administrative practices that do not rise to the promise of freedom.

Rob Robertson introduces the Aboriginal Population Record in the Northern Territory and discusses its potential as a source of material for a range of historical and anthropological research. Rhonda Povey and Michelle Trudgett explain the use of Indigenous research methods as a ‘proper-way’ approach to research involving Aboriginal people. Their paper argues that collaborative and emancipatory research processes support decolonisation of history through the telling of different stories. Gary Osmond surveys autobiographies, biographies, interviews and ‘as told to’ accounts by Aboriginal Queenslanders from Cherbourg, Palm Island, Woorabinda and Yarrabah — former government Aboriginal settlements and missions — for insights into the sporting past. Premised on the importance of sport to Aboriginal people, and in recognition of deep sporting engagement historically, Osmond’s paper explores the complex relationship of people with sport, which includes, but exceeds, racism and victimhood. In their Marayurriku paper, Elizabeth Marrkilyi Ellis, Jennifer Green, Inge Kral and Lauren W Reed describe the context of sign language use in the Western Desert. They situate sign language within the spectrum of multimodal communicative practices in the Western Desert, including the innovation of ‘air writing’. The paper provides a Ngaanyatjarra/Ngaatjatjarra perspective on sign.

In the final paper in this edition, Michael Atkinson shares his analysis of 100 questions on the Deadly Questions website. Atkinson gives us an insight into the ways that meanings that members of mainstream cultural groups bring to their dialogues with Aboriginal people are strongly bound with their moral outlook. The paper concludes by reflecting on pathways to promote a more dialogical vision of Aboriginal and mainstream cultural relations, making the case that it beholds those with a humanitarian ethos to stimulate debate towards a more inclusive society.

Progress may at times be painfully slow but the articles we publish are building, piece by piece, a picture of Aboriginal and Torres Strait experience and ways of being. Through research we tell people who we really are. We again thank Aboriginal and Torres Strait people for understanding the utility of research and continue to commit to its promise.

Lawrence Bamblett
General Editor

Mara yurriku: Western Desert sign languages

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Abstract: *In the Ngaanyatjarra Lands of the Western Desert the phrase mara yurriku ‘moving the hands’ is used to describe communication by manual signing. This paper introduces some of the forms and functions of sign, based on previous documentations of sign in the Western Desert, as well as on new research supported by an ARC-funded research project on Western Desert Verbal Arts (2015–19).¹ We describe the contexts of sign language use, illustrating how sign fits into the communicative ecology of Ngaanyatjarra Lands communities. The paper discusses some linguistic features of sign, including the handshapes used, the semantic domains represented in the lexicon and the development of new signs for contemporary concepts. The paper also situates sign language within the spectrum of multimodal communicative practices in the Western Desert, including the innovation of ‘air writing’. The paper provides a Western Desert perspective on sign, as the first author is a Ngaanyatjarra/ Ngaatjatjarra speaker and is knowledgeable about signing practices.*

Australian Indigenous alternate sign languages

Sign languages such as Auslan and many other sign languages of the world are the primary mode of communication of deaf people. By contrast, other types of sign languages, such as those used by Indigenous peoples in Australia, are used in particular cultural contexts and these tend to have been developed and used mainly by hearing people. In central and northern Australia, and in the Western Desert, Indigenous sign languages are used alongside speech, gesture and other semiotic systems such as sand drawing. These sign languages have been termed *alternate sign*

languages (Kendon 1988), as they are not generally the main mode of communication, but rather they may be employed alongside speech or used instead of speech in particular cultural circumstances (Adone and Maypilama 2014; Green and Wilkins 2014; Kendon 1988).

There are some generalisations that can be made about the contexts of use of Australian Indigenous sign languages. Sign may be used by hearing interlocutors when they are in view, but out of earshot; and in some places sign is used, particularly by women, as a mark of respect when they are bereaved. Sign is also used in some ceremonial contexts. As Lempert (2018:225) has written, ‘signs were not only a way of communicating information,

but also served as full-bodied ways of expressing the nuance, humor, and individuality embedded within everyday Aboriginal community life'. Sign also comes to the fore as a way of mediating indirect and even 'self-effacing' forms of communication — values which are, as Kendon has pointed out, central to Indigenous cultures in Australia (Kendon in Kwek 1991:141). Finally, using sign affords 'silent forms of coordination' in collective enterprises such as hunting when the imperative is to not scare off game by making noise (Montredon and Ellis 2014:11–12).

After initial interest in Indigenous sign languages in the late nineteenth and early twentieth centuries, little research took place until the late 1970s.² It was Adam Kendon's 1988 publication *Sign languages of Aboriginal Australia* that refocused attention on this important part of the communicative repertoires of Indigenous peoples. Kendon's fieldwork, conducted between 1978 and 1986, was concentrated in Central Australia, and particularly in the communities of Yuendumu (Warlpiri), Ti Tree (Anmatyerr), Tara (Kaytetye), Tennant Creek (Warumungu and Warlmanpa) and Elliott (Mudburra and Jingulu). Kendon made tentative comparisons with signing practices beyond this central region, although for some language communities that he did not have the opportunity to visit he had to rely on sparse documentary records. Drawing on new research, and with the benefit of additional access to archival records, this paper provides a more detailed picture of sign languages in the Western Desert, and in particular sign use in the Ngaanyatjarra Lands.

The Ngaanyatjarra and other Western Desert peoples

The Western Desert may be regarded as a single cultural bloc, comprising a unified social system and relative cultural homogeneity. It extends from Woomera in the south-east of South Australia to Kalgoorlie in the south-west of Western Australia, then north through Western Australia to Wiluna, Jigalong and Balgo (Berndt and Berndt 1959, 1980; Tonkinson 1978). The Ngaanyatjarra Lands fall within the Western Desert, fanning out into Western Australia from the tri-state border with South Australia and the Northern Territory (see Figure 2). As a group, the Ngaanyatjarra have never left their country, nor has their country been annexed or occupied by outsiders. Remoteness protected them

from the more profound ravages of the colonial encounter and their post-contact experiences have been relatively benign (Brooks 2002, 2011). The population includes descendants of the last nomadic groups of the Western Desert (the first wave came into Warburton Ranges Mission in the 1930s and the last into Kiwirrkura Community in the 1980s). Approximately 2000 people now live in the Ngaanyatjarra Lands. Residents are predominantly Ngaanyatjarra speakers, but the speech community also comprises speakers of other mutually intelligible Western Desert languages (including Ngaatjatjarra, Pitjantjatjara and Pintupi).

