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Personal experience narratives in three West African sign languages: the influence of time-depth, community size and social interaction

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Personal experience narratives in three West African sign languages

The influence of time-depth, community size and social interaction

This book is about three West African sign languages with different time-depths, community sizes and patterns of social interactions. Adamorobe Sign Language (AdaSL), Ghana, is an old village sign language used by 33 deaf people. Langue des Signes de Bouakako (LaSiBo), Côte d'Ivoire, is a new village sign language, used by six deaf people. Língua Gestual Guineense, Guinea-Bissau, is an emerging school-based sign language used by around 500 deaf people.

In the three sign languages, 45 narratives of personal experiences were analysed to better understand how the time depth, the community size and the socialisation frequency influenced the three sign languages. Four different descriptive analyses of the narratives were carried out. Study 1 analysed the structure of the narratives, following Labov & Waletzky's model (1967) and Freytag's dramatic pyramid (1894). Studies 2, 3 and 4 focus on specific narrative devices that work to make narratives more convincing, as part of Labov's (1972) "evaluation" component. These devices refer to the moments when storytellers give dramatic prominence to narratives through the incorporation of characters, such as the use of different signing perspectives (Study 2), the use of role shifting between characters and constructed dialogues (Study 3) and the use of different types of descriptions of the animal (Study 4).

These studies show that AdaSL and male LGG signers use devices that reflect a greater ability to capture the audience's attention, while LaSiBo and female LGG signers tend to show similar patterns in using simpler or reduced devices.

This study shows that the frequency of social interaction between deaf peers is the most crucial factor in language change over time.

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Marta Morgado
Personal experience narratives in three West African sign languages



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My position as a deaf researcher

It seemed natural to me as a deaf researcher to work with deaf people. I took for granted the feeling of mutual identification bringing us together, researcher and research 'objects'. It was only at the World Congress of African Linguistics in 2021 (held online during the global pandemic) that, after one of my presentations, I was taken aback by a simple, though crucial question. Lindsay Dunn, a Deaf Studies lecturer at Gallaudet University, asked me what my positionality was as a white deaf person working with African deaf communities, especially considering that these were very small communities. What seemed so evident to me before, had suddenly filled me with doubts. Was I a rightful researcher at all? To answer this, I need to go back to my past as it made me the person I am today.

I was born deaf, and at the age of two, I had my first contact with deaf children at school. Deaf education in the 1980s was not at its best. My parents wanted me to be with deaf people like me but they also wanted me to have a better education so I attended a hearing school as well, one in the morning and the other in the afternoon. Although Portuguese Sign Language (LGP) has existed since 1823, we were only deaf children at school creating our own way of communicating. Very few had deaf parents and brought LGP from home, but most of the time we were just mixing it all up. For us, it was signing non-stop even if we got to be called monkeys by teachers, who made us use speech to be 'intelligent'. At that time, teachers did not sign and there were no interpreters, so we could hardly follow the lessons. We felt inferior to the hearing because we were deaf, but we kept ourselves safe in our togetherness. Maybe because of this, I decided not to go to the university. I was tired of struggling to understand the teachers.

While my expectations within the hearing world shrank, the deaf community outside of school opened up. I joined the Portuguese Deaf Association at 16 and it became my second home. There I understood what deaf pride was and how much I needed those social gatherings to fully develop as a deaf person. At the same time, my horizons with the international deaf community spread out. At the age of 15, I had my first contact with International Sign (IS), in a deaf camp in France. After that, many other experiences followed, leading me to build a network with deaf people from all over the world. Besides IS, such exchanging experiences made me feel quite at ease with other sign languages, such as American Sign Language and Libras (Brazilian Sign Language).

While some hearing people made me feel inferior, others looked at me as if there was something special about me. Right from the beginning, since I was two, I remember people coming by the school to look us up. Yet, we never understood why, only that

it was related to our deafness. This went on until I finished secondary school without ever receiving the results of these works. In my last year of high school, the University of Lisbon started a research project on sign language, of which I ended up being part. This was 1994 and the project was coordinated by hearing people who did not sign, which did not please the deaf community. The project included a one-month training course at the University of Hamburg, Germany, where I realised that it was possible to proceed to a higher education as a deaf person. When the project ended, I left the academic world because it was not connected to the deaf community.

In 1997, I started working at the biggest deaf school in Portugal which was just beginning the bilingual educational model. At the same time, I gathered up the courage to get a university degree in education. This was a night course, since all students were supposed to be working in a day school. This university had never taken in a deaf student before, so, in the end, I was put to a test. Because I was teaching deaf children, the university board wanted to be sure that I was capable of teaching hearing children as well, which, of course, was never in my plans. It was so obvious to me, as a deaf teacher, that my rightful students were to be deaf like me. I did teach a class of hearing children anyway with the absolute sense of unfairness of it, knowing that so many hearing teachers were teaching deaf students without any preparation or even the willingness to do it.

After graduating, I went on to integrating the first master's course specifically in LGP and deaf education. In a class of about 30 people, there were only four deaf and two eventually dropped out. Shockingly, no interpreters had been included in the course's design. Therefore, after fighting for an interpreter without success, the university invited the Portuguese Deaf Association to give some of the classes. Of course, the deaf taught in LGP and, because there were no interpreters, half of the class did not show up. In the end, it was again challenging to find a qualified interpreter for my master's defence.

While teaching at the deaf school, my interest for deaf literature sparked. I was appalled by the lack of children´s stories with deaf characters. There were traditional stories translated to LGP, but deaf children could hardly feel identified with any of the characters. Therefore, I started creating deaf-directed stories myself. Stories that were about all of these children that I was teaching, all so different from each other and all so similar in their way of being in the world, as deaf. Many of the children came from former Portuguese colonies in Africa, without their families, without a sign language. Still, it was so easy to connect. As a teacher of the deaf at that same school for 21 years, and in collaboration with the Portuguese Deaf Association, I gave training courses to teachers of the deaf in West African countries, namely Cape Verde, São Tomé and Principe and Guinea Bissau. Moreover, with both the Deaf Association

and the Ministry of Education, I expanded curricula for Portuguese Sign Language as first language from nursery to high school and trained deaf teachers throughout the country on deaf education and deaf literature.

When I started as a PhD student at Leiden University, in 2018, my world opened anew. I moved from Portugal to the Netherlands, bringing a background of experiences to finally be part of a team composed of people fluent in sign language, both deaf and hearing. Although I had previously worked with west African deaf communities, I had never been to villages with deaf people. Thus, I prepared for fieldwork very carefully, so not to do to others what researchers had done to me while growing up. Fortunately, I had been preceded in the field by exemplary researchers, such as Victoria Nyst and Annelies Kusters. I did not stay in the village though, because I took my family with me – my youngest daughter was still breastfeeding – and there were no houses available. Hence, I stayed as close as possible to the villages.

In all three countries, I made sure I did not use any sign language other than their own. Since I had seen Língua Gestual Guineense (LGG) emerge, my communication with the deaf in Bissau, Guinea-Bissau, was never a barrier. In the village of Adamorobe, in Ghana, I communicated with Marco Nyarko, the deaf assistant, in IS although he only went with me to the village on the first and last days of fieldwork and on filming days. At the beginning of the fieldwork, the deaf youngsters also communicated with me in Ghanaian Sign Language (GSL), which was easy for me to follow because it is based on American Sign Language. Still, as soon as I could understand Adamorobe Sign Language (AdaSL), within no more than two weeks, they promptly stopped using GSL with me and switched to AdaSL. In contrast, since my very first day in Bouakako, Ivory Coast, I was able to understand Langue des Signes de Bouakako (LaSiBo) because many of the signs were similar to AdaSL and Língua Gestual Guineense (LGG). Hence, I always communicated directly with the deaf.

I suppose being deaf might have made the whole process easier for me. I was well accepted in the village of Adamorobe for being "DEAF SAME" as Annelies Kusters described in her book (2015). However, deaf – and hearing – people in Bouakako and on my first visit to Guinea-Bissau in 2005 were confused that I was also deaf. How could I be white and had not undergone 'curative treatment' for my deafness? What really stood out in me as an outsider was being white. They would get a plastic chair for me to sit on, while the others sat on wooden benches, or when I drank water from the bag, they would tell me to buy water bottles instead. In Adamorobe, after some time, they were very comfortable with me. They would ask me to touch my white hair because they had never seen one as white as mine.

Apart from being deaf and white, there were two other characteristics about who I am that played an important part during my fieldwork: being vegetarian and LGBTQ+.

The fact that I do not eat meat was worrisome for some deaf people. They would offer me food and I had to refuse it, which offended them. This led me to make up some poor excuse about getting sick if I would eat it. I also had to go around the truth about whom I was married to and had children with, especially in the two villages. They would ask about my 'husband' and I would say he was away. They would ask me for photos and I would show them pictures of my children, but mostly avoided developing the subject further. I believe that, in Guinea-Bissau, deaf people know that Mariana is my partner. Although we were never open about it, we never hid either when asked about it. This became clearer when they met our children.

During my stay, I paid attention to each deaf person whenever possible, helping them with their tasks and chatting. In Adamorobe and Bissau, I tried my best to remain neutral in conflicting situations, being there for both sides without getting involved in their problems. The trickiest situation to deal with is that as a foreigner from the global north, I am always perceived as someone with money, at least to their standards. Therefore, I had to be very careful when distributing goods, making sure that all deaf people benefitted from them. When I am asked for money, I try to assess the real need, like when someone is sick and needs medicine or a medical appointment. Those are very difficult situations to manage, especially from afar.

After the fieldwork, I kept myself available. I contact (and am contacted by) deaf people quite regularly, sometimes simply to say hello, except with the deaf from Bouakako because none of them has a mobile phone. I also exchange frequent messages with the local assistants in the three countries for various matters related to my work and other issues. I am currently planning to return to Adamorobe and to Bissau to show my final work to the deaf people. Although Bouakako is not in the near plans, I hope to get the opportunity to return there as well. I also plan to show my work at the Ghanaian National Association of the Deaf to stress the importance of preserving AdaSL. After the thesis, I really want to get the deaf community of Guinea-Bissau more involved in future research on LGG, such as organizing training about filming techniques, computer skills, ELAN annotation, among others.

Finally, and replying to Lindsay Dunn, I position myself as a deaf researcher who keeps connected to the local deaf people, trying to include them in academic work whenever possible and supporting deaf education. Of the three communities involved in this thesis, Guinea-Bissau is the only one that has children and has still a lot of work to do to improve deaf education, especially in what concerns university access to deaf young adults.

List of abbreviations

Sign Languages

ABSL - Al-Sayyid Bedouin Sign Language

AdaSL – Adamorobe Sign Language

ASL – Americaqn Sign Language

Auslan - Australian Sign Language

BISINDO - Bahasa Isyarat Indonesia (Indonesian Sign Language)

GSL - Ghanaian Sign Language

ISL - Israel Sign Language

ISN - Idioma de Señas de Nicaragua (Nicaraguan Sign Language)

KQSL - Kufr Qasem Sign Language

LaSiBo – Langue des Signes de Bouakako (Bouakako Sign Language)

LaSiMa - Langue des Signes du Mali (Mali Sign Language)

LGG – Língua Gestual Guineense (Guinean Sign Language)

LGP – Língua Gestual Portugesa (Portuguese Sign Language)

LGSTP – Língua Gestual São Tomense e Principe (Sign Language of São Tomé and Principe)

Libras - Língua de Sinais Brasileira (Brazilian Sign Language)

LSF - Langue des Signes Française

LSR – Romanian Sign Language

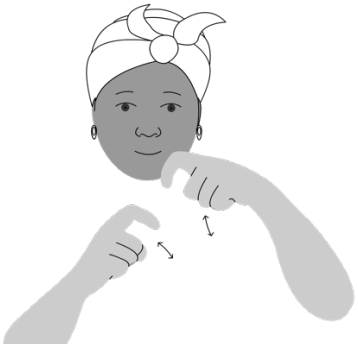
Others

L&W – Labov and Waletzky

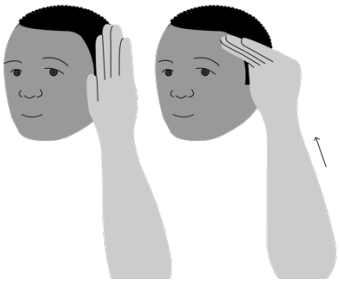
S&S – Size and Shape

PART I

INTRODUCTION



Adamorobe (AdaSL)



Bouakako (LaSiBo)



Guinea-Bissau (LGG)



Bissau (LGG)

Chapter 1 – Introduction

1.1 Introduction

How you language is beautiful. Don´t let anyone tell you your languaging is wrong. Your languaging is the story of your life.
(Jon Henner)

This thesis investigates personal experience narratives in three West African sign languages. Two of them are young, emerging languages of different population sizes and one is an older established language. This research describes and compares how signers structure their narratives and use devices to captivate the audience to show how narrative structures and devices develop in sign languages.

This is the first research to compare African sign languages with different backgrounds and also to study the narrative structure of micro-community sign languages. This study contributes to our understanding of the linguistic development of narratives by finding that the factor of social interaction appears to play an important role. The present research confirms that the basic ordering of information in a story is present immediately in language emergence as a human universal. Also, starting and finishing a story as a narrator and enacting the character in between seems to be quite straightforward. However, it has been demonstrated here that enhancing devices to turn a narrative compelling need to be learned by watching and telling stories.

Storytelling is a fundamental practice found in all human societies. Yet, specific storytelling traditions, topics and particular language constructions are expected to vary across groups. Thus, when considering languages in a different modality, how much of this universality will be found in sign language narratives? Another important aspect of storytelling is that it requires an experienced use of language since information about an event has to be presented to an audience in a clear, logical, and interesting way. The more a language user is skilled the more developed will be the potential ability to tell a captivating story. Also, the more a person is exposed to language use, and especially to storytelling, the more that ability will strengthen. To what extent do signers of small communities and emerging sign language structure their narratives and captivate their audiences through specific devices?

From the moment deaf people are part of a communicative community, they produce storylines with a beginning, middle and end, as much as hearing people do. However, when compared to spoken languages, the signed modality presents specific devices to enhance the narratives. For one, signers can express different signing perspectives.

They can embody a character using a real scale projection, and their bodies to switch between enacted characters, for instance during the (re)construction of a dialogue. They can also use their hands to display story elements on a reduced scale around their signing space. These narrative devices can occur spontaneously in everyday conversations to tell about personal experiences. Such stories are rich instruments for linguistic studies because they are not planned and can thus tell us about the real practices of these informal storytellers.

In this thesis, I compare personal experience narratives in three sign languages in West Africa to expand the crosslinguistic understanding of ways of structuring narratives and using narrative devices. By looking at languages with different sociolinguistic backgrounds, I can investigate whether and how various factors play a role in the use of different narrative devices and structures in storytelling. The present study focuses on two sign languages developed by small deaf groups in villages, Adamorobe Sign Language (AdaSL), Ghana, and Langue des Signes de Bouakako (LaSiBo), Ivory Coast. The first group is composed of 33 deaf people and the second of six. LaSiBo is a language around only 50 years old, while AdaSL is much older, with multiple deaf (and hearing) signing generations. The third sign language, Língua Gestual Guineense (LGG), emerged 20 years ago in a school setting in Bissau, Guinea-Bissau, and is currently used by more than 500 deaf people. In this way, the study of personal experience narratives in both old and young sign languages, told spontaneously by deaf signers of both small and large deaf communities, sheds light on the question of how community size and language age impact the emergence of narrative structure.

This thesis contains four studies based on a collection of personal experience narratives about encounters with dangerous animals in each of the three sign languages. The narratives were collected through original fieldwork done in those communities. This topic of animal encounters seems to be recurrent in deaf people's conversations at least in this part of the globe, as I had the opportunity to witness in informal gatherings in the field. The telling of life-threatening narratives has been studied especially by Labov & Waletzky (1967) and Labov (1972) who pioneered a model of the internal structure of personal experience narratives. Thus, I follow their methodology in analysing the internal structure of narratives (Study 1). These authors also stress the importance of particular narrative devices enhancing the story. These devices have modality-specific correspondences which this study focuses on, namely the use of signing perspectives (Study 2), role shift between characters and constructed dialogues (Study 3), and depictive strategies to describe the animal encountered (Study 4). From such an analysis, similar - more basic – features are expected to come to light. Moreover, specific devices will probably appear only in the languages that have developed them over time or through intense socialisation with a large number of interlocutors.

The book is organised in the following way. Here in **Chapter 1**, I begin by giving an overview of the sociolinguistic factors that characterise the sign languages studied in this thesis. I discuss the setting and size of deaf communities, the time depth of sign languages, and social interaction between signers. Then, I explain how the study was conceived and how it is organised. Finally, I describe the sociolinguistic profile of each one of the three sign languages. I start with Adamorobe Sign Language (AdaSL), then Langue des Signes de Bouakako (LaSiBo) and finally Língua Gestual Guineense (LGG).

Chapter 2 details the methodology, including the procedures undertaken before, during and after the fieldwork, the participants, and the analysis. **Chapter 3** focuses on Study 1, on the internal structure of narratives of the three sign languages following Labov & Waletzky's (1967) model. The following chapters regard narrative devices that are used by the storyteller to keep the interlocutor(s) interested. **Chapter 4** relates Labov's (1972) evaluation component with the enhancing devices analysed in studies 2, 3 and 4. **Chapter 5** describes Study 2 about signing perspectives. **Chapter 6**, in Study 3, includes role shifts and constructed dialogues between characters. Finally, **Chapter 7** focuses on Study 4 about the animal depiction of size and shape, considering that the stories elicited are all about animal attacks. For each chapter describing a study, I present a literature review about the corresponding topic and the specific methods used in that study. Then, I provide quantitative summary results for all languages, and a descriptive analysis of the data in each of the three languages separately: AdaSL, LaSiBo and LGG. In the end, I discuss the results comparing the three sign languages and the literature review. **Chapter 8** concludes the whole study, synthesising the findings from each study and addressing the main research questions (see §1.3).

In this introductory chapter, I first address various factors mentioned often as being crucial in the development of sign languages in §1.2, starting with deaf community size (§1.2.1) since the three sign languages in this thesis are used by groups of different sizes: one with less than ten deaf people – a family sign language –, another with a little more than 30 – a village sign language – and a third one with half a thousand deaf people – a school-based sign language. The second part focuses on the time depth of sign languages (§1.2.2) since AdaSL is a relatively old sign language—possibly as old as 250 years—with multiple signing generations, LaSiBo is about 50 years, and the 20-year-old LGG is one of the youngest sign languages in the world. Afterwards, I discuss threats to language vitality related to both community size and language age (§1.2.3). Next, I explain the importance of social interaction in language development (§1.2.4) and the role of storytelling especially in deaf communities (§1.2.5).

Next, I explain how the study was conceived, what are the research questions and which studies will try to answer them (§1.3). The last three subsections provide a sociolinguistic profile of each one of the sign languages, starting with AdaSL (§1.4), then LaSiBo (1.5) and lastly, LGG (§1.6).

1.2 Overview of sociolinguistic factors distinguishing the sign languages in this study

The three sign languages in this research are linked to each other by at least one factor, whether the community size or the language age. All are from West Africa. Two are villages, thus with small deaf groups, and one is a school-based sizeable deaf community. Two are very young, and one is quite old. Adamorobe Sign Language (**AdaSL**) is old language by a few deaf people in a village in Ghana (Nyst 2007a). Langue des Signes de Bouakako (**LaSiBo**) corresponds to a family sign language used for almost 50 years by six deaf people in a village in Ivory Coast (Tano 2016). Língua Gestual Guineense (**LGG**) emerged 20 years ago in a school setting in Bissau, Guinea-Bissau, and is now used by around 500 deaf people (Martins & Morgado 2017). Adamorobe and Bouakako villages, in the bordering countries of Ghana and Ivory Coast, are about 700 km apart (see Figure 1). These two languages share several characteristics: cultural traits; their spoken languages belong to the same language family, and the cause of deafness is hereditary (Tano 2016). Guinea-Bissau – the smallest country in West Africa – is located further to the northwest. It shares with the other two countries some cultural traits, including local gestures that have come to be incorporated into their sign languages (Martins, forthcoming; Nyst 2010). Throughout the thesis, I present the data from these three language communities in the same order, by oldest-to-youngest age: (1) Adamorobe/AdaSL, (2) Bouakako/LaSiBo, (3) Bissau/LGG.



Figure 1. Map of the three language communities studied in this thesis: in the city of Bissau, Guinea-Bissau; in the village of Bouakako, in Ivory Coast; and in the village of Adamorobe, in Ghana

The differences between these three languages are summarized in Table 1, based on three factors that are explained in more detail later in this chapter: **number of deaf signers, time depth** (i.e., language age), and **social interaction**. I will treat the setting and number of signers in the same subsection since they are closely connected. In terms of their setting, AdaSL and LaSiBo are village sign languages, while LGG has emerged out of a deaf school setting and in an urban area. For the number of signers (signing community size), LaSiBo has only six deaf people, AdaSL has 33, and Bissau has a deaf community of an estimated 500 members. Deaf people have lived in Adamorobe presumably for 250 years; while the oldest deaf person in Bouakako is 58 (e.g., still the first generation); and in Bissau, the deaf gathered in a school only 20 years ago. Finally, in terms of social interaction, while AdaSL and LGG signers interact with each other daily, deaf people in Bouakako do not seem to seek each other out for socialising. After collecting the data and doing a preliminary analysis, I also got the impression that male and female signers in Bissau patterned differently in their narrative structures, which could be related to their social interaction practices (discussed further in §1.2.4). Therefore, in all of the studies, I also evaluated LGG signers in two separate groups based on gender.

Table 1. Summary of the main characteristics of the sign languages in the present study

	setting		number of deaf signers			time depth		social interaction	
	village	school	< 10	< 40	> 400	young	old	daily	occasional
AdaSL	✓			✓			✓	✓	
LaSiBo	✓		✓			✓			✓
LGG		✓			✓	✓		✓	

While other studies of village sign languages include hearing signers (Kisch 2012 for Al-Sayid Bedouin Sign Language; Ergin 2017 for Central Taurus Sign Language), the studies here do not include them. This is because, during fieldwork in the two villages and in Bissau, I found that only a few hearing people were fluent signers. Also, they only used sign language when communicating directly with the deaf, from whom they had learnt it, and only for short conversations. In §1.2.4, I discuss the social interaction of deaf people with each other and with the hearing in more detail.

1.2.1 Size of deaf communities & sign language emergence

Sign language communities are not all the same. They vary based on demographic factors, such as how large the community is, which is often related to the setting where it has emerged (e.g., Fenlon & Wilkinson 2015). The size of the community may have some influence on language development, as shown by the crosslinguistic study of three sign languages in Israel that, having emerged around the same time, the village with the smaller deaf population has the slowest language development (Stamp & Sandler 2021). In this thesis, the two sign languages developing in villages are used by much smaller communities than the one emerging in the educational setting in Bissau. This subsection describes the classification of deaf communities by size.

An estimated 70 million deaf people live in different types of deaf communities around the world[1] and use approximately 215 distinct sign languages[2] (Hammarström et al., 2023). These refer mainly to large communities that first gathered in educational contexts. Such contexts usually develop into **macro-communities**, whose sign languages tend to spread at the national level, as is the case of LGG. In different parts of the world, there are also 32 rural sign languages, used mainly by **micro-communities** (de Vos & Nyst 2018, 480), such as AdaSL and LaSiBo.

To this day, it is challenging to determine the precise size of deaf communities, especially macro-communities (Schembri 2010; Fenlon & Wilkinson 2015, 7). To define a deaf community, Woll and Ladd (2012, 160) observe that "they are broadly understood to consist of those deaf people who use sign language." In feeling excluded from society, deaf people tend to share their experiences and encounters with various barriers – social, financial, educational, etc. In this way, they develop a sense of community, creating alternative structures based on deafness, communication and mutual support (ibid., 162). When they come together, they "are able to develop an awareness, acceptance, and celebration of both individual and collective Deaf self" as if healing their "negative experiences" among peers. They accept themselves as deaf in the group. This is not possible if they are isolated from each other (ibid.).

The larger a specific sign language community is the more difficult it is to know its exact size (ibid., 160). For one, finding any census data with information on both deafness and signing habits is not straightforward. The comparative handbook edited by Jepsen and colleagues (2015) is a good example of such difficulty. It provides a list of about one hundred sign languages whose community sizes are reported to the Ethnologue (2015, 23). Nearly half of the language entries fail to show the estimated number of signers, as did the national sign language of Ghana, one of the countries in the present study. Other entries refer to a number of signers without specifying whether they also include hearing signers, as did Ethiopian Sign Language.

Typically, macro-community sign languages emerge within an educational context. However, there are exceptions. For example, the Langue des Signes du Mali emerged from a group of deaf men in Bamako, the city capital, to grow to an estimated population of 5000 deaf people (Nyst et al. 2012). Also, Hausa Sign Language spread through social contact outside of schools in vast urban and rural regions to include thousands of signers in a large region in northern Nigeria (Schmaling 2000). Again, deaf people in the rural Hausa area are estimated to be between 70.000 and five million. This number is much higher than some national sign languages, like the ones in Chad, West Africa, with 390 signers (Jepsen et al. 2015, 24). Thus, a distinction

[1] Data retrieved from the World Federation of the Deaf website (wfdeaf.org) on March 11 2023.
[2] Data retrieved from the Glottolog (glottolog.org) on March 11 2023.

between sign languages emerging within an educational context or outside of schools does not necessarily predict community size.

As far as we know from the existing studies on the origins of older sign languages, macro-communities developing outside schools are exceptions. Most commonly, national sign languages co-occur with others emerging in more isolated locations (Jepsen et al. 2015, 24–25). For example, the Ghanaian Sign Language coexists with the sign languages used in at least two villages identified as having deaf inhabitants: Adamorobe and Nanabin (Nyst, 2010). These are used by micro-communities, representing small-scale sign languages (Schembri 2010; Fenlon & Wilkinson 2012, 10), typically located in villages with a high incidence of hereditary deafness. In such 'minority' (Dikyuva 2012), 'indigenous' (Edward 2021), 'rural' (de Vos 2011), 'shared' (Kisch 2008) or 'village' sign languages (Nyst 2007), it is much easier to identify the number of actual signers. Micro-communities comprise language groups that may be as large as a little more than a hundred deaf people, such as the 130 deaf of the Al-Sayyid Bedouin people (Kisch 2012). Most of these village sign languages consist of a few dozen deaf people, like the group of 21 deaf people in the Central Taurus mountains in Turkey (Ergin 2020), the 24 people in the village of Ban Khor in Thailand (Nonaka 2012), or the 33 people in the village of Adamorobe, Ghana in the present study.

When the then 45 deaf people in the village of Adamorobe were first discovered by David and his team (1971) in Ghana, it was labelled a "deaf village" (see §1.4.2 for more details). Deaf villagers were using signs with each other and the hearing villagers. Then on Grand Cayman Island, Washabaugh (1981, 123) identified 18 deaf signers who hardly interacted with hearing people. Many other descriptions of such communities followed, from all over the world.

Micro-community sign languages also vary linguistically, showing unique characteristics compared to other sign languages. For instance, Kata Kolok, a sign language used in the village of Bengkala, Indonesia, presenting a high incidence of deafness for several generations (Marsaja 2008; de Vos 2012), has no grammatical system of directional verbs (de Vos 2012, 173). In turn, AdaSL appears to lack the use of entity classifiers in motion predicates (e.g., a handshape representing a person moving through space; Nyst 2007, 196; but see Chapter 5 for more details). However, both tend to use a large signing space (Marsaja 2008, 160; de Vos 2012, 268; Nyst 2007, 214).

