Chapter 12
YSL in cross-linguistic perspective

The foregoing chapters of this book brought to light a number of remarkable features of YSL and showed that this sign language shares many similarities in its grammatical structures with other (shared) signed languages of the world documented so far. One of the patterns is, for example, a handshape inventory in shared sign languages.

Section 5.1 has shown that YSL makes use of a smaller set of phonetic handshapes, when compared to the DCSLs that display a much larger set. For example, 70 handshapes were reported for NGT (van der Kooij, 2002), Auslan makes use of 62 handshapes (Johnston & Schembri, 2007) and TSL is reported to use 56 handshapes (Smith & Ting, 1984, in Ann, 2005). The YSL data revealed the use of 33 phonetic handshapes (see Appendix I). A glance at the few studies addressing the issue of handshapes in shared sign languages points out that these sign languages also have relatively few phonetic handshapes. For AdaSL Nyst (2007) identifies 29 handshapes, Marsaja (2008) finds 28 in Kata Kolok and Schuit (2013) also reports about 33 phonetic handshapes in IUR. Hence, YSL patterns with other shared sign languages studied so far and displays a smaller set of phonetic handshapes if compared to the DCSLs.

A considerable degree of handshape variation also appears to be another feature occurring in various shared sign languages. Section 5.1 identified handshape variation in YSL lexical signs. The same YSL signs were often found to be articulated with different handshapes within the dataset. For example, the YSL sign GAPU ‘water’ was articulated with the (O), (V), (Index) or (Bbent) handshapes (see section 5.1, Figure 18 and Appendix I for the images of YSL handshapes). Again, similar inter- and intra-signer handshape variation in the formation of signs has also been observed among other shared sign languages, such as PROVISL (Washabaugh, 1991) and ABSL (Israel & Sandler, 2009; Sandler, Aronoff, Meir, & Padden, 2011).

A few available systematic descriptions on a number of shared sign languages allow me to discuss in the next section some of the interesting morphological-spatial aspects attested in YSL and other shared sign languages. In particular, it shows that shared sign languages lack DCSL-type of uses of space.
12.1. The use of space in shared sign languages

12.1.1. The lack of metaphorical pointing

Section 8.2.1 explained that the pronominal system in DCSLs is based on metaphorical pointing, where signers establish anaphoric loci in the neutral signing space in order to refer to third person individuals (Bos, 1990; Sandler & Lillo-Martin, 2006; Meier & Lillo-Martin, 2010). Section 8.4.6 revealed that YSL makes virtually no use of metaphorical pointing. Instead of anaphoric localization, YSL signers use direct or metonymic pointing (see section 8.2.1 for the discussion of terminology) to indicate people and objects. In case individuals are physically absent during the speech event, person reference in YSL is usually done by pointing to the house of the individual. Interestingly, the pointing to non-visible entities was always accurate, i.e. the direction of the pointing to the real world position of the entity appeared to be in accord with its cardinal direction.

As has been recently noted by Nyst (2012), a great number of shared sign languages have been described to lack metaphorical pointing for person reference (see also Washabaugh, Woodward, & DeSantis, 1978; Washabaugh, 1986 for PROVISL; Davis, 2010 for PISL; Perniss & Zeshan, 2008; De Vos, 2010, 2012 for Kata Kolok; Sandler, Aronoff, Meir, & Padden, 2011 for ABSL; Schuit, 2013 for IUR; Nyst, 2012 for AdaSL). The use of accurate pointings to the real-world locations of referents (i.e. to a person’s house) has also been referred to as absolute pointing in the literature (Perniss & Zeshan, 2008), which is reminiscent of, but not quite identical to the absolute frame of reference (see section 12.2.2). Apart from direct and metonymic pointing for person reference, KK signers also use the so-called “list buoys”, where each finger of the signer’s nondominant hand is associated with a specific referent (De Vos, 2012, pp. 199–206).