Multimodal practices

Communication in Ngaanyatjarra communities embraces a rich spectrum of verbal art forms, speech styles, respect registers and forms of polite speech. Everyday *wangkarra* 'communication' includes *tjuma* 'storytelling', *mirlpa* 'sand storytelling' and *turlku* 'dance/song', as well as *mara yurriku* 'sign language'. Storytelling, especially sand storytelling, includes graphic schema drawn on the ground, as well as speech, song, sign and gesture (Eickelkamp 2008, 2011; Green 2014; Green and Turpin 2013; Munn 1973; Watson 2003; Wilkins 1997). Figure 1, developed by Ellis, schematises the interconnectedness of these different aspects of Ngaanyatjarra communication. Here we see how *mara yurriku* is seen as part of the broad repertoire of *wangkarra*.

Sign language in the Western Desert

Early documentation

We now outline sign language research undertaken in the Western Desert since 1932, with an emphasis on documentation in the Ngaanyatjarra Lands. Sporadic documentation of Western Desert sign has taken place in various regions of the broader Western Desert, as illustrated in Figure 2.

The first references to sign language in the Western Desert appear in Norman Tindale's (1932) account of his anthropological expeditions to Mount Liebig in the Northern Territory and to the Mann and Musgrave Ranges in South Australia (Tindale 1933).³ In 1935 Tindale and his team from the Board for Anthropological Research at The University of Adelaide (including photographer CJ Hackett, cinematographer EO

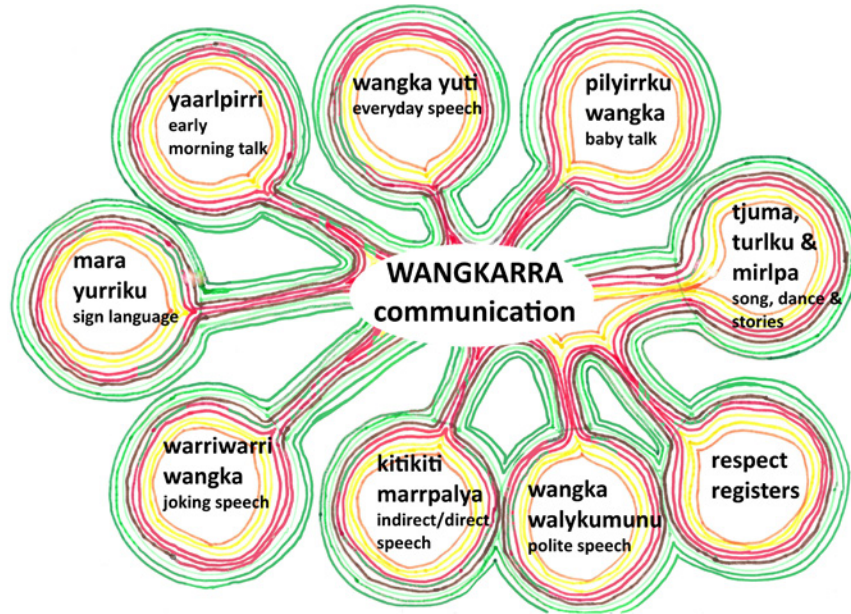


Figure 1: The network of communicative practices found in Ngaanyatjarra communities (artwork: Elizabeth Marrkilyi Ellis, 2016)



Figure 2: Map of main communities and languages (in italics) referred to in this paper, and a key to sources of sign language documentation in the Western Desert (map: Jennifer Green, 2018)

- KEY: 1. Tindale 1935
 2. Mountford 1938 3. de Graaf 1968 4. Gould 1969 5. Miller 1970a, 1970b, 1978 6. Douglas 1977, 1990 7. Obata and Ngaanyatjarra Council 2002 8. Ellis et al. 2012–16
 9. Ellis et al. 2012–16
 10. Ellis and Carew 2012
 11. Ellis et al. 2012–16
 12. Montredon and Ellis 2014
 13. Ellis et al. 2012–16 14. Ellis et al. 2012–16 15. Tindale 1933
 16. Love 1941 17. Liberman 1982
 18. Goddard 1985 19. Parlette 1972a, 1972b 20. Armstrong 1974
 21. Abbie and Stocker 1950s
 22. Tindale 1932 23. Lempert 2018
 24. Thieberger 1988 25. Kwek 1991
 26. Tonkinson 1978, 1991
 27. Wangkanyi Ngurra Tjarra Aboriginal Corporation 2002



Figure 3: Charles Mountford's (1938) line drawings for some signs — a: cat, b: possum, c: man, d: water, e: wallaby, f: myself, g: goanna, h: rabbit, j: euro, k: plains turkey. Reproduced with permission from *Oceania*

Stocker and anthropologist CP Mountford) made an expedition to the Warburton Ranges in Western Australia. Following this, Mountford (1938) published 'Gesture language of the Ngada tribe of the Warburton Ranges, Western Australia'.⁴ The paper included line drawings of some signs (Figure 3). Sadly, one of his early recordings was ruined. Mountford states that he collected 'a large number' of signs, but that it 'was a misfortune of no mean order that the whole film was spoiled by a faulty camera' (Mountford 1976:63). Mountford (1938:153) notes that this 'gesture language' was 'employed extensively when hunting'.

In his thesis on 'the Ngadadara at the Warburton Ranges' Mark de Graaf (1968:22) mentioned that 'the sign language...is very well developed, and can replace the spoken word entirely when necessary'. He noted that sign language was used during hunting, 'during a revenge expedition when the element of surprise is most important', for long-distance

communication, during ceremony and 'between lovers' (de Graaf 1968:23). References to ceremonial uses of sign language are also found in Tindale (1935), Mountford (1938), Gould (1969) and Tonkinson (1978, 1991).

Wilfrid Douglas, a missionary linguist who worked in the Warburton Ranges and Eastern Goldfields area from the 1950s, published an illustrated topical dictionary of the Western Desert language (Douglas 1959, rev. 1977 and 1990). The revised editions include line drawings of 'gesture speech' (Douglas 1977:25) and 'hand gestures' (Douglas 1990:26–7). An example is shown in Figure 4. Some of Douglas' sign illustrations were later republished as 'Wangkatha hand gestures' in a Wangkatha dictionary (Wangkanyi Ngurra Tjurta Aboriginal Corporation 2002:106–07).

A later study was undertaken by Wick Miller, a linguistic anthropologist who worked with Western Desert peoples at Warburton Ranges Mission between 1969 and 1970. He recorded 297 signs with two Ngaanyatjarra signers at Warburton (Miller 1978:435–6) and 94 black and white photographs from this study are held by AIATSIS (Miller 1970a). With access to these images the project team was able to make some comparisons with contemporary repertoires of sign.

Miller (1978:436) made the interesting observation that, while sign in the North Central Desert (NCD) region, for example Warlpiri sign, was mainly used by women, Western Desert sign was used relatively equally by men and women. He noted how sign is used for communication over distance and in situations when silence or secrecy is a priority. He also noted how sign is employed 'when two channels of communication are used at the same time' (such as during a conversation when one may ask a third party to bring something, without this request interrupting the flow of the main conversation). Moreover, sign is used 'when a speaker wishes to punctuate or italicise some aspect of the verbal message', as a discourse marker, by people who may find it hard to speak, and 'apparently just for fun' (Miller 1978:436).

