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# Deaf signers in Douentza, a rural area in Mali

*Victoria Nyst, Kara Sylla and Moustapha Magassouba*

## 1. Introduction<sup>1</sup>

Over the past 5 decades of sign language research, studies have focused on the sign languages of national deaf communities, based in Western or Asian cultures (cf. Brentari, 2010; Pfau et al. in press). In addition to those sign languages, home signing, i.e. the signing of deaf children growing up in entirely hearing, non-signing environments, has been studied extensively (Goldin-Meadow, 2003). Again, the majority of these studies are done in Western or Asian cultures where deaf education is available. What many of the home sign studies have in common is that the interaction studied is deliberately kept free of sign language exposure, as a result of a speech-centred educational approach. Another important bias in our understanding of home signing is the fact that most studies are based on the home signing of children. More recently, a third type of signing has come under study, i.e. that found in communities with a high incidence of hereditary deafness, the topic of this volume. The findings emerging from these latter studies show significant structural differences with the sign languages of large, national deaf communities.

The current focus in sign language studies leaves two important questions unanswered. What do the sign languages of national deaf communities in Africa look like? And, what does the sociolinguistic situation and the signing of home signers on the African continent look like? This paper addresses the latter question. An important motivation for it is the fact that the majority of deaf Africans have no access to deaf education. It is likely that most of them are not in regular contact with a large, stable deaf community. As such, they are often qualified as home signers. However, little is known about these signers.<sup>2</sup> This is striking, as in fact the majority of deaf people in the world are in precisely this situation, i.e. isolated from large deaf communities, with limited (if any) access to health care or education. A pertinent question is the extent to which such people and their signing fit the labels presently available in our research vocabulary. The notion of ‘home sign’ in particular

seems to require refinement. Also, knowing more about signers and their languages in areas without deaf education and large deaf communities helps us develop more reliable hypotheses about the diachronic development of sign languages, both young and old.

This chapter reports on a survey of deaf signers and signing communities in the administrative unit of the *cercle* of Douentza in central Mali, West Africa (see Figure 1). This survey was part of a larger effort to investigate signing in the wider Dogon area of Mali, roughly covering the *cercle* of Douentza and the neighboring *cercles* of Koro, Bankass and Bandiagara. With limited access to medical care, the incidence of deafness is relatively high (around 0.4%, see below). Deaf education is not available. As such, the area is representative of most rural areas in Mali and West Africa more generally. Using snowball sampling, a deaf-led team of Malian signers traced and recorded deaf signers in Douentza. The deaf signers as well as selected hearing interlocutors or family members were interviewed about their deafness and interaction patterns. Although the observations are preliminary and often impressionistic, they do allow a basic assessment of the sociolinguistic settings of most signers and of how they compare to the types of sociolinguistic settings identified in the sign language literature.

The paper starts with an introduction of deafness and sign language in Mali in §2. In §3, the Dogon Sign Language Corpus and the sign language survey in Douentza are presented. The signing situation in seven places in the *cercle* of Douentza is presented in this section, followed by a discussion in §4 of the findings and their implications for our understanding of sign linguistics and a conclusion in §5.

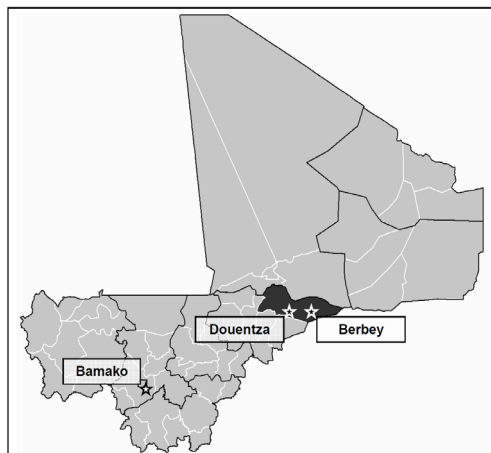


Figure 1. The map of Mali, with the *cercle* of Douentza shaded in black.<sup>3</sup>

## 2. Deafness and sign languages in Mali

No official figures are available for the incidence of deafness in Mali. Evaluating several studies done on deafness in West Africa, McPherson and Swart (1997) conclude that the prevalence of severe/profound bilateral hearing loss in West Africa is about three to four times the prevalence rate in industrialised nations. UNICEF (1985) gives an estimate of 0.5% for the prevalence of moderate to severe hearing loss in developing countries. If profound deafness is between 0.3% and 0.5% in Mali as well, this would mean the number of deaf Malians can be estimated to be between 40,000 – 70,000 given a total population of 14 million. The number of deaf Malians relying on signed communication is probably relatively high, as the availability of hearing aids and speech therapy is virtually non-existent.

The *cercle* of Douentza has a total population of 247,794, with an estimated deaf population numbering between 700 and 1,300.

Mali is a multilingual country, both in terms of spoken languages (as will be discussed in §2.5) and sign languages. A person's age and access to deaf education determines which sign language they are likely to use. Young, urban signers with access to education tend to use *Langue des Signes de l'Afrique Francophone* (henceforth LSAF), which is a variety of American Sign Language with influences from French and local signs and gestures. Older urban signers typically use the local Malian sign language, as do younger signers who live in rural areas and/or have no access to deaf education or to LSAF signers. *Langue des Signes Française* and *Langue des Signes Québécoise* have been introduced to the Deaf community at some point in time, but these languages have had less lasting impact. No sign language has been recognised by the Malian constitution so far, but LSAF is the sign language used in education (see §2.3).