12.1.2. Limited use of spatial modification in transitive verbs

Section 9 concluded that YSL does not exhibit a system of verb directionality analogical to the systems described for DCSLs (Sandler & Lillo-Martin, 2006). The spatial modifications attested on YSL transitive predicates are only faintly reminiscent of the integral system of spatial modifications documented in many other sign languages (Padden, 1990; Mathur & Rathmann, 2006, 2012). First of all, as discussed above, YSL signers do not establish conceptual referent locations, which are fundamental for the movement of
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12.1.3. Restricted use of entity classifiers

Most large Deaf community sign languages are generally known to have an extensive system of entity classifiers (Aronoff, Meir, Padden, & Sandler, 2003; Zwitserlood, 2003, 2012). Section 10.3.2 of this book showed, however, that unlike DCSLs, YSL does not virtually employ a system of entity classifiers for expression of path and direction of motion Signs that resemble classifier predicates may be used in YSL to express the manner of directional verbs in the neutral signing space (Lillo-Martin & Meier, 2011). The corpus-based analysis of YSL reveals that only six verbs were spatially modifiable in transitive constructions indicating a referent: LAKARA ‘to tell/speak/say’, NHÄMA ‘to see’, MÄRRA ‘to get/bring’, GURRUPA ‘to give’, BITJA ‘to take a picture’ and RIRRIKTHU ‘to make sick/to kill’ (see section 9.3.1.1 for a detailed description). These verbs were, however, very rarely modified in space in the corpus to mark core arguments. For example, only 21% of all occurrences of the verb NHÄMA ‘to see’ occurred spatially modified in the corpus. In sum, 60–80% of all verb occurrences of the six verbs mentioned above appeared spatially unmodified in the YSL data set.

The limited use of spatial modification on transitive verbs has also been documented for other shared sign languages. In PROVISL only two verbs were reported to exhibit some spatial modifications, these are HIT and GIVE, “but the directionality in the expression of these verbs was not used to disambiguate any of the utterance pairs” (Washabaugh, 1979, p. 199). AdaSL verbs allowing for spatial modification are MARRY, CURSE, TELL, SEE, and INSULT (Nyst, 2007, p. 158). Two sign languages, KK and ABSL, have been reported to lack a system of verb directionality indicating the subject and object of a transitive event. In these languages, transfer verbs are produced with a straight outward direction, even when the first person is the direct object (see Aronoff, Meir, Padden, & Sandler, 2004; Padden, Meir, Aronoff, & Sandler, 2010 for ABSL; Marsaja, 2008; De Vos, 2012 for KK). In IUR, 17 verbs (such as HATE, BULLY, SEE, SHOOT, GIVE and other) were found to be spatially modified at least once in the data analyzed by Schuit (2013). Although the number of IUR agreeing verbs is much higher than in many other shared sign languages including YSL, the results reported in Schuit (2013) are quite comparable, since only 65 tokens (37%) of these verbs show agreement. The rest of the verbs appear in a non-modified form in the IUR data (ibid, p. 108).
motion. The path and the direction of motion are preferably indicated in YSL by two generic directionals similar to AdaSL and KK (see section 10.3.1).

Other shared sign languages are also known for their restricted usage of entity classifiers (see for example Washabaugh, 1986 for PROVISL). Nyst (2007) reports about the virtual absence of entity classifiers in AdaSL. Instead of using entity classifier constructions, AdaSL also effectively expresses motion with directionals (ibid, 2007). Similarly, in ABSL no classifier predicates have been found so far (Aronoff, Meir, Padden, & Sandler, 2004; Sandler et al., forthcoming). Quite different from YSL, KK as well as IUR are reported to make extensive use of entity classifiers (Marsaja, 2008; Schuit, 2013). Although according to De Vos (2012, p. 101), the system of KK entity classifiers differs from descriptions of such systems in other sign languages. KK entity classifier handshapes are primarily defined based on orientation and movement pattern, rather than handshape and thus, the same handshapes may be used for various entities (Marsaja, 2008).

12.2. Language-external factors and sign language structure

The preceding sections have highlighted some similarities of YSL with other shared sign languages particularly regarding some selected features of spatial grammar. By emphasizing the similarities between various shared sign languages in the organization of signing space, this study does by no means aim to categorize shared sign languages into one linguistic sub-type on the basis of these similarities (cf. also De Vos & Zeshan, 2012). It has been shown above that shared sign languages differ from each other in their spatial organization. For example, while ABSL and KK lack a system of directionality, some YSL and AdaSL verbs allow for spatial modification (see sections 9 and 12.1.2). These differences in the organization of signing space notwithstanding, shared sign languages appear not to use space for grammatical purposes as extensively as it has been reported for DCSLs. This peculiarity has led many scholars to wonder whether the linguistic organization of these languages is possibly determined by some language-external factors.