There are also extremely small groups that tend to consist only of two or a few deaf people from the same family growing up communicating with each other. When they and possibly one or more hearing family members innovate a new communication system, this has typically been called **family homesigns**. Examples of these are the

three siblings in the village of Zinacantec, Mexico (Haviland 2020), and the six deaf relatives in the village of Berbey, Mali (Nyst 2012). Tano (2016, 31) also hypothesises that the six deaf people living in the village of Bouakako, in the Ivory Coast share a family sign language, LaSiBo, since they are connected by a consanguinity relationship (see §1.5 for more details). There is also the case of a wider extended family with many deaf members in Nanabin, Ghana, comprising 25 to 30 deaf members of the same family, using a local sign language among themselves which Nyst (2010, 7) labelled as a family sign language. Nyst (2010, 18) justifies such a label, rather than homesign, due to a large number of deaf family members and the fact that it has been developing and stabilising for three generations.

The names given by scholars to the sign languages used by deaf family members vary (see Table 2). They are commonly labelled 'family sign languages' (Nyst 2010, in Ghana; 2012, in Mali; Tano 2016, in Ivory Coast). They can also be designated as 'familylect' (Sandler et al. 2011, in Israel), 'deaf family small-scale sign language' (Dikyuva 2012, in Turkey) or 'family-based signed language' (Hou 2018, in Mexico). However, some authors are more cautious in designating such a communication system as a sign language. Haviland (2020, 396) argues that the six deaf members of the same family in the village of Zinacantec, in Mexico, use 'family homesign' instead because they only use it inside the family.

Table 2. Classification of deaf family signing systems

Location	Deaf members	Time depth	Label	Author
Nanabin village, Ghana	25–30	3 generations[1]	Family sign language[1]	Nyst 2010 [1] p. 18
Berbey village, Mali	6[2]	3 generations at least[3]	Family sign language[4]	Nyst 2012 [2] p. 265; [3] p. 266; [4] p. 271
Boukako village, Ivory Coast	**7**[5]	50 years[6] in 2011	Family sign language	Tano 2016 [5] p. 67; [6] p. 32
Mardin village, Turkey	14[7]	Since the 1930s (4 generations)[8]	Deaf family small-scale sign language[8]	Dikyuva 2012 [8] p.396; [9] p.395
San Juan Quiahije Chatino village, Mexico	**11**[10] of 6 families	2 generations[11]	Family-based signed language varieties[11]	Hou 2018 [10] p.574; [11] p.570

Zinacantec village, Mexico	3[12]	1 generation[13]	Family homesign[13]	Haviland 2020 [12] p.46; [13] p.35

All of these cases differing in cultural and geographic environments seem to have in common a high incidence of hereditary deafness. Some deaf people have access to school (e.g., in Adamorobe), while others do not (e.g., in Bouakako village [Tano 2016]). Some of these contexts still see children being born deaf (e.g., Hou 2016 for San Juan Quiahije Chatino village), while others watch their deaf population get older (e.g., Kusters 2015 for Adamorobe village) and disappear (e.g., Dikyuva 2012 for Mardin). Deaf people can marry each other in some places (e.g., Groce 1985 for Martha's Vineyard) but not all (e.g., Nyst 2007 for Adamorobe). Some areas are completely isolated (e.g., Omardeen 2022 for Providence Sign Language), while others are close to urban centres (e.g., e.g., de Vos 2012 for Bengkala). Some sign languages are constrained to one village (e.g., Meir et al. for Al-Sayyid Bedouin), while others are spread over two or more villages (e.g., Ergin 2017 for the Taurus Mountains).

In addition to deaf communities of different sizes, deaf people can be isolated within a hearing community with no other signers or deaf people. In such situations, deaf people, usually relying on a gestural system to communicate with the surrounding hearing people, are designated as **homesigners** (Coppola 2020). On this subject, Nyst (2015a) points out the importance of distinguishing between homesigns developed by children growing up without access to a deaf education and a deaf community, and those developed by scattered deaf people in rural settings where a gestural communication is used by most people rather than limited to the household.

The three sign languages that this thesis focuses on belong to different types. LGG, with a growing population of at least 500 deaf people and spreading from schools in the capital to the rest of the country, has likely attained the level of a macro-community. AdaSL is, in the true sense of the term, a village sign language used by 33 deaf villagers. LaSiBo is used by seven deaf people, although one is neither native nor fluent in LaSiBo. Despite the fact they are not closely related to each other, the LaSiBo sign system used by such a small group resembles more that of a family sign language as labelled by Tano (2016, 31). In the next subsection, I address another factor: the time depth of sign languages.

1.2.2 Time-depth of sign languages and sign language emergence

The previous subsection discussed the size of deaf communities, ranging from micro to macro-communities. Here I focus on another important difference between the world's sign languages: their age or time depth, especially those of micro-communities.

The focus of this thesis is on three sign languages: an older one used in the village of Adamorobe (AdaSL) and two younger ones, that of the village of Bouakako (LaSiBo) and the school-based one in Guinea-Bissau (LGG). This section looks at the time depth of each in this order; that is, from oldest to youngest. In the literature, the distinction is often made between established and emerging sign languages (e.g., Pyers & Senghas 2007).

Considering that a macro-community sign language emerges when a large number of deaf people come together, it is possible to identify the oldest sign language of this type from the establishment of the first school for the deaf in 1760, in Paris (Millet et al. 2015). After the Langue des Signes Française (LSF), which was brought to the USA, many other sign languages have followed all over the world. In Africa, the first school for the deaf was established in Cape Town in 1863, creating the conditions for the emergence of South African Sign Language (Aarons & Akach 1998, 7). With these time marks in mind, we become aware that AdaSL, supposedly existing since 1773 (Okyere & Addo 1994, 100, but see §1.4.2 for more details), might be almost as old as LSF. Also, in what concerns the establishment of a school for the deaf, the (strong) possibility that deaf people have been meeting and developing sign languages outside the educational context cannot be ruled out (e.g., Miles 2010, for deaf people at the Ottoman Court).

However, one has to consider that even established, older languages keep changing, as do the communities that speak or sign them. For instance, it may be the case where younger generations of deaf people, from not interacting as much with each other as the older generations used to, end up by losing specific features in sign languages (Woll & Ladd 2012 for British Sign Language). For instance, Pupponen and colleagues (2022) presented a study showing differences between younger and older deaf people in the use of constructed action (embodiment of characters) in Finnish Sign Language. They observe that older signers use constructed action practically without lexical signs, contrasting with younger ones who rather use it simultaneously with lexicon (see Chapter 5 for more details).

As opposed to older sign languages, there are new sign languages. In this line of thought, when do emerging sign languages stop being considered young? One-hundred-year-old sign languages seem to be still designated as young, as are the three sign languages of Israel: the school-based Israeli Sign Language and the village sign

languages of the Al-Sayyid Bedouin and Kufr Qassem (e.g., Stamp & Sandler 2021). Considering this threshold, AdaSL is twice their time depth and LaSiBo half of it.

So far, the most studied emerging school-based sign language is the one that arose in Nicaragua around 46 years ago (Coppola et al. 2019). In a context involving interactions within a large group, deaf children turned homesigns into Idioma de Senãs de Nicaragua (Nicaraguan Sign Language) within under two decades (Senghas & Coppola 2001). Few other macro-community sign languages have emerged since Idioma de Senãs de Nicaragua. Examples are the 20-year-old LGG and Tibetan Sign Language (Hofer 2017).

Scholars define the age of sign language in different ways. When possible, they pinpoint a specific original date, which is the case for most school-based sign languages. In relatively new sign languages, they may follow the age of the oldest deaf person (Tano 2016). Still, in older sign languages, the time depth is usually determined in generations (de Vos 2012). The problem is to reach a consensus on what a generation consists of. Some may consider kinship generations (Ergin et al. 2018) and others groups of age peers (Kisch 2012). Aside from their actual years, the time depth of sign languages has been typically referred to in the literature by **generations** in villages and **age groups** in school-based sign languages. However, to determine a more precise time depth, it has been suggested to set the number of 20 years for each generation (Kisch 2012, 96) and ten years for school age groups (Molly 2014, 102).

The ages of the three sign languages in this thesis have been determined in different ways, from historical records to interviews with the community. Early descriptions of AdaSL mention that deaf people have existed in the village since the beginning of its population (Frishberg 1987), which seems to have been established in 1773 (Okyere & Addo 1994), precisely 250 years ago, though there is no concrete evidence demonstrating the exact age of AdaSL (see §1.4.2 for more details). Following this assumption, Nyst points to six generations of deaf villagers, from parent to child (2007, 22). Currently, Adamorobe has two separate deaf groups: one composed of elders and another of schooled youngsters (Kusters 2019). The fact that the younger deaf people are now bilingual in AdaSL and Ghanaian Sign Language, as well as the ageing elder population, puts the local sign language at risk. This is aggravated by the fact that no more children are being born deaf. Although the elders have had several opportunities to learn Ghanaian Sign Language (GSL), and some are fluent, they keep faithfully using AdaSL. However, it does not seem likely that AdaSL will survive past the current generation of elder deaf signers. A similar scenario is found in another older village sign language: fewer and fewer children are being born in the village of

Bengkala, and some deaf move away, putting the Kata Kolok language at risk (Lutzenberger 2022, 42).

The time depth of the second language in this thesis, LaSiBo has been defined according to the age of the oldest deaf person in the village, who was 50 years old in 2011 (i.e., born in 1961; Tano 2016). However, considering that signed communication develops in systematic interactions between deaf people, it is probably more accurate to point to the period after his deaf sibling was born ten years later (presumably around 1971), who is the second oldest deaf person. Taking into account the time for the sibling to mature as an interlocutor, that would make LaSiBo less than 50 years old, as of this writing. These two deaf siblings may or may not have interacted daily, but the natural path of development would be to move on to more structured communication. Around the same time, a third person was born deaf in the village in another family where he is the only deaf person. Ten years later, three siblings born 14 years apart in another family became deaf at a young age (see §1.5.2 for more details). Having remarkable age differences, currently between 24 and 58 years old, they do not interact much with each other in everyday life (Tano 2016), which hardly enables the development of social networks between (age) peers (Kisch 2012, 98). Since none of the deaf people has been schooled, LaSiBo is not threatened by the national sign language. However, if no more deaf children are born in the village, LaSiBo will not likely survive after its last signer has disappeared.

Whether LaSiBo's time depth is determined according to the first deaf born in the village 58 years ago or by his deaf brother's birth ten years later, it is the youngest 'family sign language' described in West Africa, still in its first – and possibly only – generation. The other two family sign languages were identified in the villages of Berbey in Mali and Nanabin in Ghana (see Table 2). The former is used by a family of seven deaf members, while the latter includes 25 to 30 deaf people. Both have been used for over three generations.

The third language in this thesis, LGG, emerged in a school context in the city of Bissau in the school year of 2003/2004. It emerged out of local gestures and quickly evolved into a structured sign language mostly used by the growing deaf community in Bissau but also in other schools across the country (see §1.6 for more details). This is probably the youngest school-based macro-community sign language in the world that is emerging independently from foreign sign languages.

Out of the three sign languages studied here, LGG is the only one whose community continues to grow, contrasting with deaf micro-communities. The sign language of São Tomé and Principe islands, off the coast of West Africa, also emerged in the 21st century in a school context. While 20 deaf people gathered in a school in 2013 for the first time in São Tomé, another group of 15 deaf people was brought together outside the school in a Portuguese project to make a dictionary of that emerging sign language

(Língua Gestual de São Tomé e Príncipe, LGSTP, Carmo et al. 2014). However, according to deaf collaborators on the site, it has been strongly influenced by the Portuguese Sign Language (Língua Gestual Portuguesa, LGP) due to ongoing contact with LGP signers, which include many Jehovah's Witnesses. Thus, a potentially emerging autochthonous language used by a micro-community of around 100 deaf members has been gradually replaced by LGP.[3]

Looking now at the three sign languages in this study in terms of diachronic generations, we again face different scenarios. Although AdaSL signers themselves distinguish between youngsters and elders, for this study I consider all the villagers as a single group due to its small size, even though their ages ranged from 20 and 72. The age of LaSiBo signers similarly ranges between 24 and 58 years of age, but they will also be analysed as a single generation of signers (Tano 2016). In contrast to these other sign languages, the school-based LGG also includes young children who are learning the language; however, the focus in this thesis is only on the first generation of LGG signers, which includes young adults and teenagers. It seems that the first generation of signers was constituted according to the development of social networks between (age) peers (Kisch 2012, 98), while those still constrained solely to the school space represent a second younger generation (Martins, forthcoming). The big difference between the two groups is the access to linguistic models, which occurs in the younger generation. The study of emerging sign languages allows us to observe how linguistic structures develop in real-time, mainly if they are not influenced by macro-community sign languages (de Vos & Zeshan 2012, 8; Meir et al. 2012, 13; Jaraisy & Stamp 2022, 1).

Having examined the time depth of sign languages of both micro and macro deaf communities, I show in the following subsection how the vitality of sign languages can be prone to change, especially in micro-communities, such as AdaSL and LaSiBo.

1.2.3 Sign language vitality

Sign languages, especially those used by micro-communities, can be threatened because of decreasing deaf population. This may be caused by emigration, ageing due to no more babies being born deaf, and superimposition of a majority sign language (Webster & Safar 2020). This is happening to AdaSL and LaSiBo.

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[3] Information based on short fieldwork in São Tomé in 2014 of Mariana Martins and me and on testimonies of a deaf Santomean, who grew up in Portugal to have schooling and came back to the island and is working at the school for the deaf, as well as from two Portuguese deaf people who have spent time there.

The prevalence of deaf births in such settings is crucial to the survival of sign language. For instance, San Juan Quiahije Chatino Sign Language has been used for one to three generations (Hou 2016, 70), depending on the family (there are six families), of which some have children. Other factors are migration and schooling. For example, the family of 14 deaf people in Mardin, Turkey, has witnessed their younger members moving away to urban centres and turning to the macro-community sign language, leading to the extinction of their sign language. Also, in the fishing town of Miyakubo, on Oshima Island, Japan, sign language was shared by deaf and hearing people who worked together on fishing and seafood boats (Yano & Matsuoka 2018, 645–646). With time, the younger deaf islanders started leaving the island for educational or professional purposes, and new people came to the island with no sensitivity to the language of the deaf. As a result, this sign language is dying out.

All threats considered, language superimposition easily puts micro-community sign languages at risk of extinction (Jaraisy & Stamp 2022). This is the case of Alipur Sign Language, with a time depth of six generations, which has been superimposed by American Sign Language (Panda 2012, 356–357), and of Miyakubo Sign Language, used over three generations, replaced by Japanese Sign Language (Yano & Matsuoka 2018, 644–645). This is also happening to micro-community sign languages with less than 100 years, like Kufr Qassem Sign Language by Israeli Sign Language (Jaraisy & Stamp 2022, 17), Mardin Sign Language by Turkish Sign Language (Dikyuva 2012, 397–398), and Ban Khor Sign Language by Thai Sign Language (Nonaka 2004, 743). It is also the case where small-scale sign languages have already reached extinction, Konchri Sain by Jamaican Sign Language (Cumberbatch 2015, 201, 388, 556).

In sum, many of these sign languages are on the verge of extinction (Table 3), primarily due to fewer babies being born deaf and consequent ageing of the remaining population (e.g., Lutzenberger 2022 for Bengkala), emigration (e.g., Dikyuva 2012 for Mardin), schooling in urban centres (e.g., Yano & Matsuoka 2018 for Miyakubo) and superimposing of a majority sign language (e.g., Nonaka 2012 for Ban Khor). Of course, such factors may co-occur.

Table 3. Examples of three micro-community sign languages undergoing population decrease

Sign Language	Number of deaf signers over the years		
Providence SL	20 (Washabaugh 1979)	17 (Lattig et al. 2007)	13 (Omardeen 2022)
AdaSL	45 (David et al. 1971)	38 (Nyst, 2007)	33 (my fieldwork)
Kata Kolok	47 (Winnata et al. 1995)	38 (de Vos 2012b)	31 (Lutzenberger 2022)

Unfortunately, to my knowledge, there are no micro-communities studied as such that have had their populations increasing.

1.2.4 Social interaction between signers

In addition to community size and language age, a third factor that is hypothesized to be of significance is interaction dynamics between signers. For language to evolve, social interaction is a crucial component, and it is hypothesised that the more that people interact, the more language becomes structured (Senghas & Pyers 2005; Stamp & Sandler 2021). One of the key differences between deaf people in the AdaSL, LaSiBo and LGG language communities is that socialisation occurs in very different ways. Although I include detailed information about social interactions in the sociolinguistic profile of the three sign languages separately in three sections later in this chapter (§1.4, §1.5, §1.6), in this subsection I present a comparison of the social interaction of signers in several signing communities. In particular, I look at micro-communities that have interaction patterns similar to the sign languages in this study. I establish a parallelism between LaSiBo and Providence Island Sign Language since deaf signers seem to not have daily socialising habits with each other as a tight group. I also compare AdaSL with Kata Kolok in terms of interaction patterns. For larger deaf communities, I pay special attention to gender differences occurring not only in Bissau but also in Benin, Senegal, Mali and Nigeria.

The moments when deaf people come together and communicate by signs, they are developing language. Thus, the more they gather, the more the language develops. In macro-communities, deaf people are known to seek other deaf people apart from the hearing society. They feel the need to be in common spaces to socialize with each other (Lane et al. 1996; Woll & Ladd 2012). This is what is happening with the deaf community in Bissau. In contrast, in micro-communities, deaf people do not seem to

seek deaf spaces to be together, because they have access to communication with the surrounding hearing people from birth (de Vos 2012, 29). The 33 deaf villagers of Adamorobe do not have the habit of being together as a whole but rather in smaller mixed groups (see §1.4.4 for more details). The six LaSiBo signers meet each other often – also because their homes are very close to each other – but their interaction partners are hearing people, even if the communication with them is limited.

In the village of Adamorobe, the deaf have probably been around since the village was founded. However, their numbers have been decreasing over the years, at least since they have been counted, while the hearing population has been increasing. In the first description of the deaf villagers by David and his team (1971), there was one deaf person per 100 inhabitants. At this time, deaf people seemed well integrated for having similar occupations as their hearing peers and were equally lacking education. The communication between the deaf and the hearing, whether for play, work or social life, occurred using sign language (1971, 71).

More recently, Kusters, a deaf anthropologist, did ethnographic work in the village, describing deaf sociality in great detail. She observes how rare it is to see hearing people fluent in AdaSL. Due to the population growth, hearing villagers started accessing education and better job opportunities. In contrast, deaf people, mainly of older generations, did not have such opportunities. Unbalanced power relations developed thereafter as the deaf kept working in subsistence farming. The hearing also banned inter-deaf marriage, revealing a negative preconception towards deafness. Moreover, since the arrival of the deaf missionary Andrew Foster, the deaf started getting special attention by receiving church donations, which probably stirred up some envy amongst their hearing peers (see §1.4 for more details).

Nowadays, the 33 deaf AdaSL signers habitually gather informally in small groups, usually in deaf peoples' homes. On Sundays, they meet in a larger group for mass. The deaf priest comes from the capital to give sermons. In the past, they attended mass to receive donations, but as donations decreased, many started missing mass. In everyday life, when the deaf are together, hearing people rarely join them (ibid.). Apart from close family members and friends, very few hearing people are fluent in AdaSL. Therefore, most conversations between deaf and hearing people are limited to greetings, task assignments and short informative reports.

In Indonesia, there is a micro deaf village community like Adamorobe. The sign language that has developed in the village of Bengkala, Indonesia is called Kata Kolok. Of the 31 deaf villagers in Bengkala, a few are children, while in comparison, the youngest deaf person in Adamorobe was already 18 in 2018. In Bengkala, deaf children are supported to attend an inclusive school where they can use Kata Kolok (Lutzenberger 2022, 64), while in Adamorobe, the younger generation of deaf people had to stay in a boarding school without any financial support and where they did not

use AdaSL. In Bengkala, village activities are shared between deaf and hearing people, they are free to marry whomever they wish and the job opportunities are equal to the hearing people (de Vos 2012, 29). In contrast, there is a marriage ban between the deaf in Adamorobe and they are far from getting the same work opportunities as the hearing (see §1.4. for more details). Another difference from the situation in Adamorobe is that deaf Kata Kolok signers seek each other for social activities (de Vos 30). Lutzenberger observes that village life has been recently impacted by important factors, such as population increase and tourism resulting from growing popularity on social media (Moriaty 2020, 196; Lutzenberger 2022, 48). Deaf people try to make the most out of it by profiting from it. They do not demand donations from foreigners like the deaf in Adamorobe. Deaf villagers in Bengkala have contact with other sign languages such as Bahasa Isyarat Indonesia (Indonesian Sign Language, BISINDO) used by visitors. Deaf people, especially the younger ones, use their mobile phones to communicate with friends from outside the village and can move around in scooters. In Adamorobe, they remain dependent on subsistence farming and therefore are more limited.

The need to seek out deaf spaces is different for each deaf community. In Adamorobe, small groups of deaf villagers interact daily, mostly after work, in the common outdoor space from deaf people's homes. By contrast, in Bouakako, deaf villagers are not in the habit of getting together, not even siblings. At first, Tano (2016) gets the impression that the deaf are well integrated into the village's social life but then realises that, in reality, they are left out in many ways. Nonetheless, two hearing people interact often with the deaf. One is married to a deaf woman, and his best friend is a deaf man. The other hearing person lives and also works with a deaf man. Family members communicate with the deaf at a basic level, such as giving orders and assigning tasks.

A parallel community to compare with LaSiBo signers are deaf people in Providence Island, Columbia, in the Western Caribbean. Despite having existed on the island since the 1800s, deaf people there yet do not have the habit of gathering as a group, either, which may limit the structural development of their sign language (Washabaugh 1986, 180) They do not interact daily, perhaps because their ages range between 8 and 81 years old (according to the latest update), but more importantly, because they are spread across the island (Washabaugh 1986, 18). Although hearing people are paternalistic towards the deaf, Washabaugh (1986, 181) suggests that Providence Sign Language still developed out of the interactions that deaf people have with the hearing. However, Omardeen (2022, 35) found various levels of sign language fluency in hearing people, even if deaf people appear to sign more often with their hearing than deaf peers (ibid., 38). This might also be the case with LaSiBo.

In general, we find other situations in which contact with hearing people through gestures is important as the grounding for communication. Le Guen (2022, 4) suggests that local gestures often serve as a basis for communication between hearing and deaf people, which might easily be misinterpreted by outsiders for the type of communication being held; that is, people may interpret interactions with only shared community gestures as a sign language. Indeed, in an Indian village, in Brazil, where there was a deaf child, it was observed that all hearing people communicated with her with gestures (Ferreira-Brito 1984). However, changes over time concerning the proportion between hearing and deaf inhabitants should be taken into account as an important factor in distancing between the two groups. Lutzenberger stresses that how sign languages are shared in micro-communities should be looked at on a case-by-case basis (2022, 88). Indeed, I recall from my own experience that when I first arrived in Adamorobe, I did not see anyone signing, nor did Kusters (2012a, 2014). I had pictured the village in mind as a place where I would easily see people signing around but that was not the case, at least when I was there. Even when I was with deaf people only on a few occasions, I saw them interacting with the hearing. I also had the information that in Bouakako, there were at least two fluent hearing signers.

In contrast to the lack of gathering habits observed among the deaf people of Bouakako, larger groups of deaf people do tend to seek out shared spaces where they develop a sense of community. Tano (2016, 52) describes such informal gatherings at Abobo, a municipality near Abidjan, alongside formal deaf associations. In Bissau, Martins and I have found that deaf people interact with each other daily. They get together after work during the week. On Saturdays, they meet to play football or between the women. On Sundays, many of them gather alternately at the home of one of the deaf. Some deaf men work together, especially at the fishing harbour and in construction. We also observed that men interact more often than women since obligations usually constrain women at home or with their children. Despite the gender differences, LGG is increasingly structured and expanding nationwide (see §1.6.3. for more details).

In reflecting on how the interaction patterns in Bissau might be comparable to other deaf communities, I found several instances in the literature in which social patterns by gender are mentioned in deaf communities in Africa, as described below, but surprisingly these have not previously been considered as a whole. Further, previous research has not examined whether gender differences in interaction specifically affect sign language skills or linguistic content of signing, which this thesis does for the first time by describing differences in narrative structure and devices between deaf women and men in Bissau.

From his anthropological work in Benin, Mildner (2021) shows that the deaf community mirrors the differences in the social statuses between men and women. He

observes that deaf men lead more independent lives, while deaf women tend to live together to avoid early pregnancies and sexual abuse (2021, 68). In one of the deaf schools, when classes are over, girls help out in the canteen while the boys play, chat or rest (ibid., 69). Nonetheless, he observes meetings between men and women, like in a shop where a deaf woman works, that are looked down upon by the hearing people (ibid.).

Such gender separation impacting interaction patterns also occur among the Malian deaf people in Bamako, where they have developed sign language outside schools in the capital Bamako, Langue des Signes du Mali (LaSiMa). Here, meetings of deaf people mainly involve men who get together at someone's home or workplace at the end of the day to drink tea and talk (Nyst et al. 2012, 254). Nyst observes that LaSiMa was almost exclusively developed by regular interactions between deaf men (Nyst 2015a, 134) and she had difficulty finding women fluent in LaSiMa to document it (ibid., 137). As a consequence, the masculine character of the language is reflected in the type of lexicon of LaSiMa (Pinsonneault 1999).

In Nigeria, sign language has also emerged outside of school in the northern Kano state. There, deaf people built an interactive network from which developed the local sign language, Maganur Hannu (meaning the Language of the Hands), also known as Hausa Sign Language (Schmaling 2000). She observes that most deaf people use Maganur Hannu and regularly interact in specific places, mainly in the evening, constituting a very active community. It is not overtly stated that deaf men interact more than women. Still, Schmaling observed that one of the meeting places was a bicycle workshop where two deaf men worked. Another was a deaf man's house where deaf people usually got together on Sundays (ibid., 15). Although it is unclear if these gatherings involve mainly men, one can assume that deaf spaces that are men-centred will likely attract other men. Schmaling describes in her methodology that she worked mainly with deaf male informants and that, in outdoor locations, Hausa women (predominantly Muslim) are rarely visible (ibid., 50). Similarly, Orie (2013, 245) found groups of deaf people separated by gender in Akure, in southwestern Nigeria.

Similarly, Jirou (2008) describes a group of deaf people in the fishing city of Mbour in Senegal, who developed a sign language outside school. Although she does not specify the number of deaf people, she identifies a few dozen (ibid., 151). Even if apparently unaware of gender inequalities, she observes that deaf men gather around a tree in an open square where two own a shop for small repairs, such as basins and shoes. Jirou also mentions that two deaf men in this group, fishermen who work on the same boat, use a very rich signed lexicon, possibly because they interact a lot (ibid., 140). She then goes on to mention that deaf women have developed different lexical areas that revolve around the tasks they usually assume (ibid., 141).

A pattern emerges in various places in West Africa that – just like in Bissau (see §1.6.3) – deaf men are much more likely to gather together while deaf women do much less frequently or hardly at all. Men create deaf spaces where they talk about various topics such as major problems in the schools for the deaf, politics, work, and football, among others. They stay in these spaces for as long as they can. In Hausa, Nigeria, deaf people easily retell films they have seen on television (Schmaling 2000, 15). Such cinematic stories are one of the types of stories in deaf literature (Bahan 2006; Sutton-Spence 2021), which I will discuss in the next subsection.

Interacting is part of being human. When socialising among deaf peers, deaf people tend to share their personal experiences. These moments are crucial because they are often the only spaces where they can communicate freely without communication barriers (Lane et al. 1996; Bahan 2006; Holcomb 2012; Morgado 2011; Sutton-Spence 2020). It is also on these occasions that deaf literary products emerge in different types, such as poems, anecdotes and stories (Sutton-Spence & Kaneko 2017).

The interactions of deaf people in Africa are not well studied. Scholars have collected spontaneous and elicited stories in African sign languages to document and analyse them linguistically. Nyst (2007) compiled spontaneous narratives, myths, and bible stories in AdaSL (2007, 40). Those spontaneous narratives include personal experiences in daily life, work, school, or related to food, family, animals, death, or deafness (Morgado 2021). Kusters (2015) described conversations between deaf people in Adamorobe, mainly involving gossip, comments on relationships between deaf people and deaf and hearing, daily problems, past events, and beliefs, among others. During my fieldwork, they told me new stories, for instance, about snake attacks, in addition to topics previously collected by Nyst and Kusters (Morgado 2021, 86).