### 2.1. Malian Sign Language in Bamako

The Ethnologue of the world's languages mentions the term *Bamako Sign Language* to refer to the variety of *Langue des Signes Malienne* as used in Bamako, the capital of Mali ([www.ethnologue.org](http://www.ethnologue.org)). The ISO code for this variety is [bog]. In speech and writing, the language is sometimes referred to as *Langue des Signes Bambara*. Because of the absence of a particular link between Bambara language and culture, I will use the more general term *Malian Sign Language* in this chapter, sometimes abbreviated as *LaSiMa*, based on the French name *Langue des Signes Malienne*.

At present, only anecdotal information is available about the relation between the local sign language of Bamako and sign languages in other parts of Mali. Several deaf signers have made journeys in Mali and to surrounding countries, to meet other signers and learn new signs. They report no problems of mutual intelligibility inside Mali. Yet they also report differences in lexical signs, e.g. in monetary terms. Such variation is also found within the LaSiMa community in Bamako. Lexical variation is widely attested in many sign languages, where often each variant is centred around a deaf school (see e.g. Lucas et al. 2003 for ASL). The variation in Bamako is mostly centred around *grins*, places where deaf people, mostly men, gather in the afternoon to chat and have tea together, usually at the house or workplace of a popular deaf person.

Most sign language research in Mali has focused on the local sign language as used in the capital of Bamako. In 1999, the first and so far only dictionary of Malian Sign Language appeared, containing 570 signs as used in Bamako (Pinsonneault, 1999). In 2007, *Projet LaSiMa* was launched, aiming at the description and documentation of the LaSiMa variety of Bamako, funded by the Endangered Language Documentation Program of the Hans Rausing Endangered Language Project. The project, based at Leiden University and the Institut des Langues Abdoulaye Barry, in collaboration with AMASOURDS, was completed in 2010, resulting in a corpus of over 27 hours of recorded discourse in Malian Sign Language, featuring 65 signers (Nyst, Magassouba and Sylla, 2011). Recordings were mainly made in Bamako. In addition, about four hours of signing were recorded in Mopti, a town in the centre of Mali with a small signing community of about 10–15 deaf persons. The recordings in Mopti revealed that despite the absence of deaf education in this city, LSAF had found its way into the signing community, due to regular contact with deaf signers in and from Bamako. A more in-depth description of Malian Sign Language as used in Bamako, as well as its corpus, can be found in Nyst (2008; 2010).

## 2.2. ASL and LSAF

The deaf community in Bamako is shifting to ASL/LSAF. This sign language is referred to by the ASL sign for SIGN, whereby two upright index fingers make a backward, alternating, circular movement, palms facing to the front. The same sign also refers to the general notion of ‘sign language’. The spread of ASL in Mali is part of a larger picture in which this sign language is used in deaf education in virtually all countries in West and Central Africa, albeit

often alongside other sign languages (Nyst, 2010). Several factors have contributed to the spread of ASL in Deaf education in West Africa, especially the efforts of Reverend Andrew Foster. Between 1957 and 1987, he set up schools in 22 countries, mainly in West and Central Africa. In the 1980s, he attempted to set up a school in Mali, but failed.

Foster used Signed English with ASL signs in his schools (Oteng 1997). Considerable modifications took place in the case of ASL in Francophone countries in West Africa, whereby English loan elements were replaced with French elements (Kamei, 2006). These adaptations mainly concerned initialised signs, whose handshapes were changed so that they referred to the corresponding words in French instead of English. In addition, accompanying articulations or mouthings from English were replaced with French ones. Kamei (2006) argues this sign language is the result of a creolisation process and proposes the term *Langue des Signes de l'Afrique Francophone* (LSAF) for this variety of ASL. Despite the differences mentioned, signers of North American ASL tend to immediately recognise these varieties as being ASL-based. To what extent the ASL-based varieties have diverged from their source language and from each other remains to be determined. Malian signers of ASL/LSAF do not seem to perceive the two language varieties as different and use the same sign to refer to both. For a more extensive treatment of LSAF and ASL in (West) Africa, see Kamei (2006) and Nyst (2010).

### 2.3. Sign language planning, facilities and endangerment in Mali

Deaf schools are a crucial factor in the transmission of sign languages and in determining their status. Present and future deaf children in Bamako are likely to grow up using an ASL-based variety. Adult deaf signers too are eager to learn and use ASL and are often bilingual in LaSiMa and ASL. Having virtually no child users and a lower status compared to ASL, ASL is replacing LaSiMa in the Deaf community in Bamako and other places with deaf schools. Moreover, ASL is also spreading in places without deaf schools, e.g. Mopti, through contact with ASL signers in other parts of the country. As such, LaSiMa can be considered endangered.

Like many West African countries, Mali has no qualified sign language interpreters, neither for Malian Sign Language, nor for ASL. No regular sign languages classes are available for hearing people. The absence of such basic sign language facilities limits the participation of Deaf people in Malian society: deaf children do not have access to quality education as teachers do not have sufficient signing skills; Deaf organisations cannot lobby govern-

mental and non-governmental bodies for their rights; and deaf children and adults have no access to vital information spread in public information outlets.

The multilingual sign language situation raises additional challenges. Educated Deaf signers, most of whom are active members of the Malian Deaf Association AMASOURDS, favour the use of ASL, whereas the vast majority of signers do not have formal education and use Malian Sign Language. Every initiative for setting up a sign language facility faces this language policy question and as mentioned before, several foreign NGOs have resolved this problem by introducing the sign language of their home country. Obviously, the introduction of foreign sign languages only adds to the existing challenges. At present, the Association Malienne pour les Personnes Sourdes does not have an official language policy. An extensive discussion of the distribution of local and foreign sign languages in West Africa is found in Nyst (2010).

