Shared sign languages

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24. Shared sign languages

Abstract

In communities with an unusually high incidence of deafness, sign languages shared by both hearing and deaf community members are found to spontaneously develop. The sociolinguistic setting of these shared sign languages, also known as "village sign languages", differs considerably from the settings of the "macro-community sign languages" studied so far. This chapter provides an overview of communities with a high incidence of deafness around the globe, followed by an overview of the sociological and sociolinguistic features that characterize them. A description is then given of the structural features in which shared sign languages appear to differ from the sign languages of large Deaf communities. A discussion of the role of language age and language ecology in shaping shared sign languages concludes this chapter.

1. Introduction

Scattered around the globe, a number of small communities with a high incidence of hereditary deafness exist. The island of Martha's Vineyard (Massachusetts, USA) is a well-known example of such a community. Communities with a similarly high incidence of deafness are found in Asia, Africa, and the Americas.

In all of the reported communities, a local sign language has spontaneously emerged as a result of an incidence of deafness that is considerably higher than the 0.1 % incidence estimated for developed countries. The sign languages that emerged in these communities are used extensively by both deaf and hearing community members. As such, they provide a unique opportunity to evaluate several key phenomena in (sign) linguistics, including the evolution of conventionalization and structural complexity in sign languages. In addition, they are likely to offer new insights into the correlation between sign language structure and sociolinguistic setting.

Several labels and classifications have been proposed to refer to communities with a high incidence of hereditary deafness. Labels that have been coined for these communities are *isolated deaf communities* (Washabaugh 1979), *assimilating communities* (Bahan/Nash 1995), *assimilative societies* (Lane et al. 2000), and *integrated communities* (Woll/Ladd 2003). In her work on the Bedouin community of Al-Sayyid, Kisch (2008) argues against classifying communities with a high incidence of deafness and wide-

spread sign language use as a type of Deaf community. Instead, she argues for a classification of signing communities, rather than of d/Deaf communities, and proposes the term *shared signing community.*

The sign languages of shared signing communities have also been classified. Woodward (2003), for instance, proposes the term *indigenous sign language.* In this chapter, I adopt Kisch's term *shared signing community* to refer to the communities listed in section 2 and, by analogy, use *shared sign language* to refer to their sign languages.

The chapter starts with an overview of the communities with a high incidence of deafness reported in the literature to date in section 2. In section 3, I discuss a number of sociological and sociolinguistic features these communities have in common. In section 4, I address a number of linguistic features which are similar across different shared sign languages. The last section contains a discussion of the phenomenon of shared signing communities and their sign languages.

2. Shared signing communities

In this section, I present a compact overview of a number of shared signing communities from around the globe, as reported in the literature. All of them have an incidence of deafness that is several times higher than 0.1 %, which is the estimated incidence of deafness in developed countries (Martin et al. 1981). The overview includes information on the percentage of deaf people in the respective community and references to the linguistic and sociological studies concerning these communities and their sign languages. The map in Figure 24.1 illustrates the geographical distribution of the communities presented in this section.

Fig. 24.1: Communities around the world with a high incidence of deafness

2.1. North America

For North America, only two communities with a high incidence of deafness have been described in some detail: the well-known case of Martha's Vineyard in Massachusetts (USA) and a Keresan village in Central New Mexico (USA). In addition to these two cases, a high incidence of deafness is reportedly also found in the Amish and Mennonite communities in Lancaster County, Pennsylvania (Mengel et al. 1967) as well as in Inuit communities in Nunavut, Canada (Joke Schuit, personal communication).

2.1.1. Martha's Vineyard

Martha's Vineyard is an island off the coast of Massachusetts in the northeast of the United States. Tracing the history of deafness on the island in the period between the 18th and the mid 20th century, Groce (1985) reconstructs attitudes towards deaf people and sign language usage. The incidence of deafness on the island as a whole was 0.65 %. In some communities on the island, however, the incidence was as high as 2 % (in Tisbury) and 4 % (in Chilmark). Since the mid 20th century, the incidence of deafness on the island has decreased to an average incidence, resulting in the disappearance of the local sign language. Poole-Nash (1976, 1983) tries to reconstruct what the sign language looked like. The case of Martha's Vineyard has fascinated deaf people and scientists because of the high level of integration of deaf and hearing islanders described by Groce (1985).

2.1.2. Keresan Pueblo in central New Mexico

In a small Keresan-speaking community in central New Mexico (USA), 15 out of 650 inhabitants (2.3 %) have severe to profound hearing loss. The local sign language is believed to have developed in one family to communicate with deaf family members (Kelley 2001). Nowadays, the sign language is used in two different ways: first, as a primary language by deaf community members, and second, as an alternative to spoken language by hearing community members. Interestingly, Keresan Pueblo Sign Language is claimed to have an origin that sets it apart from Plains Indian Sign Language, which primarily evolved for inter-tribal communication (see chapter 23 for details). Keresan Pueblo Sign Language is endangered by a shift to American Sign Language (ASL) or Signed English, due to Deaf education and acculturation (Kelley/McGregor 2003).