Through storytelling and other aesthetic and humorous signed productions, deaf people develop their sign languages, and deaf literature emerges (Lane et al. 1996; Morgado 2011; Sutton-Spence 2021). In the African continent, South African Sign Language literature is the most documented (Kaneko & Morgan, 2019; Morgan & Kaneko, 2017; Asmal & Kaneko, 2020; Baker, 2017). Other than these studies, there still needs to be a record of storytelling in African sign languages, whether imagined or from personal experiences, but evidence of the richness of this literature was observed at the Hands! Festival 2021[4] deaf people from Ghana, Ethiopia, Burundi, South Africa and Guinea-Bissau presented stories, poems and visual vernacular. Such literary productions have not been documented in micro-communities, except for Kata

[4] Online Festival organised by Leiden University during the pandemic: https://www.youtube.com/watch?v=F-iR1gLgHfw&t=6s

Kolok in Bali (de Vos 2012). The current research, therefore, adds to our understanding of what narratives look like in these places.

From this review of interaction dynamics in micro and macro deaf communities, I have shown that the social interaction of deaf people varies in different types of communities, and I lay the foundation for the idea that sign languages may develop according to the frequency with which deaf people interact, with greater interactions resulting in more complex and compelling stories. The next subsection briefly describes the deaf cultural habit of storytelling and their narrative types.

1.2.5 Storytelling in deaf communities

In the previous subsections, I discussed the size of deaf communities, the time depth of sign languages and interaction dynamics between deaf (and hearing) people. In sum, sign languages emerge if there are deaf people. The bigger the group, then the more it seems that deaf people interact and sign language will develop. During interactions, deaf people talk about various topics, often through the framework of storytelling.

Deaf communities around the world habitually tell stories such as narratives of personal experience (Bahan, 2006, Davidson 2017, Sutton-Spence 2021), but besides personal experiences, there are other types of stories in sign language, such as cinematic stories (imitation of parts of films such as action scenes involving shooting and car crashes, enhanced, for example, by being done in slow motion), translated works of folktales and original fiction (ibid., 28). Some of these stories have existed for a long time and have been told from generation to generation.

Stories are usually shared in deaf spaces such as schools, clubs, associations, sports, meetings, conferences etc. Anyone in the DEAF WORLD (as designated by Bahan 2006) can tell stories and share personal experiences, but not just anyone has the skills or the talent to do it and, thus, be considered a "smooth" signer (ibid., 24). Any narrative, such as a personal experience, can be told once or on many different occasions by the same signer and passed on to other signers from generation to generation (Bahan & Supalla 1995, Sutton-Spence 2021).

In both the oral and the signed tradition of storytelling, narratives are transmitted in face-to-face contexts, where there is a teller, a tale, and an audience (Bahan 2006, 25). Bahan (ibid., 29) suggests that narratives of personal experience are the most common narratives circulating in the deaf community, whether humorous or tragic. As a deaf signer, this conforms to my own experience. Personal stories are often told in everyday conversations. People can share their own or second-hand experiences with

family, friends or co-workers as a routine or in occasional meetings. Here, pleasant or terrifying personal experiences may be told as naturally as possible.

Personal experience narratives have been included in folklore literature, even if not traditional ones (Stahl 1977). Generally, a **narrative**, a story, or a tale can be real or fictional (Harmon 2012). Narratives are everywhere, in all societies, as far back as we know (Barthes 1975). The first narratives would have been circulated orally from generation to generation (Vansina 1985). They went on to various narrative forms, such as myths, legends, poems, folk tales, fantasy stories, fables, novels, biographies etc. (Stanzel 1984). Narratives can be transmitted in various ways besides orally, such as in writing, through images (comics, etc.), moving images over time (film, animation), and, of course, in signing (Traupman 1966). A narrative is when a person tells about a set of events in temporal order (Hühn & Sommer 2009). In every narrative, there is a narrator. When the narrator is introduced in the first person, they usually participate in the action as a character. When the narrator uses the third person to talk about other characters as an outsider or about the experiences of others, then it is said to be a vicarious narration. Narratives can be related to personal experiences in a prose format (without following a metrical layout).

Sutton Spence & Kaneko (2017) explain that telling stories, regardless of the kind of community, transmits linguistic and cultural heritage from one generation to the other. This also happens in the deaf community, where stories are told in sign language. Sutton-Spence defines personal experience narratives as those involving real people and events, including them in the broader category of **sign language folklore**.

It is known that sign language literature is developed by deaf people all over the world (Sutton-Spence 2021) as long as there is a space where they can be together and are thus able to communicate in sign language, such as in schools (Morgado 2011), villages with a higher incidence of deafness (Nyst 2007; Kusters 2015; Tano 2016) or even tea groups, as in Bamako, Mali (Nyst 2015). In the days when sign languages were forbidden in Europe (mainly between the rise of the oralist method in the late 19th century and the beginning of sign language studies in the 1970s), a large majority of deaf people attended boarding schools and communicated in sign language, away from the eyes of hearing supervisors. This way, they exchanged their life experiences, and the language became stronger (Morgado 2021). From there, the first stories (Lane et al. 1996), probably narratives of personal experience, were retold several times, being polished artistically. Over time they turned into poems, jokes, and other performing acts. Deaf people usually tell about their lives, the lack of accessibility, and their identity and pride; but they also produce stories unrelated to being deaf. This way, personal experience narratives appear to be part of sign language folklore literature, even if the narratives are not about deaf people. The fact that they are told in sign language makes it a literary object (Sutton-Spence 2010; Sutton-Spence &

Kaneko 2017). Nowadays, literary videos in various sign languages from around the world are shared on social networks and are easily found on the internet.

What about studies and documentation of folklore and literature from village sign languages worldwide, including the two villages in the current study? As mentioned, the only published research thus far on narratives in village sign languages is from de Vos (2012), who describes a rich tradition of storytelling in the Indonesia village of Bengkala where Kata Kolok signers tell stories of ghosts, magical villagers, and personal experiences such as accidents or about the Japanese invasion in the second world war (2012, 266). In these stories of personal experience, de Vos analysed the use of signing space (see Chapter 5).

Other than linguistic studies, some language resources contain narratives from village sign languages. Two corpora of village sign languages have been collected for linguistic, historical, anthropological and literature studies from Mali (Nyst et al. 2012) and Côte d'Ivoire (Tano 2014). Within these corpora can be found personal experience narratives.

For Adamorobe Sign Language (AdaSL) in particular, there is a sizeable corpus[5] that Nyst (2012) collected and which includes numerous life stories. Nyst used images of food, animals, customs and so on so that deaf signers had the freedom to express themselves about each item. For example, when telling about honey, a deaf woman ended up talking about how dangerous bees and wasps were. Another deaf person, when seeing the images of animals, started imitating them, telling about what they looked like and how they could be dangerous to people. Nyst also collected stories about the daily life in the village, where deaf people told what their jobs as farmers were like, what had been their most difficult experiences, gossip, fatalities, witchcraft or events in which they were harmed.

Other AdaSL stories in the corpus were more exceptional. For example, there were accounts of fatal experiences, such as the death of a baby crushed by a goat or a deaf man who stole palm wine. Stories involving the supernatural included the local belief in a deaf God, dwarves with feet pointing backwards living by the river, and the idea that whoever sees these dwarves will go deaf or have a deaf child.

Important community events in Adamorobe are referred to, as well. For example, the closure of the only school for the deaf that had existed in the village because a bad teacher beat them a lot. One day a deaf person went to school sick. Since the school provided food, she went to school to eat, but the teacher did not like it, so he hit her,

[5]https://archive.mpi.nl/tla/islandora/object/tla%3A1839_00_0000_0000_0016_8312_9

and, to defend herself, she hit him back. It seems that, after that, the whole group of deaf people got together and beat the teacher. As a consequence, the village chief decided to close the school. This event was historical and is still told of today. These reports are available in the corpus videos collected by Nyst (2012).

In the other village in this study, Bouakako, Tano filmed a few moments over the course of his research when the deaf in Bouakako came together at his invitation, which resulted in a small corpus of LaSiBo of around 20 hours (Tano 2014). They appear together in groups of two or three people and communicate only with each other. In these videos, the LaSiBo signers do not sign directly to the camera, as the AdaSL signers do. Sometimes, a hearing person who knew how to communicate with them would appear. The conversations were about everyday life, about bad and good things. For example, one of them says that a snake is good to eat because it gives strength, while the other does not agree.

For the current study about narrative structure and devices in AdaSL and LaSiBo, little was possible to use out these corpora. For LaSiBo, the videos are mostly back-and-forth dialogues between two or more people, where there are no complete narratives about an event due to constant interruptions. In the AdaSL corpus, however, there are three narratives about dangerous animal encounters that could be included in my study. One of the narratives involved a snake, another a swarm of bees and the third a lion, as will be described in §3.4. For LGG in Guinea Bissau, there is no publicly-archived corpus of LGG yet, but some of the videos taken during our previous fieldwork (mine and Mariana Martins), such as those of deaf people telling about their daily routines, do seem to show the seeds of sign language narratives emerging. These were not used as data in the current research but did inform my perceptions and intuitions about storytelling in this community. In the present research, I focus exclusively on personal experience narratives about animal attacks in the three languages, which required collecting new data. Narratives were collected in each community by me using the same method, i.e., face-to-face interviews, where I asked if they had ever encountered dangerous animals such as snakes (see Chapter 2).

This section summarises the notion of sign language folkloric literature, mentioning its possible origin in personal experience narratives. Whether they are polished over time to become literary art objects or are produced spontaneously at the moment, personal experience narratives can always be viewed as part of folkloric literature. It was also shown that there are several works on folkloric literature in macro sign language, but little or nothing in village sign languages. In the next section, I summarise the motivations for choosing the three sign languages, the conception of the four studies in this thesis, and the questions and hypotheses for each study.

1.3 Design of the study

The previous section focused on the typologies of deaf communities and their sign languages and the influence of community size, language time depth and interaction dynamics on language emergence. The present subsection summarises the study's design, explaining why the three sign languages were chosen, how the study is organised and on which questions and hypotheses the research is based.

This thesis studies three West African sign languages with different backgrounds or settings, community sizes, language time depth and interaction patterns. The research first focused on two village sign languages in the project From Gesture to Language:[6] Adamorobe Sign Language (AdaSL) in Ghana and Langue des Signes de Bouakako (LaSiBo) in Ivory Coast. This project aims at comparing West African sign languages and their gestural environments, with a special emphasis on the expression of size and shape. By comparing two sign languages of different ages, the project seeks to understand how gesture is conventionalised into linguistic elements.

Besides looking at the impact of **time depth** on the linguistic structure of micro-community sign languages, a third language, Língua Gestual Guineense (LGG) from the capital of Guinea-Bissau, was added later regarding the **size of the deaf community**. Of the sign languages in this study, the two used by micro-communities – AdaSL and LaSiBo – have developed in villages, while LGG emerged in a school setting at the hands of a macro-community. Although they have developed in different environments, the setting will not be considered a factor. I argue that the setting per se is not a determinative factor, at least in this study, because the interaction dynamics in a school-based community are strongly shaped by what happens outside school (as can be seen in culturally-based gender distinctions). I later introduced a third factor, **social interaction**, which should have both a cumulative effect over time (i.e., cumulative interactions) and also develop from frequent interaction exchanges with a variety of partners (i.e., density and variety of interactions). The variable factors distinguishing the three sign languages are shown in Table 1.

Several other factors that may play a role in shaping language emergence and development should also be mentioned. First, I will assume that deaf children have played some role in (re)structuring all three sign languages, but there is no evidence that this has affected each language differently at this stage of their development (though it certainly will in the future development of LGG). Schooling is another individual factor that is not necessarily dependent on the setting because deaf people

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[6] The project *From Gesture to Language* coordinated by Victoria Nyst was founded by the NWO Vidi project with a duration of five years, from 2017 to 2022.

in villages may also attend school. No differences between individual signers in the data were found on this basis, although there were not enough individuals to treat them as distinct groups to test such a factor. It should, nonetheless, be considered in future research. Other factors of potential relevance are the age of participants and gender. The age of participants was not considered because the deaf groups in the villages were too small and consisted only of adults to be analysed separately. Also, no differences based on age were found in the data. **Gender**, however, was added as a factor later after the initial results for LGG were reviewed, and differences in their narratives emerged. Upon further investigation, though, I found that male and female signers in the villages of Adamorobe and Bouakako did not show the same distinction as in Bissau, so those signers are not separated based on gender in the analyses.

The original research design of the Gesture to Language project involved data collection for five different tasks for analysing expressions of size and shape (see Chapter 2 for more details), with one of the tasks being the spontaneous personal experience narratives. For the goals of this thesis, I focus only on the narratives, leaving the other four for future studies.

The narratives of personal experience involve encounters with dangerous animals. These are the only data that I analyse in this thesis, which is comprised of four different studies. In Study 1, I analyse the internal structure of the narratives, in Study 2, I analyse the four perspectives (real scale, reduced scale, simultaneous and multiple) that the signers used during the narratives. In Study 3, I analyse the change from one character to another (role shift) and how they constructed dialogues (constructed dialogue) and finally, in Study 4, I analyse the depiction of the size and shape of the animals in the narratives.

For each language, I filmed deaf people telling a story. I annotated the videos in ELAN (Crasborn & Sloetjes 2008) according to the four studies and made a comparison in the three sign languages. I look at how the emerging languages construct their narratives as well as in the older village language.

I have found very little on structures of personal experience narratives in sign languages. Labov & Waletzky (1967) pioneered the model of the structure of personal experience narratives and I adopted this model for this thesis. There were very few studies that I found which followed the L&W model in sign languages (see Chapter 3 for more details).

In that model where it is going to be in all four studies. Study 1 I analysed the structure of the narratives of the three sign languages according to the L&W model (see Chapter 3 for more details). L&W also highlights the evaluation component which overlaps with the structure of the narratives. That component is treated in Studies 2, 3 and 4.

The thesis contains four studies that examine the differences and similarities in narrative structures and devices between the three sign languages, and then the thesis evaluates these differences based on the factors that distinguish the languages: setting, community size, language age and interaction patterns. This research is motivated by the following main research question.

(1) Main question: To what extent do community size, language age and frequency of social interactions impact the structure and narrative devices in storytelling?

Hypothesis: The more the deaf group socially interacts, the more chances deaf people will have to develop storytelling abilities, regardless of community size or language age. In this line of thought, AdaSL and LGG are expected to develop more than LaSiBo, and gender differences may appear in LGG (see Chapter 8 for discussion). Specifically, this means more enriched narrative structures and more elaborated use of linguistic devices.

Each study also has a central research question.

(2) Study 1: Structure of personal experience narratives

Research question 1.1: How do signers of the three sign languages structure their personal experience narratives?

Hypothesis: The more languages are developed, the more narratives will be structured according to what appear to be universal components (as represented by Labov & Waletzky's model). Hence, LaSiBo narratives and those by female LGG signers may not be as structured as the ones in the other two sign languages (see Chapter 3).

Research question 1.2: To what extent do signers of the three sign languages convey emotion in their personal experience narratives?

Hypothesis: The more socialisation habits signers have the more the narrative will be emotional, by including a climax (as represented by Freytag) and distinct narration roles. Hence, LaSiBo narratives and those by female LGG signers may not have a marked climax as the ones in the other two sign languages. (Chapter 3)

(3) Study 2: Signing perspectives in personal experience narratives

Research question 2: To what extent do signers of the three sign languages produce signing perspectives to enhance their narratives?

Hypothesis: Hypothesis: Signers naturally use constructed actions in the first person, unlike the reduced scale perspective. The reduced scale will probably have developed

over time and frequent socialisation and will, thus, not be found in LaSiBo (see Chapter 5).

(4) Study 3: Narrative devices in personal experience narratives

Research question 3: To what extent do signers of the three sign languages produce role shifts and constructed dialogues to enhance their narratives?

Hypothesis: Narrative devices may require time and regular social interactions to develop. Therefore, emerging sign languages with little socialisation between peers, i.e., LaSiBo, may still need to be able to shift between roles and construct dialogues (see Chapter 6).

(5) Study 4: Animal depictions
Research question 4: To what extent do signers of the three sign languages depict the animal's size and shape to enhance their narratives?
Hypothesis: Narrative devices may require time and regular social interactions to develop, I hypothesize that signers using only on a few occasions their young sign language with each other, like the ones from Bouakako, may still need to be able to clarify to the audience what the animal looks like to turn the story more interesting. (see Chapter 7).

Having described the study's conception for this thesis, I focus, in the next section, on the background of each one of the three sign languages at a time, to situate the historical, political, sociocultural, and even interpersonal context of the signers in each community because this has implications for the development of their respective languages.

1.4 Sociolinguistic profile: Adamorobe Sign Language

In this section, I describe the background of Adamorobe Sign Language (AdaSL) as one of the sign languages of the present study. I start with a description of the village (§1.4.1) and then of the deaf community (§1.4.2), their educational background and the effects of benevolence towards the deaf (§1.4.3), and their interaction habits (§1.4.4). Finally, I summarise previous studies on AdaSL and their relevance to sign linguistics and deaf studies (§1.4.5)

1.4.1 The village of Adamorobe

The village of Adamorobe (Figure 2) is located about 40 kilometres from Accra, the capital of Ghana, to the northeast (see map in Figure 1). It lies in a valley of the Akwapim mountains. According to Okyere and Addo (1994), the village was settled 250 years ago, in 1773. In the interviews with the villagers collected for her thesis, Nyst (2007, 22) collected folk stories about the reasons behind the village's establishment. One of these stories relates how a hunter came across this land and became impressed with the variety of hunting games and crops, especially pineapples. In the local language, Akan, medam m'aborob means "I depend on my pineapples", which gave its name to the village: Adamorobe, the land of pineapples.

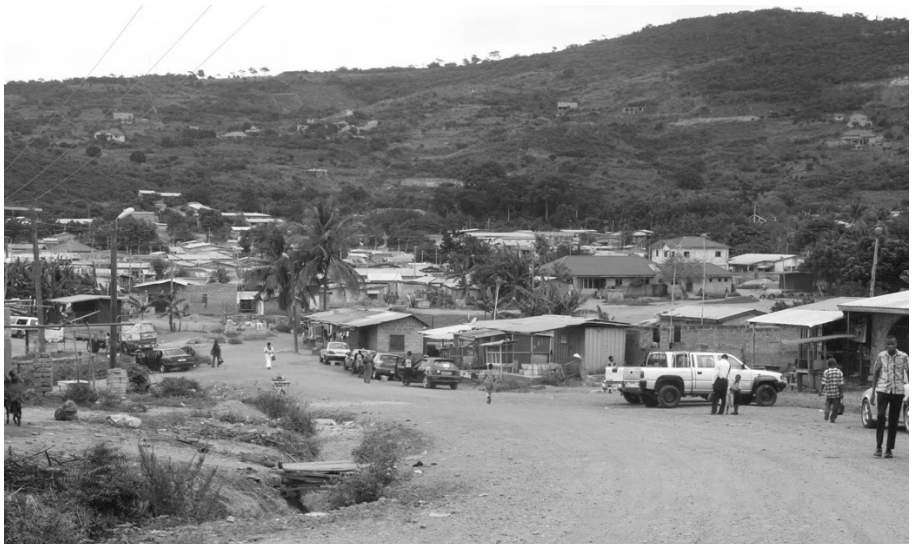


Figure 2. Main street leading to the village of Adamorobe

The people of Adamorobe are part of the Akan ethnic group, the most populous in Ghana, representing 45,6% of the population (Edward 2022, 70). They share with Akan customs, culture, religion (Nyst, 2007; Kusters, 2012a, 2012b, 2015), the existence of a local chief, and the spoken Akan dialect, the Akuapem Twi. Adamorobe has been growing over the years. The local religion is traditional Akan, practised in Ghana and the Ivory Coast, which has no houses of worship but is omnipresent amongst the Akan people (Kusters 2014, 473). In addition, Christianity is very present in the village and has also been practised by many Akan people since the beginning of the 20th century.

People live in single-room constructions, grouped by kinship, around an interior courtyard where they socialise and do their chores, such as cooking and washing clothes, in so-called compounds, as illustrated in Figure 3 (Kusters 2012a; 2012b; 2014; 2015a; 2015b). Since there are no plumbing or sewer systems, people get water from a communal pump.



Figure 3. Examples of activities occurring in the shared interior courtyard of different compounds: socialising (a), cooking (b), doing the laundry (c) and peeling corn (d)

Other than the compounds, which are made of bricks or mud, there are a few schools, churches, a small clinic, a market, hairdressers, stalls selling various goods (like household utensils, clothes, tools, food, and drinks), and workshops, such as carpentry. Because there is electricity in the village, most people have television at home, many have mobile phones, and some have smartphones with internet access, as observed by Kusters (2012b, 347) and my fieldwork.

The only public transportation is the taxi (Figure 4) that takes you through the main road to Oyibi, about three kilometres away (see map in Figure 24 of Chapter 2). In Oyibi, it is possible to find small buses (trotros) to different destinations, including the capital.



Figure 4. Taxi station in Adamorobe.

The village of Adamorobe is on the verge of becoming a small town (Kusters 2015b, 165). During my fieldwork, several houses were under construction, many from outsiders buying land there and building, due to its proximity to Accra. Although the main activity of the villagers is agriculture, many people work in the capital (Kusters 2015b, 165), and others work in a stone factory located on the main road to Oyibi.

In the next subsection, I address the cause of deafness in the village.

1.4.2 A deaf village

In the previous subsection, I gave a brief description of the village. Here, I look at the high incidence of deafness in Adamorobe.

It seems that there have been deaf people in Adamorobe "for as long as anyone remembers" (Frishberg 1987), "since time immemorial" (Kusters 2012b, 2768), but Okyere and Addo are the first to set a precise date for its onset:

Even though the hearing and deaf villagers have co-existed in this community since 1733, only a few hearing villagers can properly communicate with the deaf people in the deaf villagers' sign language. (1994, 100)

However, this time reference cannot be considered reliable since it appears as an end note in a chapter about deaf culture in Ghana, where the only mention of Adamorobe is made in relation to marriage rites. Thus, there should be caution in assessing AdaSL's time-depth. The fact is that there is no surviving direct evidence for how long a sign language has been in continual use in this village. Where genetic traits for deafness exist in a community, it is also possible that sign languages may have arisen and gone out of use previously. In this context, I can only say that AdaSL is an old sign language.

Hearing people in the village believe that deafness results from witchcraft, and several oral stories and myths tentatively explain its cause. Deaf people trust that their traditional god, Nyame, the world's creator, has chosen them. It is a general belief that one of the several small Akan gods, Termina, is deaf (Nyst 2007; Kusters 2014, 2015) and is also supposed to give deafness herself (Kusters 2014, 476). At the village level, there is a minor god, Ayisi, ruling Adamorobe, in addition to a deaf god of the village named Kiti, who seems to penalise couples who offend her by giving them deaf children (Amedofu et al. 1999, 12; Nyst 2007, 19). Furthermore, people believe there is a sacred stream near the village whose water they should not drink at the risk of becoming deaf (ibid.). In contrast to those who think being deaf is a punishment, others believe it is a gift since the deaf are strong and hardworking. This relates to the myth about the strong deaf man who was asked to breed deaf people as good farmers (Kusters 2012b, 2769). Deaf people themselves seem to look at their deafness with pride (ibid).

At first, the village was perceived by outsiders as a cursed village where deafness could be transmitted. It was not until 1961 that Sir Alexander Drummond came across Adamorobe and carried out a survey on the high rate of deafness, designating it as a deaf village (David et al. 1971). Later, another team led by David and colleagues (1971, 70–72) went back to the village to perform audiological examinations on deaf people, counted at that time as 45 out of a total of 405 villagers, according to the 1961 census (ibid.). After observing 20 deaf people, the medical team concluded that it should be genetic since they had been born deaf and deaf couples had deaf children while being physically healthy and showing normal cognitive and visual development. Also, even though deaf people had never developed speech, they had been transmitting a sign language across generations that seemed worth looking into.

In an attempt to prevent more children from being born deaf, the village chief forbade marriages between deaf people from 1975 onwards (Nyst 2007, 28; Kusters 2015, 36). Although it is difficult to ascertain the exact reason for the ban, it looks like the presence of doctors – David and his team – in the village had some influence. The fact is that, after the prohibition, deaf children of deaf parents kept being born, but there were gradually fewer and fewer. The last deaf child of deaf parents was already 18 years old during my fieldwork, which means he was born in 2000. His deaf parents told me they had been forbidden to be together because they had a deaf child. In 2018, they were still living together, even if not as a couple, since neither of them could afford another house.

After David and colleagues (1971), another medical team (Amedofu et al. 1999) went to Adamorobe to update the information on the type of deafness. Thirty years later, the deaf population in the village had reduced to 38 deaf people. The average age was 32,4 years old, indicating that the deaf population was getting older (Nyst, 2007, 22; Kusters 2019, 36). This new team examined 30 deaf people. It determined that the deaf gene had stabilised in the last 60 generations and was probably caused by matrilineal marriages between Akan clans (ibid.). A few years later, during Nyst's fieldwork in 2001, the deaf population had decreased to 35 deaf people.

At the same time, the hearing population was growing exponentially. From 405 villagers registered in the 1961 census, the number of inhabitants increased to 1356 in 2000 (Nyst 2007, 24). This population growth became more prominent around the 1990s due to migration waves in search of jobs in the capital and settling in Adamorobe, located on the outskirts of Accra (Kusters 2015a 27). During Kusters' (2012a 347) fieldwork in 2008-2009, the hearing population had increased to 3500 people, and so had the number of deaf people, at the time 41, due also to migration flows, with an average age of 38 years old. Later, another researcher, Edward (2021, 20), the first African linguist to study AdaSL in her fieldwork in 2016, counted 40 deaf people, including five children. Finally, during my fieldwork in 2018, there were 33 deaf adults; the average age had increased to 43 years old, and there were no deaf children (see Table 4). The youngest deaf person was 18 years old and was still attending the deaf school in Mampong (see the next section for more details). From 2018 until now, four deaf people have passed away, which brings it down to 29 deaf people. In addition, one deaf person that had moved to Accra returned to the village, which amounts to 30 deaf people currently living in the village. Concerning the hearing population of Adamorobe, the 2021 census was not completed to this day due to the pandemic, so it was impossible to know the updated number of inhabitants for the present description.

Table 4. The average age of deaf people in Adamorobe since 2000

year	average age of deaf people
2000 (Nyst)	32
2008 (Kusters)	38
2018 (Morgado)	43

In the first descriptions of the village, deaf people represented 11% of the overall population, i.e., 45 deaf in 405 inhabitants, as mentioned above. David and colleagues (1971, 71) were impressed by the ease of communication between deaf and hearing people who played together as children and worked collaboratively as adults. In general, the hearing had a "sympathetic attitude" towards the deaf, who indeed appeared happy and enjoyed a quality of life similar to the hearing villagers. Kusters (2012a) observed that hearing and deaf shared tasks and worked together as farmers and night guards. For that reason, deaf villagers felt equal to their hearing peers. However, with the growth of the hearing population and the ban on deaf marriages to prevent children from being born deaf, the percentage of deaf people reduced from 11% to 1,1% in 2012 (Kusters 2012a, 347), significantly decreasing the number of hearing people who knew AdaSL. In addition, hearing people have become more and more educated, which has enhanced the inequalities.

1.4.3 Foster's heritage: education and welfare

The number of deaf villagers decreased over the years, overshadowed by the village's expansion. In addition, with fewer children born deaf, deaf people are becoming older on average. I now turn to their schooling and religious practices.