Further east around Docker River, Kenneth Liberman (1982:310), writing about the Pitjantjatjara, notes that 'Aboriginals [sic] may converse using hand-signs alone, but usually hand-signs are employed to carry the central aspect of

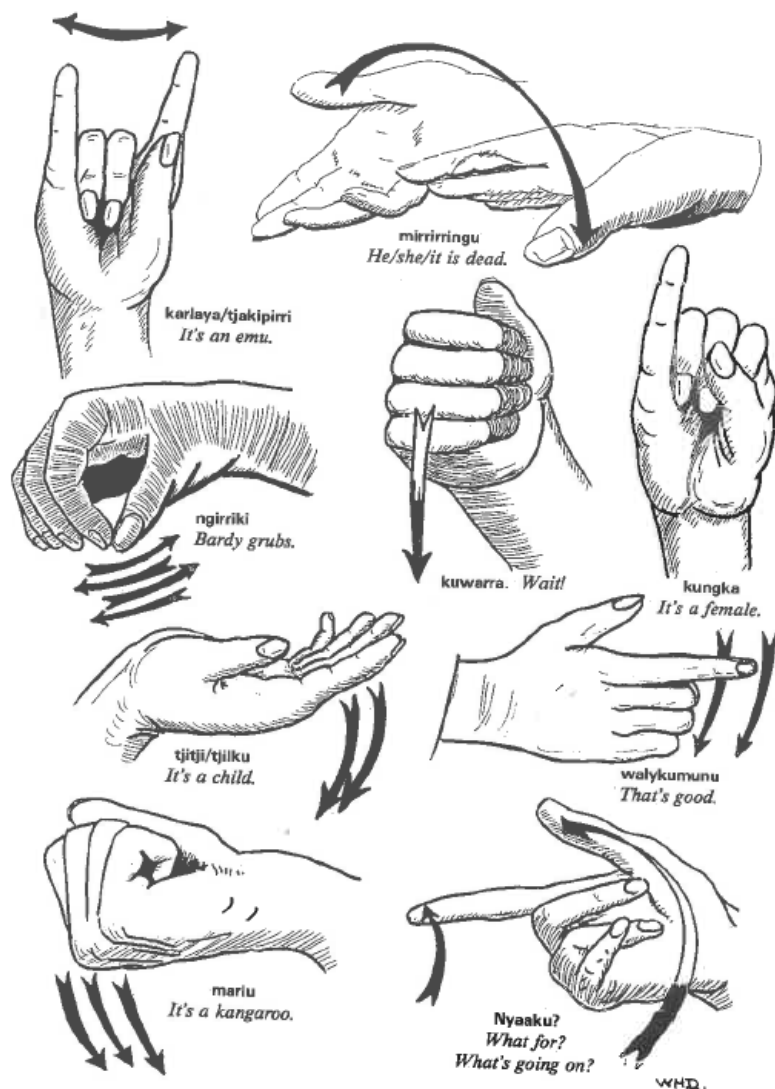


Figure 4: Illustrations of hand signs from the Western Desert (Douglas 1990:26). Reproduced with permission from Rob Douglas

a message, while the talk signifies around it'. He further describes how signing can add a 'visceral' emphasis to an utterance, or be used to get to 'the very crux of the matter'.

Yet another perspective is given in a study of Ngaatjatjarra gesture. Jacques Montredon worked with Elizabeth Marrkilyi Ellis in Alice Springs and in Tjukurla sporadically between 1982 and 1997, particularly focusing on Ngaatjatjarra gestures relating to time and space in everyday conversation (Montredon and Ellis 2014). Although not

aiming to record Ngaatjatjarra sign as such, they write that 'it may well be that some or most of the gestures we recorded do belong to the sign language of the Ngaatjatjarra' (Montredon and Ellis 2014:12; Ellis and Montredon 1991).

In another paper Joan Kwek (1991) summarises the use of sign at Punmu in Western Australia, as recounted by her sister, D Vallance, when Kwek visited Punmu. From 1984 to 1988, R and D Vallance worked as school administrators at Punmu in Western Australia (see Figure

2). Keeping in mind the secondary nature of these observations, Kwek nevertheless provides comprehensive descriptions of sign use in the community, highlighting its facility for communication over distance, ‘in place of greetings and small talk’ and at times when it is ‘socially inauspicious to speak’ (Kwek 1991:148, 151, 155). In an introduction to Kwek’s paper, Kendon writes that implicit in her work is the idea that ‘the medium of communication not only has consequences for the structure of the code employed...it also has consequences for the mode of social relationship it can mediate’ (Kendon in Kwek 1991:144). One passage in Kwek’s discussion of sign reads:

At meetings of the community council it was quite normal for an undercurrent of signed conversation to be taking place at the same time that the council head was verbally outlining an issue. In wider Australian society we would probably resort to whispering or passing notes if we didn’t want to disturb the speaker by talking. However what often surprised my sister and her husband was that the council head would proceed to announce a collective decision on a proposal without calling for any group discussion. It seemed to the Vallances that the signed conversations had already constituted a form of group discussion, and that there might also be some motivation for keeping the verbal record clear of any overt dissention or wrangling. (Kwek 1991:152)

Another observation made by linguist Cliff Goddard (1985:325) about sign use by the Yankunytjatjara in South Australia is the way that sign may be employed by people who are not fluent in spoken language respect registers. The existence of special registers in Aboriginal spoken languages — often referred to as ‘mother-in-law’, ‘brother-in-law’ or ‘avoidance’ languages — is well known (for an overview see Fleming 2014). This verbal style is one of a range of strategies used to encode respect in situations where cultural value is attached to indirect or oblique forms of communication. Signing can thus be used as another strategy for circumventing direct contact with an interlocuter.⁵

Recent documentations, 2012–19

Recent documentation of Ngaanyatjarra/Ngaatjatjarra sign has been undertaken as part of the Western Desert Verbal Arts project. A web-based sign language dictionary project, *Iltyem-iltyem*, which focuses mainly on Anmatyerr and Warlpiri sign from Central Australia, also includes examples of Ngaatjatjarra sign demonstrated by Ellis (Carew and Green 2015).⁶ The methods employed in this research have been primarily based on filmed elicitation sessions conducted in several communities and outstations in the Ngaanyatjarra Lands. The sessions were aimed at building up a corpus of sign by targeting well-known signs grouped in semantic domains.