2.1.3. Nunavut (Canada)

In at least some Inuit communities in the large province of Nunavut (Canada), an incidence of deafness of 0.5 % is attested. An indigenous sign language, Inuit Sign Language, is used by some deaf Inuit, but most deaf Inuit now use ASL (Schuit/Baker/Pfau 2011).

2.2. Central America and the Caribbean

Central America and the Caribbean show a relatively high number of communities with a high incidence of deafness. Most of these communities have arisen in the frame of the transatlantic slave trade.

2.2.1. Providence Island (Colombia)

Providence Island is an English Creole speaking Colombian Island in the Caribbean Sea. Around 1985, 19 people out of a total island population of 2500−3000 were deaf (0.67 %). The deafness is caused by the Waardenburg syndrome, in which disorders in the pigmentation of the skin and hearing disorders go together. A local sign language, Providence Island Sign Language (PISL), is used in communicating with deaf people. Providence Island was one of the first communities with a high incidence of deafness to be studied by linguists, in particular by William Washabaugh and − to a lesser extent − by James Woodward. These linguists published an initial article together with Susan DeSantis (Washabaugh/Woodward/DeSantis 1978), followed by three articles by Woodward (1979, 1982, 1987) and a series of articles and a book by Washabaugh (1979, 1980a,b, 1981a, 1985, 1986, 1990).

2.2.2. Cayman Islands (United Kingdom)

A high incidence of deafness seems to have existed on Gran and Little Cayman (Cayman Islands) as well, together with a locally developed sign language (see Doran (1952) for Little Cayman; Washabaugh (1981b) for Gran Cayman). Washabaugh (1981b) reconstructs the history of the Deaf community and the sign language that evolved on Gran Cayman. However, at the time of Washabaugh's research, the use of Gran Cayman Sign Language was already in decline as most Deaf inhabitants of the island were educated in the ASL-based Jamaican Sign Language, used in Deaf education in Jamaica.

2.2.3. Saint Elisabeth's (Jamaica)

In Jamaica, "country sign language is used by perhaps 200 deaf people living within a few miles of each other on an isolated part of the island" (Dolman 1986, 235). That part of the island is Saint Elisabeth's parish, the total number of inhabitants of which is not specified. Features of the sign language are described by Dolman (1986), who also remarks that the sign language is in danger of extinction due to the increasing use of the ASL-based Jamaican Sign Language. A recent presentation by Cumberbatch (2006) confirms the increased endangered status of the language.

2.2.4. Surinam

In Surinam, several communities with a relatively high incidence of deafness seem to exist. Groce (1985, 69) lists several communities that appear to have a relatively high

incidence of deafness and a resulting sign language. She quotes Tervoort (1978), who mentioned a group of Deaf Indian villagers in Surinam.

Van den Bogaerde (2006) encountered a slightly higher than average incidence of deafness in Kosindo, a Saramaccan-speaking community of African descent in the Surinamese jungle. She reports that of the 2000 inhabitants of the community, about 0.5 % were deaf, and that the deaf people could communicate efficiently with hearing people in a local sign language.

2.2.5. Yucatan (Mexico)

Two scholars report a high incidence of deafness for a Yucatec Maya village in Yucatan (Mexico). Shuman (1980) describes the village of Nohya in Central Yucatan as having about 300 inhabitants, 12 of whom are deaf, i.e. 4 %. Shuman finds that part of the lexicon of the sign language in Nohya is based on the conventional gestures of the larger Mayan culture. Shuman and Cherry-Shuman (1981) published an annotated list of signs.

The second scholar, Johnson (1991, 1994) describes a village in north Central Yucatan with 400 inhabitants, 13 of whom are deaf, i.e. 3.25 %. He also notes that: "We found small populations of deaf people in most villages and we were told of at least one village with an equally large proportion of deaf inhabitants" (Johnson 1991, 468). Johnson does not mention the name of the community he is describing, but it is very likely to be the same village that Shuman describes.

Both Johnson and Shuman find that hearing community members sign well. In fact, the sign language in Nohya may be related to an indigenous sign language that is shared by all Maya groups in Mexico and Guatemala (Fox Tree 2009). Despite the extensive command of signing by hearing people, deaf people appear not to be fully integrated. They have a lower marriage rate and do not have access to most of the discourse, which is conducted in spoken Maya.

Currently, several scholars are conducting research on the sign language of Nohya, including Gabriel Arellano at the Deafness, Cognition, and Language Research Centre in London (UK), Olivier LeGuen at the Centro de Investigaciones y Estudios Superiores en Antropología Social in Mexico City, and Ernesto Escobedo at the International Centre for Sign Languages and Deaf Studies in Preston (UK).

2.2.6. Jicaque community (Honduras)

Lastly, a high incidence of deafness has been reported for a clan of Jicaque Indians in Honduras who fled to the mountains in 1870 and established a community there (Chapman/Jacquard 1971). It is not known what the situation is like at present.