The view that language structure is partially influenced by sociolinguistic conditions of the linguistic community has been advocated by many scholars (Kusters, 2003; McWhorter, 2007; Wray & Grace, 2007; Lupyan & Dale, 2010; Trudgill, 2011; Bentz & Winter, 2012). Since many shared sign languages occur in similar sociolinguistic settings (see also section 2.3), a number of hypotheses arose proposing that particular social and
sociolinguistic environments could have given rise to a particular type of linguistic structure (Washabaugh, 1986; Jepson, 1991; Sandler, Meir, & Aronoff, 2005; Nyst, 2007; Schuit, 2012; De Vos, 2012). The results of my analysis of the YSL data do not hint at any specific hypothesis being true. Possibly a combination of more than one language-external factor - such as, for example, the habitual use of geocentric frame of reference and context-dependency - may provide a more adequate explanation for the structural similarities found between YSL and a number of other shared sign languages.

In the following sections, I consider a number of proposed assumptions suggesting that some extra-linguistic factors might have caused the similarities in the use of space between the shared sign languages described in section 12.1. Language-external factors include demographic factors such as a language’s age, the population size of a signing community and sociolinguistic and sociocultural factors such as signers’ spatial cognition and the prevalence of signers with hearing ability. Highlighting the role of extra-linguistic patterns in the following sections does not discount the importance of language-internal factors. It is clear that the generalizations to be discussed are based on a limited analysis of data obtained from less than 10 sign languages and thus no premature conclusions will be made here. Future research on this issue is in need of more data from small-scale sign languages in rural areas. For more indepth comparison, differences in the sociolinguistic make-up of these languages, such as the number of deaf people, the incidence of deafness, the type of deafness (hereditary vs. non-hereditary), the size of the signing community and the age of the language should be evaluated more carefully (Nonaka, Nyst, & Kisch, 2010; Nyst, Sylla, & Magassouba, 2012).

12.2.1. Age of language

ASL is reportedly about 250 years old. In comparison, ABSL appears to be a relatively young language estimated to be around 75 years (Sandler & Aronoff, 2007). This language developed within the past three generations in the Negev region of present-day Israel and is used extensively today by both hearing and deaf individuals (Kisch, 2008). In the early stages of research, linguists found that unlike the well-studied sign languages of large Deaf communities, ABSL has strikingly little and no systematic morphology (Aronoff, Meir, Padden, & Sandler, 2004, p. 32ff; 2008). In particular, no spatially modified verb forms inflected for agreement or complex classifier predicates were found in ABSL (Sandler et al., forthcoming). Aronoff, Meir,
Padden, & Sandler (2004) attribute the absence of verb directionality to language age. Other structural features such as the relative dearth of sequential affixation are also argued to occur due to the relatively young age of this language (Padden, Meir, Aronoff, & Sandler, 2010, p. 574). Sandler, Aronoff, Meir, & Padden (2011) also observe a significantly higher degree of sublexical variation in handshape production in ABSL, when compared to ISL or ASL, and conclude that discrete formational phonological parameters have not yet been established in this sign language. Moreover, they imply that the evolution of a linguistic system takes a gradual course and, thus, assume that ABSL will develop more complex structures, in due time (Sandler et al., forthcoming).

However, the findings from other shared sign languages, AdaSL and KK, are not consistent with this hypothesis of a historical developmental path (De Vos & Zeshan, 2012). KK is estimated to be considerably older than ABSL. Nevertheless, this language also still lacks the system of verb directionality (De Vos, 2012). AdaSL, which is considered an old sign language with about 200 years of history, lacks a system of entity classifiers in intransitive verbs of motion (Nyst, 2007). Although the recent findings from Nicaraguan Sign Language seem to support the idea of language’s evolutionary path (Senghas & Coppola, 2011), the development of spatial grammar in this emerging sign language, as stated by De Vos (2012, p. 421), is more likely to be an effect of nativization (Senghas, 1995), rather than the time depth. Evidence from KK and AdaSL suggests that a unidirectional developmental perspective on the linguistic structure of shared sign languages does not explain the similarities observed between those languages (Nyst, 2012, p. 565 ff.).