Other aspects of this paper are based on a lifetime of participant observation by the first author from within her own speech community. Ellis is an accomplished signer. She was born in 1962 to a semi-nomadic family from the Rawlinson Ranges in the Ngaanyatjarra Lands (Ellis 2016) and learned to use hand signs by watching older people. Ellis recalls her father being a particularly good signer, who would mix sign with speech while storytelling. She notes that sign was used for communication across distance and to ensure silence while hunting. Sign might also replace speech during ceremony time, and be used for private talk between boyfriends and girlfriends. ‘One other reason,’ Ellis says, ‘is when the older people don’t want the younger people to hear conversations about secret sacred issues’. As Ellis elaborates, being able to use sign provides communicative options:

It’s best to talk in many different ways, not just by words. It’s best to talk by sign and other ways that makes speaking richer. It makes it more creative, and it also gives the brain that extra thing, you know, you’re not only listening but you’re looking. You’re using the eyes to look at the hand sign. And it’s polite to ask in sign. Like I might ask you for *tjimarri* ‘money’. And you might say [by signing] *wiya* ‘no’, and it’ll be like — quick as a flash [refusal will be indicated]. You do that so you don’t cause offence.⁷

A prevailing ideology is that sign repertoires across the Western Desert are the same, despite differences in spoken languages. Ellis asserts that some signs, such as the ‘question’ sign (see Example 3 later in

this paper) are ‘universal’ across all Indigenous language groups. However, when asked whether she signs with Aboriginal people from outside the Western Desert, she replies, ‘I don’t [usually] sign with other people because their hand sign might be different to ours. But sometimes I might accidentally sign, because it’s just so common that we do it. It’s just like breathing, I guess.’

Some features of Western Desert sign languages

With the exception of some very young sign languages of the world, such as Al-Sayyid Bedouin Sign Language from the Negev region of Israel (Sandler et al. 2011), the majority of deaf sign languages have a level of meaningless yet contrastive patterning, akin to phonology in spoken languages. This patterning was first described by Stokoe (1960) for American Sign Language. Stokoe (1960:30, 33) coined the term ‘cherology’, from the Greek *cher-*, ‘handy’, to discuss the contrastive system of features in American Sign Language. His term was not widely adopted, however, and linguists now typically refer to ‘sign language phonology’.

The following contrastive features are found in sign: (a) handshape, (b) place of articulation or location of the sign, which may be on the body or in space, (c) movement of the hand or hands, and (d) orientation (of the hand in relation to the place of articulation) (Battison 1978; Johnston and Schembri 2007:79–81; Fenlon et al. 2018; Stokoe 1960). For some sign languages nonmanual features (such as movements of the mouth and face) are a fifth contrastive parameter (Brentari 2011). A change in a single feature can change the entire meaning of a sign. As we now describe, Western Desert sign languages exploit all these four major contrastive features, just as most deaf sign languages do.

Handshape variation and frequency

Kendon (1988:121–5, Appendix I) provided a detailed inventory of the handshapes used and their frequencies in the sign languages of the NCD. In order to provide some preliminary comparisons, we draw on data from seven sets of film recordings of Western Desert sign languages (Ellis and Carew 2012; Ellis et al. 2012–16; Parlette 1972b), which



Figure 5a: Some common handshapes found in the Western Desert sign corpus



Figure 5b: Some infrequent handshapes found in the Western Desert sign corpus

relate to alternate sign languages of Ngaanyatjarra, Ngaatjatjarra and Pintupi speakers.

In this analysis we coded each sign in these sources for handshape, using the codes developed by Kendon (1988:461–73) for NCD handshapes as a guide. Drawing on the Western Desert sources, 135 lexical signs were coded for handshape. We counted the handshapes in each sign once across all sources. For example, we counted the sign KANGAROO 'marlu' once, despite it recurring multiple times in all seven sources.⁸ An exception was where the handshape for a single sign clearly varied between signers. For example, the sign MAN 'wati' may be produced by contacting the chin with an index finger, by grasping the chin as if pulling a beard, or by tapping the chin with the side of the fist.⁹ In this case, we coded the handshapes in the variations of the sign MAN and included these in our handshape count.

In his analysis of handshapes used in sign from the NCD, Kendon (1988:128–30) only considered one- and two-handed signs where the sign action involved no change in handshape. We coded signs in our corpus with these same parameters, but differed in that we also counted one-handed signs where the handshape changed in the course of sign articulation, as well as two-handed asymmetrical signs (ones in which each hand is a different handshape). For one-handed signs where the handshape changed in the course

of sign articulation, we counted both the initial and the final handshape. For two-handed asymmetrical signs, we counted the handshape for each hand. For two-handed symmetrical signs (that is, those in which both hands assume the same handshape), we counted the handshape only once.

Figure 5a illustrates some examples of the most common handshapes found in Western Desert sign languages, and gives some examples of signs they appear in. Figure 5b illustrates some handshapes that are found only rarely. The four most frequent handshapes account for more than 60 per cent of the handshapes in the 135 signs we coded. The four least frequent handshapes appear in only one sign each. As a point of comparison with other sign languages from Indigenous Australia, Kendon (1988:126–7) found that 50 per cent of the 41 handshapes in the NCD account for 90 per cent of signs. In Yolŋu sign language eight handshapes out of a total of 34 account for 98 per cent of the signs (Bauer 2014).

This type of Zipfian distribution of handshapes is common in many other sign languages. For example, in Auslan there are 37 contrastive handshapes (Johnston and Schembri 2007:86). The four most common of these are used in more than 50 per cent of the lexicon. The most common 15 appear in 80 per cent of signs, while the next 22 handshapes appear in only 20 per cent of the lexicon (Johnston and Schembri 2007:87).

The most common handshapes in both Auslan and many other sign languages are part of the ‘unmarked’ set proposed by Battison (1978:36–8) and Sandler and Lillo-Martin (2006:161–2), and this set appears to be widely distributed cross-linguistically.

The evidence for unmarked handshapes is mainly from American Sign Language research, as well as from research on Korean Sign Language, New Zealand Sign Language, Finnish Sign Language, Al-Sayyid Bedouin Sign Language and Maxakalí sign (Battison 1978:36–8; Rozelle 2003; Sandler et al. 2011:526–529; Stoianov and Nevins 2017). Sandler and Lillo-Martin (2006:160–3) summarise the research on unmarked handshapes. These handshapes are said to be the easiest to articulate in terms of motor co-ordination, the first to be acquired by children and the last lost by aphasic signers. The most frequent handshapes in Western Desert sign (Figure 5a) are the same as the set proposed by Sandler and Lillo-Martin (2006:161).

It is unclear whether some handshape distinctions that Kendon observed in the NCD are contrastive in the Western Desert. As discussed below, we also found some contrastive handshapes that have not been identified in the NCD. That said, it is difficult to precisely and confidently compare frequency counts generated by our separate analyses, first, because our data set is small and, second, because the basis of our handshape counts differed slightly from Kendon’s. Despite this, some tentative observations of differences between the regions can be made. For example, the ‘horn’ handshape is the third most common handshape in the NCD, representing 8 per cent of the lexicon of Anmatyerr and Kaytetye sign, and 7 per cent of Warlpiri and Warumungu sign (Kendon 1988:128). This handshape is less common in the Western Desert, and only found in a few signs, including the Pintupi sign ROCK.WALLABY ‘*warru*’ and Ngaanyatjarra signs EMU ‘*karlaya*’ (Figure 4) and FEATHERFOOT ‘*tjinakarrpilpa*’.¹⁰ The prevalence of the horn handshape in NCD sign languages, and its comparative infrequency in the Western Desert sign languages we have considered, may be one small point of difference between signing practices in these regions.