2.3. South America

2.3.1. Urubú-Kaapor (Brazil)

The Urubú or Kaapor, a people spread across several villages in the Brazilian Amazon, use a sign language in communicating with deaf people (Kakumasu 1968; Ferreira

Brito 1984). In 1965, Kakumasu counted seven deaf people in a total of 500 Urubú-Kaapor, i.e. 1.4 %. Almost 20 years later, Ferreira Brito (1984) counted five deaf people in a total population of less than 500 people. No contemporary information is available. Kakumasu (1968) describes selected linguistic features of the sign language, whereas Ferreira Brito (1984) compares the language with Brazilian Sign Language.

2.4. Africa

Whereas quite a number of communities with a high incidence of deafness have been described for the Americas, to date only one clear case of such a community has been identified in Africa, i.e. the village of Adamorobe in Ghana.

2.4.1. Adamorobe (Ghana)

Adamorobe is an Akan-speaking village in Ghana with an incidence of deafness of 2 %: around 35 people out of a total population of 1400 are deaf (Nyst 2007a). The incidence may have been higher in the past: David et al. (1971) mention a deaf population of 40 in a total population of 400 (i.e. 10 %), while Frishberg (1987) reports an incidence of 15 %. Amedofu et al. (1999), on the other hand, mention an incidence of 1.6 %. Deafness in the village has existed as long as anybody can remember. The differences in ascribed frequencies are likely to be the result of miscalculation rather than reflecting actual variation in the incidence.

The village has been studied by audiologists and geneticists (Amedofu et al. 1999; Meyer et al. 2002) and sign linguists (Frishberg 1987; Nyst 2007a,b). Recently, an anthropological study of 'deaf space' in Adamorobe was completed by Kusters (2012).

2.5. Asia

2.5.1. Ban Khor (Thailand)

The village of Ban Khor in Thailand has 2741 inhabitants; it also has a high incidence of deafness (Nonaka 2007). With a total number of 16 deaf people, the incidence is 0.6 %. A local sign language emerged about 70 years ago. In her study of the signing community, Nonaka investigates patterns of sign language acquisition and baby talk. Ban Khor Sign Language is endangered, as a result of increased contact with Thai Sign Language, among other reasons (Nonaka 2004).

2.5.2. Desa Kolok (Indonesia)

The northern part of Bali, Indonesia, has an increased incidence of deafness. In one village, Desa Kolok, 47 people were found to be deaf in a total population of 2186, i.e. 2 %. Deafness has existed in the community for several generations (Branson et al.

1996; Marsaja 2008). In his monograph on the village and its sign language, Kata Kolok, Marsaja describes the socio-cultural adaptations to deafness in the village and the ethnography of communication of Kata Kolok. De Vos (forthcoming) presents an extensive study of the use of space in Kata Kolok.

2.5.3. India

Another Asian community with a high incidence of deafness is the community of Andhra Pradesh in India (Majumdar 1972). Sibaji Panda of the University of Central Lancashire (UK) is currently investigating the shared signing community of Alipur, in southern India, which is a Shia Muslim enclave in a dominantly Hindu area. The community has an estimated 250 deaf people in a total population of several thousands. The local sign language is endangered through increasing contact with Indian Sign Language.

2.6. Middle East

2.6.1. Israel

The Bedouin community of Al-Sayyid in the Negev in Israel has an incidence of deafness that is as high as 3.2 %: 120 people out of a total population of 3700 are deaf (Kisch 2008). Deafness emerged only 4–5 generations, i.e. around 80 years, ago (Kisch 2006, 2008). A similar high incidence of deafness is found in at least two other Bedouin communities in the Negev. All three communities have developed their own sign language (Kisch 2007).

The Al-Sayyid community is one of the few communities with a high incidence of deafness that has been studied extensively from both an anthropological and a linguistic perspective. Research on the linguistic structure of Al-Sayyid Bedouin Sign Language (ABSL) is done by a team of four linguists (Sandler et al. 2005; Aronoff 2007; Meir et al. 2007; Aronoff et al. 2008).

A high incidence of deafness has also been reported for ethnic enclaves in northern Israel (Costeff/Dar 1980).

2.7. Europe

To the best of my knowledge, there are no contemporary reports on communities with a high incidence of hereditary deafness in Europe. Historically, the village of Katwijk in the Netherlands (Aulbers 1959), the commune of Ayent in Switzerland (Secretan 1954; Hanhart 1962), and a Scottish clan in a Jewish community in Britain (Fraser 1976) had a relatively high incidence of deafness.

3. Common features of shared signing communities

Shared signing communities provide a rare opportunity to investigate a relatively unknown type of primary sign language and signing community. In quite a number of cases, medical researchers have been the first to identify a high incidence of deafness in a particular community. In a considerable number of communities, genetic research has been undertaken as well. However, discussing the results of these studies falls outside the scope of this paper.

In addition to medical researchers, linguists and sociologists started doing research on shared signing communities and their sign languages several decades ago. However, most of the descriptions published to date are preliminary. Actually, for most communities, only one or two publications are available which, in most cases, do not go beyond giving a first impression of the sign language and its community. Some studies have been conducted by linguists, others by sociologists. Despite the different perspectives taken and the variation in detail of description, a number of interesting commonalities come to the surface. A comparison reveals that the shared signing communities differ from large Deaf communities in a range of features:

Proportion of hearing signers
In all of the shared signing communities, a large part of the population signs. This includes hearing signers, who actually form the majority of regular signers. Marsaja (2008) extensively studies the spread of sign language competence across the inhabitants of Desa Kolok. He finds that 68 % of the community are regular sign language users. Nonaka (2007) observes that 15–25 % of the hearing inhabitants of Ban Khor sign regularly. The lower number of hearing signers in the latter village is in line with the generally lower incidence of deafness in Ban Khor as compared to Desa Kolok.