ABSL shares many of its features with Yolngu Sign Language, although the time depth of YSL cannot yet be ascertained (see section 3.5). It is, however, highly plausible to suppose that YSL well predated European contact (see section 3.5.3 of this book). In any case, the scenario seems to be unlikely that a highly grammatical system of verb agreement, R-loci establishment and entity classifier constructions will emerge in YSL with the passage of time, given that other sociolinguistic and sociocultural features remain the same. It thus appears conceivable, as Nyst (2012, p. 567 ff.) concludes, that not all mature sign languages are obliged to develop the (spatial) grammatical structures typically found in sign languages of large Deaf communities and the relatively young age of a language does not play a major role in shaping the structure of a (shared) sign language (cf. Hendriks, 2008, p. 208 ff.).
12.2.2. **Frame of reference**

Languages vary typologically in the way they express the spatial relations between entities that are located in space and specify the location of these entities (Pederson, et al., 1998). Frames of reference are coordinate systems for expressing these spatial relationships. Recent typological research differentiates between three different frames of reference: the ‘intrinsic’ (object-centered), the ‘relative’ (egocentric) and the ‘absolute’ (geocentric) (Pederson, et al., 1998; Levinson, 2003; Majid et al., 2004; Le Guen, 2011b). Languages may thus choose one or more frames of reference as a strategy for locating or orienting one object (usually called the *figure* or the *referent*) in relation to another object (called the *ground* or the *relatum*) (Palmer, 2010).

The term ‘in front of’ in the sentence “the child is in front of the tree” readily invokes a particular coordinate system, an intrinsic frame of reference, in which the coordinates are determined by the intrinsic features of the relatum. The relative frame of reference defines the location of the referent based on the external viewpoint (as in “the child is left of the tree”). This projection is thus dependent on the speaker’s location. The absolute frame of reference is determined by the fixed bearings or cardinal directions (as in “the child is to the north of the tree”) (Levinson, 2003).

Little research has been carried out with regard to exploration of the predominant frame of reference used in a particular sign language (see for example Emmorey, 1996, 2002 for ASL; Perniss, 2007 for DGS; De Vos, 2012 for KK). Perniss (2007) shows that DGS signers habitually represent a spatial relationship in relative and intrinsic terms. She finds that DGS static scene descriptions are encoded by the use of a relative system and the event narratives by the use of the intrinsic frame of reference. Additionally, she finds no incidences of the absolute frame of reference for either type. An interesting fact is that the speakers of a language like German also use both a relative and intrinsic system and do not usually keep track of the real world orientation of places and things, i.e. do not normally use an absolute frame of reference. Conversely, KK signers were found to systematically favor the absolute frame of reference (Perniss & Zeshan, 2008; De Vos, 2012), similar to the surrounding spoken Balinese language and culture, which adhere to geocentric terms in spatial reference (Wassman & Dasen, 1998, cited in De Vos, 2012, p. 252 ff.).

As noticed by Le Guen (2011b), the use of a particular frame of reference has a direct impact on the type of pointing used in a speech or sign...
community. In particular, he notices that the geocentric coders, i.e. speakers or signers habitually using the absolute frame of reference, seem to be reluctant to use metaphorical pointing. The findings presented by De Vos (2012) provide further support to his observation. KK signers, who are preferentially using an absolute frame of reference, typically point to an existing place such as a person’s house and do not use metaphorical pointing for person reference (De Vos, 2012). Conversely, the pronominal system in DGS relies on metaphorical pointing (Boyes-Braem, 1992, p. 61).