Some examples of contrastive parameters

The following examples illustrate how signs in our corpus may differ along the contrastive parameters of either handshape, location, movement or orientation. From Parlette (1972a, 1972b) we understand that the Pintupi signs EURO (Figure 6) and BLUE.TONGUE.LIZARD (Figure 7) are distinguished only by the separation and curvature of the first and second fingers. Although the handshapes are different, they have the same movement, location and orientation features.

From Miller’s (1970a, 1970b) data on Ngaanyatjarra sign, the signs KNIFE ‘*kanti*’ (Figure 8) and SPINIFEX.GUM ‘*kirti*’ (Figure 9) differ only in location, KNIFE being articulated with the thumb contacting the teeth and SPINIFEX.GUM with the thumb contacting the tongue. We do not know whether the different orientation of the hand as seen in these photographic records of sign is significant.

The Ngaanyatjarra signs BUSH.TURKEY ‘*nganurti*’ (Figure 10) and CAMEL ‘*kamurlpa*’ (Figure 11) have the same handshape, location and orientation. The difference between these two signs lies in the movement of the hand. For BUSH.TURKEY the hand taps gently forward several times, whereas for CAMEL the hand moves backwards and forwards in a more extensive arc, flexing from the wrist.



Figure 6: Pintupi sign
EURO

Figure 7: Pintupi sign
BLUE.TONGUE.LIZARD



Figure 8: Ngaanyatjarra sign KNIFE 'kanti'



Figure 9: Ngaanyatjarra sign SPINIFEX.GUM 'kirti'¹¹



Figure 10: Ngaanyatjarra sign BUSH.TURKEY 'nganurti'

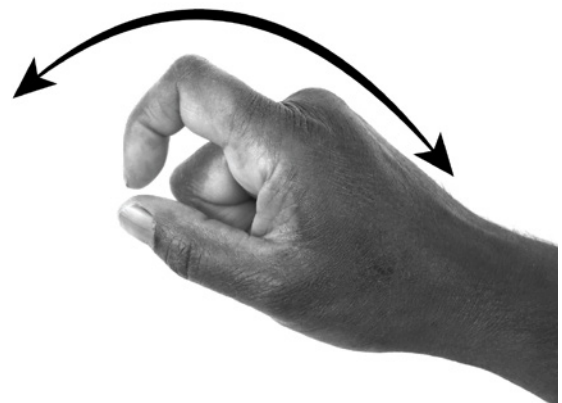


Figure 11: Ngaanyatjarra sign CAMEL 'kamurlpa'



Figure 12: Ngaanyatjarra sign TJIRNTULUKULTUL 'sun side' (illustration: Jenny Taylor)



Figure 13: Ngaanyatjarra sign NGUMPALURRU 'shade side' (illustration: Jenny Taylor)

Finally, we turn to the contrastive signs for generational moieties. A moiety division based on sets of alternating generations is seen as 'the most important category system in the Western Desert', penetrating 'deeply into social practice' (Dousset 2011:99). This generational moiety division is denoted by two terms: the *tjirntulukultul* 'sun side' (*tjirntu* 'sun') and the *ngumpalurru* 'shade side' (*ngumpa* 'shade'). Everybody in Ngaanyatjarra society belongs to either of these life-long categories (Green et al. 2018). As illustrated in Figures 12 and 13, this distinction is also rendered in sign. The signs for the two generational moieties are differentiated principally by the orientation of the hand in relation to the body. The spatial locations during ceremony of kin belonging to either moiety is mirrored in the positioning of the signing hand, which becomes a metonymic stand-in for a seated person. The sign TJIRNTULUKULTUL 'sun side' (Figure 12) presents the back of the hand to an interlocutor and represents the way that people in this moiety sit on the eastern side of a ceremonial ground, facing west. In contrast, the sign NGUMPALURRU 'shade side' (Figure 13) presents the palm of the hand, as *ngumpalurru* people sit on the west, facing in an easterly direction.

Semantic domains found in Western Desert sign lexicon

One tool for examining the lexicon of sign is to order signs in semantic domains, where they are grouped according to clusters of related meanings — for example, signs for flora and fauna, for topography, time, human actions and so on. In order to investigate the semantic domains represented in Western Desert sign languages, we considered visual records (film, photographs and drawings) from a range of sources.¹² We also included non-pictorial written descriptive material in our analysis.¹³ In the previous section we considered seven moving image sources and coded 135 signs for handshape. However, working with a wider range of materials, including pictorial and written ones, resulted in the identification of 336 signs for the semantic domain analysis.

Occasionally, the forms of particular signs differ between sources. For example, the Pintupi sign WITCHETTY.GRUB recorded by Armstrong (1974, item # N00708.09a) differs in terms of both handshape and movement from the Ngaanyatjarra sign recorded by both Ellis and Carew (2012) and Douglas (1990:26). When these types of variation were identified we counted the variant forms as a single item, despite the differences in sign articulation, as our