To discuss this topic, it is necessary to mention Andrew Jackson Foster, an American deaf missionary who founded 31 schools for the deaf in Africa. The first Mission School for the deaf was established in Accra in 1957 (Oteng, 1988; Nyst, 2010; Kusters, 2015). However, after a donation, it moved to Mampong, in the Akuapim mountains (Amoako 2019, 3; Edward & Akanlig-Pare, 64). Later, the government took control of the school, though Foster remained headmaster while searching for deaf children from town to town. Adamorobe was one of the places where he did his queries (Kusters 2015). There, Foster convinced the village chief that the deaf should learn to read and write, so he took fifteen deaf children to the Mampong school (Kusters 2015, 152). Still, within the following months, the deaf children quit school for different reasons, such as illness, death of parents, problems at school or fear (e.g.,

of a lion near the school[7]). As a rule, villagers did not like having their children sent away. Consequently, a team of teachers from Mampong school visited Adamorobe and, noting that the deaf children "presented social, educational and psychological differences" (Kusters 2015, 153), proposed to set up a deaf school in the village.

When Foster was in Adamorobe looking for deaf children to have schooling, he was also with deaf adults. He tried to teach them American Sign Language, and in return, he learnt AdaSL. He also taught them the Christian religion while frequently donating food, clothing and hygiene products (Kusters 2014, 476). He expected the deaf to follow the Christian religion in return for the donations, which continued through Foster's followers after he left. This became a habit for the deaf, who became accustomed to receiving donations to Mass (ibid.).

In 1974, the Ministry of Education founded a school with two small classrooms in Adamorobe. The teacher who was assigned to the school followed Foster's method: "a combination of lipreading, fingerspelling, speech training, and some (American) sign language (which was the language spread by Foster)" (Ibid, 154). Nevertheless, due to conflicts between the deaf students and the teacher, the village chief decided to close the school in 1980.

Besides founding Christian schools, Andrew Foster trained deaf Ghanaians to be pastors, establishing deaf Christian groups in Ghana and other African countries (Miles 2004, 542). Samuel Adjei was one of Foster's deaf followers, who, shortly after the school in Adamorobe closed, moved to Adamorobe from Accra. Besides preaching to deaf people, he promoted a course in literacy and numeracy to deaf adults, which lasted only for a few months because they lost interest.

At the same time, some deaf adults attended vocational courses organised by deaf associations, churches and other NGOs. On one occasion, the Ghana Society for the Deaf recruited ten deaf young adults from Adamorobe for tailoring, sewing and carpentry vocational training. However, they quit a short time afterwards. Besides going to Accra, the deaf also complained that they only got one meal a day and that the teacher was strict (ibid). The fact is that deaf people worked hard in farming and were generally tired and hungry afterwards when they still had to cook and do several other chores. Despite everything, some of the deaf learnt to write their names, the

[7] In this thesis, I will analyse 17 personal experience narratives in AdaSL. One of the younger signers tells about having witnessed a traumatising lion hunting. In her story, she comments that it was not safe to stay in Mampong because of the lions and that her grandmother had brought her back to Adamorobe because of that (see Narrative 17, in Chapters 5 and 6, for more details).

names of familiar places like Adamorobe and other nearby towns, and to count up to ten (Kusters 2015, 156–157).

During this time, deaf children had no access to education in Adamorobe. This changed with the arrival of Kofi Arkoful, a deaf priest of the Lutheran church, replacing Samuel in 1998. Concerned with their lack of education, he got support from his church to send the children to one of the deaf schools in Mampong. Thus, in 2000, the last ten deaf children of Adamorobe went to school in Mampong (Kusters 2014, 477).

Kofi Arkoful also took over the masses every Sunday. He preached in GSL, Signing Exact English with some signs of AdaSL (Kusters 2014, 477, and my observations). Kusters (2014, 479) notices that the deaf priest seemed to give more attention to the deaf men seated separately from the deaf women and the children when they were in the village for holidays. Deaf women did not usually pay attention; instead talked to each other or fell asleep (ibid.).

During my stay, mass was no longer held weekly but every two weeks. When I joined them, between 20 to 25 deaf people came. However, just as it happened with Kusters (2014), the deaf priest complained that they came in lesser numbers if we were not there. He also said that sometimes he only went once a month due to a lack of financial means to travel to Adamorobe since he lives in Accra. The mass was translated from GSL to AdaSL, on only one of the six masses I attended. The translation was done by one of the older deaf villagers when a group of hearing Americans who knew ASL visited the village. In the end, all the deaf people received donations.

During my fieldwork in 2018, eight of the ten deaf children that had gone to the residential school in Mampong were already aged between 20 and 32 years old and had returned to Adamorobe. The two others, the youngest, a boy and a girl, 18 and 19 years old, were on holiday in the village when I arrived for fieldwork in early September. By then, they no longer had their studies funded by the church. The girl has hearing parents and a deaf brother and was financially supported by her family to continue studying. The deaf boy has deaf parents and deaf sisters and receives individual support from outsiders to keep going to school.

Out of the eight deaf youngsters, six girls and two boys, who had returned to the village, some interrupted their studies, and the others concluded them. Part of the girls returned pregnant, and two youngsters only attended primary school. During my stay in Adamorobe, none of the girls were working, and only one of them had not gotten pregnant yet. The new mothers stayed at home looking after their children. One of the boys worked as a baker (later, he changed his profession to building construction). The other was at home waiting for his high school certificate and wanted to continue his studies. This deaf boy eventually got into Takoradi Technical University (about

250 kilometres from Adamorobe) to study Graphic Design. He was the first deaf person from Adamorobe to enter university.

Deaf people in Adamorobe have gradually grown apart into two different groups: the elders, the older deaf people in the village with no or little schooling, and the schooled youth, aged between 18 and 31 years old (Kusters 2019, 3). When socialising among themselves (and on the bible songs at mass), the deaf youngsters used Ghanaian Sign Language. However, they switched to AdaSL when communicating with the elders, their families and the villagers. As a rule, the elders were uncomfortable using GSL (see §1.4.4. for more details).

Older deaf people follow subsistence farming, while the younger ones are primarily unemployed despite having done vocational courses such as hairdressing, sewing, and catering. Several external supports, like churches and associations, have tried to invest in small businesses for the deaf (both elders and youngsters), but they all failed for various reasons. The older deaf people constantly return to subsistence farming, and the younger ones dream of leaving the village despite not having the means to do so. They confessed to me that, as the last deaf people in the village, they felt there was no future for them there. The only young deaf person who left the village was the one who went to the university. On his return, saying he finished the course but lacked the money to get the diploma, he remained unemployed.

After presenting the attempts to educate and convert the deaf villagers, initiated mainly by Foster, I next turn to the interaction between deaf people.

1.4.4 Social interaction in Adamorobe

So far, I have talked about the village of Adamorobe, the village life, the high incidence of deafness and characterised the deaf people, their educational background and daily routines. Now I focus on how they interact better to understand patterns of interaction in the village, since AdaSL has been in use much longer than in the other two languages in this research.

The first description of the interaction of deaf people in Adamorobe was by David and colleagues (1971, 71) in the context of their research on local deafness. They note that the deaf people seemed happy and communicated without problems with their hearing peers.

After returning from work, usually farming, deaf people bathe, cook and rest. Resting includes socialising with the people they live with (Nyst 2007, 28), both deaf and hearing. It is usual for large families, including siblings and their partners, to share a

compound arranged around an outdoor courtyard where people do their chores, as described in §1.4.1.

Outside the compounds, many hearing and deaf people greet each other and exchange brief dialogues. When deaf people communicate with each other, as shown in Figure 4a, they usually chat for longer than with hearing people (Kusters 2012a, 348; 2014, 471). They can gather in groups of three or more deaf people at once but rarely more than ten. During my stay, I arrived early every morning and greeted deaf villagers in their houses (not all, because some had left to work). One day I would stay longer at one of the houses and the next day at someone else's (see Figure 5b,c).

a.  b. 

c. 

Figure 5. Examples of deaf people interacting in their homes.

Kusters (2015a, 93) also observed that deaf people interact with each other more than with hearing people when in the same compound. They use the term 'we are the same' for their families (including both deaf and hearing members) and their deaf peers. Kusters reports several episodes where the expression DEAF SAME was used by deaf people empathising with other deaf people for being equally deaf. They believe they should look after each other, as on the occasion when a group of deaf adults called a young deaf boy and told him god connected them because they were the same, they were deaf.

As a consequence, deaf spaces spontaneously set up by the deaf (Kusters 2014, 472) are rarely joined by the hearing since only some of them know how to communicate with the deaf (Okyere & Addo 1994, 100). As the village grows, fewer and fewer hearing people know AdaSL, resorting instead to traditional gestures to convey essential information. A few hearing people are fluent in AdaSL, usually close family or friends who have grown up with them or co-workers (Kusters 2012a, 348; 2014, 144). These hearing people sometimes join deaf gatherings but hardly stay for long. Otherwise, in hearing gatherings, if a deaf person joins in, hearing people do not switch to AdaSL, even if they know it. Therefore, deaf people complain about not being habitually included in hearing conversations.

On the other hand, hearing people also feel excluded when deaf communicate in AdaSL (Kusters 2014, 145). Deaf people know that hearing people are not fluent in AdaSL and do not communicate as much as they used to. In the past, the deaf and hearing had everyday chores and were more empathetic with each other. Nowadays, there are too many hearing people in proportion; many do not have deaf family members and are not sensitive to the deaf. Thus, conversations with the hearing become shorter and shorter and sometimes even reduced to only greetings (ibid., 146).

Out of the 41 deaf villagers, 28 had deaf parents and 26 had at least one deaf sibling (Kusters 2012a, 347), so deaf people can interact in AdaSL daily and throughout their lives. Kusters (2014, 468) uses the term '**deaf sociality**' to refer to the interaction and social relationship between deaf people. She argues that deaf people in Adamorobe feel their sign language is omnipresent since they can gather spontaneously in small groups of trusted friends to socialise, naturally creating a deaf space. This kind of socialising usually occurs at the end of the working day or in the mornings before farming, and in different places; at the same time, it can be at someone's house or in the middle of the street (see Figure 5).

Deaf people do not seek to gather in large groups. This only happens when they are visited by outsiders, such as by the priest giving the Sunday mass or by external researchers, which was my case in 2018, and also that of Edward (2021), Kusters (2015a) and Nyst (2007). During my stay, when I attended the Sunday mass, more deaf people than usual would join, as explained in §1.4.3.

On Thursdays, the resting day of the Akan religion, most villagers do not work. Instead, they go to nearby towns to sell or buy farming goods at the markets (Nyst 2007, 18). During my stay, I usually met with the elders and some of the youngsters (between 10 to 12 deaf people) on that day under the shade of a big tree (see Figure 6a). In general, deaf people in Adamorobe do not have the habit or interest of gathering in big groups. They seem to prefer staying home resting or chatting in small groups to chat and do their chores. Besides the big tree, the mass would be the larger

space where all the deaf villagers could be together, but they do not see it as an important gathering space since they are close to each other daily and free to socialise when they feel like it (Kusters 2014a, 467).

In other deaf communities – especially those that emerge in schools – deaf people need to be in the same space with their deaf peers to share their experiences, hardships, or achievements because at home there is usually no sign language. By contrast, "[i]n Adamorobe, both deaf sociality and sign language communication are already established. They do not need to be further cultivated in places such as the church. Also, the language used in the church is not fully accessible to them" (Kusters 2014, 481).

Even if not intentionally sought after, socialisation between deaf peers is also not avoided. For instance, at the house where the data for this study was collected, deaf participants stayed there for two or three more hours after it was finished to chat (Figure 6b). Also, on Sundays, they kept on chatting for a couple more hours after the mass (Figure 6c), mainly because I was there. If it were not for me, many would not have come.

a.  b. 

c. 

Figure 6. Examples of spaces where the deaf interact: (a) under the shade of a big tree; (b) house where the data collection occurred; (c) in Mass

Deaf people in Adamorobe are not isolated within the village boundaries. Some have migrated to the village from somewhere else. Some have left Adamorobe and moved to other places, such as Accra or the cocoa farms in Nsawan (Nyst 2007, 27; Kusters 2015a, 102). Many of the deaf villagers have already interacted with deaf outsiders or attended vocational courses far away from the village, or participated in church-related events.

Furthermore, at least since Foster's arrival, deaf people have had contact with GSL. Foster taught GSL while learning AdaSL. Masses given in GSL were often translated into AdaSL (although they no longer do this now) since deaf people, especially the elders, had to try to understand GSL, as I have witnessed on two occasions.

Even though deaf people, especially elders, were confronted with GSL often, AdaSL was always maintained as their first language. Also, the younger generation, albeit having been schooled in GSL, promptly switched to AdaSL in the village mainly to communicate with the elders (Kusters 2014, 141).

The elders developed a basic knowledge of GSL from the Sunday masses, their numerous contacts with outsiders and their short experience at school (a few months at Mampong and a few years at the local school) (ibid.). The elders complained that deaf youth's use of GSL in front of them was a lack of respect for them and AdaSL. However, the elders sometimes use GSL signs when they need to say something that should not be understood by the hearing people (Kusters 2014, 147; 2019, 14).

Deaf people of Adamorobe are proud to be deaf and of their language. They believe that god made them deaf and that they have a life mission to be strong and good farmers. They have never considered their language inferior to GSL and are aware of outsiders' interest in and valuing their language (Kusters 2014, 153). However, Kusters mentioned that one of them once complained that people were going to the village to film them communicating in AdaSL and would leave without staying for some time. They were also surprised that outsiders were more interested in AdaSL than GSL.

In 2019, Leiden University organised the conference "Deaf and hearing children in a multilingual world" to present the work of African deaf researchers in Ghana, Ivory Coast, Kenya, Ethiopia and a few other African countries. Research assistants had filmed interactions between deaf parents and their young children, hearing and deaf, in which AdaSL was included. All deaf villagers (except one who had just had a baby) attended the Legon University conference. It was the first time all 32 deaf people left the village together. There they interacted with several deaf people from Ghana and deaf people from Ivory Coast, Mali, Guinea-Bissau, Nigeria, Kenya, Ethiopia, South Africa, Chad, Burundi and Burkina Faso. Although it was not the first international contact for some of them, it may have been the first such a big group of deaf African

academics from so many different countries got together. Some foreign deaf people attempted to interact with the deaf people of Adamorobe, who communicated back in a mixture of AdaSL and GSL signs. This also happened to me in my first few days in Adamorobe and to Kusters as well (2014, 152).

As soon as visitors (including researchers) are included in the conversations, we observe that the deaf share news that has been told by hearing family members and gossip. They talk about the village, illnesses, deaths, relationships, separations etc. (ibid. 2015a, 60). They also tell of their personal experiences with other people, with farming work, in dangerous situations such as animal attacks, witchcraft etc. Some spontaneous accounts collected by Nyst included good and bad memories, such as the death of a baby crushed by a goat or the closure of the deaf school in Adamorobe. On the latter subject, a deaf person tells about his experience with the conflict between students and the teacher leading to the school closure. In another situation, two deaf people are sitting under the shade of a big tree discussing a storm that had happened the night before (Figure 7a). Also, on one occasion, a group of deaf men are preparing kenkey (traditional food) and talking about different topics (Figure 7b) (Morgado 2021).

a.  b. 

Figure 7. Fragments of interactions, (a) referring to the moment when a big tree fell during a storm and (b) about different topics to the preparation of kenkey, a traditional dish (video frames from the AdaSL corpus, in Nyst 2012)

They are not in the habit of participating in recreational activities like football or traditional ceremonies. Kusters deduces that they prefer to avoid these activities so as not to get into trouble because of hearing people who have insulted the deaf (Kusters 2015a, 62). Because of past incidents, deaf people did not like some of the hearing who were ‘bad’ (ibid., 91) or spoke ill of them. Also, at village events, deaf people did not always have access to translation (Kusters 2014, 146).

Although no differences in AdaSL fluency were noted between men and women, distinctions are pronounced between age groups (Kusters 2015a, 62). Elders are proficient almost solely in AdaSL, and some can use basic GSL. The youngsters are bilingual in both AdaSL and GSL. They were resident students, going home only for holidays during their schooling time. Except for the deaf children of deaf parents, AdaSL got rusty for most of the other deaf students. However, when they finished school and returned to the village for good, they picked up AdaSL again.

In conclusion, deaf sociality, as described by Kusters (2014), is spontaneously present in the everyday lives of deaf people of Adamorobe and has probably been so for many generations. Even with several attempts to superimpose GSL, AdaSL has endured. Several generations of deaf people feel that their deaf peers are DEAF SAME. They feel pride in being deaf and in their language and do not feel isolated. However, the fact that the deaf population is ageing is real. The youngest deaf member was already 18 years old in 2018, and no more children have been born deaf since. Moreover, deaf youngsters dream of leaving Adamorobe as they feel there is no future there.

Here I focused on the context of language use by deaf people in Adamorobe, including interaction, sociocultural practices, and historical events. In the next section, I turn to what we know about the language of AdaSL itself.

1.4.5 Adamorobe Sign Language

Since it appears there have been deaf people in the village for a long time, a sign language likely emerged as the deaf interacted with each other and their hearing peers. To facilitate communication with the deaf, gestures used by the hearing villagers were integrated into Adamorobe Sign Language (AdaSL) (Nyst 2007, 115; Nyst 2010, 31; Kusters 2015, 63, 71, 209).

The first description of the language used by the deaf in Adamorobe was done by a medical team, who visited the village to examine the origin of deafness in 20 deaf people:

“The deaf indeed appeared happy and enjoyed a quality of life similar to the normally hearing villagers. Undoubtedly contributing to this adjustment of the deaf was their ability to communicate with one another using sign language. We were most impressed by this system of communication when conversation by this means was demonstrated to us. Critchley's (1963) previous description of the gestural system of the deaf is eminently fitting to these people in particular. The system is indeed graceful and pleasing to the eye and when attractive facial mimicry accompanies the gestures, the result is most eloquent. Gestures are executed at a very rapid rate so that one might

well believe that it is comprehended about three times as fast as spoken speech." (David et al. 1971, 71)

It was only later that Frishberg (1987, 78) designated the local sign language as Adamorobe Sign Language, describing it as a "traditional deaf sign language" with as much time as ASL (American Sign Language) or LSF (Langue des Signes Française – French Sign Language). She further explains that hearing relatives and neighbours "know, understand and use AdaSL" with the deaf. She was the first to film deaf people signing (Miles 2005). The videos have not been made public; neither have descriptions of them. However, she does mention that AdaSL has some fundamental and universal features, such as more basic handshapes and verb agreement also occurring in ASL, while revealing other idiosyncratic features. She also suggests that AdaSL seems to be based on "the gestural trade jargon used in markets throughout West Africa".

Nyst (2004, 2006, 2007a, 2007b, 2008, 2010, 2012, 2016, 2018, 2019) has published the most work on AdaSL, including a corpus, many by herself and some with colleagues comparing AdaSL with other sign languages (Nyst & Baker 2003; Nyst & Perniss 2004; Tano & Nyst 2018; Nyst et al. 2021). Nyst wrote a detailed thesis on AdaSL that describes (1) its **phonology**, (2) some **semantic fields** (colours, kinship, numbers, time and name signs), (3) expressions of **size and shape** and (4) expressions of **motion**. These last two topics were ground-breaking because the expression of size and shape is very unusual in AdaSL for being body-based (see Chapter 6 and Study 3 for details). Regarding the expression of motion, Nyst observed that space is primarily used in the **real scale perspective**, where the signer and his signing space are life-sized (see Chapter 5 for details). Otherwise, even though she notes that the **reduced scale perspective** seemed to be considered universal in sign languages (Nyst 2007a, 155–157), she did not find it in the AdaSL data. She claims that "AdaSL lacks a system of entity classifiers to express location and motion" (2007, 204) enabling signed productions in the reduced scale perspective. Although Morgan (2020, 66–67) also reports a reduced entity classifier system in Kenyan Sign Language, this was a surprising finding (e.g., Zwitserlood 2012, 158; de Vos 2012, 10, 17; Edward 2021) since it is quite common in other sign languages. The manipulation of model-sized entities (i.e., entity classifiers) in a reduced scale signing space has been identified in several sign languages such as ASL (Liddel 2003), Libras (Língua Brasileira de Sinais [Brazilian Sign Language]) (Sutton-Spence 2020) and DGS (Deutsche Gebärdensprache [German Sign Language]) (Perniss 2007).

Nyst and Kusters (2019, 8) observe that AdaSL includes signs that are derived from traditional Akan gestures used by hearing people in Ghana and the neighbouring countries. Besides incorporating conventional gestures, AdaSL has **mouthings** influenced by the spoken language, Twi (an Akan dialect). Hearing people say that

AdaSL is an Akan sign language (Kusters 2014, 150). Deaf people use **conventional gestures** to communicate with non-signing hearing people both in and outside Adamorobe (Ibid, 64).

Nyst collected videos for her thesis which were archived on a corpus (also explained in §1.2.5). These videos include interactions between deaf signers, in pairs or groups. Just to give some examples, it can be spontaneous conversations, like telling about a mouse (showing a real mouse) that had just been caught and they plan on how to make a cage for it. Other videos show a break from farming where they rest and talk in the courtyard of a house and some are individual videos in which they produce signs and stories elicited through illustrations.

AdaSL emerged as an isolate, without any other sign language influence. This is unlike GSL, which is strongly ASL-based, due in large part to the influence of Andrew Foster described above. Both sign languages have different lexicons, but because they have emerged within a common culture, they share many signs, especially for Ghanaian customs and food (but see Hadjah forthcoming).

Edward (2021) focused mainly on iconicity on lexical items, spatial representations, and simultaneous constructions. In her PhD thesis, she compared GSL and AdaSL and hearing gesturers from both urban and rural settings. She looked at lexical items in different semantic categories and compared the iconic strategies, concluding that they show an overall similarity in depicting preferences per semantic domain. Edward also compared the grammatical iconicity in the representation of location, motion and action in those two languages. Again, Edward (2021, 237) found many similarities, like both preferring the character-narrator and the narrator perspectives in the representation of motion and the character-narrator and the character in action events. As an important difference, she saw that GSL signers use much more entity classifiers than AdaSL's in the expression of motion and a preference of GSL signers for observer perspectives in action events. However, Edward (2021, 340) observes the use of entity classifiers in reduced scale, like the two upright indexes to depict the motion of two persons riding bikes towards each other, acknowledging that such use may have been influenced by GSL, or eventually by the elicitation material.

Previously, it has been observed that only some hearing people master AdaSL, such as family members, neighbours and friends of the deaf (cf. Frishberg 1987; Okyere & Addo 1994, 100; Nyst 2007, 29; and Kusters 2015a, 62). Kusters, as a deaf anthropologist, became a fluent user of AdaSL, after spending a total of ten months in the village, accompanying the deaf in their daily lives. When she arrived in the village, she was surprised to see no one communicating in sign language (Kusters 2014, 142). I had the same impression when I arrived. While going from house to house where deaf people lived, no one signed. Even within the compounds, when deaf

people were present, the hearing communicated only orally among themselves. As explained in the previous subsection, hearing people fluent in AdaSL only used it to communicate with the deaf in small conversations, give simple chores instructions, share news, and not much else. Kusters explains that AdaSL in Akan is called mumu kasa, which means 'deaf language', implying that AdaSL is meant for communication with and by the deaf. Thus, the hearing are likely to use it only to communicate with the deaf (Kusters 2014, 150) as a secondary language (Nyst 2007, 211), in a situation of 'contact signing' between the local signed and spoken languages (as defined by Valli & Lucas 2011, 192).

On the topic of **language attitudes**, Kusters interviewed deaf villagers to understand better how they saw AdaSL, which they described as HARD, with the sense of being more complex, robust, enjoyable and challenging to learn for those who do not know it (Kusters 2014, 139,151; 2019, 9). In comparison, even if they consider both languages, AdaSL and GSL, to have the same status, they characterise GSL as SOFT. They are proud of their language (Kusters 2014, 151), but they also value GSL and recognise its importance. They recognise that deaf youngsters have more access to the outside world for being bilingual (ibid., 151). Despite acknowledging some advantages of using GSL, such as helping them communicate with outsiders or saying something without being understood by the hearing villagers (ibid., 152), the elders know little about GSL. They disagree that it is used in Adamorobe (ibid.).

In terms of **language status**, Ghanaian deaf people, in general, consider AdaSL as a language of inferior status and not even a real language (ibid., 152–153). During both our fieldwork, Kusters' (2014, 153) and mine, we experienced several situations where Ghanaian deaf people did not understand our interest in the deaf people of Adamorobe. For instance, Arkoful, the deaf priest from Accra to preach Sunday masses in Adamorobe for the past 20 or so years (see §1.4.3 for details), makes no effort to communicate in AdaSL with the deaf villagers. He justified this by explaining that AdaSL was not an actual language and did not even have a status as GSL did. In another situation, there was a deaf man who was born and raised in Adamorobe, then moved to the capital and became a GSL teacher. One day when he was visiting the village, he saw me and started asking me questions in GSL. I was with a group of deaf people, mostly elders. After I explained what I was doing in the village, he was surprised and did not understand why I valued AdaSL. The elders got angry with him and sent him away. Then, one of them told me they did not like people using their language. Also, I encountered a few of the younger deaf people in the village who tended to communicate in GSL, and I had to ask them to use AdaSL while filming some of the tasks.

In conclusion, the published research on AdaSL describes various aspects of its linguistic content, as well as information about how AdaSL is viewed in the

community. About the research in this current study, the question is what types of narrative structure and devices are present in AdaSL storytelling? With enough communication partners (i.e., community size) and enough time/generations, it might be expected that narratives have become quite sophisticated. However, the community is still relatively small and hearing people are among the interlocutors, so perhaps those factors have constrained the development of the narrative structure. In this thesis, I posit that time depth could be one influencing factor on narrative structuring. We know that AdaSL is at least a few generations old and is potentially as old as the 250 year mark that coincides with the founding of the village, as suggested by Okyere & Addo (1994, 100). I sometimes refer to this age for convenience, to symbolise a long time of existence, but in truth the exact age of AdaSL may never be known."

As a final note, it has to be acknowledged that, since AdaSL signers had contact with Foster, they have been often exposed to ASL and then to GSL which may naturally have influenced AdaSL, even if indirectly. Such an influence certainly deserves to be investigated further but it goes beyond the scope of this thesis.

Having described AdaSL, the oldest and most thoroughly studied of the three West African sign languages, I now turn to LaSiBo.

1.5 Sociolinguistic profile: Langue des Signes de Bouakako

In this section, I focus on the background of Langue des Signes de Bouakako (LaSiBo). To contextualise LaSiBo within the present study, I start with a description of the village (§1.5.1) and then of the deaf community (§1.5.2) and their interaction habits (§1.5.3). Finally, I summarise previous studies on LaSiBo and their relevance to sign linguistics (§1.5.4).

1.5.1 The village of Bouakako

The village of Bouakako is located between Abdijan, about 250 kilometres to the southeast, and Yamoussoukro, the capital of Ivory Coast, 100 kilometres to the north (see map in Figure. 25 in Chapter 2). Bouakako does not appear on Google Maps, and one can hardly find information about it on the internet, except for what concerns LaSiBo. The village belongs to the municipality of Hiré (Figure 8), which is eight kilometres to the northeast of Bouakako. The city of Hiré has significantly expanded

because of job opportunities in two nearby gold mines. In 2014, Hiré had more than 50.000 people, and by 2021, it had grown to more than 78.000.



Figure 8. Bus station in the main street of Hiré

In comparison, Bouakako had 1.233 people in the 2014 Census. Updated records have yet to be available, but it seems irrefutable that the village has grown since.[8] The village lies on top of a hill in a forest area (Figure 9a) and is connected to the city by a beaten-ground road. The houses are made of bricks, adobe (Figure 9b) or metal sheets (Figure 9c), and many of them do not have electricity, although the village has it (Tano 2016, 59). Under the rule of a chief, most villagers farm, growing cocoa (whose season I witnessed during my fieldwork, as shown in Figure 9d), coffee, plantain, and cassava, among other crops. Although there is a small market for local trade in Bouakako, villagers usually go to Hiré three times a week to sell their crops. They go on foot, by bicycle, motorbike or car (ibid., 62). Besides farming, they engage in hunting and mining. In this region, people speak a Dida dialect, the Dida Mamini whose original people may have been historically related to the Ashanti, an Akan

[8] Personal observation by the assistant who worked with me and grew up in Hiré in February 2023.

ethnic group, in Ghana (Tano 2016, 61). Village children go to the only local primary school where they are taught in French, the official language of Ivory Coast (ibid., 59)



Figure 9. Pictures taken in Bouakako during fieldwork: (a) forest landscape surrounding the village, (b) adobe house, (c) metal sheet house, and (d) cocoa drying

As part of the Dida ethnolinguistic group, the villagers have their traditional religion. Tano (2016, 63) does not specify which religion they follow, but he explains that they worship deities. Christianity is also very present in the village (ibid.).