Number and percentage of deaf signers
In the communities listed in section 2, the incidence of deafness – where indicated – ranges between 0.5 % and 4 %, with the total number of deaf signers ranging from 12 to 250. In some cases, a (much) higher incidence of deafness has been reported, but these percentages seem to overstate the actual situation as far as can be logically perceived and/or be deducted from the actual numbers. Thus, Frishberg (1987) mentions an incidence of 15 % for Adamorobe, but it is very likely that this should be 1.5 %, in view of the incidence of 2 % in 2004 (Nyst 2007a). Similarly, Washabaugh claims that 19 deaf people in a total population of 2500–3000 people equals an incidence of 6.7 %, rather than 0.67 %. It seems likely that these miscalculations result from the specific communication patterns observed in a community with an increased incidence of deafness and the impression these patterns leave in the outside observer.

An incidence of deafness of 0.5 % is clearly high compared to the incidence of childhood deafness in Western Europe, estimated to be around 0.1 % (Martin et al. 1981). However, UNICEF (1985) estimates an incidence of 0.5 % for moderate-severe hearing loss in children in developing countries. Although this estimate also includes hard-of-hearing children (i.e. those with moderate hearing loss), the UNICEF report suggests that some of the communities discussed in this chapter may have an incidence of deafness that is only slightly higher than that of the wider area.

Language endangerment

In view of the restricted number of users of shared sign languages, the ecology that triggered the spontaneous development of a sign language in these communities is extremely fragile. Demographic changes may easily lead to a reduction of the incidence of deafness. Thus, in Martha's Vineyard, increased contact with the mainland, as a result of Deaf education among other factors, resulted in a reduction of the incidence of deafness to an average rate and consequently led to the extinction of the local sign language. Just as in Martha's Vineyard, most sign languages described in this chapter differ significantly from the respective sign language used in deaf education at a national level. As such, when deaf children from "deaf villages" start attending school, they typically become bilingual signers. Especially when such schools are boarding schools, the national sign language may become the dominant language of these bilingual signers. Once children are no longer fluent users of a language, the vitality of that language is at stake. Dolman (1986, 241) states that "one feels a certain wistfulness realising that with the school's continued success a language and even a way of life are likely to be lost forever." Whereas Deaf education may be a factor increasing the endangerment of shared sign languages, hearing signers may be a positive factor when it comes to the vitality of shared sign languages. Nonaka (2007) points out that hearing signers may be the key "keepers" of shared sign languages, as they have little if any incentive to learn the national sign language that endangers the local sign language.

An endangered status has been explicitly claimed for Country Sign Language (Dolman 1986; Cumberbatch 2006), Ban Khor Sign Language (Nonaka 2004), Keresan Pueblo Sign Language (Kelley/McGregor 2003), and Adamorobe Sign Language (AdaSL, Nyst 2007a).

No Deaf community

There is usually no clearly distinct Deaf community. Most studies report that there are virtually no activities that would single out the deaf inhabitants. Deaf people identify themselves along social structures existing in the wider community/culture (Shuman 1980; Johnson 1991). A partial exception is Desa Kolok, where deaf community members take on particular responsibilities at the village level, such as decorating and cleaning particular temples (Marsaja 2008). In Adamorobe, Desa Kolok, and the community of Al-Sayyid, increased contact with educational and medical services as well as Deaf people from outside the village triggers an emerging sense of Deafhood.

Transmission

The transmission of sign languages of Deaf communities is usually characterized by peer-to-peer transmission. In contrast, the transmission of shared sign languages resembles more closely the pattern common for spoken language transmission in that deaf children acquire sign language in the presence of adult language models.

Attitudes towards deafness and sign language

Deaf and hearing people in shared signing communities tend to have a neutral to positive attitude towards deaf people. In some communities, religious explanations are given for the high incidence of deafness in the community. Thus, both Adamorobe and Desa Kolok recognize the influence of a deaf god. In Ban Khor, a Buddhist community, the deafness is considered to be the result of a karmic sin.

In all communities, sign language is straightforwardly accepted as the normal means of communicating with deaf people. Still, the social position of deaf people is not always fully equal to that of hearing people, which is most clearly reflected in a lower marriage rate among deaf people in some villages (cf. Shuman (1980) for the Yucatan Maya community; Washabaugh (1986) for Providence Island; Nyst (2007a) for Adamorobe).

The study of spoken languages has shown that the social setting of a language may influence its linguistic structure significantly. This is most obvious in the case of creoles and pidgins, whose structures reflect language contact and specific acquisition patterns. Similarly, comparative research on the sign languages of large Deaf communities and the signing of isolated home signers (see chapter 26) has demonstrated a pervasive influence of social setting on sign language structure. Shared sign languages, evolving in yet other circumstances, allow further investigation of the direct or indirect correlation between signing community and sign language structure.