#### 2.4. Deafness and sign language in Douentza

Prior to this study, there was no information available about deafness in Douentza or the sign language situation there. Based on the total population, the number of deaf people in the Douentza *cercle* is estimated to be between 700 and 1300 (see §2). Currently, there is no school for the deaf in the *cercle* or in the wider region of Mopti. Due to the large number of deaf children encountered in the area surrounding Douentza, a deaf school is now being set up in Douentza. Currently, five deaf children are being taught at a mainstream school, awaiting the construction of the deaf school. The establishment of deaf education is likely to impact the sign language situation, as all Malian deaf schools use ASL at present. However, if the Malian policy of *pédagogie convergente*, in which children start primary education in their mother tongue before shifting to French, is extended to deaf education, the local sign language used in Douentza and surrounding communities may continue to be used. Blench (2005) encountered a small number of deaf signers in a Tebul Ure speaking hamlet in Koro, a *cercle* adjacent to the *cercle* of Douentza. He also recorded sample sentences and narratives in the sign language, in spoken Tebul Ure and in French. The deaf signers fluently communicated with the hearing people in their community. The Ethnologue has listed the language, and given it the ISO code [tsy] ([www.ethnologue.com](http://www.ethnologue.com), 16/2/2012).

## 2.5. Spoken languages and language policies

The official language of Mali is French. In addition, the Malian constitution recognises 13 spoken Malian languages as ‘national languages’, including Bamanankan, Fulfulde and Songhay, as well as one Dogon language, Toro So ([www.ethnologue.com](http://www.ethnologue.com), 5/11/2010). Bamanankan (or Bambara, a Mande language from the Niger-Congo phylum) functions as a lingua franca and is spoken in varying degrees by 80% of the Malian population. For national languages, several facilities are provided, such as mother tongue education at the primary level, radio programs, weekly news bulletins on national TV, and newspapers. As mentioned above, the government supports the use of a bilingual approach in primary education referred to as *pédagogie convergente*, whereby children start off learning their mother tongue, and gradually shift to French (Traoré, 2001).

This paper results from sign language research in the Dogon area of Mali, an area about the size of the Netherlands which is highly multilingual. In his on-going survey and description project, Heath distinguishes 20 related Dogon languages and one isolate ([www.dogonlanguages.org](http://www.dogonlanguages.org)). The paper reports on a sign language survey in the town of Douentza and its surrounding communities. In Douentza, the Atlantic-Congo language Fulfulde is the lingua franca, but several other related Dogon languages are spoken in Douentza and the surrounding communities, including Jamsay-tegu, Najdamba (Bondum-dom), Tommo-so, and Toro-tegu (Hochstettler et al. 2004). The report also includes one location a little north of the Dogon area, the village of Berbey. There, the Humburi Senni variety of Songhay is spoken (Heath, in preparation). The locations visited during the survey are presented in section 3.1.

## 3. Dogon Sign Language Project: the Douentza survey

In 2009, the project ‘Documentation and Analysis of West African Sign Languages’ was initiated at the University of Leiden, in affiliation with the Institut des Langues Abdoulaye Barry in Mali, aiming at the creation of a representative, digital corpus of the signing used in the Dogon area as well as a corpus of Adamorobe Sign Language, used in a village in Ghana (Nyst, 2007, Nyst, 2012a; Kusters, this volume). Data collection for the Dogon corpus was carried out in 2010 and 2011. Prior to this, a few major issues had to be tackled. The first was how to find and sample the set of signers contributing to the corpus. With very limited information about the incidence

of deafness and signing in the area, in addition to limited resources, it turned out to be impossible to design a strategy that would lead to a statistically representative sample of deaf signers in the entire Dogon area. In addition, Nyst, principal investigator of the project, was not able to visit the field site. Fortunately, Magassouba had ample experience collecting sign language data in Bamako for the Malian Sign Language Project (2007–2010). In view of the above challenges and of a possible stigma associated with deafness, snowball (or chain referral) sampling seemed to best fit our survey aims. In snowball sampling, participants refer the researchers to other participants. This method is used in various types of studies where potential participants are hard to locate. During two visits, a team of signers, led by Magassouba, visited the Dogon area looking for deaf people in the urban centres who would then be asked to bring them into contact with other (deaf or hearing) signers. Obviously, this methodology has its constraints, for example a potential bias toward signers considered to be part of a (deaf) network, but it also brought about the possibility of new pathways and hence results.

During the first fieldtrip, the ‘deaf snowball’ brought the team to Mopti, where recordings were made as part of the earlier Malian Sign Language Project. Additional recordings were made during this visit as well. Consequently, the team continued to Bandiagara, and a few days later to Douentza, where it was based at the field station of the Dogon languages project led by Jeff Heath. In Douentza and surrounding communities, considerable numbers of deaf people were encountered. Two factors favoured the localisation of deaf people in and around Douentza. Firstly, with their extensive knowledge of Dogon communities, as well as practical help, the Dogon languages project supported the process of identifying deaf people in the area. Secondly, a young deaf man named Alassane Djepkele appeared to know an extensive network of deaf people. He was a vital link between the documentation team and deaf signers.