In the following subsection, I describe the deaf people in the village.

1.5.2 A deaf 'family'

Seven of the 1.233 inhabitants registered in the 2014 census were deaf, representing 0,6% of the population. Angoua Jean-Jacques Tano (2016; 2022), a hearing linguist from Hiré, was the first to examine these deaf people and their sign language. Tano learned from a friend in 2008 that a deaf person lived in Bouakako. Since he was

searching for linguistic models from different Ivorian deaf communities for a study, he set out to meet that deaf villager. When he got there, he realised that there were three deaf brothers. Through one of the brothers, Tano found four more deaf people living in the village (2016, 93). With support from a grant from the Endangered Language Documentation Programme, he returned to the village three years later, in 2011, to document one of the country's sign languages.

Tano analysed the ancestry of the deaf villagers and gathered that there were consanguineous relationships of different levels between them (ibid., 31). Altogether, there were deaf people in four families: those three brothers (two had been born hearing and became deaf at the age of 5 or 6) belonged to one family; in another family, there were two deaf brothers; and in two other families, there was only one deaf person each (all deaf members had hearing siblings).

The eldest deaf man was 50 in 2011, now (in 2019) he is 58, while his younger brother is now 48. In the other family of three brothers, the eldest is now 37, and the youngest, a deaf woman, is 24. The middle brother had been killed a few years before and was seemingly a bright and active person. The two deaf individuals without deaf siblings, a man and a woman, are now, respectively, 47 and 39 years old. The youngest deaf person in the village was born possibly in 1996. This makes her 27 years old now. Of the five deaf men and two deaf women (ibid., 67–68), only three got married, and these had hearing children. Thus, Tano (2016) hypothesises that the cause of deafness is genetic, although the villagers themselves attribute the deafness to them being cursed since witchcraft is very prominent in the village. Since a group of deaf adults (between 24 and 58 years of age) are related to different degrees of consanguinity (Tano 2016, 31), LaSiBo could be termed as a family sign language. Although there is nothing written about whether the Bouakako village had deaf people before this group, this cannot be known for sure.

Tano writes that LaSiBo emerged when the oldest deaf person in the village was supposedly born in 1961. However, as mentioned in §1.2.2, considering that sign language develops naturally amongst deaf peers, I would instead consider its time depth according to the age of his deaf brother, the second oldest deaf person in the village, ten years younger than him. With this in mind, it might be more realistic to say that LaSiBo emerged around 1970, when the two brothers may have begun communicating more systematically with signs. However, there is no documented record of whether the two brothers with a ten-year age difference had socialising habits in their childhoods. It is not very clear whether deaf people interact with each other and even less as a group. Tano explains that a few of them interact with another deaf peer in pairs (see next subsection for more details). Tano (2016, 73, 131, 165) labels it as an emerging family sign language, in its first generation. I will follow these designations, keeping in mind that it will probably not live beyond its deaf signers.

None of the six deaf people went to school and thus remained illiterate (ibid., 68), though, at the moment, Tano is putting together a project to teach the deaf group to read and write. They are all farmers, and, like the hearing people, they leave to work early in the morning and return in the evening.

The following subsection characterises the interaction of the deaf between each other and the hearing people.

1.5.3 Social interaction in Bouakako

Given the fact that the deaf people in the small village of Bouakako consist of one generation of a small number of signers (Tano 2016,131, 73, 165), how do they relate to their peers, both deaf and hearing? Tano suggests that, at first sight, the deaf seem well integrated into everyday life. However, only some people outside their close families know LaSiBo and instead, limit communication to basic gestures. LaSiBo is used by 15 hearing people (Tano 2016, 31–32), but only two are fluent enough to act as intermediaries – not to say interpreters – with the hearing (ibid., 78). This means that 0,5% of the population uses LaSiBo, both deaf and hearing.

Deaf people participate in village activities, festivals and ceremonies. However, Tano and his deaf assistants from Abidjan, who stayed in the village for five months and at other times for three weeks to a month, noticed that the socialisation was not quite as they first saw it. On the contrary, the deaf were pushed aside. For one, only hearing people were recruited to work in the gold mines, and, in other jobs, the deaf were not compensated as much as the hearing were. Although the villagers acknowledge the deaf as good farmers, they never involve them in conversations nor recognise their need to access information, such as in church. Consequently, deaf people cannot express themselves and give their opinion in discussions or meetings. Therefore, while deaf people participate in everyday activities, they feel isolated and tend to withdraw from the group (ibid., 69–70), showing that they are not fully integrated into village life.

There have been no marriages between deaf people since deafness has never been well accepted in the village. It is also considered shameful for a hearing person to marry a deaf person. The two hearing villagers who married deaf people are somewhat marginalised or ridiculed since some hearing still see deafness as a contagious disease. Deaf people who are unmarried find it challenging to get partners because of this kind of discrimination (ibid., 71–72).

Tano describes the socialisation habits of each deaf person (see Figure 10), observing that the conversations between them and their families were concise (ibid., 75). Four of the six deaf people have a preference for a hearing interlocutor who is a friend or a

family member, such as a sister or an aunt with whom they communicate in LaSiBo. He explains that these deaf people that have a hearing person as a preferred interlocutor work and/or live together, sharing daily tasks. For instance, one of the deaf women grew up with a hearing aunt, with whom she works in farming and at home. Also, the hearing husband of one of the deaf women had been long a close friend of one of the deaf men, which made him fluent in LaSiBo (ibid., 76), although in my fieldwork I saw them speaking while signing. That deaf man has a deaf sister with whom he does not live nor socialise daily. The only two deaf women interact with each other only occasionally (Tano 2016, 76 – 77). The other two deaf men do not seem to have a preferred interlocutor and one of them spends most of his time alone. All six deaf live near each other, crossing one another often but they do not share any tasks (ibid. 77 – 78). Tano further explains that the three of them visit each other regularly but are not close friends (ibid., 159). The brother and sister did not grow up in the same house. They had a brother who died recently. The two brothers grew up together while the sister went to live with her hearing aunt from the age of six (ibid., 155). It was not clear whether the other two deaf brothers socialise between each other and the remaining deaf villagers.

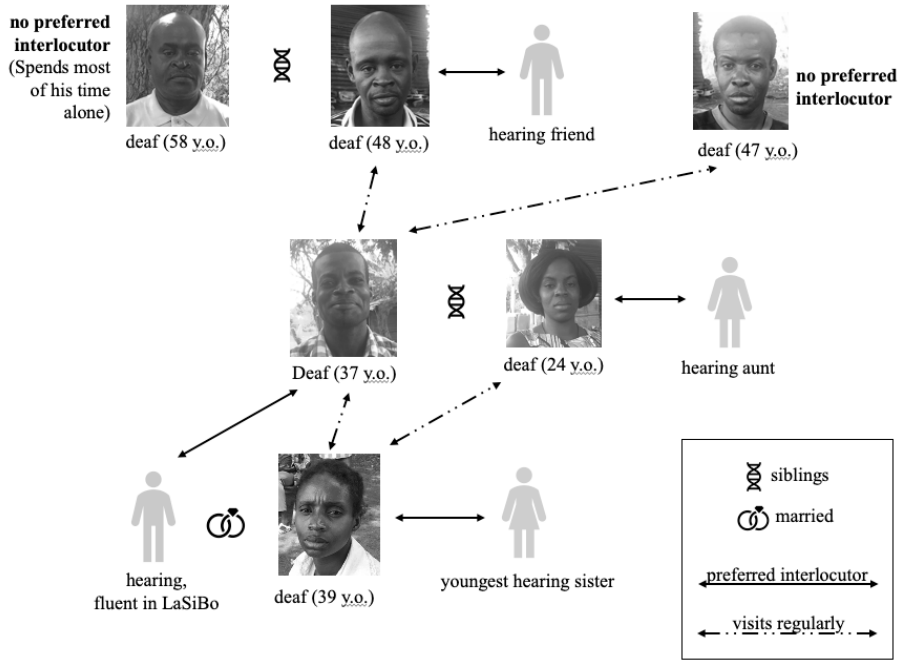


Figure 10. Interactions between signers in Bouakako

Despite their physical proximity within the village, it is not very clear how often they interact. Due to large age differences, siblings may have had little interaction during childhood and youth. I rarely saw them signing to one another. On one occasion, while we were all sitting together with a group of hearing people talking to each other, the deaf were silent. Some had their eyes on the floor, others on someone else, and they rarely signed. Meanwhile, the deaf person we were waiting for appeared and sat in a free seat next to another deaf man. He began by telling the deaf man sitting at his side what had just happened to him. He had seen a python being killed by people from another village. Then, he repeated the story to the rest of us. Oddly, the deaf group sitting with me watched the deaf man's story but did not seem interested and barely reacted. The hearing people there were more interested in the story than the deaf group. This type of lifeless interaction was typical throughout my stay[9], whereas, for instance, right on my very first day in Adamorobe, the deaf naturally interacted a lot with each other in front of me.

In another situation, we were all on the balcony of the house of the deaf woman married to one of the two hearing men fluent in LaSiBo. I brought with me a questionnaire for the deaf participants. The oldest deaf man took a paper, started 'reading' and then told me that reading was good and smart. He then pointed at the other deaf people and said they could not read, which was bad. They kept quiet, not reacting to that statement. They are all illiterate. This shows that they feel inferior to their hearing peers.

The deaf people in Bouakako do not have contact with other deaf. Tano's assistants were the first ones they met. After that, Tano presented his work on LaSiBo in Abidjan and invited the deaf villagers. I was the first white person to visit the village, which stirred quite a bit of confusion because, on top of that, I was deaf. It seemed that they believed that deafness only happened to them. They tried to communicate with me through gestures, which I felt were similar to those used in Ghana. They would point to their ear and gesture 'How come?' as if it was hard to believe. My hearing assistant explained that I came from the same university as Tano. They were confused that I could read and was a researcher like Tano. I naturally responded that I was deaf like

[9] Although this may feel like a strange behaviour from a group of deaf people, I have to relate it to my own personal experience as a deaf person. Before meeting deaf adults outside of school at the age of 16, my interactions with the deaf were limited to age peers. At that time (in the late 1980's beginning of the 1990's) we were often called as "monkeys" by the teachers for using signs. This made us feel ashamed of being deaf and many of us tended to avoid socialising with each other and seek hearing people instead. I believe that the deaf people in Bouakako may have a similar experience of being looked at as inferior.

the deaf villagers, pointing at them. During my short stay, only two deaf men socialised more with me. The others were quieter, even when I tried to pull them into the conversations.

Andrew Foster was also present in Ivory Coast but never in Bouakako (see §1.4.3 for details). Thus, when Tano and their deaf assistants visit Bouakako they avoid using the ASL variant of Ivory Coast (ASL-CI). Even the manual alphabet is known by only one deaf villager who can spell his name, as witnessed by Tano at a conference in Abidjan, where some deaf attendees tried to use it with the villagers with no success. (ibid., 74).

In sum, deaf people in Bouakako constitute a very small group that does not seem to be connected by any tight relationships. When they interact with each other, it occurs more likely within the same habitual pairs. Their most noticeable preference is for hearing interlocutors. Even though they are usually close to one hearing person, they feel isolated and are discriminated against in various situations. Such feelings of inferiority are not unusual in deaf people that are looked at as less able to do things than their hearing peers. Moreover, considering that deaf people's apparent 'inability' in such marginalising contexts is centred on the language, they may opt to avoid signing with each other. Nonetheless, LaSiBo is still used for basic conversations on daily topics, probably highly contextualised, at least between two signers at a time.

1.5.4 Langue des Signes de Bouakako

In the previous subsection, I described how deaf people in Bouakako typically interact with each other and their hearing peers, which is generally not very much. What do we know about the linguistic content of LaSiBo, and what can we say about the status of their language?

Tano's (2016) PhD research focused on LaSiBo's signs by semantic categories, such as kinship, colour, the number system, and time, just as Nyst (2007) had done for AdaSL. Tano compared the two sign languages, LaSiBo and AdaSL, especially regarding their differences in lexical structures developing over time (Tano 2016, 41). He concluded that having both languages evolve within a similar environment, spoken language, and culture (ibid., 326), they present similar language properties. For instance, their signing space is relatively large (ibid., 163), and they use whole-body movements (ibid., 167), such as moving the feet to sign WALK in both sign languages. At the same time, he found differences in the colour lexicon. In AdaSL, signers rely greatly on mouthing to distinguish colours, while, LaSiBo signers tend to indicate the colour directly in their immediate environment (ibid., 253). The only sign that appears to be conventionalising is rubbing the arm with the palm for light colours (ibid., 247, 253). In general, LaSiBo often resorts to indicating real things (ibid., 323). Tano also

observed that some of the LaSiBo signs were also used as gestures by the hearing, such as MAN and WOMAN, which are very productive in denoting kinship. Apart from these, TALL, SHORT, SAME, OLD or BIRTH are also used through polysemy (ibid., 207). Even though compounding may occur, single forms are more frequent (ibid. 217). While LaSiBo still exhibits much variation in these signs, AdaSL distinguishes between WOMAN and MOTHER (ibid., 327).

Tano concludes that AdaSL has a conventionalised lexicon in contrast to LaSiBo, as evidenced in colour designations. This may be due to the small number of signers. The fact that they all know each other facilitates their mutual understanding. When they create signs, they rely on shared knowledge. For instance, specifying kinship may be optional since everyone knows who they are (Tano 2016, 218).

Later, Tano and Nyst (2018) compared size and shape specifiers in LaSiBo, AdaSL and Anyi speakers' gestures (see Chapter 6 for details). They showed that all made use of the body to express size and shape. Moreover, LaSiBo signers and Anyi gesturers would rely on a larger signing space by using the leg and, especially gesturers, by pointing at objects in the immediate environment (see Chapter 7 for more details). In sum, descriptions of LaSiBo have thus far been carried out by Tano and colleagues, focusing mostly on the lexicon and size and shape depictions (Tano 2016; Tano & Nyst 2018; Tano 2022; Tano & Le Guen 2022). However, it is yet to be known how LaSiBo signers structure their narratives, which signing perspectives they use, and if they can shift between character roles or construct dialogues.

To conclude, the village of Bouakako has a small group of deaf inhabitants who have not been to school, and who do not seem to have frequent or lengthy conversations with other deaf people. Even their interactions with hearing people appear to be limited. Their sign language, LaSiBo, has some conventionalised signs (e.g., colours), but also a lot of lexical variation.

I now turn to the third sign language included in this study, the emerging sign language of Guinea Bissau: Língua Gestual Guineense (LGG).

1.6 Sociolinguistic profile: Língua Gestual Guineense

In this section, I describe the background of Língua Gestual Guineense (LGG) as one of the sign languages of this study. I present the city (§1.6.1) and explain how sign language emerged in an educational context (§1.6.2). Then, I describe the interaction dynamics of deaf people leading to the development of their sign language (§1.6.3). Finally, I summarise previous work on the linguistic structure of LGG (§1.6.4).

1.6.1 The city of Bissau

Guinea-Bissau is one of the smallest countries in Africa, located on the west coast. Ghana has an area of 238.000 km^2, and the Ivory Coast of 322.000 km^2. In comparison, Guinea-Bissau is only around 36.000 km^2, about nine times smaller than the other countries. The population of Guinea-Bissau is slightly over one million people, while Ghana has over 30 million and Ivory Coast 28 million.

Bissau is the country's capital. Its city and the surrounding region have 664.000 inhabitants[10] Bissau began as a village of hunters and farmers until the Portuguese colonisation in the seventeenth century when it became an important trade centre. Since its independence in 1973, Guinea-Bissau has endured severe political instability affecting the country's economy. There is a high mortality rate and a life expectancy of 64 years[10]. The city centre maintains the Portuguese colonial style (see Figure 11). It has historical monuments, a post office, a hospital, a cemetery, restaurants, cafes, pharmacies, banks, schools, supermarkets, and hotels.



Figure 11. National Heroes monument in the city centre of Bissau

[10] https://www.cia.gov/the-world-factbook/countries/guinea-bissau/#people-and-society

Around the city centre, there are large neighbourhoods – former villages – where most people live. The living conditions in these neighbourhoods are similar to the ones in the villages (Figure 12a). According to the 2008 Census – and also from my observations on the site (but see Martins forthcoming), houses are mainly of adobe or baked clay, and most do not have electricity or water. Houses typically shelter large families sleeping on mats in the same room. Houses usually do not have wooden doors but fabrics instead. The sewerage and rubbish systems are still precarious (Figure 12b), and most people fetch water from shared wells (Figure 12d). The outside bathroom is also shared. Generally, people cook with firewood or charcoal (Figure 12c). Also, even if television is still a luxury, many own mobile phones.

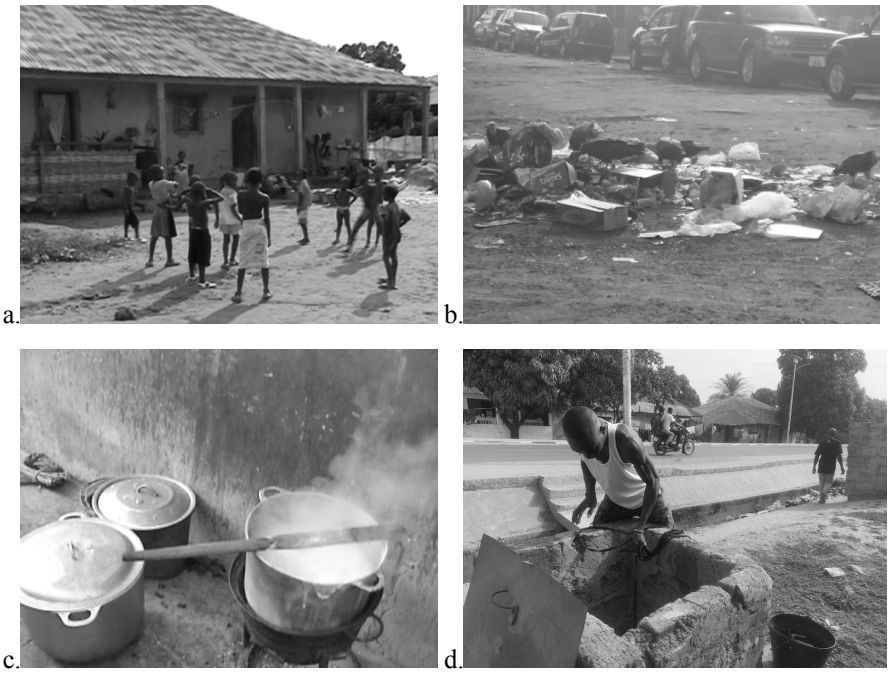


Figure 12. Example of a house made of baked clay (a), rubbish on the streets (b), coal-fired cooking pans (c) and a shared water well (d)

There are about 30 ethnic groups spread around the country. The most significant is the Fula, followed by the Balanta, the Mandinga, and the Papel. Each ethnic group has its language, cultural traditions and customs (Beech 2020). For example, the Fula and the Mandinga are more engaged in trade, but the former also do animal pastoralism, while the latter alternate trading with farming (Gomes 2018). Regarding

agriculture, the Papel people focus mainly on growing cashew (Fernando 2006). Ethnic groups use their languages as their primary language. Portuguese is the official language, spoken only by 27% of the population, but Guinea-Bissau Creole, called 'Kriol' or 'Guinensi' locally, is the lingua franca and is used by about 90% (Census 2008). Creole is the everyday language used in public spaces, on television, in political speeches and even in education, as the mainstream spoken communication (Filomena 2008).

1.6.2 The emergence of a school-based sign language

In the previous section, I introduced the country of Guinea-Bissau and its capital Bissau, which is where gatherings of deaf people were first documented. In this section, I describe the history of this language based on discussions with deaf and hearing people in Guinea-Bissau and on the direct experiences and observations of me and Mariana Martins.[11]

When we first went to Bissau in 2005, a group of deaf students had already been gathered in a school setting for two years when the language likely began to emerge. In 2003/2004, the school for the blind received 18 deaf children and youngsters (15 boys and three girls). The teachers had been trained to teach the blind and not the deaf. Thus, the president of the Association of the Blind, who was also the coordinator of this school, and his secretary visited the Portuguese Association of the Deaf (APS) in Lisbon in 2004 to ask for some guidance. APS gifted them with a Portuguese Sign Language (Língua Gestual Portuguesa, LGP) dictionary and a poster of the manual alphabet. By then, Mariana worked at APS as a hearing sign linguist, fluent in LGP, teaching deaf adults and deaf LGP instructors. I was coordinating the LGP department, as a deaf teacher, in the most prominent school for the deaf in Portugal.

To teach the deaf students, the hearing teachers tried to teach LGP in an 'unsmooth' way according to what they were learning from a paper dictionary they had brought from Portugal. In 2005, Mariana and I went to Guinea-Bissau to give a training course on deaf education to the teachers. When we arrived, the hearing teachers wanted to learn LGP to communicate with the deaf students. We explained that the LGP lexicon was strongly influenced by the cultural habits of the Portuguese deaf community and that it did not make sense to apply it locally. We stressed that seeing how the students communicated and learning from them was important. During the training, there was one deaf young man who had lost his hearing at the age of eight and was now studying at the university. His name was **Amaré Soares**. While Mariana gave part of the

[11] Mariana Martins' doctoral research at Leiden University focuses exclusively on the emergence of Língua Gestual Guineense (LGG) and some of its linguistic properties.

training in spoken Portuguese, I would sit next to Amaré and transmit the same contents in writing to him. At the same time, I would ask him questions about deaf people's situation.

On the spot during that visit, we filmed the deaf people as much as possible without thinking if the videos would be helpful in the future. When we became aware of the importance of what we were witnessing – the emergence of an autochthonous language, we started a video diary of our impressions. Besides the daily videos, we also kept written notes (including the conversations with Amaré) that will be used in this section. Over the years, we interviewed different people, namely hearing teachers and deaf adults, making short visits (between two to three weeks) to Bissau in the years 2005, 2006, 2008 and 2018 (Mariana also went in 2017 and 2022). After the pandemic, in 2022, Mariana returned to Bissau to further describe the deaf community and to gather documentation stating the exact number of deaf students that have been enrolled in the local schools for the deaf. I use her updated information in this description, as well.

Considering that Bissau is a small city and the surrounding neighbourhoods have a village-like life, it is natural to assume that deaf people have been living there among their hearing peers for a long time. For instance, in one of the neighbourhoods called Quelelé, where Amaré lives, there were, back in 2005, about 20 deaf people of different ages (the youngest was four years old, and most were young adults). At that time, an average of nine deaf people occasionally met there (see Figure 13). They were not from the same family and, as a rule, had lost their hearing after birth. Amaré told us that other neighbourhoods had small groups of deaf people as well and that they communicated in traditional Guinean gestures. At the time, he did not believe that that was a language. Nonetheless, the hearing people seem to easily use gestures to hold basic interactions with the deaf (see Martins forthcoming for more details on the gesture use).

There were also scattered deaf people in the capital, many unschooled. On one occasion, we went to the house of a deaf 16-year-old who had not been in the habit of meeting other deaf people. I tried to talk to him with some difficulty. However, his father said they communicated with gestures and that he was smart. Then he asked him to get the candlesticks that he did to show them to us. It was his work. He made candlesticks from cans and sold them. In the meantime, he started going to school and became more sociable. With this example, I hope to illustrate that 'isolated' deaf people led their lives within the hearing community as best as possible. However, only after the school was established did they begin to gather more regularly and in larger groups.

a.  b. 

Figure 13. Group of deaf neighbours in the Quelelé neighbourhood in 2005.

During our first visit to Bissau, we asked deaf students to join the training, although it was July, the school holidays. As they showed up, we saw them communicating in the playground, but when they entered the classroom where we all were, they greeted us with "Good morning teacher" in LGP. They had learned these signs from the LGP dictionary brought from Portugal. However, the signs were produced unnaturally, as if they were a set of detached frames. Once in the classroom, they 'recited' the LGP alphabet, whose poster hung on the wall. Then the teachers showed us the weekdays in LGP. We explained that signs for weekdays had been created according to the old weekly menu and weekend routines at the deaf boarding school (students used to eat meat on Mondays, fish on Tuesdays, spaghetti on Wednesdays, rice on Thursdays, codfish on Fridays, on Saturdays they went home and on Sunday they went to mass). They also used the signs for the months in LGP, which were again primarily based on Portuguese customs.

At the same time, by watching deaf people's informal interactions, we saw that they had their sign names, signs for animals, food, school material and so on. Since we were training the teachers in the morning, we gathered with the deaf children and youngsters in the afternoon to document their signs for various topics already in use. We used local schoolbooks illustrations to elicit discussion topics.

Signs that were not conventionalised were discussed within the group, and part of these discussions was filmed. For instance, to sign 'bath', most referred to washing their bodies by throwing water with their hands from a basin to their shoulders, while only a few used a shower. Also, for sweeping, most of them signed it with their hand as an entity replacing the shape of a small broom of straw sticks, while very few knew the longer broom. To sign 'plane', there was again a short discussion, where it was clear that a wider variant by stretching the two arms replacing the plane's wings coexisted with a single hand modelling a flying aircraft (Figure 14a).

As a result, we photographed a first set of 200 signs of the emerging LGG (Figure 14b). Then, we printed it as an informal short dictionary and handed it over to the school on the last training day in August 2005.

a.



b.

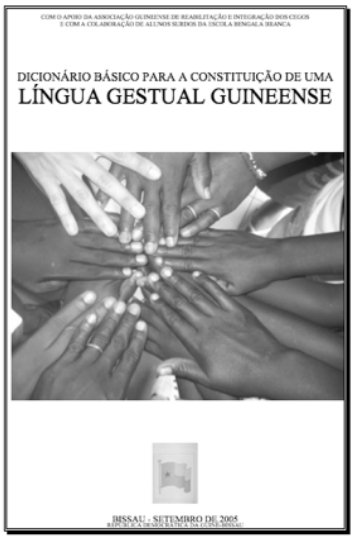




Figure 14. Sample of the first informal dictionary with 200 LGG signs (b) and a video frame of a discussion about the sign for 'plane', showing two variants, one produced with one hand (on the left) and the other with two stretched arms (on the right) (a)

The school administration showed the dictionary to public institutions asking for support to publish an LGG dictionary formally. Mariana Martins and I named the dictionary of LGG to claim its autochthonism from LGP (Portuguese Sign Language). It was not something that we thought about at the time. We were only aware of the

fact that they used ‘gestu’ in Creole to designate the signs used by the deaf (but see Martins, forthcoming, for more details). In this way, the deaf community and its language gained progressively more respect from the hearing community (see Martins, forthcoming for more details on the LGG dictionary collection).

In the following school year, 2005/2006, 84 deaf students (48 boys and 36 girls) enrolled, and the secretary of the blind association, José Augusto Lopes, established the **National School for the Deaf of Guinea Bissau (ENS)**, becoming its director. At the same time, the **Association of the Deaf of Guinea Bissau** was founded, and Amaré was elected its president.

At first, the ENS school, located in the city centre, had two classrooms (Figure 15a), but as the number of deaf students increased, they had to be distributed in three daily shifts. A few years later, the school director secured funding from the Portuguese Cooperation to build a boarding school for the deaf (Figure 15b) in Ponta Gardete, about 12 kilometres from the city centre (see map in Figure 26 in Chapter 2). In addition, he acquired the students’ transportation by bus to and from the new building of the ENS (Figure 15c).

Having realised the importance of learning LGG from deaf students, the teachers started using it to teach all school subjects: Portuguese, mathematics, history, drawing etc. In addition, a few teachers went to Lisbon for training periods of about three months at the school for the deaf and at the deaf association. They also understood the importance of the adult deaf model and began employing them as LGG instructors (Fig 15d).

a.  b. 

c.  d. 