4. The linguistic structure of shared sign languages

Systematic descriptions of the linguistic structure of shared sign languages are extremely scarce. The task of distilling the linguistic features shared by some or all shared sign languages is further complicated by the variety of methodologies and perspectives taken by different researchers. In a number of cases, this leads to studies contradicting each other. Creating accessible corpora of these languages seems imperative at this stage. Such corpora are much needed, as most shared sign languages are intrinsically fragile and often endangered. Shared sign language corpora could also provide a reliable basis for comparative studies on this type of sign language.

4.1. Phonology

Almost all studies on shared sign languages address at least some basic aspects of the sub-lexical or articulatory level of these languages.

4.1.1. Handshape

A few studies address the issue of handshapes in a given shared sign language. Washabaugh (1986), for instance, claims that Providence Island Sign Language has relatively few handshapes, which are also unmarked. Comparing PISL with ASL, he finds that the former has 10 distinctive handshapes and the latter 17. Nyst (2007a) finds 29 phonetic handshapes in AdaSL. Using the approach developed for Sign Language of the Netherlands (NGT) by van der Kooij (2002), Nyst distills a total of only seven phonemic handshapes from the 29 phonetic handshapes, as opposed to the 31 phonemic handshapes described for NGT by van der Kooij (2002). A relatively small set of unmarked handshapes has been claimed to be characteristic for home sign languages as

well (see e.g. Kendon (1980) for Enga Sign Language in Papua New Guinea). For Kata Kolok, Marsaja (2008) lists 28 different phonemic handshapes, but it is not clear which criteria were used to distinguish phonemic from non-phonemic handshapes.

4.1.2. Multi-channeledness

Multi-channeled signs are signs that are not only articulated by the hands, but also involve non-manual articulators, such as the face, the mouth, the leg, or the body as a whole. Some shared sign languages make relatively extensive use of non-manual elements. PISL, for instance, has "a significant non-manual component" in 36.5 % of its lexical signs, as compared to 1.9 % for ASL (Washabaugh (1986, 56); also see Dolman (1986) for Country Sign Language). In AdaSL, a considerable number of signs are made with body parts other than the hands, either alone or in unison with the hands. These articulators may be the head (in LIZARD), the face, the mouth, the leg (INSULT), and the arm/elbow (REFUSE, CHASE) (Nyst 2007a, 55).

Shared sign languages appear to differ from each other in their use of mouthings (articulations based on spoken words). AdaSL, on the one hand, makes extensive use of mouthings, for example, in distinguishing the manually identical signs for the colour terms BLACK, WHITE, and RED, as illustrated in Figure 24.2 (Nyst 2007a, 93). Kata Kolok, on the other hand, does not use mouthings at all (Marsaja 2008, 157).

Fig. 24.2: The signs for BLACK (a), WHITE (b), and RED (c) in Adamorobe Sign Language

4.1.3. Iconicity

The languages of shared signing communities are often described as being more iconic than sign languages of large Deaf communities (e.g. Dolman (1986) for Country Sign Language; Ferreiro-Brito (1984) for Urubú-Kaapor Sign Language; Washabaugh (1986) for PISL). However, iconicity is notoriously difficult to assess and claims concerning high levels of iconicity are consequently difficult to evaluate. AdaSL has an unusual iconic feature, as it rarely depicts the outline of entities. Where possible, the articulator stands for the entity as a whole, rather than tracing its outline (Nyst 2007a). See, for example, the sign for BOTTLE illustrated in Figure 24.3 (Nyst 2007a, 124).

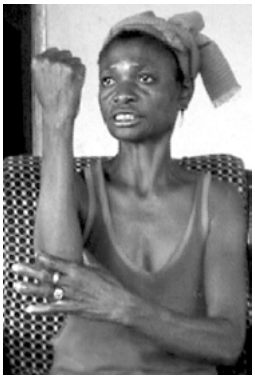

Fig. 24.3: BOTTLE in Adamorobe Sign Language

4.1.4. Location

Both in-depth and preliminary studies of shared sign languages never fail to comment on the use of space and locations in the shared sign language under investigation. A large signing space and a proliferation of locations, including locations not commonly used in sign languages of large Deaf communities (e.g. below the waist or behind the body), seem to be common to most shared sign languages. Thus, Kata Kolok has signs that are located on the buttocks (INJECTION, see Figure 24.4), on the tongue (SALT, see Figure 24.5), and on the crotch (OFFSPRING).

Fig. 24.4: INJECTION in Kata Kolok (Marsaja 2008, 143). Copyright © 2008 by Ishara Press. Reprinted with permission.

Fig. 24.5: SALT in Kata Kolok (Marsaja 2008, 143); Copyright © 2008 by Ishara Press. Reprinted with permission.

Similarly, AdaSL has signs that are articulated on the knee (a personal name sign), the foot (INSULT), the crotch (KROBO, an ethnic name sign), the buttocks (INJECTION), the thigh (SUMMON, TROUSERS), and the back (YOUNGER-SIBLING). Interestingly, a large

signing space and a proliferation of locations have also been described for earlier varieties of sign languages of large Deaf communities (cf. Kegl et al. (1999, 183, 196) for Nicaraguan Sign Language; Frishberg (1975) for Old French Sign Language).