In Bandiagara, 10 deaf signers were filmed, and in Douentza, 19 were filmed, but the actual number of deaf people in Douentza was significantly higher. A considerable number of deaf signers in Douentza refused to be filmed. In the area around Douentza, 27 deaf signers were filmed in the six surrounding villages of Koubewel Koundia (10), Drimbé (4), Fombori (4), Ourodou Lamordé (3), Wakaraga-Na (3) and Madina (1). Inhabitants of these villages regularly visit the weekly market in Douentza to sell their produce and buy necessities. Some deaf people visit Douentza or other villages from time to time; others have never left their village (see §3.2 for a descrip-

tion of the contacts between signers from the same and different places). During a second field visit, more data were collected with a selection of these signers. In addition, the team visited a reportedly ‘deaf’ family with six deaf members in the aforementioned village of Berbey, a Songhay village about 80 kilometers from Douentza.

For most deaf signers, interviews or narratives about their personal history or daily life were collected. In several cases, mainly those of young children who did not sign, deaf or hearing family or community members gave such accounts. In addition, for those signers with whom reasonable communication could be established, single signs were elicited using the lexical questionnaire developed by Parks & Parks (2008), who also made available a set of accompanying images. As quite a number of pictures were not directly transparent in the Malian context, these were replaced with equivalent pictures taken in Mali, or by the real object represented in the picture.

### 3.1. Results

So far, the corpus contains 32 hours of video recordings, cut into 341 clips of varying lengths. After capturing the raw video data with Adobe Premiere CS5 and cutting them into sessions, the resulting AVI clips were compressed with TMPGEnc into both MPG1 and MPG2. Currently, 87 (25%) of the clips are annotated at the gloss level. A lexical database is under construction. It is our aim to create a lexical database containing at least 200 signs, annotated for selected features pertaining to the phonology, semantics and iconicity of the signs.

The recordings, which were made in 13 locations (see Table 1 below), feature the signing of 41 men and 27 women. Out of these 68 signers, 59 are deaf, two are hard of hearing and seven are hearing. Of the deaf signers, 26 were reportedly born deaf, while 31 acquired deafness after birth. For two deaf signers, the time of onset of deafness was reported as unknown. The majority of deaf signers (54) did not make use of speech to communicate. Only two signers had ASL skills, following prolonged stays in Bamako. The youngest signer recorded was three years old at the time of filming, while the oldest signer was 80. The average age was 30. The signers recorded were born in 17 different places, with one deaf signer being born in Ivory Coast (see Table 1).

*Table 1.* Places of birth and recording in the Dogon Sign Language Corpus

<b>Place</b>	<b>Total population</b>	<b>Deaf signers filmed here</b>	<b>Deaf signers born here</b>	<b>Spoken language(s)</b>
<i>Cercle of Douentza</i>				
Douentza	10722	19	12	Fulfulde, Jamsay Tegu, Bondum dom, Tommo So, French
Berbey		5	5	Humburi Senni
Fombori	962	5	7	Jamsay Tegu
Koubewel-koundia	1200	9	9	Nadjamba
Ourodou Lamorde	603	4	3	Nadjamba
Madina	300	2	2	Nadjamba
Diony	225	0	1	Nadjamba
Diona	1173	0	1	Tommo so
Drimbé	635	5	5	non Dogon
Dala	ca. 800	0	1	unknown
<i>Cercle of Ningari</i>				
Saré-dina	1304	0	1	Pomuru, Bondum dom
Wakaraga-Na	951	3	3	Nadjamba
<i>Cercle unknown</i>				
Fanga	Unknown	0	1	unknown
Darli	Unknown	0	1	unknown
Fana	Unknown	0	1	unknown

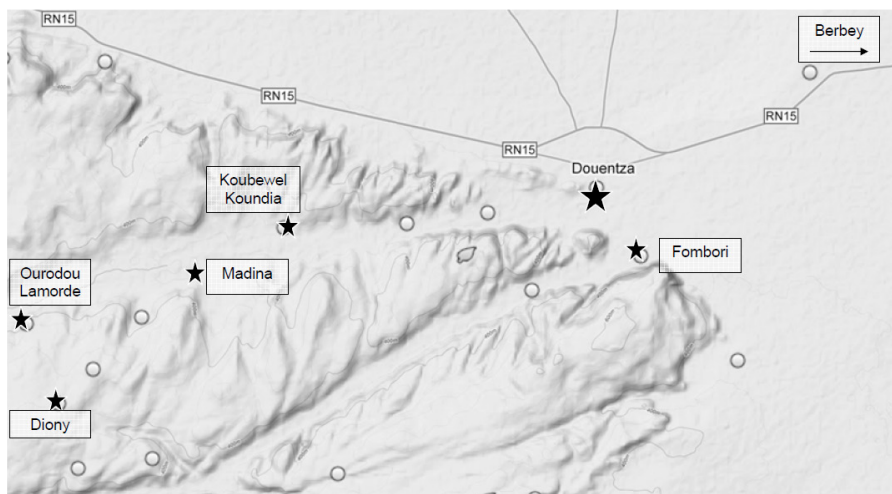


Figure 2. A map of Douentza and the villages where deaf people were encountered

Following approaches developed for earlier sign language corpora (e.g. the corpora for NGT (Crasborn et al. 2008), Auslan (Johnston 2008) and LaSiMa (Nyst et al. 2011), several types of data were collected for the Dogon Sign Language Corpus:

- personal narratives
- interviews about personal history
- signed guided tours by deaf signers around the house and outdoors
- elicited lexical data
- reports by the team members of the data collection

Metadata will be stored in the ISLE MetaData Initiative (IMDI), using the sign language profile (Wittenburg et al, 2000; Crasborn & Hanke, 2003). The entire corpus, i.e. the video clips, annotations and metadata, will be stored in the archive of the Documentation of Endangered Languages program (DoBeS) at the Max Planck Institute for Psycholinguistics in Nijmegen. A web portal is currently under construction to inform the wider public about Malian Sign Language and the corpora compiled in the Dogon area as well as in Bamako.