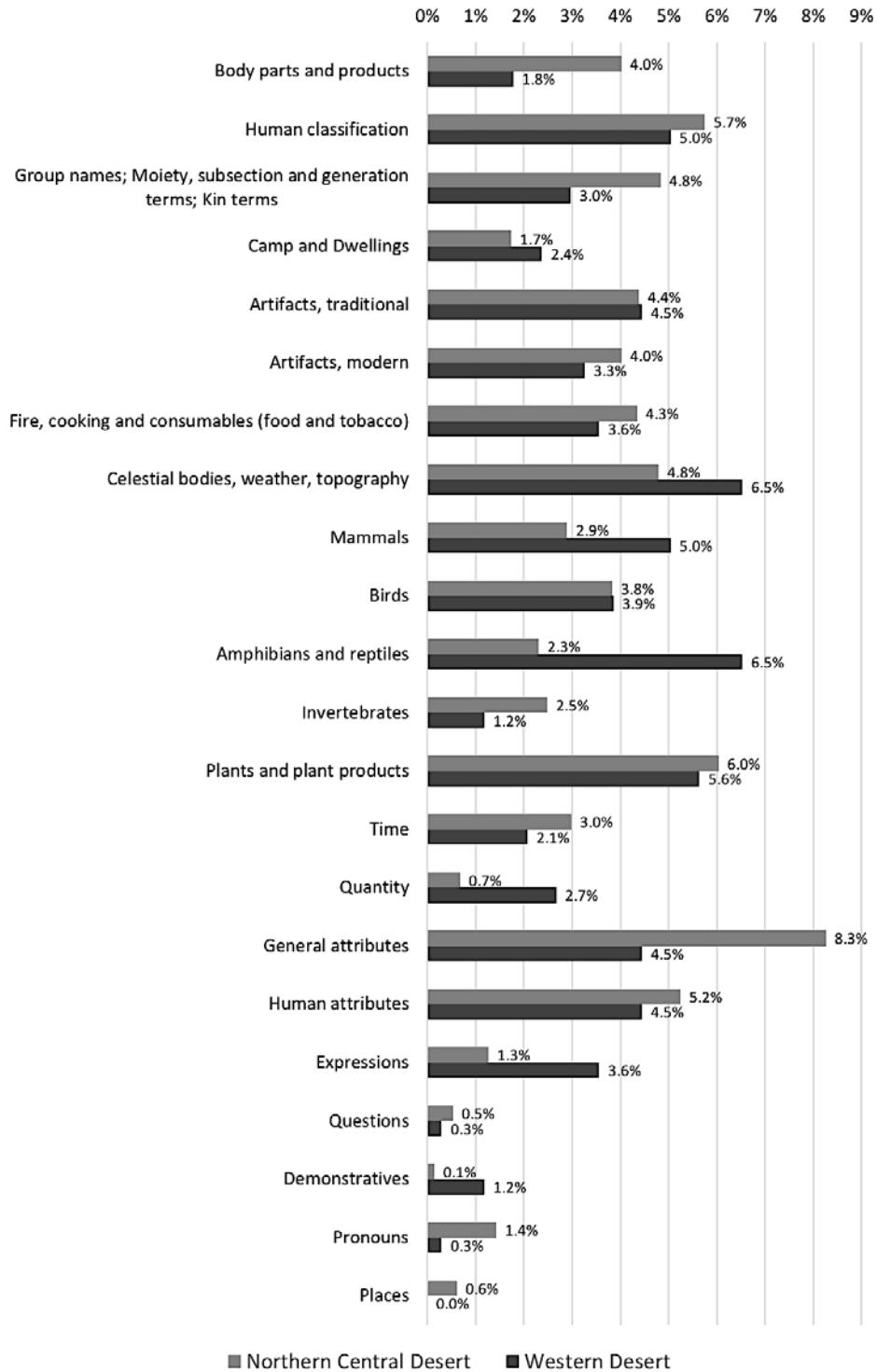


Figure 14: A preliminary comparison of Northern Central Desert and Western Desert sign based on semantic domains

interest was in mapping the semantic scope of the sign lexicon rather than differences in sign forms between Western Desert languages.¹⁴

Kendon coded his corpus of well over 4000 signs from seven NCD languages for semantic domain and grammatical and discourse functions using his own coding scheme (Kendon 1978–86).¹⁵ We coded each of the 336 signs in our corpus using the scheme developed by Kendon.¹⁶ Figure 14 presents a comparative snapshot of both corpora.

What is immediately apparent in Figure 14 is that the distribution of signs across semantic domains in the NCD and Western Desert corpora is comparable, even although the size of our corpus makes more fine-grained comparisons within categories difficult. Signs for ‘Human classification’ include age- and gender-related terms, such as CHILD.AT.SITTING.STAGE (Armstrong 1974, item # N00708.17a). In the category of ‘Group names; moiety, subsection and generation terms’ are kin signs, as well as the signs for generational moieties detailed above (Figures 12 and 13). In the Western Desert many kin signs are polysemous. For example, while there are distinct spoken language terms in Ngaanyatjarra for mother’s brother, father’s brother, mother’s sister and father’s sister, there is only one sign: AUNT/UNCLE (cf. Green et al. 2018). Miller (1970b) also noted polysemy in Ngaanyatjarra hand signs, stating that ‘often one sign stands for a cluster of semantically linked words’ (1970b:1). He records one sign for *ngunytju* ‘mother’, *yurntalpa* ‘daughter’ and *yipi* ‘breast’ (1970b:11), and another for *tali* ‘sand, sand hill’, *karru* ‘creek’ and *parna* ‘dirt, ground’ (1970b:15). The category ‘Artifacts, modern’ in the Western Desert includes signs such as BLANKET¹⁷, DISCO¹⁸, CAR.KEY¹⁹ and MOBILE.PHONE.²⁰ ‘General attributes’ includes signs such as BIG (Douglas 1990:27), while ‘Human attributes’ includes descriptors such as HAPPY (Miller 1970b:14). ‘Expressions’ includes signs for ‘come on!’ (Tindale 1932) and another sign used to indicate that a damper is almost ready (Tindale 1933).

A small number of signs have been coded as ‘pronouns’ in both the Western Desert and the NCD data sets. Whether pronoun signs are true signs, or are pointing actions with pronominal functions, is a subject of ongoing debate in sign linguistics (e.g. Cormier et al. 2013; Johnston 2013; Klima and Bellugi 1979; Meier 1990). In the Western Desert pronouns are pointing signs, and the first person singular pronoun is a point

to the nose, which is unusual cross-linguistically (Hou 2016:180–1). This contrasts with other sign languages of Indigenous Australia, where this pronominal function is usually indicated by pointing to the chest region (e.g. Adone and Maypilama 2014:74; Kendon 1978–86).

In the NCD, Kendon recorded signs for different language groups, such as the Anmatyerr sign KAYTETYE, and the Kaytetye sign WARUMUNGU. In comparison, we have not yet identified any signs in Western Desert sign languages for neighbouring language groups. Categories present in NCD sign languages but absent in our data set of Western Desert sign languages include signs for grammatical affixes. For example, Kendon (1995) recorded Warlmanpa signs for dative, possessive and resultative grammatical functions. Kendon (1995) also recorded signs for places, such as local water sources, Dreaming sites and communities. We have not yet identified any signs for geographical locations in Western Desert sign, although air writing (see below) is used by some to indicate the specifics of spatial locations and to augment other manual actions such as pointing.