4.2. Spatial morphology and syntax

A striking feature of some shared sign languages is the absence of spatial inflection on verbs to mark agreement (see chapter 7). In these sign languages, transfer verbs typically move away from the body of the signer, allowing no directional modification (cf. Washabaugh (1986) for PISL; Aronoff et al. (2004) for ABSL; Marsaja (2008) for Kata Kolok). In contrast, AdaSL does allow spatial modification to mark agreement, e.g. in the verbs MARRY and INSULT (see Schuit/Baker/Pfau (2011) for Inuit Sign Language).

Another striking feature of some shared sign languages is the virtual absence of classifiers (see chapter 8) in intransitive verbs of motion and location (Washabaugh (1986) for PISL; Nyst (2007a) for AdaSL). In Nyst (2007a), I argue that the absence of such classifier verbs is directly related to the absence of a reduced signing space in AdaSL. Instead of classifiers, AdaSL makes use of two types of serial verb constructions, parallel to structures attested in the surrounding spoken language, Akan. Again, the absence of classifier handshapes in intransitive verbs of motion is not a general characteristic of shared sign languages, as Kata Kolok does make extensive use of such classifiers (Marsaja 2008).

A third feature that has been described for several shared sign languages concerns the use of pointing. In PISL, Kata Kolok, and Inuit Sign Language, pointing is directed towards real world locations (absolute pointing), rather than towards metaphorical locations in a reduced signing space (de Vos 2009; Schuit/Baker/Pfau 2011). It seems that AdaSL observes a similar restriction on the use of pointing signs, but further research is needed to verify this claim.

A final interesting feature concerns the use of simultaneous constructions or buoys (Liddell 2003), in which the two hands sign semantic content more or less independently from each other. AdaSL hardly uses such structures (Nyst 2007b), which is quite striking in view of the fact that they are abundantly used in sign languages of large Deaf communities (Vermeerbergen et al. 2007).

All of the features described in this section as being absent in shared sign languages are very common in sign languages of large Deaf communities. In fact, they are so common that they have often been considered to be universal, modality-specific features of sign languages. The studies on shared sign languages prove that stable sign languages can do without these features, optionally developing alternative structures to fulfil the communicative task otherwise fulfilled by such "modality-specific" features.

5. Discussion

A summary of the few linguistic descriptions available implies a significant difference between shared sign languages and sign languages of large Deaf communities. In particular, at the articulatory level the shared sign languages seem to be special in their

use of relatively few, unmarked handshapes, a large signing space with a proliferation of locations, and a high degree of multi-channeledness. At the morphosyntactic level, striking features described for a few shared sign languages include the absence or infrequent use of spatially modifiable agreement verbs, classifier verbs of motion and location, pointing towards abstract locations for person reference, and simultaneous constructions. In this section, I wish to address the question to what extent the specific social setting of shared signing communities may affect sign language structure.

5.1. Social setting and sign language structure

In his works on PISL, Washabaugh (1986) describes the language as highly context-dependent and "immature". He ascribes the difference between PISL and sign languages of large Deaf communities to the absence of a distinct Deaf community. He further argues that in the absence of a Deaf identity and a Deaf community, there is no alternative community in which exclusive or predominant use is made of sign language. Instead, deaf people tend to focus more on their hearing environment for their communicative needs. Hearing-deaf interaction, however, appears to be limited in both extent and depth as compared to hearing-hearing interactions.

In Adamorobe, a distinct Deaf community seems to have started to develop only recently and AdaSL is used extensively by deaf and hearing signers. Apparently, in this case, it is not so much the absence of a Deaf community, but rather the large proportion of hearing signers in the village which has significantly affected the local sign language. Thus, several features of Akan, the dominant spoken language of hearing signers, are visible in AdaSL, among others at the lexical and the syntactic level.

Sandler et al. (2005) ascribe several aspects in which ABSL is found to differ from sign languages of large Deaf communities to the young age of the sign language, which is only about 70 years old. Relating these features to age implies a developmental perspective on the structure of ABSL. That is, the researchers assume that such features will emerge if enough time passes. One has to keep in mind, however, that ABSL shares most of these features with sign languages of other shared signing communities. For example, it shares the lack of spatially modified agreement verbs with Kata Kolok, which has a long history. Similarly, the very limited use of classifiers in ABSL is not necessarily a sign of immaturity, since AdaSL, an old sign language, makes no systematic use of classifier handshapes in intransitive verbs of motion either.

The next section evaluates the explanatory force of a unidirectional developmental perspective on the structure of shared sign languages.

5.2. Shared sign languages and the evolution of sign languages

Washabaugh (1986, 10) qualifies PISL as "immature", specifying that it is not a "complete and mature language". Goldin-Meadow (2005, 2271) considers ABSL a unique system between home sign and "fully formed sign languages" and states: "Homesign tells us where ABSL may have started; fully formed sign languages tell us where it is going."