### 3.2. Signers and signing communities encountered

In this section, I present an overview of the signers encountered in Douentza and surrounding communities as well as in Berbey. As far as collected by the documentation team, information is presented about a) their sign fluency and b) their interaction with deaf and hearing people. Although this information is somehow anecdotal in nature, it serves to show that there is no one way to characterise the sociolinguistic setting of rural deaf signers and their signing skills.

#### 3.2.1. *The town of Douentza*

The largest number of deaf signers was found in the town of Douentza, where 19 deaf signers were filmed. As stated above, there were also a considerable number of deaf signers who did not want to be recorded. The total number of deaf people encountered by the team in Douentza was estimated at around 35. This number roughly corresponds with the number of deaf people expected on the basis of a total population of 10.722 and an incidence of deafness of 0.4%, which would be 42 deaf people. Strikingly, the survey team reported encountering more deaf people in Douentza than in the much larger regional capital of Mopti.

Although most deaf people do not meet on a regular basis, there are two or three places where a few deaf people do meet from time to time. The number of deaf people in Douentza fluctuates according to the season and the work that needs to be done in the fields.

There are two villages close to Douentza that were said to have many signers; Koubewel Koundia to the west and Fombori to the east. The survey team visited both villages. Koubewel Koundia turned out to have an especially high incidence of deafness. They also visited villages around Koubewel Koundia that were said to have deaf inhabitants. These surrounding villages include Ourodou Lamordé (three deaf people), Diony (one deaf person), Madina (one deaf person) and Wakaraga-Na (three deaf people).

#### 3.2.2. *Fombori*

Fombori is a Jamsay speaking village a little to the east of Douentza. During the two visits to Fombori, the survey team found five deaf adults and three deaf children, in a total population of 962. The oldest deaf person is a

40-year-old man who contracted deafness as an adult. He now communicates very little, mainly with his wife and children, using signs. A 25-year-old cousin of his is also deaf. She is married and has three hearing children. Before her marriage, she spent some time in Bamako, as her father works there as an imam. She is a fluent signer and an active member of her family and the wider village community. Lastly, there are three deaf boys, aged between nine and eleven. They spend their time working in the fields and playing, and they communicate with their hearing and deaf friends using signs. All of the deaf people in Fombori were born deaf, apart from the aforesaid 40-year-old man.

### 3.2.3. *Koubewel Koundia*

Koubewel-Koundia is a Najamba (Bondum-dom) speaking village about nine kilometers west of Douentza, with a high incidence of deafness. It has 1,200 inhabitants, 10 of whom are deaf, i.e. 0.85%. Deafness appears to have various causes here. Most deaf signers reportedly acquired deafness postlingually as a result of meningitis or another illness. Such infectious diseases are the primary cause of deafness in Bamako as well (Ag Mohamed et al. 1996). No close family relations were found to exist between deaf individuals, which makes a hereditary cause for deafness unlikely in most cases. Strikingly, all deaf signers are male and six of them are under the age of 10.

There are four adult deaf men. The youngest of them is 35, and he is also the only adult who was born deaf. He is married and has fathered nine children, four of whom have died. He works in the fields in the morning, and in the afternoon he takes tea with his hearing friends. On Sundays, he goes to Douentza for the cattle market. He is also an active family man and a fluent signer. The other three men, aged 45, 60 and 66, all became deaf around the age of seven. The 45-year-old deaf man can understand spoken Najamba through lip-reading. He was married, but is now a widower with two hearing children. He has a limited social network, but extensive practical skills, including masonry, tailoring and waterhole construction. The two eldest men are both heads of large families. One of them has married two wives and has fathered nine children, five of whom have died. The other man has five children and enjoys spending time with them. Strikingly, both older deaf men reportedly have limited signing skills. None of the deaf men in Koubewel Koundia seek each other out for communication.

The six deaf boys in Koubewel Koundia are not close friends either. The oldest works in the fields all day and has no time to play with other chil-

dren. His signing skills are limited and he uses relatively much pointing and gesturing to communicate. As such, his interaction patterns contrast sharply with those of eight-year-old Allaye, who has a large number of hearing friends he plays with regularly. He herds his family's cattle and runs small errands. He signs fluently and effectively communicates in this way with his friends and family. The youngest deaf boy is three. The survey team reported not having seen him sign. As for the other three deaf boys, no information is available at this point about their daily activities or signing skills.

Several hearing people were found to communicate effectively using signing. Most of them are family members of deaf signers, living on the same compound. The signing skills of the deaf signers vary significantly.

Some deaf signers of Koubewel-Koundia occasionally have contact with deaf people in Douentza and in surrounding villages, including the Najamba speaking villages of Diony, Madina and Ourodou Lamorde.

#### 3.2.4. *Ourodou Lamorde*

Ourodou Lamorde is a village on the side of a hill, about three kilometers from Koubewel Koundia. Like the latter, it is a Najamba-speaking village. It has a population of 603, three of whom are deaf. The eldest deaf person is an 80-year-old widow, mother of 10. She became deaf during her third pregnancy. She still mainly relies on spoken Najamba for communication, although her speech has become hard to comprehend. The two other deaf people are a father (50 years old) and his son (21 years old), both of whom have been deaf since birth. After the death of his first wife, the father remarried and has five hearing children from this second marriage. This deaf father is a man of principles and one of them is that he does not chat with his wife or children. The deaf son is from his father's first marriage, and he lost his mother when he was two years old. He works on the fields and herds the cattle. He is very timid and does not leave the village of Ourodou Lamorde. The deaf son communicates very little with other people and does not sign well. He is regularly visited by his deaf cousin from the neighbouring village of Diony.