Signed utterances

In Ngaanyatjarra communities signing can function as a standalone mode of communication, but it may also combine with speech to create multimodal utterances. In this section we give some examples. These different possibilities — sign alone or sign with speech — raise interesting issues about the ‘division of labour’ between these different semiotic resources and their temporal co-ordination. In spoken Ngaanyatjarra, word order in a sentence is variable, and grammatical roles are expressed by case suffixes. The equivalent of tense or case suffixes in spoken Ngaanyatjarra are not expressed in sign, so the grammatical roles in sign sentences need to be made clear by other means. More research is needed to establish whether or not there are tendencies towards particular word order in Ngaanyatjarra sign, particularly when sign is used without speech. Examples 1 and 2 illustrate sign-only utterances in response to Ngaanyatjarra spoken-language elicitation prompts. In example 1 the signed utterance is verb initial. In example 2 the signed verb is last and the subject, *wati* ‘man’, is elided (and in all likelihood inferred from context).²¹

Example 1²²

Spoken language prompt:

<i>Tjitji</i>	<i>yula-rra</i>	<i>marlu,</i>	<i>marlu</i>	<i>wipu-ku.</i>
child	cry-PRS	kangaroo,	kangaroo	tail-DAT

'The child/children is/are crying for kangaroo, kangaroo tail.'²³



CRY



CHILD



KANGAROO



TAIL

Example 2²⁴

Spoken language prompt:

<i>Wati-ya</i>	<i>ya-nu</i>	<i>marlu-ku</i>	<i>mutuka-ngka</i>
man-PL	go-PST	kangaroo-DAT	car-LOC

'The men went to get kangaroo in the car'.



KANGAROO



CAR



GO

Reciprocity is expressed in spoken Ngaanyatjarra by suffixing a reciprocal pronoun to the end of the first word in the phrase. At least for some signed verbs reciprocity can be expressed by articulating the sign on both hands and directing the signs in space in meaningful ways. The sign LOOK/SEE is an example of this, and in both the NCD and in the Western Desert this sign is formed with the first and second fingers extended in a loose ‘V’ shape (see also Figures 6 and 7). In Figure 15 the signer begins a

story about two lovers by saying, ‘*Nyakula-pula...*’, ‘Those two are looking’. She then directs two LOOK signs, one articulated on each hand, towards each other. The reciprocity of the ‘looking’ action is made explicit by the sign. Where she is describing the man looking at the woman — an action not reciprocated in this instance — the LOOK sign is one-handed and the signer’s gaze is aligned with the direction of the LOOK sign, towards a fictive location in narrative space where the woman may be (Figure 16).



Figure 15: Two-handed version of LOOK sign²⁵



Figure 16: One-handed version of LOOK sign²⁶

Example 3²⁷

When we have instances of co-speech signing, and sign is deployed with speech, signs may be articulated at the same time as their spoken language

counterpart. This is demonstrated in Example 3, where we also see an instance of the distinctive Western Desert sign for the 1st person pronoun, formed by touching the nose, and discussed above.



PT:PRO-1s
Ngayuku
 1SGPOSS
 ‘Where’s my child?’

CHILD
tjitji
 child

QUESTION
wanytjatja?
 where

Example 4²⁸

By way of contrast, Example 4 demonstrates how, in contexts of co-speech signing, signs and their speech affiliates are not always articulated at the same time, but rather may be loosely co-ordinated at the utterance level. The Ngaanyatjarra speech in the multimodal utterance shown in Example 4 is translated as ‘bring the billycan for tea’. The first action, glossed as BRING, occurs in silence. The meaning of

the imperative form of the Ngaanyatjarra verb *katiku* ‘bring, carry, take’ is made clear by this action, which is directed towards the signer, thus adding an explicit deictic component to the utterance. The word *tii-ku* ‘for the tea’ is articulated at the same time as the sign TEA. The spoken word *wayatjarra* ‘billycan’ is articulated during the final phase of the second occurrence of the action BRING, rather than timed closely with the subsequent production of the sign BILLYCAN.



BRING

TEA
Tii-ku
tea-DATBRING
kati
bring.IMP
‘Bring the billycan for tea.’BILLYCAN
wayatjarra
billycan

Air writing

In the previous section, we have shown how sign combines with speech to create multimodal utterances. A recent addition to the communicative practices of Ngaanyatjarra communities, known as ‘air writing’, is regularly used by both young and old. It is also commonplace in other central Australian Indigenous communities (Green et al. in prep.). In this newly literate speech community, paper, sand *and air* are used as planes of inscription. Those who are literate may also trace words or alphabetic letters on their own bodies — typically on their arm or leg — or on their interlocutor’s body. Orthographic symbols are traced in the air to signify the names of people and places. The letters ‘A S’ may be used to denote Alice Springs, or ‘L G’ to signify the initials of an individual’s first and last names. The letters are usually traced on the vertical plane, from left to right and oriented from the perspective of the signer, meaning that the interlocutor will see them backwards. They are regularly combined with pointing actions to the location of the person or place in question, or with an interrogative sign where a mutually understood context establishes common ground and enables comprehension of the composite message.

This form of representation as a complement to manual signing has been observed in other places. In New Zealand senior deaf people use a similar system, which Forman (2003) calls ‘aerial spelling’, where words are traced in the air using the forefinger (also see Dugdale et al. 2003). In some contexts, only the first letter of a word is

necessary to act as a signifier of the whole word, and aerial spelling may be combined with mouth-ing of the letters or words. Aerial spelling is used when a sign does not exist or is not known, or ‘when lip reading fails’ (Forman 2003:93).²⁹

Example 5³⁰

Example 5 exemplifies a multi-sign utterance which incorporates air-writing. After signing the 2nd person (a pronominal point), MOTHER and SIT, Ellis traces the letters ‘A S’ in the air to signify ‘Alice Springs’. She completes the utterance with a point to the north-east, in the direction of Alice Springs in relation to Tjukurla in Western Australia where the recording was made. This is an example where signing may add additional information to an utterance by indexing absolute direction. Both sign and gesture share some spatial characteristics in these communities, typically showing directional precision (Wilkins 2003).

Kwek (1991:148–9) also gives a detailed description of how hearing children from the community of Punmu (see Figure 2) would converse in sign with deaf children they encountered from nearby Western Desert communities. In the context of storytelling practices, she writes about how a deaf child ‘gave extra visual shape to her story by drawing sketches and letters in the sand with her finger in addition to signing manually’ (Kwek 1991:149). This is consistent with more recent analysis of the rich semiotic repertoires that are drawn on in these desert communities (Ellis et al. 2017).



PT:PRO-2SG
Nyuntukunku
2SGPOSS
Your mother lives...



MOTHER
ngunytyju
mother



SIT
nyina-rra
sit-PRES



A 5

Alice Springs-ta

Alice Springs-LOC

...in Alice Springs (in that direction from here).