Conceiving diversity in sign language types along developmental lines has a number of consequences. It implies among others that:

1) There is an ultimate stage of sign language development, a sort of 'super sign language'. Which sign language (type) represents or comes closest to such a 'super sign language'? Perhaps one might expect to find such an ultimately developed sign language in a monolingual signing community, without hearing/speaking signers (a "sublimation" of the Deaf community), and, due to the ample availability of adult language models, without continuous recreolization.
2) All sign languages in the world will eventually move towards the ultimate stage of development if given the opportunity.
3) There is a hierarchy among sign language types as to which sign language has advanced more on the developmental cline.

Although it would be interesting to hypothesize about what structures would be employed in a sign language used in a monolingual signing community with a "normal" acquisition pattern, to date such communities have not been found to exist. All we have are "sub-ideal" environments for ultimate sign language development, including (i) large Deaf communities with a majority of dominant sign language users, but predominantly peer-to-peer acquisition in the absence of adult language models (except for a minority of deaf and hearing children who grow up in families with Deaf adults); (ii) small signing communities with a considerable number of deaf signers, a 'normal' acquisition pattern, but a majority of non-dominant SL users; and (iii) isolated deaf signers in hearing environments.

To what extent is it coincidental that the sign languages of large Deaf communities − the sign languages most sign linguists are most familiar with − would present the ultimate stage of sign language development? And, is there historical evidence that sign languages of large Deaf communities were at one point in their history shared sign languages used in shared signing communities?

It seems likely that both shared sign languages and sign languages of Deaf communities developed out of home sign languages. In the case of a shared sign language, the first deaf persons in a community with hereditary deafness create a home sign language to communicate with their environment. Consequently, deaf children born into that community start acquiring that home sign language, which expands to a shared sign language. In the case of sign languages of Deaf communities, the scenario is likely to be like that of Nicaraguan Sign Language (Kegl et al. 1999; also see chapter 36 on creolization). That is, home signers form a community, e.g. in the context of a Deaf school, and from the collection of different home sign languages, a new sign language evolves. However, there is no straightforward scenario for the transformation of a shared signing community into a large Deaf community. In other words, it is not likely that a sign language of a 'deaf village' will become a national sign language.

Situations that may resemble more closely the historical social setting of some large sign languages are the social contexts of sign languages like Hausa Sign Language (Schmaling 2000) or Malian Sign Language (Nyst 2008), which evolved in the absence of Deaf education in urban centres in the Hausa-speaking areas in Nigeria and in Mali. These areas have an average incidence of deafness and the two sign languages evolved and are used outside the context of Deaf education.

A similar developmental perspective used to be taken on spoken language development. Generally, pidgins have been assumed to turn into creoles, i.e. languages of greater complexity, as soon as they become the first language of a group of speakers. Nowadays, creolists have replaced the concept of a developmental cline with what Mufwene (2001) calls an ecological perspective on language. In that view, particular features of a language may appear or disappear in concert with the dynamics of the sociolinguistic setting of that language. In that view, creole formation involves different patterns of language acquisition and creation than pidgins, which affects the linguistic structure of the creole. In contrast with a unidirectional developmental path, a language ecology perspective recognizes that the ensemble of features of a given language is influenced by the full set of diverse sociolinguistic features (contact, status, acquisition patterns, etc.) that make up its social setting.

Applying such a multidimensional and multidirectional perspective to sign languages provides a more adequate explanation for the structural differences found in different sign language types, including home sign languages, shared sign languages, and sign languages of large Deaf communities. Such an account may further explain why stable, primary sign languages have developed in different ways. Indeed, further study of shared sign languages may reveal the influence of the diverse dimensions that figure in shared sign communities, such as the proportion of deaf and hearing signers, the sheer number of deaf signers, the social position of deaf people, and language age.

Despite similarities between shared sign languages and both home sign languages and sign languages of large Deaf communities, shared sign languages should not be considered 'half-way' sign languages, trapped somewhere in the middle of a developmental cline. The same holds for International Sign and alternate (secondary) sign languages used by hearing signers, which are not developmental stages of an ultimate visuo-gestural language, but rather examples of the different forms a visuo-gestural language may take (see chapter 35 for International Sign and chapter 23 for secondary sign languages). Shared sign languages constitute a type of sign language of their own *on a par with* the sign languages used by large Deaf communities. By not having developed agreement verbs (as in the case of e.g. Kata Kolok) or classifier handshapes in intransitive verbs of motion (as in AdaSL), shared sign languages prove that old, stable primary sign languages are not obliged to develop the structures typically found in sign languages of large Deaf communities. That is, the path towards developing agreement verbs or classifier handshapes is an option, not a unidirectional developmental cline that all mature sign languages inevitably go through. Shared sign languages are full-fledged sign languages that are shaped by their sociolinguistic "ecology". Rather than being immature sign languages, they are maximally adjusted to the small size of the community that uses them, to the various levels of language proficiency existing in these communities, and to the multilingual setting in which they typically flourish (cf. Jepson 1991).

5.3. Avenues for further research

Generally, the incidence of deafness in rural areas with little medical care tends to be relatively high. In some areas, it is estimated to be as high as 0.4 %, which is close to the incidence on Providence Island (0.65 %). What is the threshold in terms of incidence of

deafness for a community to become a shared signing community? Is there a threshold at which there is a shifting balance or is it rather a matter of a sliding scale? Do other factors play a role beyond the mere incidence of deafness?