#### 3.2.5. *Diony*

When the documentation team came to Ourodou Lamorde, Bakaye was called for from Diony. He came with a hearing younger brother. Diony is

a Najamba speaking village on a hill about 1–2 kilometers to the west of Ourodou Lamorde. There is only one deaf person in this village of 225 inhabitants. Bakaye, 21 years old, was born deaf. He is related to the deaf father and son in Ourodou Lamorde. Like other young men of his age, he works on the farming grounds during the rainy season and herds the cattle. Being the sole deaf person in the entire village, Bakaye seems to come closest to the definition of a home signer of all signers presented so far. From this perspective, the contrast between Bakaye and his deaf cousin in Ourodou in terms of signing skills is surprising. Bakaye has excellent signing skills and communicates well with the hearing people in his and neighbouring villages. He has his own signs to communicate, but also knows the signs used in Koubewel and Douentza, paying regular visits to these communities. His deaf cousin in Ourodou, on the other hand, has limited signing skills despite living with his deaf father .

### 3.2.6. *Madina*

Madina, a Najamba village with 300 inhabitants at 1.5 kilometers east of Koubewel, has one deaf inhabitant, a 23-year-old, married mother of one child. She was born deaf. Currently she is waiting to join her husband who went to work abroad four years ago. She is not very communicative, uses a lot of pointing and mainly converses with her friend, for whom she is employed as a domestic worker. In the cluster of Najamba-speaking villages, she seems to be the only deaf person who lives in an entirely hearing environment and has limited signing skills.

### 3.2.7. *Berbey*

Towards the end of the last field visit, the research team was informed of a deaf family in Berbey, at about 155 km east of Douentza and 5 km west of Hombori. Berbey, the Songhay village mentioned above, is situated on a hill close to Mount Hombori, the highest point in Mali. The villagers' spoken language is the Humburi Senni variety of Songhay (Heath, in preparation). Berbey has an estimated 450 inhabitants, five of whom are deaf.

The “deaf family” in Berbey consists of the families of two brothers, one hearing, one deaf, living on two neighbouring compounds. The hearing brother has married a hearing wife, and together they have one hearing and one deaf son (25 years and 22 years old respectively) and two deaf daughters

(20 and 18 years old). The 25-year-old hearing son has a very good relationship with his deaf siblings and fluent signing skills. When the rainy season is over, he goes to Bamako to generate additional income. His younger brother was born deaf and works in the fields. He sometimes spends the dry season in Ségou to work there as a shoe polisher. He once visited Bamako. Their two younger sisters are also deaf. One of them sells juice at the Hombori market, and she has visited the Douentza market with her mother several times. When there is no market, she helps with household chores. She is very bright, has a good understanding of money and is very communicative. She is in charge of doing most of the shopping for the family. The younger deaf sister is 18 and helps her parents in the house and fields. She has never left the Hombori area. She is a good signer who spends most of her time with family members.

On the neighbouring compound lives the family of the deaf brother (50 years old), who also married a hearing spouse. He is a farmer, but during the harvest as well as market days he goes out to collect money for his family. He was away at the time the documentation team visited Berbey, and was still absent when the team visited again a few days later in the hope of meeting him. The deaf brother and his wife have a deaf daughter of 23 and a hearing son. The deaf daughter is the only child of the two families who has married, but she is now divorced. She has one child. She works in both the house and fields, and has been employed for two years in Mopti as a domestic worker. She seems to have some residual hearing and sometimes speaks, albeit unintelligibly. The documentation team did not report on the interaction patterns of the hearing brother.

Interviews with the family members revealed that the late father of the two brothers was also deaf. When asked about his signing, hearing family members told the documentation team that he signed like the divorced deaf daughter, i.e. with (unintelligible) voicing. From the spread of the deafness in the family, it seems apparent that the deafness is caused by a recessive gene, occurring in at least three generations. In fact, all deaf signers of the last generation were born deaf. The hearing and deaf children of both families get along very well and spend a lot of time together. All children are very competent signers. It was the impression of the documentation team that the signers of Berbey were the most fluent of all signers they had encountered during their visits to Douentza and surrounding villages. Lexically, there was also a significant divergence from the signing found in the latter places.

## 4. Discussion

### 4.1. Findings of the survey project in Douentza: deaf villages, family sign language and fluent home signers

Having no deaf school or deaf community available, the situation in the *cercle* of Douentza can inform us about the interaction, communication strategies and general sociolinguistic circumstances of deaf people in areas with no access to education.

The signers and communities encountered during the survey in Douentza vary greatly. Some signers are very fluent and communicative, whereas others have limited skills. In the sign language linguistics literature, the number of deaf signers interacting on a regular basis is what distinguishes fully-fledged sign language from home sign. Interestingly, the variation in fluency in Douentza is not due per se to the number of deaf people found in a given community, or even in a given family. For example, Bakaye, the only deaf person in Diony, is a fluent signer. His deaf cousin Oumar, on the other hand, has limited signing skills, despite growing up with a deaf father. In other words, being the sole deaf person in a village does not mean one cannot become a fluent signer, and being a deaf child of a deaf adult does not mean one automatically acquires fluent signing skills. Similarly, the case of the deaf signers in Koubewel Koundia shows a not-so-straightforward distribution of skill, with some being very fluent and others much less so. The fact that the deaf signers do not seek each other out for communication suggests that the signing of older people does not represent the main language input for the younger generation. Rather, the signing of fluent and less fluent hearing family and community members is likely to provide the main language input. The case of the “deaf family” in Berbey, whose signing was judged by the survey team as the most fluent and expanded, does suggest however that transmission within a family can favor the acquisition of signing skills by individuals.