However, it is not yet clear whether all sign languages lacking the metaphorical pointing (see section 12.1.1) favor the geocentric coordinate system. The YSL data analysed in this study do not provide a conclusive answer to the question of whether the absolute frame of reference is preferred in YSL discourse. To identify the frame of reference used in a language, a number of spatial cognition tasks in various conditions need to be conducted (see Perniss, 2007; Le Guen, 2011b, De Vos, 2012), which was beyond the scope of this study. Despite these limitations, noteworthy is the fact that YSL signers use direct pointing for distant entities and places and point accurately towards the real world locations of these entities (see section 8.4.6 for a detailed discussion of this issue). Consequently, as discussed in section 8.4.6, YSL signers do not use metaphorical pointing to refer to these entities. Hence, YSL pointing patterns strongly resemble the paradigm that has been described for other geocentric coders (see Levinson, 2003, p. 146 ff. for Tzeltal speakers; Le Guen, 2011b for Yucatec Maya speakers; De Vos, 2012 for KK signers). Moreover, as the prevailing majority of YSL signers are speakers of *Yolngu Matha* (see section 3.4 for a discussion of the traditional languages in North East Arnhem Land), it would be interesting to know whether the spatial system of Yolngu languages is determined by geocentric terms. However, to the best of the author’s knowledge, no study is available on the use of a coordinate system to localize a figure with respect to a ground in any spoken Yolngu language. The use of motion verbs such as *guwatu-thu-* meaning ‘go up, go towards the bush’ and its antonym *yarrupthu- ‘to go down, go towards the sea’ (Wilkinson, 1991, p. 152) remind us of a system of spatial reference based on geographically salient objects, such as the one in Balinese (Wassmann & Dasen, 1998, cited in De Vos, 2012) or Northern Mansi Ob-Ugric dialect (Schön, 2012). In addition, a number of Aboriginal spoken languages in Northern Australia have been reported to make a habitual use of the geocentric spatial system (see for example Haviland, 1993, p. 26; Levinson, 2003, pp. 261–2 for Guugu Yimithirr; Wilkins, 1999, 2003, p. 187 for Arrernte; Hoffmann, 2011, 2012 for Jaminjung and closely related variety Ngaliwurru). The question whether YSL and the surrounding spoken Yolngu
languages favor the absolute frame of reference awaits further research. The preliminary observations mainly based on findings from KK (De Vos, 2012) seem to be in line with the idea that the use of a particular frame of reference has an impact on the use of metaphorical pointing in a sign language (Le Guen, 2011b). This is an interesting aspect deserving further investigation.

12.2.3. Size of community and context-dependency

Shared sign languages have much smaller signing communities than those of Deaf community sign languages and reportedly do not exceed the limit of 3,500 individuals (Sandler, Meir, & Aronoff, 2005) (see Table 1, section 2.3). The size of the shared signing community does not solely rest upon the number of deaf people, but also upon a great number of hearing signing individuals (Kuschel, 1973; Ferreira-Brito, 1984; Kwek, 1991).

The population size of the signing community, or more strictly its growth rate, is known to have an impact on the language structure (Senghas, 2005). The small size of a community might lead to a number of other social factors, which might affect the structure of a sign language. Israel and Sandler (2009) attribute, for example, the presence of sublexical variations in handshape production in ABSL to the small size of the community and the absence of formal deaf education. This may also be the case for YSL. The community of YSL users is rather small and no prescriptive norms, such as sign language teaching at school, sign language dictionaries, sign language interpreting, schooling etc. exist (see section 3.5 for more information on the use of YSL today), which would have likely led to standardization of the signs and, thus, to lowering the number of alternate forms (Israel & Sandler, 2009, p. 41).

A recent study on spoken languages shows that the small size of the community can lead to smaller phoneme inventories. Hay and Bauer (2007) have found a surprisingly strong correlation between the size of phoneme inventory of a spoken language and the total number of speakers of that language. Evidence from shared sign languages having smaller sets of phonetic handshapes, when compared to the DCSLs (see section 0), indicate that this hypothesis might be correct, however more comparable research is needed to consider a possible link between handshape inventory and the size of the signing population.

Furthermore, the small size of a signing community seems to facilitate the growth of social homogeneity witnessed to develop through dense social networking, high degree of kinship relations and the large amount of communally shared information between the community members. This
social homogeneity has, according to Washabaugh, Woodward, & DeSantis (1978), significant repercussions for the structure of PROVISL, which the authors consider to be a highly context dependent language. De Vos (2012) also finds support for this context-dependency hypothesis in her data on KK. She attributes the dominance of exophoric reference in KK to a large amount of communally shared information. The YSL data available for this study also appears to be in line with this hypothesis predicting that the signers of shared sign language use more exophoric pointing than the Deaf community signers. Unlike the signers of DCSLs, YSL signers share a common social environment, a common culture and a common identity and thus a considerable amount of extra-linguistic information is essential to fully comprehend YSL discourse.