PT:ABSOLUTE

Discussion

The Western Desert Verbal Arts project has been a catalyst for an exploration of existing research on the use of sign language in the Western Desert, and for a preliminary analysis of modern repertoires of Ngaanyatjarra sign. However, there remains much to do. Little is known about the communicative practices of Indigenous deaf people, especially in those communities where alternate sign languages are in everyday use. An exception appears to be reports of the use of Yolŋu sign language as a primary mode of communication by Indigenous deaf people living in parts of Arnhem Land (Adone and Maypilama 2014:7–8). In the Ngaanyatjarra Lands Ellis has observed deaf people using Auslan in combination with traditional sign to communicate with their families. This warrants further research as there is little fine-grained work on how alternate sign may be modified when used as a primary mode of communication for deaf people, or how it may interact with home sign and with Auslan (see Green et al. in prep.).³¹

In this brief sketch of Western Desert sign we have shown how sign is embedded in other linguistic and cultural practices, including pointing, drawing and the rendering of aspects of new orthographies on different surfaces. Taken apart, sign may depend heavily on context and go beneath the radar. As Ellis noted earlier, it may be as unremarkable and taken-for-granted

as is breathing. Combined with these other semi-otic systems it becomes a powerful resource that holds a particular place in the overall schemata of Ngaanyatjarra *wangkarra* ‘communication’. ‘I don’t think there’s anybody in the Ngaanyatjarra Lands who can’t sign’, asserts Ellis. ‘Even if they are speaking mainly English with a smattering of Ngaanyatjarra, they’ll still be signing. Because you can’t help yourself. It’s infectious to sign!’³²

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NOTES

- 1 The *Tjaa Yuti*: Western Desert Speech Styles and Verbal Arts project was funded (2015–19) by an ARC Discovery Indigenous Fellowship (IN150100018) awarded to Elizabeth Marrkilyi Ellis with co-investigators Jennifer Green (The University of Melbourne) and Inge Kral and Jane Simpson (Australian National University).
- 2 For an overview of early sources of research on Australian Indigenous sign languages, see Kendon (2008).
- 3 A film 'devoted to sign language' made by Tindale when the Mann Range expedition reached Ernabella is said to exist, but it has not yet been located (Philip Jones, pers. comm. to Lauren Reed, September 2017).
- 4 Ngada is a term used by Tindale and Mountford to refer to the people they met around the Warburton Ranges in the early 1930s. The languages spoken by these people are now referred to as Ngaanyatjarra and Ngaatjatjarra.
- 5 In the Western Desert, the respect register *anitji* or *tjaa paku* has been partially described by Goddard (1985:325–30). Further research on this register was conducted by the Western Desert Verbal Arts project.
- 6 See the *Iltyem-iltyem* website at <<http://iltyem-iltyem.com/>> (accessed 16 September 2018).
- 7 Pers. comm., Elizabeth Marrkilyi Ellis interviewed by Lauren Reed, Canberra, 23 July 2018.
- 8 In line with established practice in sign linguistics, we gloss signs with a relatively simple one-word translation, rendered in upper case. We include equivalent, or partially equivalent, Ngaanyatjarra spoken language terms in italics.
- 9 The iconic base for the sign *MAN* here is an adult man's beard. The Auslan sign *MAN* has the same base and a similar form, as does the sign for *MAN* in the language of Kagobai, the only deaf person born in some 20 generations on Rennell Island in the Solomons, who used a sign language of his own invention (Kuschel 1974:14–17, 105). The similarity between Auslan, Western Desert and Kagobai's signs for *MAN* is a case of parallel invention based on a salient iconic base, rather than a consequence of contact between these languages.
- 10 The *tjinakarrpilpa* 'feather-foot' or *warnapa* 'kurdaitcha man' has the role of avenging cultural transgressions. They wear emu-feather shoes that obliterate their tracks. It is possible that the use of the horn handshape in the signs *EMU* and *FEATHERFOOT* is mediated by this cultural association. An alternative Ngaanyatjarra sign for 'feather-foot' is the sign *MAN*.
- 11 AIATSIS Item numbers: MILLER.W01.BW-N09229_13 [1289], MILLER.W01.BW-N09229_14 [1290]. Signer: Cyril Holland, Warburton Ranges Mission. Permission to reproduce images given by Cyril Holland's widow Elizabeth Holland and AIATSIS (2017).
- 12 Mountford (1938), Miller (1970a), Parlette (1972a, 1972b), Armstrong (1974), Douglas (1977, 1990), Thieberger (1988), Obata and Ngaanyatjarra Council (2002), Ellis and Carew (2012) and Ellis et al. (2012–16).
- 13 Tindale (1932, 1933, 1935), Love (1941) and Miller (1970b).
- 14 Our assumption in this case is that such differences do not reflect signs for different species, although imprecise glossing in some sources does raise this possibility.
- 15 Kendon (1978–86) refers to an AIATSIS manuscript (AILEC 0675). It contains the entire collection of verified signs collected by Kendon in 1978, 1981 and 1984–86 at Yuendumu (Warlpiri), Ti Tree (Anmatyerr), Neutral Junction (Kaytetye), Tennant Creek (Warumungu and Warlmanpa), and Elliott (Jingulu and Mudburra). The format of the original file was updated by David Nash in 1995.
- 16 Kendon coded verb-like signs as 'verbs', rather than coding them according to the semantic domain they fall into. For example, he coded 'cook' as 'verb' rather than assigning it to the semantic domain 'fire, cooking and consumables'. This resulted in a very high proportion of signs coded as 'verb' in the corpus (26.9%). As 'verb' is not a domain of meaning, we decided to exclude it from Figure 14. We also exclude Kendon's coding of 'grammatical' (which encompassed 0.5% of his corpus) as, again, this is not a semantic domain.
- 17 Archival file reference: SIGN20130911-06 (time code: 00:55:30-00:57:40).

- 18 Archival file reference: SIGN20160630-NJ-02-JG (time code: 00:38:50-00:40:60).
- 19 Archival file reference: SIGN20130909-NG-02-IK (time code 00:06:49-00:06:54).
- 20 Archival file reference: SIGN20130909-NG-02-IK (time code 00:07:29-00:07:34).
- 21 Where scale permits, we have inserted arrows in the graphics that accompany these examples to indicate some aspects of the movement of the hand/hands.
- 22 Archival file reference: Sign-20130911-06 (time code 00:01:14.744-00:01:18.960).
- 23 Glossing conventions: 1 1st person; 2 2nd person; DAT dative; IMP imperative; LOC locative; PL plural; POSS possessive; PRO pronoun; PRS present; PST past; PT point; SG singular.
- 24 Archival file reference: Sign-20130911-06 (00:00:21.555-00:00:29.310).
- 25 Archival file reference: SIGN20130909-NG-02-IK (time code 09:10).
- 26 Archival file reference: SIGN20130909-NG-02-IK (time code 09:35).
- 27 Archival file reference: SIGN20160630-NJ-01-JG (time code 00:13:35.518-00:13:37.388).
- 28 Archival file reference: SIGN20121031-JP&EG-02-JG1 (time code 00:33.000-00:40.000).
- 29 Younger deaf New Zealanders now use the British two-handed fingerspelling alphabet.
- 30 Archival file reference: SIGN20130905-03 (time code 00:04:49.184 — 00:04:53.773).
- 31 Home sign is canonically understood as an ad hoc sign system developed by a deaf child raised without access to an established sign language (Goldin-Meadow 2003).
- 32 Pers. comm., Elizabeth Marrkilyi Ellis interviewed by Lauren Reed, Canberra, 23 July 2018.

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