The signers and their communities also show striking similarities in one respect, namely that in all cases, hearing family or community members readily interact with deaf people using signs; there seems to be no stigma whatsoever attached to the use of gestures. Another notable feature is that all deaf adults are married, and many of them participate actively in family and community life.

## 4.2. Rethinking current labels

The variation and similarities found in a) the social setting and b) the signing observed during the survey do not readily fall into the clear-cut categories of large Deaf community sign language, home signing or “village sign language”. None of the sign languages found is used by a large Deaf community. In this section I reflect on how the signing described compares with home sign and the languages of communities with a high incidence of hereditary deafness. I argue that the term ‘home signing’ needs fine-tuning to be able to apply it to some of the signing in the corpus. The communities here also differ from those with a high incidence of deafness as a result of heredity, and I argue that instead of – or at least before – positing an increasing number of sign language types, it is more useful to describe and analyse a wider range of individual microcommunity sign languages. This enables one to properly appreciate the impact of the various idiosyncratic, sociolinguistic features.

### 4.2.1. *Home sign and home sign: the need for redefinition*

Despite the preliminary and impressionistic nature of the observations in the *cercle* of Douentza, three significant issues come to the fore.

Firstly, it becomes clear that the term ‘home sign’ needs rethinking. The main body of literature on home sign is based on deaf children growing up in hearing environments with no exposure to a conventional sign language, following oralist educational advice (c.f. Goldin-Meadow, 2003). The term ‘home sign’ is also used to refer to the signing of a deaf person who lives in a hearing environment in a typically rural area where deaf education and/or a signing community is not available (cf. Yau, 1992; Coppola & Newport, 2005; Fusellier de Souza, 2006). The social settings of these two types of home signers are likely to differ quite radically in a number of ways, many of which are known to affect language and communication. It is likely that spending one’s life in the same community where one is born, where literacy is no major factor in daily activities, and where gesturing/signing is considered the natural way of communicating with deaf people, favours the expansion and conventionalisation of the home signer’s communication. Thus, the two types of home signing, oral and rural, are likely to differ significantly in their structural features.

Secondly, the role of hearing signers may be very different for these two types of home sign. As noted above, hearing signers seem to play a central role in the transmission of the signing to deaf children. This is all the more

interesting as there seems to be a good deal of lexical consistency across the various signing varieties in the *cercle* of Douentza (and even in the signs used in Bamako). It appears worthwhile to consider the scenarios that may have led to this consistency. Is it the result of the irregular contact some deaf people have with each other? Or does mainstream hearing culture exploit an extensive, conventional vocabulary of gestures/signs to communicate with deaf people or others in the absence of a shared language? An analysis of the data collected will clarify how consistent the lexicon actually is. To study the nature and extent of the hypothesised conventional gesture vocabulary in mainstream hearing culture, new data need to be collected with hearing people in communities with and without deaf members.

Lastly, distinguishing between the home signing of children in the oralist tradition and that of adults in rural, gesture-prone environments raises an important question about the linguistic status of home signing. Generally, home sign is considered a system, rather than a language, because it does not fulfill two of the defining criteria formulated for human language, i.e. shared use across a user community and transmission across generations (Frishberg, 1987). The above findings suggest that these disqualifying features may be applicable to oralist home sign, but cannot be automatically generalised to rural home sign. Firstly, several home signers are fluent signers with no apparent communicative limitations outside the ordinary. Secondly, the evaluation of the defining criteria of a user community and intergenerational transmission with respect to rural home signing in Douentza is largely determined by the role of hearing signers. Deaf signers and their hearing interlocutors together form a community in which home sign is the means of communication. If indeed mainstream hearing culture avails of an extensive conventional gesture vocabulary, this implies it is transmitted across generations as well. Although the conventional vocabulary is hypothetical, and its relation to the actual home signing found is not clear, the current findings suggest intergenerational transmission cannot be ruled out either.

Furthermore, rural home sign varieties meet the criteria of a) a community of users, and b) transmission across generations for human languages as much as sign languages of large Deaf communities, albeit in different ways. Where it comes to the functionality for communicative purposes, rural home signing may differ categorically from oralist home signing in linguistic status.

Granting the signing of fluent rural home signers the status of language instead of merely a pre-linguistic system has important implications theoretically as well as practically. Considering these signers to be users of a full, natural language has important implications for the field of sign linguistics

as well, in particular for our understanding of sign language genesis. All sign languages are assumed to have started out with one or more home sign systems. For sign languages of deaf communities that evolved in the context of deaf education, it is assumed that the first stage of the language was characterised by a merging of the various home sign systems contributed by the first children attending the school. This scenario has been documented in Nicaragua and Mauritius (see Kegl, Senghas and Coppola, 1999, and Adone, 2004, respectively). For sign languages of communities with a high incidence of deafness, it is assumed that the initial input of the sign language consisted of the home signing of the first deaf person in the community. This process has been documented in the case of Al-Sayyid Bedouin Sign Language (see Kisch, this volume). However, if the home signing of the first generation of these new languages is actually a language, this implies that new sign languages actually present cases of radical language restructuring rather than of language genesis.