Figure 15. First two classrooms of the National School for the Deaf in the city centre (a). Newly-build boarding school for the deaf in Ponta Gardete (b). School bus taking deaf students to and from school (c). Class taught by a deaf teacher (d)

Meanwhile, Amaré, the only deaf person with a complete educational degree during our first visit, attended a four-year course for sign language instructors at the Portuguese Association of the Deaf (2005 to 2009). He returned to Guinea-Bissau as soon as he finished the training, duly aware that he should avoid LGP influence at most, and went on to be the first adequately trained LGG teacher and a leader in the deaf community.

However, in 2013, Amaré clashed with José Augusto, the school director, and left the ENS, followed by several young deaf people (see Martins forthcoming for details on the deaf community separation). Two years later, Amaré received a small building with two classrooms in the city centre from the Ministry of Education, which was designated **Mariposa** (Figure 16a). The Mariposa school is currently running from the first to the tenth grade to deaf students only, as a day school. Amaré is the school director and teaches LGG, Portuguese and English (Figure 16b). Besides Amaré, the school has another deaf teacher and seven more hearing teachers.

Over these past few years, Mariposa has been financially supported by several sources, including donations from the Portuguese deaf community, to enlarge the school, such as acquiring bricks and zinc roofs. The students (young adults who study and work) have been building and rebuilding the Mariposa school (Figure 16c).

a.  b. 

c. 

Figure 16. Front part of Mariposa School (a). Class of deaf students taught by Amaré (b). Deaf people building a new pavilion with two more classrooms in the back part of the school (c)

Since the ENS is a large school with good infrastructure and material conditions, the director had to acquiesce to the official educational policy of inclusion and open half of the school quarters to hearing students (in separate classes). Although the school has been running from kindergarten to high school, the boarding facilities have remained closed for lack of funding, so at present ENS is only operating as a day school. The transportation serves deaf students and their teachers, picking them up in specific locations starting at the old facilities in the city centre. Hearing students and the remaining teachers live in the area around the school.

Every year the number of deaf students in both schools increases (see Martins forthcoming for details on the deaf population). In the school year 2021/2022, the ENS had 501 deaf students (292 boys and 199 girls) and about 600 hearing students. In Mariposa, there were 97 deaf students (62 boys and 35 girls). More and more deaf people are finishing high school, and four deaf young men have attained the university level. One is Amaré, who re-enrolled in law school instead of economics. Two obtained their degrees as primary school teachers. The last one is studying civil engineering (ibid.). The enrolment numbers show that there are many more male

students than female students. According to local explanations, retaining girls longer (or permanently) at home is a cultural habit. Also, if girls become pregnant, they cannot continue their studies (ibid.). Thus, as a rule, deaf boys have had better access to education. However, in the country, there are a few more female than male inhabitants (1062,600 women and 1016,220 men according to The World Factbook). One can only suppose that the proportion might be similar in the deaf population of Bissau.

It is important to note that many deaf people remain to be counted apart from those enrolled at schools for the deaf, especially in Bissau. In addition, there are schools with deaf people in other cities that are threatened, to different degrees, by the imposition of LGP. One of them, in Ingoré, has missionary teachers that seem to teach LGP there with some mistakes. Despite the existence of LGG dictionaries, LGP appears to be used in other schools across the country where there are small groups of mainstream deaf students. To avoid such external influence, the Deaf Youth Centre, based in Bissau, has promoted meetings between deaf people to guarantee natural interactions in LGG and preserve it as the national language (Martins, forthcoming).

This overview of establishing the two leading schools for the deaf in Bissau is summarised here; for further details on deaf education in Guinea-Bissau, see Martins (forthcoming). The following subsection focuses on the interactive dynamics of deaf people in Bissau.

1.6.3 Social interaction in Bissau

In the previous subsection, I briefly explained how sign language has emerged in Bissau within the educational context since 2003. The number of deaf students, with more boys than girls, has been increasing. Here I now focus on how deaf people interact in their everyday life.

As mentioned in the previous subsection, during our first stay in 2005, deaf young people were already communicating in an emerging sign language at the school for the blind (Figure 17a). When we collected the first set of signs, deaf students discussed the signs from school books' illustrations in the textbooks. Along with the teachers in the school at that time, we observed as they debated which signs were better and why (Figure 17b).

With the establishment of the National School for Deaf (ENS) and the increase of deaf students, classes were organised in three daily shifts of about three hours each, starting in 2006. As a result, only the middle shift had contact with the first and the third shifts during the breaks. To improve contact opportunities between deaf students, Fridays were assigned with extracurricular activities such as games, drama, free play and

socialising (Figure 17c) and lunch for everybody (Figure 17d). As the ENS got more classrooms from the Ministry of Education and eventually moved to the new building in Ponta Gardete, daily shifts were reduced to two.



Figure 17. Deaf students at the school for the blind (a). Deaf people discussing which signs to choose for a first collection of LGG (b)—deaf students during extra-curricular activities (c) and lunchtime (d) on Fridays.

Over time, the first deaf students became schooled young adults, leading autonomous lives. Outside school, they kept meeting in groups, showing pride in their sign language. They gathered in open spaces to be seen using their language. During our fieldwork in 2018, Mariana and I went out one night with a large group of deaf people. Because we were so many, it took work to find a bar. In one of them, the owner said there was room in the back, but the deaf people refused. They justified it by saying they would not be seen in the back and that using sign language in plain sight was important. Thus, they made a point of showing that they existed by gathering in visible places. We eventually found a bar next to a busy street that became quickly filled by us. It is possible that Amaré, having lived in Portugal for four years, has influenced (even if only slightly) the pride of being deaf and having their sign language.

Given that Bissau has two (opposing) schools for the deaf, they have grown apart. Although a few deaf people moved between groups, they met in separate locations, organised different events and played football independently. In one group, football is played in a pavilion (Figure 18a) and the other group plays in a field (Figure 18b); and there is also a female team (Figure 18c). During football practices, other deaf people show up to socialise (Figure 18d).

a.  b. 

c.  d. 

Figure 18. Deaf people playing football in a pavilion (a) and in a field (b); the deaf female team (c); and deaf people socialising during the football practice (d)

Since the conflict between Amaré's group and the ENS board occurred, the Deaf Association of Guinea Bissau became led by the ENS administration. Consequently, the young deaf adults of the Mariposa school founded the **Deaf Youth Centre of Guinea Bissau (CJS)**. They then started organising various events, which included deaf people from other parts of the country, such as celebrating the World Day of the Deaf or free storytelling. Additionally, each school has deaf women's groups with weekly meetings, usually on Saturdays (Figure 19a,b). They gather to sew their clothes and organise 'fashion shows' (Figure 19c). Generally, women are responsible for preparing the meal for everybody, especially at Mariposa school (Figure 19d).

Since it has been under construction, deaf men do most of the work, and women prepare the food – they do the groceries, cook and clean everything afterwards. They usually eat separately as well.



Figure 19. Deaf women's group of ENS (a) and Mariposa school (b). Fashion show by the Mariposa women's group (c) and deaf women preparing everyone's meal at Mariposa school (d)

During school holidays, deaf young people and adults from both schools go to their respective school sites to socialise. ENS students gather at the former location in the city centre, where they maintained a classroom (see Fig. 15a and Fig. 19d). They usually go there twice a week during holidays and on Saturdays during school periods. The deaf group from Mariposa go there every day, including weekends and holidays. Here, they share everything, and everyone contributes according to their possibilities. Some of the adults studying there also work. Deaf fishermen bring fish to the shared meal, often the only meal of their day. In addition, schools are supported by the World Food Programme, which provides them with rice, constituting their typical meal: rice with fish.

What about interaction outside of school settings? In terms of work settings, most deaf men work in fishing and brickmaking, where they are also in large groups. Women usually work alone as street vendors or with hearing people. Thus, they usually get together only at school. Besides school and work settings, deaf young people in Bissau – usually over 17 years old, and primarily men – meet in smaller groups in fixed neighbourhood locations every night. Few deaf women attend these evening meetings because they have chores at home, their family does not allow them to, or they have small children to care for. Deaf people also meet on Saturdays to play football (each school on its schedule), as described above. On Sunday afternoons, they gather in a larger group outside someone's house. Each Sunday they meet in front of a different home to make neighbourhoods aware of the deaf people living there by showing them using LGG (Figure 20a,b). In such gatherings, they organise the order in which speakers address the audience and the topics discussed, ranging from free storytelling to politics, health issues or a particular problem. Even if more balanced, weekly gatherings are attended by more deaf men than women.

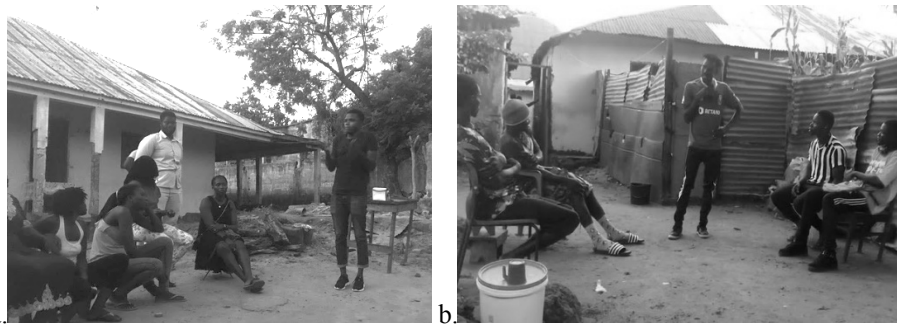


Figure 20. Sunday gatherings in front of a deaf person's house in two different neighbourhoods (a,b)

In terms of contacts outside of Bissau, most deaf people have a smartphone for social networking and do so mainly via WhatsApp and Facebook. In these posts, they write in Portuguese and Creole, but mainly they post videos in LGG. However, there has been minimal actual contact with foreign deaf people. Besides Amaré, who lived in Portugal for four years, seven other deaf people (six boys and one girl) – four from ENS and three from Mariposa – have spent time in Portugal for a few months in the context of the dictionary work with Mariana and I. Amaré has also been to international deaf meetings in Brazil and Ghana, and seven other deaf people from Bissau spent a few months in Portugal (one in 2006 and seven in 2017). One person

was also in Guinea Conakry for an international conference where he met other deaf Africans. In addition, the ENS has organised annual football matches between their team and a Senegalese deaf team in Senegal.

There is a Guinean deaf teacher who was born in Bissau but moved to Portugal at an early age. After he collaborated on the last LGG dictionary in 2017, he established a strong connection with the Guinean deaf community. In the last few years, he has visited Bissau two to three times a year during his school holidays and given different training courses related to the deaf community, such as human and women rights, deaf identity and other related topics. He has been communicating with the deaf in LGG. There have been no influences of other sign languages brought by outside entities to Bissau, although it has occurred in other cities in the country (see the next subsection for more details).

To sum up, mainly deaf men interact daily in LGG in both fixed (school, football and neighbourhoods) and mobile (deaf people's houses) deaf spaces. In general, deaf people in Bissau have become autonomous, determined and proud of themselves. The following subsection focuses on their language, LGG.

1.6.4 Língua Gestual Guineense

Having described the conditions in which sign language emerged in Bissau when deaf people gathered in school in 2003, it is essential to note that before the school was established, they were scattered, sometimes in small groups, in their neighbourhoods and they communicated by using traditional gestures.

At that time, they were generally considered helpless and thus put aside. They did not go to school or even have an identity card. This all changed when they started attending the school for the blind, and an informal dictionary with about 200 signs was printed in 2005. Because this first collection of signs had such an impact, we returned to Bissau the following year to produce a proper dictionary. In 2006, the language seemed more developed, perhaps because the number of deaf students had increased to 84 (48 boys and 36 girls). For instance, PENCIL was produced in the first dictionary (2005) as a compound of 'drawing' + 'tracing around the face' (Figure 21a). In the second dictionary in 2006, it was already reduced to a short tracing movement on the neck (Figure 21b). This means that the iconic motivation had become more opaque in only one year.

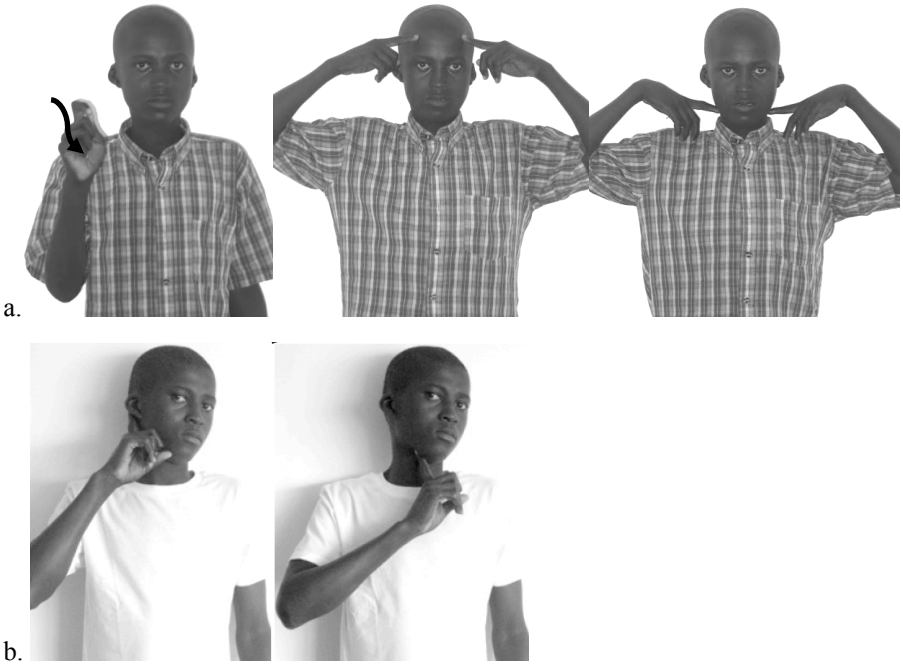


Figure 21. Sign for PENCIL in 2005 as a compound (a) and in 2006 as a more reduced form (b)

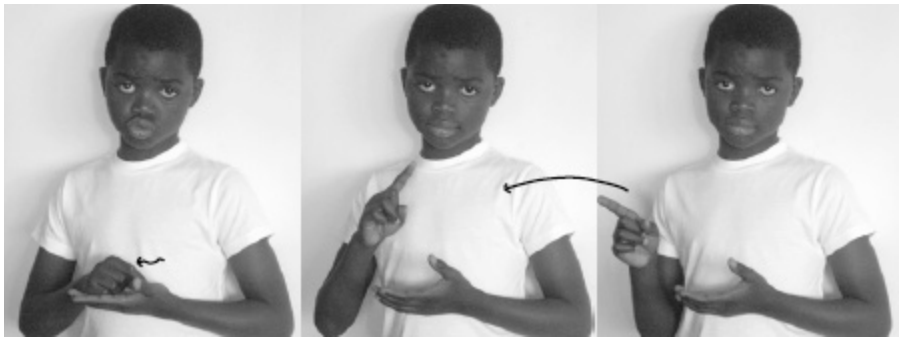
There was by then a sizeable autochthonous vocabulary, like the weekdays articulated by counting the fingers on the non-dominant hand (from MONDAY on the thumb to FRIDAY on the pinkie). However, SUNDAY refers to the cross sign on the forehead from the Christian Mass as in LGP, which does not correspond to the religion followed by the majority of the population (it is represented by 18.9% of the population). Most people are Muslim (46.1%) or follow traditional religions (30,6%)[12]. This second dictionary had an educational purpose, including bilingual exercises (LGG and Portuguese) for deaf students primarily. Although the collection of 500 signs was elicited from a large deaf group (mostly youngsters and adults) in 2006, it was not published until 2008.

We were again asked to update the dictionary in 2017, targeting now the overall population. Here, the collection involved the LGG instructors and comprised 1000 signs and short conversation samples. Linguistic evolution was evident at this time.

[12] The World Factbook 2023 in https://www.cia.gov/the-world-factbook/countries/guinea-bissau/#people-and-society

For instance, in 2008, SATURDAY was produced as a compound of 'school' + 'no' (Figure 22a) while, in 2017, the two components of the compound had blended into a single gesture (Figure 22b).

a.



b.

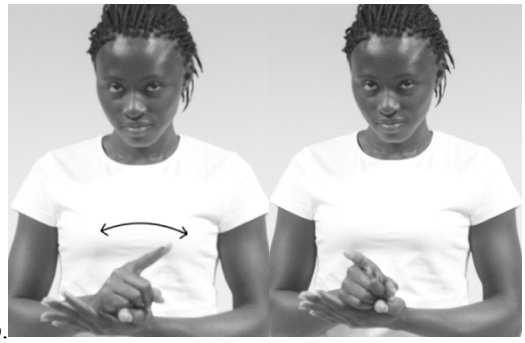


Figure 22. Sign for SATURDAY in 2008 as a compound (a) and in 2017 as a blended sign (b)

The size of the group and the frequency at which deaf people get together may be why LGG is rapidly developing. This is clear, for instance, when comparing LGG signers broadly extending their arms in the beginning and then gradually reducing the signing space, like in PLANE (Figure 14a) EVENING (Figures 23a and c) and JESUS CHRIST (Figures 23c and d).

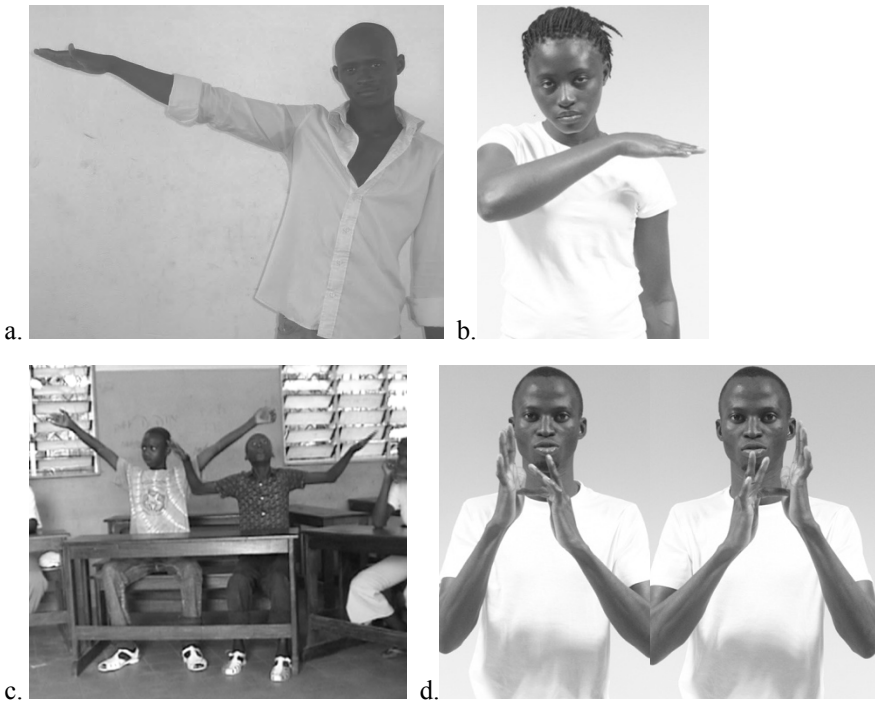


Figure 23. Signs reducing its signing space over time: EVENING in 2005 (a) and in 2017 (b) and JESUS CHRIST in 2006 (c) and in 2017 (d)

Other than the two dictionaries published in 2008 and 2017 (and the informal one created in 2005), Martins and I have briefly described the lexical change in LGG (Martins & Morgado 2016). In her current and ongoing doctoral work, Martins is analysing to what extent local gestures were the original input to LGG signs (Martins, Morgado and Nyst 2019; Martins, Soares e Barros, 2021; Martins forthcoming), and also describing the morphosyntax of how LGG signers organise human referents in transitive events; i.e., argument structure of LGG (Martins, Morgan and Nyst 2021; Martins forthcoming).

Since the beginning of LGG, signers have had different types of exposure to LGP and so I am aware that this may have influenced its emergence in some way, even if indirectly. Overall, my experience as a native deaf LGP signer have allowed me to state that over the many years in which I have witnessed the changes in LGG these are distinctly different languages. However, this will not be explored in the present study (but see Martins, forthcoming, for more details).

To conclude, the deaf community in Bissau and their language, LGG, has emerged and evolved relatively recently. It is characterised by relatively high population density, an urban environment and schooling, with frequent interactions between deaf signers (especially among deaf boys and men). The language itself seems to have developed quickly. Given this sociolinguistic environment, it is reasonable to expect that storytelling may have been able to develop quickly as well, but before this study, it was not known whether certain narrative structures and devices need multiple generations to develop (e.g., as in Adamorobe), or if just having many interactions would be sufficient.

1.7 Concluding remarks

In this chapter, I gave an overview of the literature on the sociolinguistic factors that distinguish the sign languages studied here from each other (§1.2), namely the size of the deaf community (§1.2.1), the time depth of the sign language (§1.2.2), sign language vitality (§1.2.3), interaction patterns (§1.2.4) and the importance of storytelling in deaf communities (§1.2.5). In the following section, I explained how the study was conceived and organised (§1.3). In the three subsequent sections, I described the sociolinguistic profile of each sign language, starting with AdaSL (§1.4), then LaSiBo (§1.5) and finally LGG (§1.6).

The three sign languages are different in the size of their communities: one has 33 deaf in the village of Adamorobe, Ghana (AdaSL), another is used by six deaf people (linked by consanguinity) in the village of Bouakako, Ivory Coast (LaSiBo), and the third has around 500 deaf signers centred in the city of Bissau, the capital of Guinea-Bissau (LGG). The time depth also differs between the three. Although the age of AdaSL at 250 years is an estimation, it is categorically older than LaSiBo at around 50 years and LGG at around 20 years. Together, they represent a necessary distinction in this thesis between a very old, a still young and a very recent sign language. Finally, the interactions patterns vary much between deaf signers: in Adamorobe, they socialise daily in smaller (age) groups, in Bouakako they only interact with each other occasionally, and in Bissau socialisation between the deaf members of the community occurs daily and for long hours and involving multiple interlocutors.

With such a diversity of factors driving language use, what impacts the most language change over time is expected to come to light. I observe eventual variations through the study of narrative structure and captivating devices used by signers. Will those factors influence the way narratives are internally organised? Will signers with distinct socialising experiences seek to involve the audience using similar strategies?

In the following chapter, I will describe the methodology of the four studies.

Chapter 2 – Methodology

2.1 Introduction

The research in this thesis is based on original fieldwork conducted in three countries in Western Africa: Adamorobe (Ghana), Bouakako (Ivory Coast), and Bissau (Guinea-Bissau). In this chapter, I explain how I came about to study the topic of this study (§2.2), how the fieldwork was undertaken (§2.3), how the data was collected (§2.4) and which procedures were followed for the video annotation (§2.5).

This thesis is integrated into a larger research project led by Victoria Nyst, "From gesture to language", mainly focused on size and shape depictions by both hearing and deaf people in West Africa. I went for fieldwork in the first year of the project, in 2018. Initially, the plan was to collect data only in the villages of Adamorobe and Bouakako. Adamorobe was the first and the longest fieldwork (from September to November 2018) and Bouakako was shorter because they were very few (January 2019). Bissau happened, almost by 'accident', in between (December 2018), since I was accompanying Mariana Martins on her fieldwork on the local emerging sign language (LGG). It was then considered an added value to include data on the emerging LGG in the project's study.

Before focusing on the relevant aspects of the fieldwork, I first contextualise the choice for studying personal experience narrative. I discuss this here because such a choice came out as a consequence of the different methodological approaches to collecting data on size and shape depictions. The result was that participants – and myself – felt much more engaged with the spontaneous storytelling about personal experiences. Also, I saw a clear difference between the narratives told in the different settings which immediately sparked my keenest interest.

2.2 Note on how the study was chosen

Under the context of the larger research project "From gesture to language", the local team at Leiden University, in the Netherlands, including Victoria Nyst, Timothy Mac Hadjah and myself, decided on a set of five tasks. Although I collected data from all those tasks on the three research sites, I only used one of them for my study on narratives. I will nonetheless, present the five of them here and justify the choice for the one involving the production of spontaneous narratives about animal attacks.

The five different tasks, including existing and newly developed ones, aimed to collect as many size and shape signs as possible. For the first task, we developed a set of 3D objects and, for the second, pictures of objects of different sizes and shapes. We also

elicited narratives by using the Tweety and Sylvester cartoons fragments[13] (the third task) and two free topics directly related to their daily lives, one about fruit and vegetables (the fourth task) and another about experiences with dangerous animal encounters (the fifth task). Still, the first three tasks resulted in some strangeness from the signers since they were unfamiliar with that type of materials and corresponding tasks (but see Hadjah, forthcoming), which did not prevent them to do it all the same. On the first task, many of the deaf people had difficulty understanding the 'rules' of the 3D objects game, so we had to perform two or three rehearsal attempts so they could do it autonomously. This was the most challenging task in all three research sites. The third task concerning the Tweety and Sylvester video cartoons was challenging for the older deaf people in Adamarobe and all deaf people in Bouakako because they are not used to watching cartoons nor to the task of retelling them.

The last two tasks were developed in response to previously observed and documented unease in deaf rural signers with picture and video tasks (see Nyst 2015b). These tasks, involving spontaneous discourse, had prompts but not specific elicitation materials. The fourth activity was an interview about fruits and vegetables (also used in Nyst 2016 for gesture use in speakers of Anyi and Dutch), while the fifth activity—the activity that is the basis of this thesis—asks participants about **scary encounters with animals**. In these more spontaneous activities, we expected to observe the size and shape in descriptions of both fruit and vegetables and dangerous animals like snakes. Also, besides being asked about familiar topics, signers had no restrictions to talk about them. Their experiences with food items and dangerous animals were part of their daily lives as farmers and were often the subject of informal conversations, especially amongst the deaf in Adamorobe. I later became aware that this was also a popular topic among the Bissau-Guinean deaf people.

To elicit accessible narratives about food items, I referred to their experience as farmers by asking them: "What do you plant and crop on the farm?". Still, some of them asked me what I wanted to know precisely. I clarified that I had no experience with farming and would like to learn more about the whole process and the products they obtained from it. They then explained what they sowed and harvested and what the fruits and vegetables were like. In Bissau, because they were not farmers, I asked them instead to explain to me what different kinds of fruit looked like, such as bananas. However, these explanations were not actual narratives but descriptions of farming activities and food items.

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[13] The fragments used for elicitation are 'bowling ball', 'catapult', 'drainpipe', and 'swing' as created in a ready-use format by Sotaro Kita at the Max Planck Institute for Psycholinguistics, Nijmegen.

For the last activity, I asked the deaf participants: **"Have you ever encountered a dangerous animal like a snake?"**. I tried to pose an informal question to elicit personal experience narratives as naturalistically as possible. When socialising with the deaf people in the two villages and even in Bissau, I noticed that encounters with dangerous animals, especially snakes, in their farming incursions, were a recurrent topic. In Bissau, none of the participants was a farmer, but many harvested cashews in the forest, where they sometimes encountered snakes. Signers got engaged with these narratives, showing pleasure in telling a good and exciting story with a purpose. As part of their audience, they were aware of my attention and invited me into their own experiences by dramatising them.

When I collected the data from the three sites, all tasks followed similar procedures adjusted to the local contexts. Signers were called upon two at a time since the first task involved working in pairs. In the following tasks, always in the same order, from two to five, they responded individually and alternated so that the other could rest. Now and then, I would ask them if they wanted to stop, but they never did. Also, since the filming was not done in a closed space, sometimes, other people (deaf and hearing) would just stay there and watch, which ended up being important in the animal attack narratives by creating a real audience. The amount of data collected per day (and the days in which it occurred) depended on the group's daily occupations, but, on average, each pair took about one hour to respond to all five tasks.