Despite the similarities found between shared signing communities at the linguistic and social level, the differences still outweigh them. To evaluate more closely the effect of a high incidence of deafness on a community and its linguistic mosaic, it is necessary to compare communities that resemble each other to a great extent and differ only in one or two respects. For example, it might be revealing to study the differences between Desa Kolok, with 47 deaf people, and another village in northern Bali with only around 16 deaf people, as mentioned by Branson et al. (1996).

Several studies point out that deafness in the area surrounding a shared signing community may be increased as well (Kisch 2007; Marsaja 2008). For Al-Sayyid, Kisch (2007) mentions that a similarly high incidence of deafness is found in at least two neighbouring communities. However, the social adaptations that have been made in these villages are quite different from those found in Al-Sayyid. As such, a comparison of the sociolinguistic setting and the structure of the signed communication in these three Bedouin communities can provide us with "cleaner" information about the relation between sociolinguistic setting and sign language structure, as the villages are located in the same cultural, geographical, and socio-economic environment.

A related question is how shared sign languages compare to other sign languages that have evolved and are still used outside the context of Deaf education, e.g. sign languages used by Deaf communities in urban centres where no Deaf education is available, or extensive family sign languages? Are the features in which shared sign languages have been found to differ from the well-studied sign languages with a long history of Deaf education really confined to shared sign languages or are they rather found more generally in sign languages that have evolved outside the context of Deaf schools?

Most of these types of sign languages have deliberately been left unstudied, under the tacit assumption that it is difficult to tell whether or not these 'sign systems' are true languages. The increasing number of in-depth studies into shared sign languages is an important first step towards studying sign languages in the "grey area" between home sign languages and sign languages of large Deaf communities. It is of utmost importance to engage in this endeavour with an open mind, free of preconceived notions like 'sign systems' and 'full-fledged sign languages'. Only then we can begin to understand which factors are relevant in the shaping of sign language structure.

6. Summary and conclusion

Scattered around the globe are communities with a high incidence of hereditary deafness, i.e. between 0.6 % and 4 % of the total population are deaf. In response to the widespread occurrence of deafness, local sign languages have emerged that are shared by both deaf and hearing community signers. Following Kisch (2008), I refer to these communities as shared signing communities and to their sign languages as shared sign languages. In most of these communities, there is no distinct Deaf community and hearing people have neutral to positive attitudes towards deaf people and sign lan-

guage. Shared sign languages differ from sign languages of large Deaf communities in acquisition pattern, given that adult language models are available to more or less all children who acquire a shared sign language. Also, the majority of users of shared sign languages are hearing, as opposed to a majority of deaf signers in large Deaf communities.

Structurally, shared sign languages differ from sign languages of large Deaf communities at the sub-lexical level, having relatively small sets of (mostly unmarked) handshapes, a high degree of multi-channeledness, a large signing space, and a proliferation of locations. At the morphosyntactic level, some shared sign languages are characterized by the absence of modality-specific structures such as spatially modified agreement verbs, classifier handshapes in intransitive verbs of motion, and simultaneous constructions – structures that seem to be more or less universally present in sign languages of large Deaf communities. The ensemble of linguistic structures found in several shared sign languages is evaluated in relation to the social setting of these languages. In the literature, three extralinguistic factors have been mentioned that may influence the shape of a given shared sign language. These are (i) the absence of a Deaf community on Providence Island, resulting in an 'immature' sign language (Washabaugh 1986); (ii) a majority of hearing signers in Adamorobe, whose primary language is a spoken language (Nyst 2007a); and (iii) the relatively young age of Al-Sayyid Bedouin Sign Language (various studies by Padden, Sandler, Meir, and Aronoff). The role of age in shaping the structure of a sign language implies a developmental perspective on shared sign languages. In the last section, I contrast a developmental perspective with an "ecology" perspective. I argue that shared sign languages show that different sign language types identified to date should not be conceived of as taking different points on a unidirectional developmental path. Rather, a multidimensional model is needed that recognizes the relevance of the complete set of factors involved in shaping a language in the visuo-gestural modality. From this viewpoint, shared sign languages use the structures they do, not because they are not 'full-fledged' or 'immature', but rather because this particular set of structures results from diverse factors at work in the particular setting of a given shared sign language. I conclude that shared sign languages, like the sign languages of a large Deaf community, are maximally adjusted to the sociolinguistic setting in which they are used.

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25. Language and modality

Abstract

Human language can be expressed in two transmission channels, or modalities: the visual-gestural modality of sign languages and the oral-aural modality of spoken languages. This chapter examines ways in which the visual-gestural and oral-aural modalities may shape linguistic organization. Relevant properties of production and perception in the two modalities are reviewed. Those properties may constrain linguistic organization, such that spoken languages favor sequential word-internal structure (e.g., affixal morphology), whereas sign languages favor simultaneous word-internal structure (e.g., nonconcatenative morphology). The two modalities also offer different resources to signed and spoken languages; for sign languages, those resources include the transparent space