Practically, it is important that decisions concerning language policies, e.g. in deaf education, are informed correctly about the nature of the language varieties found in a given area. In the absence of a well-defined deaf community, linguistic studies on the signing of rural deaf signers are typically lacking. In such situations, the signing of rural deaf people is usually referred to as “home sign”. If one infers the findings on oralist home sign in judgments on “home sign”, the rural home sign languages risk being ignored as a suitable language for various applied purposes, including deaf education, which may lead to the introduction of foreign sign languages instead.

#### 4.2.2. *Communities with a high incidence of deafness*

At least four of the signing communities in the corpus have a relatively high incidence of deafness, three of which were revisited during the second visit of the survey team: Koubewel Koundia, Fombori and Berbey.<sup>4</sup> However, the distribution of deafness in all three communities differs from the communities with a high incidence of hereditary deafness (CHIDs) that are the topic of most chapters in this volume.

Deafness in Koubewel Koundia and Fombori is not mainly caused by hereditary deafness. In both villages, deafness has multiple causes and many signers became deaf postlingually, following a disease. This is likely to affect the patterns of language transmission. When deaf people are not bound by family ties, they are less likely to be exposed to the signing of deaf adults. Thus, the influence of hearing signers is likely to be even larger than

in the case of CHIDs (cf. Nyst, 2007). Also, the high incidence of deafness in Koubewel and Fombori is likely to have a different historical pattern as compared to CHIDs. Berbey differs from Koubewel Koundia and Fombori in that the deafness there is hereditary, as in CHIDs. Unlike CHIDs, however, its occurrence has not spread to other families in the village community. If generations to come maintain an equally high incidence of deafness, the deafness and the sign language may spread out more widely, thus following the scenario of Mardin Sign Language (see the sociolinguistic description by Dikyuya, this volume) or other CHID languages. As mentioned, it was the impression of the survey team that the signing in Berbey was the most expanded and fluent encountered during the survey visits. It is probable that the frequent interaction provided by a harmonious family setting, with several deaf members of the same age group, stimulates the use and hence the expansion of the language.

It is likely that the sociolinguistic differences between Koubewel Koundia, Fombori and Berbey affect the structure of the signing in each, causing them to diverge from the signing in CHIDs, as well as from each other. Thus, we might want to refer to Koubewel Koundia and Fombori as “communities with a high incidence of non-hereditary deafness (CHINDs)” and to the sign language of Berbey as a “family sign language”. However, rather than (or at least prior to) suggesting an increased number of sign language types, it is more useful at this point to describe and analyse a wider range of individual microcommunity sign languages, and thus to facilitate a proper appreciation of the impact of their various idiosyncratic and sociolinguistic features.

## **5. Conclusion**

The survey in Douentza has resulted in a large annotated corpus of the signing of deaf people in various types of communities (Nyst, Magassouba and Sylla, 2012b). The corpus includes signing from villages with a high incidence of deafness, the signing of fluent and less fluent home signers, and a family sign language. From a methodological perspective, the survey showed that Deaf-led snowball sampling is an effective way to identify deaf signers in rural areas.

The preliminary analysis presented here suggests features of the signing community, such as the number of deaf people, the incidence of deafness, and the type of deafness (i.e. hereditary or non-hereditary), have sociolinguistic reflections. These reflections include the frequency and distribution of deaf-deaf and deaf-hearing interaction, the status of deaf people and hence

their sign language, and the onset of sign language acquisition. The sociolinguistic features can safely be assumed to affect the structure of the sign languages through well-known linguistic processes, e.g. language acquisition and contact. The rich diversity of signers, languages and communities encountered during the survey, as well as the features they share (such as existing in areas with no deaf education and an average incidence of deafness) provide us with a natural laboratory to study how sociolinguistic setting interacts with modality in shaping visual language.

An important point that became clear is that the term ‘home sign’ is currently used to refer to the signing of deaf people in widely divergent and basically incomparable settings. To avoid overgeneralisations, it may be constructive to explicitly distinguish oralist home sign from rural home sign.<sup>5</sup>

The survey also encountered two communities that have a high incidence of non-hereditary deafness and a community that has a signing family with three generations of deafness. One can assume that these communities and their sign languages will differ from the existing categories of sign languages and/or signing communities, leading to two new types of sign languages: CHIND sign languages and family sign languages. However, in view of the dearth of knowledge about microcommunity sign languages and their communities, it is probably more effective to first systematically investigate an extensive range of such signing communities and the varieties in them to come to a deeper understanding of which sociolinguistic factors crucially influence the structure of signed languages.

## Notes

1. We wish to thank the deaf and hearing signers who participated in this survey, Prof. Jeff Heath and his team of co-workers, Mr. Alassane Djepkele and the Institut des Langues Abdoulaye Barry for their generous and invaluable contributions to the survey.
2. The few studies focusing on adult home signers in rural areas include the work of Yau (1992); Coppola on Nicaraguan home signers (e.g. Coppola & Newport, 2005); and Fusselier de Souza on adult home signers in Brazil (2006).
3. Image from [http://upload.wikimedia.org/wikipedia/commons/7/79/Cercle\\_of\\_Douentza.png](http://upload.wikimedia.org/wikipedia/commons/7/79/Cercle_of_Douentza.png). Date of download: 30/ 05/2012
4. Due to practical circumstances, Drimbé, with 5 deaf signers on a total population of 635, could not be revisited.

5. Zeshan (2010) uses the term ‘communal home sign system’ to refer to rural home signers in communities where hearing community members sign as well. The term ‘rural home signer’ is more neutral and does not make a statement about the interaction patterns with the hearing environment per se, but mainly serves to distinguish the term from home signing children in oral environments.

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