At that time, I had not decided yet upon focusing only on the animal attack narratives. At the first fieldwork, in Adamorobe, when filming the narratives about animal encounters, I was surprised by how intensely most signers dramatised their experiences, making the story appealing to those of us watching them. At the second research site, in Bissau, I noticed that some of the narratives in LGG were also told in a very engaging manner. Therefore, at the last fieldwork site, in Bouakako, I was expecting similar productions. However, it was not the case. Although their stories were presented with a basic structure of beginning, middle and end, they were more straightforward and with little dramatisation. It was then, facing many questions arising at that point, that I became motivated to focus the study on the narratives of personal experience.

2.3 Fieldwork: Preparation and stay over

The research project led by Victoria Nyst began in early 2018. Fieldwork occurred later that year: Adamorobe, from September to November; Bissau, in December; and Bouakako in January 2019. Although the data collection in itself was undertaken in very similar ways, the whole experience preceding and during fieldwork was very different in the three sites.

This thesis builds on an existing network of hearing and deaf contacts, both local and abroad who have worked with these communities. For one, Victoria Nyst is well acquainted with Adamorobe, as is Annelies Kusters whom I knew before from the worldwide deaf community. Nyst's (2004, 2007a, 2007b, 2010, 2012, 2015b, 2016a, 2016b, 2018) and Kusters' (2012a, 2012b, 2012c, 2014a, 2014b, 2015a, 2015b) work, as well as their personal hints, were crucial to prepare for fieldwork. Bouakako was the place where I struggled the most for not having a solid supporting net. Although I hardly knew Angoua Jean-Jacques Tano at the time, his work (Tano 2016) and his local contacts were fundamental for me to move around in Ivory Coast. The fact that the village was geographically quite isolated and the few deaf people were not accustomed at all to outsiders did not ease the pave either. In contrast, I was very comfortable with the deaf people in Bissau and their whereabouts since I have been visiting the local deaf community since its early inception in 2005.

Thus, in Adamorobe and Bouakako, I worked with local contacts that had been introduced to me by previous researchers, while in Bissau I had well-established relationships. Communication varied widely depending on the local spoken and signed languages, but in all settings, I communicated directly with deaf members of the community in a contact version of their sign language. Finally, the means of compensation for participants was customised in each community, about the local economic and historical circumstances.

All three sites are located in West Africa, but quite far from each other (see map in Figure 1). Nonetheless, deaf villagers, in both Bouakako and Adamorobe, depend greatly on subsistence farming and know little more than what happens within their village boundaries, especially the Ivorian ones. Many urban deaf people in Bissau also harvest cashew during a certain period of the year, but it is not their main activity. Unlike the villagers, they are much centred in a school setting and very eager to know more about the outside world. Details about the three deaf communities and how they compare to each other are in Chapter 1.

Here I go into the exact location of the research sites and my logistic conditions, namely how I went from my lodging facilities to the research sites. I also explain how I communicated with the deaf and hearing people during fieldwork in Adamorobe, Bouakako and Bissau, referring to the various strategies and languages used. I describe how my involvement with each community occurred. In the end, I explain how were the deaf participants compensated for their participation.

2.3.1 Fieldwork in Adamorobe

The village of Adamorobe is located in Ghana, near Accra. Although its geographical proximity of about 40 kilometres (Nyst, 2007) from the city capital has favoured its growth, access by public transport is still scarce. To get there, you must drive by car or taxi or pick up a minibus to Oyibi and a taxi from there to Adamorobe.

I stayed in Aburi, from September to November 2018. The options from there to Adamorobe were going by minibus to Madina and then to Oyibi or by motor taxi through a terrible dirt road (Figure 21). In the first month, I went by motor taxi, but then I had an accident and started going by trotro (minibus) to Oyibi and then taxi.

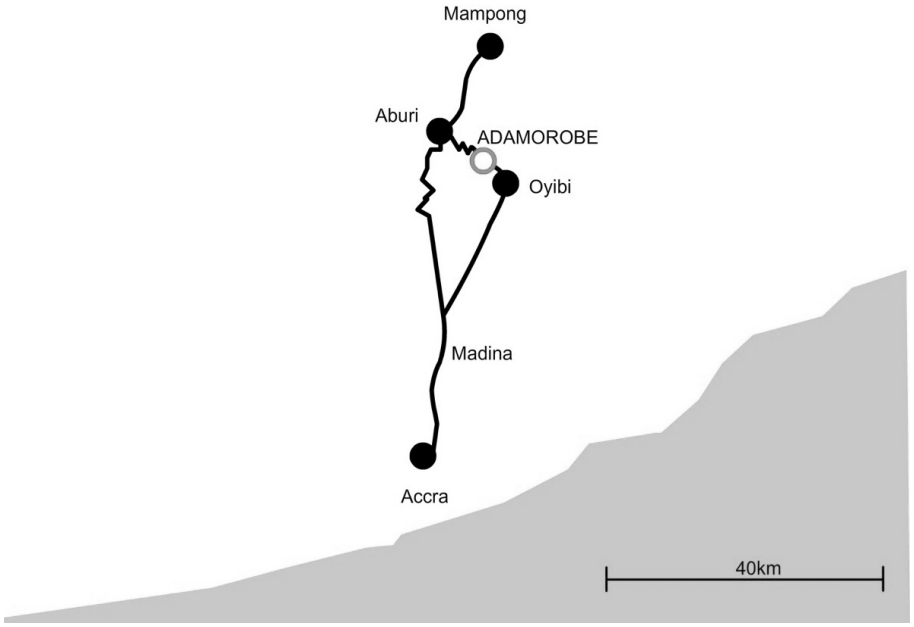


Figure 24. Location of Adamorobe, in Ghana

Preparation. Victoria Nyst and Annelies Kusters, through their work and experience with the local community, helped me in creating a foundation to enter Adamorobe. Since Victoria has been promoting the training and participation of local deaf assistants in the countries where she has had research projects, I was able to benefit in Ghana, from the valuable assistance on the ground of Marco Stanley Nyarko. Marco is a deaf teacher at Mampong school for the deaf, who was also teaching children from Adamorobe. At the time, he was doing his master's degree at Legon University and is

now pursuing a PhD at Leiden University. He had worked with the deaf community of Adamorobe before as the local lead researcher in the corpus project of language socialisation in deaf families in Ghana[14].

Communication. On my first visit to Adamorobe, Marco accompanied me. He first introduced me to James Appeadu, the local interpreter and a reference in the deaf community, who knew all the deaf people in the village. He had two deaf sisters who had both passed away. James had also been a research assistant in Nyst's PhD project, translating all the video recordings of AdaSL onto paper hardcopies.

James formally introduced me to the village chief, to whom I had to ask permission to do the research in the village. Marco (Figure 25) and I communicated in International Sign (IS), he then spoke in English to James, who translated to Akan for the village chief and back. A young deaf woman, Adwoa Agyiriwa (Figure 25), that was present at the formal introduction to the village chief, introduced me to the deaf community of Adamorobe on that first day by taking me to everyone's houses.

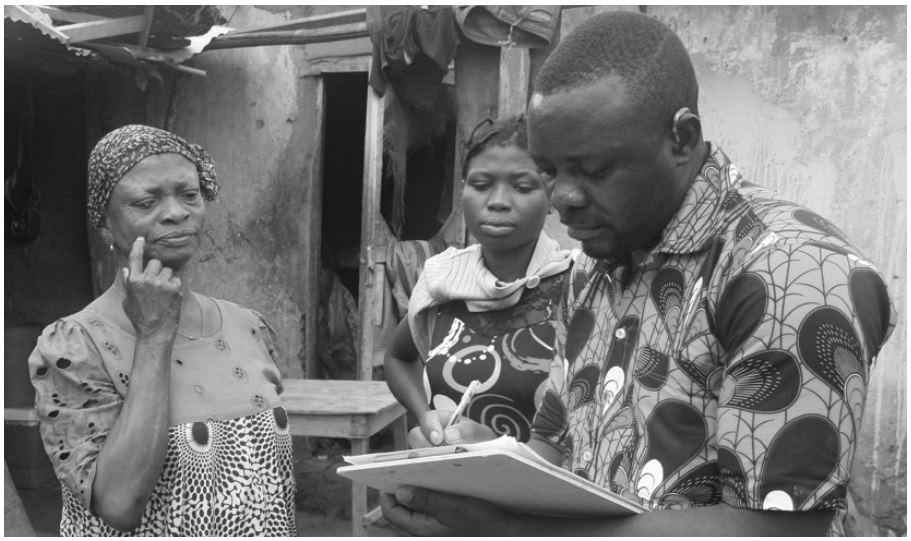


Figure 25. Marco Nyarko (man on the right) assisting me in the Adamorobe fieldwork and Agyiriwa Adwoa (first woman on the right)

[14]https://www.universiteitleiden.nl/en/research/research-projects/humanities/language-socialization-in-deaf-families-in-africa

After that initial presentation, I went from Aburi to Adamorobe daily. In the beginning, Adwoa communicated with me in GSL but being in Adamorobe daily gradually enabled me to communicate in AdaSL with every deaf person in the village. As I mentioned in Chapter 1, there were two deaf groups in Adamorobe. A younger group, between 18 and 31 years of age, had access to school and had learned GSL, and an older group, older than 31, was considered more fluent in AdaSL (Kusters, 2019); see §1.3. for more details. The group of younger deaf people communicated with each other in GSL, which they had learned at the deaf school in Mampong, located about 20 kilometres from Adamorobe (see §1.3. for more details). Usually, when younger and older deaf people get together, everyone communicates in AdaSL (see §1.3.4 for description).

Involvement. I spent more time with the younger deaf people because they did not work and stayed in the village every day, while the older deaf people went to work on the farm. Three older deaf people did not go farming because they had health problems. I also socialised with them, alternating with the young deaf people.

The elders were around only on Thursdays and Sundays, and often also on Saturdays. For the deaf farmers, Thursday was the day to rest, and we all gathered in the shade of a big tree and chatted for hours. They would talk about various subjects such as their farm work, their previous cocoa experience and work in a building blocks factory. They also gossiped and spoke much about Victoria Nyst and Annelies Kusters with affection and respect.

Unfortunately, I could never join them for meals. As a vegetarian, I could not eat meat, fish or snails with them. I usually woke up early and had a big breakfast for the whole day without needing to eat another big meal. They were disappointed with me, so I said I could not eat their food because I would get "sick". They seemed to understand it better and stopped insisting. Since then, I would keep them company at mealtime in the morning without eating to talk.

In the beginning, they would leave their daily tasks to talk to me or even teach me their language. Little by little, they understood that they did not need to worry about me; they could do their chores, and I would still be there to help them when needed. I usually accompanied them in their chores, like washing clothes, bathing their children, and preparing food[15] (usually banku and kenkey), and we talked. At the end of the first month, I started taking my small video camera, and that is when I began planning the filming. They would also ask me to bring videos and printed photos the next time

[15] Banku is mixed corn and cassava doughs fermented and cooked and then formed into balls before serving. Kenkey is white corn dough fermented and cooked. Both are traditional staple dishes of Ghana.

I return to Adamorobe. By then, they were very comfortable with me, and it was evident they were very used to the camera.

Even though I felt at first as invading their space, most deaf people treated me very well, offering me cassava and plantain on occasion. They appreciated that I was deaf, as they did with Kusters (2012c). She also felt welcomed in Adamorobe and acknowledges the fact that being deaf made it easier for the local deaf people to identify with her. Moreover, deaf people valued her because she did not leave immediately. Other researchers had gone there with cameras, filmed deaf people, paid them, and left. Besides the researchers, there are also hearing and deaf tourists who have heard about Adamorobe and, because it is near the capital, appear to take photographs, film them and then leave without donating anything. They were offended because they felt used and not cared about (Kusters, 2012a). Moreover, dissatisfied with this, the deaf from Adamorobe became more suspicious and withdrawn (Kusters, 2012c).

Compensation. Deaf people from Adamorobe got used to receiving donations from Andrew Foster's organisation every two weeks. Later, so did churches, NGOs and even individuals (Kusters, 2012c). For this reason, every time they welcome an outsider, they expect to receive donations. If they do not get it, they might even demand it.

Kusters explains that she would give presents and some money to those she had interviewed every two to three weeks. However, when they asked for more, she had to explain that she was only a student not earning any money and that the big school' in England had paid for her flight and camera.

In my case, on the first day that everyone got together since my arrival, which was on a Sunday, I prepared refreshments with cookies as a token of my appreciation. Afterwards, they did not ask me for anything, but when the filming was concluded, I paid each person for their participation. After the data collection, I continued to meet with them daily, but, by then, they kept asking me for more compensation. On the last day of the fieldwork, I brought gifts to all the deaf people in the village, such as oil, rice, Maggi cubes and soap.

After the fieldwork, I maintained contact with some of the deaf people in Adamorobe and, together with Victoria and Annelies, we supported them whenever possible in terms of educational and health critical needs. I saw them all again during summer school for African deaf Academics in August 2019.

Having concluded this first fieldwork in Adamorobe, I went next to Bissau to accompany Mariana Martins on her fieldwork for her PhD project on the emergence of the local sign language. However, I will hold here to the same order as the one

followed throughout this thesis. Thus, I will jump to the fieldwork site I undertook chronologically last: Bouakako.

2.3.2 Fieldwork in Bouakako

The village of Bouakako is located in the southwest of Ivory Coast. It is a tiny village that does not appear on Google Maps (Figure 26). It is one of the five villages in the municipality of Hiré, located about 6 km west of Hiré in a forest area (Tano, 2016). To go to Bouakako from Abidjan, we must go through Divo to Hiré, the closest village to Bouakako. We can go to Hiré from Abidjan by car or bus, about a four-hour drive (250 kilometres). Once in Hiré, there is no public transportation to Bouakako.

I stayed in Hiré in January 2019, where motor taxis are the most common way of transportation. However, in the beginning, it was difficult to find someone to accept taking me on the ten-minute ride from there to Bouakako because the route is challenging. Only after involving the local contacts, was I able to find a regular ride.

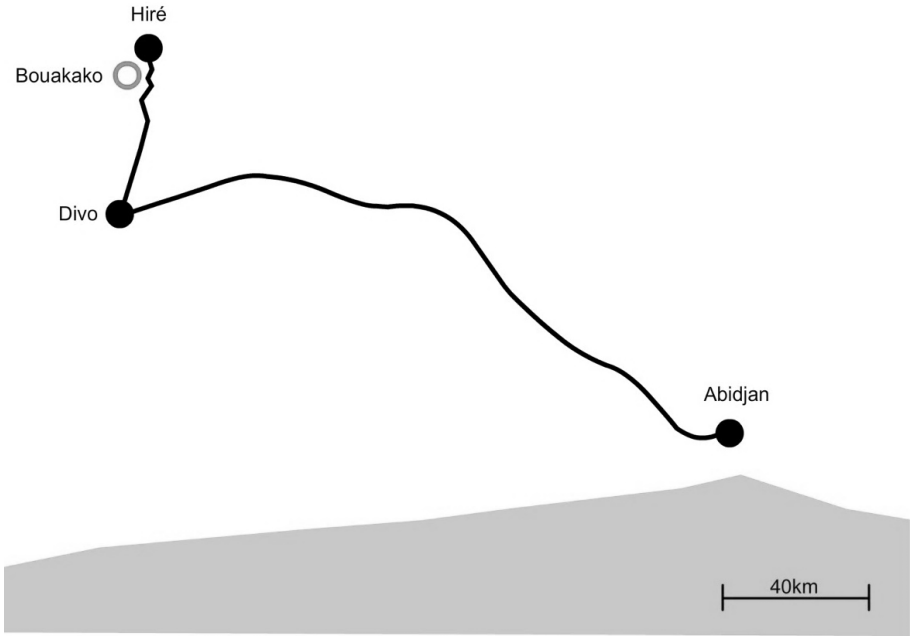


Figure 26. Location of Hiré, in Ivory Coast

Preparation. Victoria Nyst set me in contact with Angoua Jean-Jacques Tano who had done his doctoral thesis on the sign language of Bouakako (Tano 2016). He was

himself from Hiré. His father was still living there and was of great support in my fieldwork. Tano suggested that his colleague, Bruno Dibi, assist me. Bruno was a hearing master's student working on Langue des Signes de Côte d'Ivoire at Félix Houphouet Boigny University in Abidjan. He was also volunteering as an interpreter for a high school deaf student.

Communication. Bruno accompanied me during fieldwork, and our communication was always challenging because we did not share a sign or written language. We communicated either by pantomime and other gestures or by Google translating between English (mine) and French (his). Bruno mediated my communication with Tano's father during our mutual visits and with the village chief during the formal introduction, which was necessary to get permission for the research.

Having had previous experience with deaf people in different African countries, especially with those from Adamorobe and Guinea Bissau, I could quickly communicate directly with the deaf inhabitants of Bouakako without any help. However, on rare occasions, I did ask for confirmation of particular messages from the local interpreter, Kouassi Dadié, also mediated by Bruno (Figure 27), who accompanied me throughout the fieldwork.



Figure 27. Bruno Dibi (second man on the left) assisting me in the Bouakako fieldwork

Involvement. In Bouakako, deaf people welcomed me well and were surprised to learn I was deaf. They had never seen a deaf white person before. The family hearing

members explained that it was the first time a white person had come to the village. Both Bruno and some of the hearing people were constantly around, but, at some point, I asked them to let me spend time with the deaf without observers.

I immediately realised that they used some gestures that I had seen in Adamorobe. Thus, communicating directly with them was quite easy. In general, they were not very talkative, so I had to keep asking them questions. They showed me the whole process of cocoa sun drying, which was what occupied them the most at the time. I also spent some time with one of the deaf women who had recently had twins. In the end, they offered me cocoa fruit, sugar cane and plantain.

They showed me photographs they had with Angoua Jean-Jacques Tano and Victoria taken a few years earlier in Abidjan at a sign language conference. Then they asked me to bring the camera and take pictures of them and their families so that I would give them the printed photos the next time I returned to Bouakako. By then, I planned the data collection. During the filming, the people of Bouakako were quite comfortable as they had previously participated in Tano's research.

Compensation. On the first day, the oldest deaf man bought a five-litre palm wine to share with everybody as a celebration. In the following days, the same deaf man asked me to buy another one and share it with everyone. I gave them money, and the wine was shared with the deaf and some of the hearing who joined us.

In the end, they received several gifts, like rice, oil, and soap bags, as assumed luxuries. One of the deaf women who worked with me had recently had twins and received extra baby goods such as diapers, porridge, bath gel and cologne for herself. The gifts were distributed to all the deaf people and the local interpreter.

I now go back in time to describe how was the fieldwork in Bissau that had occurred the month before. As I said before, this was not initially planned within the bigger research project but ended up being a valuable asset.

2.3.3 Fieldwork in Bissau

The fieldwork in Guinea-Bissau was very different from the other two because the deaf community is based in the urban capital, Bissau, and I am very familiar with them. Here, deaf people gather in two main locations: (1) the older and bigger school for the deaf, called Escola Nacional de Surdos (ENS), which is on the city outskirts, and (2) the Mariposa school run by the deaf leader Amaré Soares in the city centre (see chapter 1 for more details).

The Bissau fieldwork occurred in December 2018, between the two villages fieldwork. I stayed in the city centre at walking distance from the Mariposa school (Figure 28). To the ENS, I would take the school's private bus from the old school for

the deaf (in the city centre) to the new location (Figure 23). During this very cheerful ten-kilometre ride, the bus would pick up several children on the way. Besides walking around to other meeting locations, we also used the minibus, locally called toka-toka, and the taxi.

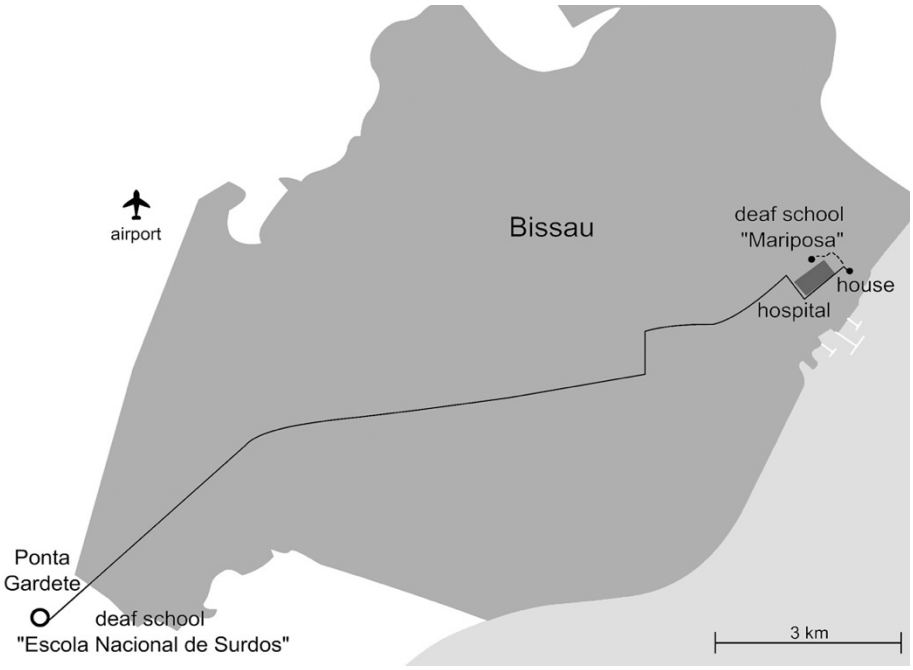


Figure 28. Locations of the deaf schools in Bissau, Guinea-Bissau

Preparation. In my previous visits, I had stayed in hotels (in 2005 and 2008) and, on one occasion (in 2006), in the residential home of blind and deaf children who had no family in the city. This time, in 2018, Mariana Martins (who was also doing her fieldwork on LGG for her PhD) and I stayed in a local accommodation near one of the deaf schools.

Communication. The first time I visited Bissau in 2005, Mariana Martins interpreted my interactions to and from Língua Gestual Portuguesa (LGP, Portuguese Sign Language) and Portuguese with the hearing people, mostly teachers, during training and meetings. To communicate with deaf children and adults, I first relied on gestures. Gradually, I learned the signs they were using, which would become LGG. In the beginning, I talked with Amaré Soares in written Portuguese. Then he went to Portugal and stayed with us for the first few months. We then communicated in LGP.

Even when he returned to Guinea-Bissau four years later, after training as a sign language teacher, we always based our communication on LGP.

With other deaf people, I tried to use LGG as much as possible. During the fieldwork in 2018, I did not rely on the support of a deaf assistant because I was already pretty at ease with the community. However, Amaré Soares was, as always, a valuable collaborator with the community around the Mariposa school and so were other deaf LGG instructors at the ENS.

Involvement. The deaf community in Bissau knew us well already, so it was easy to just be part of daily activities during our stay. We met deaf people mostly at the two schools in Bissau, football matches, and informal gatherings of both smaller and larger groups.

Compensation. After discussing the best way to compensate the deaf participants with the leaders at both schools, the recommendation was to invest in food since it was something that everybody could benefit from. Thus, students received lunches and every time we went out with smaller groups we would pay for food and drinks. I should note that there has been an ongoing collaboration with the deaf community over the years that includes the provision of different educational and technical materials as well as support in teacher training.

In the following section, I describe the most relevant aspects concerning the data collection, namely who the participants were in the three sites and how the data was collected.

2.4 Data collection: Participants and filming

After describing the context of each research site, I now turn to the portrayal of the deaf participants, how the filming went about and what is the final dataset. I first present the common issues to all three locations and then I discuss specificities for each site.

2.4.1 General overview of the data collection

The number of participants varied in the three sites. In Adamorobe, some had to be excluded for different reasons. In Bouakako there are only six deaf people. In Bissau, deaf people were chosen, broadly speaking, on age and gender criteria to match approximately the number of participants in the villages. Despite minor differences, all participants are adults. Importantly, data collection was undertaken as similarly as possible in the three sites, considering contextual idiosyncrasies.

I used two cameras in Adamorobe but quickly realised I did not need the two of them. Therefore, in Bouakako and Bissau, I only used one camera. The videos were always recorded on ScanDisk cards. In addition, the raw videos were downloaded to the computer on the same day of the filming session and recorded to two different memory disks as backups. After the fieldwork, all videos were converted to MP4 through Adobe Media Encoder.

Participants. The metadata of the participants at the three different locations is based on demographic survey questions prepared in advance at Leiden University. The questionnaire contains questions about personal information, such as the family, and educational and occupational background. Furthermore, it was prepared in English for Adamorobe, French for Bouakako and Portuguese for Bissau. These questions were asked to the deaf participants in the two villages by the assistants in the field – Marco in Adamorobe, and Bruno, in Bouakako – who filled in the data with the help of the local interpreters who also knew the participants well. In Bissau, I asked the questions to the deaf participants myself. The metadata was later processed in Excel and archived.

Overall, this survey data shows that deaf people in the villages are especially prone to hereditary deafness, while in Bissau, deafness is mainly acquired during early childhood. Also, deaf people in the villages are primarily farmers, while in Bissau, a little more than half of the participants are working students, and the remaining are non-working students. The characteristics of the participants of each country are detailed in the sections that follow. In Table 5, I summarise the number of deaf participants per gender and their age range. Here, I refer only to those whose personal experience narratives on animal attacks were analysed in this study.

Table 5. Summary of the deaf participants in Studies 1 through 4

		Adamorobe	**Bouakako**	**Bissau**
Participants	Men	4	4	8
	Women	11	2	8
	TOTAL	**15**	**6**	**16**
	Age	20 to 72	24 to 58	18 to 30

Dataset. The final dataset is comprised only of the narratives collected in the fifth task, as explained in the previous section (see §2.2). These personal experience narratives were prompted by the question **"Have you ever encountered a dangerous**

animal like a snake?", just like Labov & Waletzky had done in their interviews by asking, "Have you ever been in a situation of danger?" (see §3.2.2. for more details).

Narratives for AdaSL, LaSiBo and LGG were collected with that same method, i.e., the question asked was very similar, and the narratives were told face-to-face as well. Most of the population, although smaller, had not finished their schooling either. In addition, signed narratives can also be considered equivalent to 'oral' storytelling. Thus, because of the similarity of the topic in question and the type of population, L&W's model seemed to be the most suitable to test in this study. Based on personal experience narratives of life-or-death situations, the authors shaped their model of an internal structure divided into different parts, or components (Study 1), and containing specific enhancing devices (Studies 2, 3 and 4).

Deaf signers answered my question by narrating their personal experiences during fieldwork. With the camera beside me, I watched each signer attentively as they told their narratives. There was only one signer, in Adamorobe, that told two different stories. Once I identified this type of narrative as the focus of this thesis, I wanted to expand the set of data as much as possible. This led me to look at existing corpora for narratives about animal attacks. In the AdaSL Corpus, collected in 2000, I found three more.

To confirm if LaSiBo signers did not typically include size and shape depictions within their narratives, I asked Tano, as the local collaborator, to collect another round of narratives about animal attacks. I filmed four of the six signers and two of them told two different stories. In Bissau, all 16 signers produced one narrative each. Table 6 summarises the number of narratives collected per signer, referring to the corresponding sources. All narratives were analysed in the four studies, except for one in LaSiBo in Study

Table 6. Summary of the number of narratives per signer used in Studies 1 through 4

	Signers	**Narratives**	**Sources**	**Narratives per study**	
				1	2, 3, 4
AdaSL	#1 – 10 #11 #12, 13	#1 – 10 #11a,b #12, 13	Fieldwork 2018	14	14
	#14 #15	#14 #15a,b	Corpus 2000	3	3
Total	**15**	**17** (35 min.)		**17**	**17**
LaSiBo	#3, 4 #1	#3, 4 #1a	Fieldwork 2019	6	6

	#2 #5 #6	#2a #5a #6a			
	#1 #2 #5 #6	#1b,c #2b #5b,c #6b	Fieldwork 2021 (by assistant)	5 (#5c was excluded)	6
Total	**6**	**12** (19 min.)		**11**	**12**
LGG	#1 – 16	#1 – 16	Fieldwork 2018	16	16
Total	**16**	**16** (17 min.)		**16**	**16**
TOTAL	**37**	**45**			

After being selected as the final dataset for analysis, narratives produced by the signers were numbered according to the chronological order in which they were filmed. Those added later, in the cases of AdaSL and LaSiBo, come after the previously numbered list whether with a subsequent number if the signer was different (which is the case of AdaSL) or with letters. Throughout this thesis, the duration of the narrative is mentioned, and lines are indicated according to their number in the sequence of the storyline, whenever relevant.