12.2.4. Proportion of hearing signers

One of the main differences between large Deaf community sign languages and shared sign languages is the proportion of hearing signers (Nyst, 2007, p. 12 ff.; 2012, p. 565). Large Deaf sign communities predominantly consist of deaf signers, who use sign language as their primary language. Only a small proportion of hearing people learn to use the Deaf community sign language as a second language. Those that use it are usually CODAs (Children of Deaf Adults), relatives, interpreters, teachers or researchers (Meir, Sandler, Padden, & Aronoff, 2010). In shared signing communities the vast majority of sign language users are hearing users (Zeshan, 2011a). For example, 96% of KK signers are hearing (De Vos, 2012, p. 438). To illustrate this proportion, consider Figure 102. DCSLs can be positioned towards the left side of the continuum in Figure 102, and the shared sign languages towards the right side. YSL might be positioned on the extreme right of the continuum, as monolingual deaf signers are in the extreme minority (see section 3.5 for a number of deaf people in YSL community). As other alternate sign languages discussed in the literature, YSL has more hearing than deaf signers. If deaf signers are regarded to be dominant users of YSL, then the majority of YSL users appear to be non-dominant users, whose dominant language is one of the spoken Yolngu variety.

Some researchers have asked whether the presence of a large number of hearing signers, whose dominant language is a spoken one, may influence the sign language structure. Nyst (2007, p. 212 ff.) argues that the relatively large signing space, the relatively small set of unmarked handshapes and the relatively high degree of multi-channelledness in AdaSL can be related to
the large proportion of hearing signers in the community. She reasons that these features relate in the first place to the high degree of iconicity present in the lexicon of this language. She builds her argument on the observation that shared sign languages possess a high degree of iconicity in lexical items (Washabaugh, 1979; Ferreira-Brito, 1983; Dolman, 1986; Kendon, 1980; Jepson, 1991). Furthermore, Nyst correlates the high degree of iconicity in lexical items to the large proportion of hearing signers using this language due to the different roles iconicity plays in L1 vs. L2 acquisition and processing. Iconicity is known to play almost no role for L1 learning or comprehension of sign languages, while L2 learning is characterized by a strong reliance on the iconic features of signs (Mayberry, 2006). Nyst assumes that most of AdaSL users are hearing late learners of this language and therefore learn iconically transparent signs more easily (2007, p. 215). Because the majority of shared sign language signers are L2 users, Nyst infers that the degree of iconicity in lexical items is dependent on the proportion of L2 users. She concludes that in sign languages with a small proportion of L2 users (i.e. in DCSLs), the degree of iconicity in lexical items decreases, and as a result, the size of the signing space becomes smaller and the number of handshapes grows\textsuperscript{134}. Consequently, in sign languages with a large proportion of L2 users, “the level of iconicity remains high, correlating with a large signing
space, a high degree of multichannelledness [sic] and a small set of unmarked handshapes” (ibid, p. 217).

The terms L1 and L2 are ambiguous and can be used in the literature to refer to at least two things: 1) primacy or dominance in use (e.g. L2 is not used as a primary language, or perhaps not exclusively used) and 2) acquisition (e.g. L2 is acquired at a later age). Nyst states to use these terms in the sense of dominance. However, in the course of her argumentation, she also refers to a “probably late” acquisition of AdaSL by hearing signers.

It appears legitimate to ask whether the usage of YSL mostly by hearing people, whose primary language is a spoken Yolngu, has some impact on the linguistic structure of this sign language. However, as there are no extant studies on acquisition of YSL, it seems rather pointless to speculate, whether a high degree of iconicity in lexical items of YSL is due to a late acquisition of YSL by hearing signers. The age of YSL acquisition by the hearing or by deaf signers is thus currently unknown. It is, therefore, also not clear whether the acquisition of YSL and the surrounding spoken languages by hearing Yolngu can be qualified as an instance of multiple (simultaneous or successive) (first) language acquisition. Acquisition studies with a clarification of the age at which hearing users of YSL generally begin to learn/use this language are desirable.