In the next three subsections, I describe how the narratives were collected in the three research sites. I go through each one of them, mentioning who supported me in the field, who were the deaf participants and which data was selected for analysis.

2.4.2 Data collection in Adamorobe

During the 2018 fieldwork in Adamorobe, there were **33 deaf people** (ten men and 23 women) living in the village (see §1.3 for details on the deaf villagers). The filming was done entirely in James' house (see §2.4.1 for more details), who had put it at our disposal for that purpose. He also lent the required table and chairs to execute the tasks and made himself available by always being there.

Marco assisted me in the Saturday filming sessions. Kofi Arkoful, the deaf priest from Accra who held the Sunday mass, helped organise the filming sessions and fill out the personal data of the deaf people, such as names and dates of birth. Right after each filming session, I hand-annotated from AdaSL to English in a notebook and then the translations were reviewed by Agyiriwa Adwoa and Kofi Kumi Buckman, two deaf youngsters from Adamorobe. Adwoa was the only girl that had not become pregnant at the time and Buckman had just finished high school (he later proceeded to higher education). The following year, in August 2019, they both attended the Summer

School for African deaf academics organised by Leiden and Legon Universities, in Legon, Ghana. There, they met deaf academics from eleven African countries. The two of them were of great help in reviewing the translations, being, of course, paid for such collaboration.

Participants. I invited all deaf people to participate so they were free to choose whether they wanted or not to be part of the research project. In the end, there were 13 deaf adults (four men 11 women and, between 20 and 72 years of age) telling about their experiences with animal attacks. The disproportion in the number of men and women reflects the overall gender difference in the village of about 30% of men to 70 % of women. Some of the deaf villagers did not participate in the filming session at all. Others did respond to the remaining tasks – not included in this study – but did not experience an animal attack to tell about.

Dataset. As shown in Table 7, one of the signers filmed in the 2018 fieldwork told two narratives. Thus, at that moment, I had 14 narratives told by 13 signers. Besides these, I also searched for narratives about experiences with dangerous animals in the AdaSL corpus, collected in 2000 by Nyst (2015). Here, I found three more narratives by two different signers talking openly about animals and their dangers without being asked beforehand. In the end, I had a total of 17 narratives told by 15 signers.

Table 7 summarises the relevant information about the participants (name code, age, gender, deaf family members and occupation) and the data set (video file name and year of collection). Here, the high number of deaf people with deaf family members (13 of 15) becomes clear. Also, it is shown that, while older adults are farmers, the youngsters are unemployed (6 of 15). The narratives from the corpus were produced by signers that are not part of the narrative collection in the 2018 fieldwork, so the age of the one that says it corresponds to her age in 2000 when the videos were collected.

Table 7. Summary of metadata on participants and corresponding narratives in Adamorobe

signer	age	gender	deaf family members	occupation	narrative	date
ADA#01	22	F	none	unemployed	ADA_01	2018
ADA#02	72	F	parents and siblings	farmer	ADA_02	
ADA#03	20	F	parents	unemployed	ADA_03	
ADA#04	24	F	parents and siblings	unemployed	ADA_04	

ADA#05	34	F	father and siblings	unemployed	ADA_05	
ADA#06	28	F	parents and siblings	unemployed	ADA_06	
ADA#07	23	M	siblings	unemployed	ADA_07	
ADA#08	37	M	siblings	farmer	ADA_08	
ADA#09	49	F	siblings	farmer	ADA_09	
ADA#10	59	F	none	farmer	ADA_10	
ADA#11	47	F	parents and siblings	farmer	ADA_11a	
					ADA_11b	
ADA#12	51	F	parents and siblings	farmer	ADA_12	
ADA#13	43	M	siblings	farmer	ADA_13	
ADA#14	?	M	siblings	farmer	ADA_14	2000
ADA#15	50	F	siblings	farmer	ADA_15a	
					ADA_15b	

Having detailed the participants' profiles in Adamorobe and the narratives collected for AdaSL, I now turn to the other West African village.

2.4.3 Data collection in Bouakako

Bouakako is a relatively small village compared to Adamorobe. At the time of the fieldwork, in January 2019 there were only **six deaf inhabitants** (see §1.4. for more details on the deaf people from Bouakako).

During the fieldwork, Bruno Dibi assisted in the filming sessions and mediated communication whenever necessary. The villagers provided the tables and chairs. The footage was filmed outside, under the shade of a large tree. Afterwards, the videos were reviewed with Bruno, who translated them into French in a notebook.

Participants. In Bouakako, the six deaf people (four men and two women, between 24 to 58 years of age) were filmed in a single session. All of them told one narrative each. However, one of them was quite reluctant in the beginning. Of course, he was free to leave but chose to stay and watch his peers. After most had already told about

their experiences with animal encounters, I looked at him and asked if he wanted to tell his own story. Then he walked to the front of the camera and, seemingly at ease, told spontaneously about his experience with snakes.

Dataset. In Bouakako, six narratives were collected during my fieldwork in 2019. However, one of the accounts was rather descriptive than a time-ordered sequence of events and was, hence, excluded from Study 1.

As done for AdaSL, I also searched for narratives about experiences with animal attacks in the LaSiBo corpus, collected by Tano (2016), but I did not find any narrative of the sort. There were only dialogues with two or more deaf people about the danger of snakes and pythons.

Since I rarely found snake descriptions in the LaSiBo narratives, contrary to the other languages, I asked Tano, the local collaborator, to refilm the narratives. This was two years after my fieldwork, in 2021, during the pandemic[16]. On that occasion, signers were asked if snakes or any other animal had ever attacked them. Tano did the filming session on the same day, using the same methods as I did during my 2019 fieldwork. As a result, six other narratives told by four signers (two of them told two stories each) were added to the lot. There were only four signers, because, on that day, one of them was not in the village. The other deaf person was indeed filmed but he told his experiences by speaking the whole time. Presumably, this was because Tano, who asked the question, was a hearing person. The remaining two signers said they had never been attacked by an animal. In the end, I had 12 narratives told by six signers (two of them told two stories each, and two others told three stories each).

Table 8 provides a summary of the relevant information about the participants (name code, age, gender, deaf family members and occupation) and the data set (video file name and year of collection). It is shown here that they are all subsistence farmers. The signers' ages correspond to the age they had during the first collection in 2019.

[16] I had planned doing this second visit to Bouakako myself, but the pandemic was an impediment. Since it was not possible to travel at the time because of COVID restrictions, I turned to Tano's support on the field.

Table 8. Summary of metadata on participants and corresponding narratives in Bouakako

signer	age	gender	deaf family members	occupation	narrative	date
LAS#01	24	F	sibling	farmer	LAS_01a	2019
					LAS_01b	2021
					LAS_01c	
LAS#02	48	M	sibling	farmer	LAS_02a	2019
					LAS_02b	2021
LAS#03	47	M	none	farmer	LAS_03	2019
LAS#04	37	M	sibling	farmer	LAS_04	
LAS#05	58	M	sibling	farmer	LAS_05a	2019
					LAS_05b	2021
					LAS_05c	
LAS#06	39	F	none	farmer	LAS_06a	2019
					LAS#06a	2021

After describing who the participants were in the two villages and the final datasets complemented by additional narratives from the corpus in AdaSL and from one more visit by the local collaborator in Bouakako, I detail next how the data collection occurred in the city of Bissau.

2.4.4 Data collection in Bissau

In Bissau, deaf people were filmed in the two schools. In that year, there were about 50 deaf students enrolled at the Mariposa school and 350 at the ENS. In each school, I had deaf assistants who I already knew from before this fieldwork: Amaré Soares at the Mariposa school and Marcos de Barros at the ENS, who had worked with us in the last LGG dictionary (see more details in Chapter 1). They helped me organize the filming sessions and the participants.

Both schools made a classroom available for the filming sessions which lasted for a few weekdays. In the end, I annotated the videos and when I had doubts, I clarified them with Amaré, not only during fieldwork but also afterwards from a distance.

Participants. Amaré and Marcos were free to pick the participants as they wished, there were no criteria, so the participant selection was quite random. Of course, this was not mandatory, so only the deaf students who wanted to be filmed volunteered. There were **34 participants, 20 adults and 14 children** (from 10 to 30 years old). For this study, only deaf adults were included because there were no children in the villages to compare them with.

Dataset. Each participant told one single story. Of the 20 narratives by deaf people older than 18 years of age, four were excluded because they were not experienced or witnessed by themselves. Everyone told a personal experience about an animal attack. Hence, in the end, I had 16 narratives told by eight men, aged 20 to 30, and eight women, aged 18 to 28.

Exceptionally, in Study 4 (in Chapter 6), when analysing the size and shape of the animals, I observed that LGG signers hardly used body-based depictions for size and shape, unlike the signers from the villages. Thus, to confirm if it was a generalised feature across signers, I looked at deaf children. I noticed then that they used it a lot on the body, contrasting with the adults. For that reason, I found it relevant to show this data only in this context.

Although the balance between genders in the two villages was not as successful as in Bissau, due to demographic factors, in the end, the number of narratives became quite even across the three sign languages. Of course, signers were telling more than one narrative in the villages, but these stories were always about different experiences. Finally, having set the number of participants and narratives in each sign language, the analytic procedures were defined.

In Table 9, the most relevant information about the participants (name code, age, gender, deaf family members and occupation) and the data set (video file name and year of collection) is summarised. Unlike the participants in the villages, deaf people in Bissau are all students, except for nine of them who also work. Also, only one has deaf siblings.

Table 9. Summary of metadata on participants and corresponding narratives in Bissau

signer	age	gender	deaf family members	occupation	narrative	date
LGG#01	25	M	partner	student / LGG teacher	LGG_01	2019
LGG#02	25	M	siblings	student / LGG teacher	LGG_02	
LGG#03	30	M	partner	student / fisherman	LGG_03	
LGG#04	23	M	partner	student / fisherman	LGG_04	
LGG#05	22	M	none	student / block builder	LGG_05	
LGG#06	23	M	none	student	LGG_06	
LGG#07	18	M	none	student	LGG_07	
LGG#08	23	M	partner	student	LGG_08	
LGG#09	27	F	none	student / LGG teacher	LGG_09	
LGG#10	20	F	partner	student	LGG_10	
LGG#11	21	F	none	student	LGG_11	
LGG#12	22	F	none	student / fruit seller	LGG_12	
LGG#13	22	F	none	student / fish seller	LGG_13	
LGG#14	23	F	partner	student / fish seller	LGG_14	
LGG#15	21	F	partner	student	LGG_15	
LGG#16	28	F	none	student	LGG_16	

This section detailed how were the participants and corresponding narratives selected in the three research sites for this study. Next, I explain which annotation and coding procedures were followed to prepare the narratives for the analyses in the four studies.

2.5 Annotation and coding

In the previous sections, I described how the fieldwork was undertaken and the data collected. Having decided to focus on the study of narratives about animal attacks, I

based the analysis on a well-tested model, the one by Labov & Waletzky (L&W). In addition, I look at selected narrative devices specific to the signed modality.

This resulted in four studies interconnected with each other. Study 1, in Chapter 3, focuses on narrative structure, testing if the collected narratives have all the components identified by L&W and a climax. Studies 2 to 4 analyse narrative devices typical to sign languages, which are supposed to enhance the story (corresponding to L&W's evaluation component). Study 2, in Chapter 4, focuses on signing perspectives, i.e., whether the signer tells the narrative on real or a reduced scale or both. Study 3, in Chapter 5, looks at shifts between roles or characters, including reported or (re)constructed dialogues. Finally, Study 4, in Chapter 6, analyses how the animals are depicted within the narrative. Keeping in mind that all four studies analyse the same narratives (there was only one account excluded from Study 1), I look for different information in each study. Thus, as shown in Table 10, Study 1 analyses divisions between content components; Study 2 looks for real and reduced scale signs; Study 3 focuses on the signer's roles; and, in Study 4, I analyse only signs referring to the size and shape of animals. In this last study, as mentioned in §2.3.3, I will also look at depictions produced by deaf children in Bissau.

Table 10. Overview of the four studies

Study			**Analysis**	**Narratives**	**Chapter**
1	Narrative structure		content	44	3
2	Narrative devices	Signing perspectives	signing scales	45	5
3		Role shifts and dialogues	signer's roles	45	6
4		Size and shape depictions	S&S signs	45(+17)	7

Before the analysis, the final video format in mp4 was named according to a filename protocol. This starts with the first three letters of the sign language: 'ADA' for AdaSL, 'LAS' for LaSiBo and 'LGG'. Then, I added the symbol '#' before the number of each signer, like 'ADA#01', 'LAS#01' and 'LGG#01'. For signers who had more than one narrative, I ordered them with lowercase letters – 'a', 'b' and 'c' – after the number. For instance, for the LaSiBo signer producing three narratives, the files were named 'LAS#01a', 'LAS#01b' and LAS#01c. Each narrative corresponds to a video file, except for one from the AdaSL corpus in which the signer tells two narratives in the same stretch of video. In this video, she tells several personal stories and two are

about animals, one about wasps and one about the lion (ADA#15a and b). Therefore, for the 45 narratives, there is a total of 44 mp4 video files.

All signed productions were then annotated and coded in ELAN, a standard program used in sign language linguistics (Crasborn & Sloetjes 2008), resulting in 44 annotated files for the 45 narratives. All files are archived in more than one location. The tiers created on ELAN to support the analysis were saved in an ELAN template. As shown in Table 11, some of the tiers are common to the four studies, while others are more specific to each study.

Table 11. Overview of ELAN tiers per study

Parent tiers ↳ Children tiers	**Controlled vocabulary**	**Brief description**	**Study**			
			1	**2**	**3**	**4**
Translation	text	Free translation	x	x	x	x
RH gloss LH gloss	text S&S: 'text'	Narrow translation	x	x	x	x
Eye gaze	- gaze on the audience - character's gaze	Identifies the narrator's role Identifies the character's role	x	x	x	x
	- gaze at the hands	Focuses on the description		x		x
Role	- narrator - overt constructed action (CA) - partially overt CA	Specifies the signer's role type	x	x	x	x
Character	text	Specifies who the character is in different articulators		x	x	
↳ RH character ↳ LH character ↳ face ↳ body				x		
↳ gaze at referent		Identifies who or what the character is looking at		x	x	
Component	- abstract - orientation - complication - climax - resolution - coda	Identifies the structural components	x			x
Perspective	- real scale - multiple	Specifies the signing perspective		x		

	- simultaneous - reduced scale	type				
RH classifier LH classifier	- entity - handling - body part	Specifies the classifier type in signing perspectives		x		
Role shift	- lexical label - point-to-self - point-to-space - body shift - facial expression	Specifies the marker in the role shift			x	
Constructed dialogue	Dialogue: text Monologue: text	Duplicates translated quotations in dialogues and monologues			x	
RH S&S | LH S&S ↳ Handshape	- 1A – V6	Specifies handshape type in size and shape				x
↳ Iconic shape	- entity - handling - tracing - tracing+entity - tracing+handling	Specifies iconic shape type in size and shape				x
↳ Iconic size in space	- 2 hands - hand internal - hand+ground - hand+body - other	Specifies iconic size in space type in size and shape				x
↳ Iconic size in body	- 2 hands - hand internal - inherent delimitation	Specifies iconic size in body type in size and shape				x
↳ Iconic movement	- extent in shape - circumference shape - movement for focus	Specifies iconic movement in size and shape				x

↳ Mouth movement	- neutral - mouthing - iconic o shape - iconic puffed cheeks - iconic spread lips - iconic pursed lips - other	Specifies mouth movements type in size and shape				x

The analysis of the narratives proceeded per stage, following the order of the studies. However, before the specific analyses, I annotated the common tiers. In the following subsections, I detail these procedures, first the more wide-ranging and then the more specific per study.

2.5.1 Common tiers

Before analysing the narratives, all videos in AdaSL, LaSiBo and LGG were annotated by me after returning from fieldwork in ELAN. The annotations were all done in the same ELAN files per video file. I started with the gloss tiers and then made the translation tiers in English (see Appendix 1 for the complete translations). Then I annotated the tiers concerning the eye gaze, followed by the signer's roles and character specificities.

I did the **gloss** annotations in two tiers, one for the right hand (**RH gloss**) and the other for the left hand (**LH gloss**), whenever something else is signed simultaneously. I did the gloss – implying writing a word, in this case, in English, that "covers the most general meaning of the sign" (Crasborn et al. 2020, 7) – as close as possible to what was being signed. On the tier for the phrase-level **translations** into English, I tried to maintain the same proximity as what was originally signed.

Afterwards, I annotated the tier for the **eye gaze**. This was coded with three values (following Bahan & Supalla 1995): (1) gaze on the audience, (2) character's gaze and (3) gaze at the hands. The eye gaze to distinguish the signer's roles, whether as the narrator or a character, was annotated with the four studies in mind. However, the gaze at the hands was relevant mostly in Study 2 to identify the reduced scale perspective.

Next, I annotated the signer's role and identified the character involved in the narrative. I begin by distinguishing the **role** played by the signer, whether (1) as the narrator or (2) by an overt enactment of the character, or constructed actions. When the signer is embodying the character while giving explanations, then (3) the character embodiment is partially overt. This tier was very helpful in all four studies.

The **character** role identified the character being played. When there was more than one character or representation of the same character being conveyed by more than one articulator at the same time, it was further annotated in its children tiers: the right hand (**RH character**), the left hand (**LH character**), the face, the body and the gaze at the referent. In the hand, face and body tiers, I wrote who was being played. If more than one character were being played simultaneously, I added a number to the character according to the narrative's appearance order. In the tiers for the **face** and **body** I identified who the character being played was when the signer's hands are doing something else. It can be the case where the body (including the face) stands for one of the characters, while each hand plays two different characters. Such details on who the character was were especially useful in Studies 3 and 4.

Figure 29 exemplifies the use of these common tiers. Here, the LGG signer is telling that he climbed the tree to get cashew fruit, and the snake was above him when he saw it. In this snapshot of the annotated ELAN window, the RH gloss refers to the snake and the LH gloss to holding the tree's trunk.

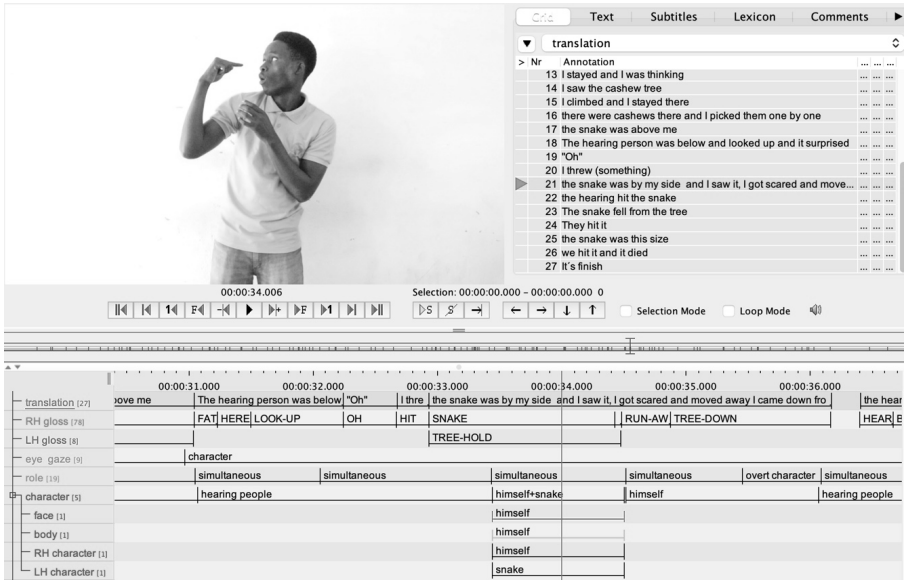


Figure 29. Example of annotated common tiers: translation, right- and left-hand glosses, eye gaze, role and character (Narrative LGG_06)

Besides glosses for each hand, face and body, the character tier is also parent to the **eye gaze at referent** tier, referring to when the eye is directed at somewhere in space. In this tier, I identified who or what the character was looking at within the narrated

event. The character could be looking at another character (father, son, mother, daughter…), at an animal, a tree, a hole and so on. This tier was mainly useful in Study 3 to better describe character changes.

Focusing next on Study 1, I use, from the tiers described above, the ones referring to the translation, the gloss tiers for both hands and those indicating the signer's roles, whether as the narrator or as a character (eye gaze and role tiers).

2.5.2 Study 1: Narrative components

Besides the common tiers mentioned in the previous subsection (translation, gloss for both hands, eye gaze and role), this Study relies foremost on the component tier distinguishing the different structural parts of the narrative.

The internal structure division of each narrative is determined in the **component** tier. This has six possible values: abstract, orientation, complication, climax, resolution and coda. Such values correspond to the five sequentially aligned narrative components defined by L&W's model. To these, I added the climax in the middle, between the complication and the resolution components (see Chapter 3 for more details). The structural components were divided according to specific content cues, as follows:

1. The abstract refers to a summary of the story before describing its setting.
2. The boundaries of the orientation are segmented according to the who, where, and when information. It can also include other details, such as what the main character was doing before the sequence of events started.
3. The complication starts with the action stirring the sequence of events and lasts until the moment immediately preceding the encounter with the dangerous animal.
4. The climax, i.e., the peak of the story, begins at the moment of the encounter with the animal and ends when the character reacts to it.
5. The resolution component concerns problem-solving, in this case about how the character dealt with the animal.
6. The last component, the coda, is identified as the moment when the signer leaves the event and returns to reality, by looking at the audience at the end of the narrative.

Apart from the structural division based on content, I also relied on changes between the signer's roles, whether as the narrator or as a character. The **narrator** was identified by the gaze on the audience (in the **eye gaze** tier) and the narrator's role (in the **role** tier). The **character** was distinguished by the character's gaze (in the **eye gaze** tier) and both the overt and the partially overt constructed actions (in the **role** tier). These were important cues to mark component boundaries since the narrator was expected to contextualise information about the story at the beginning (abstract and orientation components) and the end of the narrative (coda component). In contrast, the sequence of events in the middle part of the story (complication, climax and resolution components) was expected to be told from the character's viewpoint.

In the component tier, components are always identified consecutively along the narrative's stretch of time, since they do not overlap. Figure 30 shows an example of the annotated tiers in Study 1, including the common tiers (translation, glosses for both hands, eye gaze and role) and the component tier. In the snapshot of the annotated ELAN window below, all components are visible.

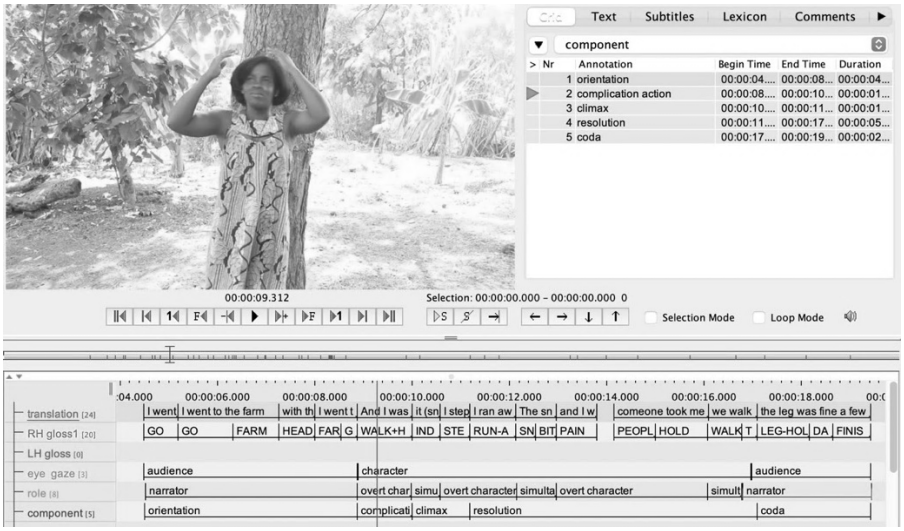


Figure 30. Example of annotated tiers for Study 1: common tiers and component tier (LAS_01a narrative)

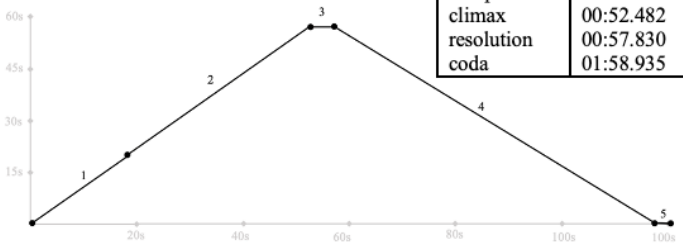
Afterwards, the translations within their corresponding components were exported to Microsoft Word to analyse the narrative content per component. Each component was then divided into lines, or semantic units, within the sequence of events. The lines were numbered instead of ordered alphabetically, as did Labov & Waletzky because some narratives had more sentences than there were letters in the alphabet. In Table 12, I show one of the AdaSL narratives, divided into lines within each component.

The narratives analysed this way and split into components can be fully seen in the Appendix.

Table 12. Example of the division into lines within each structural component (ADA_06 narrative)

Component	**Lines**
orientation	1. I stayed to pick up snails with my father.
Complication	2. I was looking for snails. 3. Amongst the leaves, 4. there was something big curled up 5. with its head moving.
Climax	6. I pointed at it. 7. What is it? Is it a rat? Ah! 8. The snake's head raised 9. and I saw it 10. and I was scared.
Resolution	11. I ran away. 12. I ran 13. and I arrived, 14. I was tired 15. and my heart was beating fast. 16. I was very tired.
Coda	17. Finished.

Besides getting a clear visualisation of how the narratives are structured differently based on the number of lines in each component, I also looked at the corresponding amount of time. I exported the components and the information on their time duration from ELAN to Microsoft Excel to do this. Such an analysis served mainly to depict the narratives as pyramid-shaped structures to get a more graphic picture of the proportional distribution of the internal components. In these graphs, I add a second dimension, using the Y-axis to reflect height as well as linear time, which draws from the concept of Freytag's pyramid and a dramatic narrative arc (see §3.2.1 for more details). Orientation and complication are depicted as the rising lines of the pyramid; the top line corresponding to the climax is flat at the peak, and the resolution is the falling line. Since the coda is not part of the narrative sequence of events, it is also laid on a horizontal line at the end. Figure 31 shows one pyramid in which the components are proportionally distributed as a prototypical example.



Component	Begin	End	Duration
orientation	00:00.000	00:18.554	00:18.554
complication	00:18.554	00:52.482	00:33.928
climax	00:52.482	00:57.830	00:05.345
resolution	00:57.830	01:58.935	01:01.099
coda	01:58.935	02:01.691	00:02.756
			02:01.691

Figure 31. Prototypical example of a time-aligned pyramid shape of a narrative (AdaSL narrative 07)

After describing how the internal structure is prepared for analysis, in terms of its different components, subdivided into translated text lines and time-aligned pyramid-shaped lines, I now turn to the studies on narrative devices. There are three studies on narrative devices. Study 2 focuses on signing perspectives, Study 3 on role shifts and dialogues, and Study 4 on the size and shape depictions of the animals. Each one of them, relying on specific tiers and coding protocols, is presented next.

2.5.3 Study 2: Signing perspectives

Similar to Study 1, Study 2 uses the common tiers for translation, glosses for both hands, role and eye gaze. In the latter, it is given, in this study, additional attention to the value of gaze at the hands. Moreover, I annotated the specific tiers for the character (in both hands, face and body), the classifiers (in both hands) and the perspectives.

Given that the distinction between signing perspectives is based mainly on whether the signer represents entities in real or reduced scale or both, I also rely on the identification of classifier types, following Perniss's (2007) criteria.

With the annotated common tiers in hand, I began by identifying, in the **perspective** tier, which value was being adopted by the signer: whether the real scale, multiple, simultaneous or the reduced scale perspective. Then I specified, in the **classifier** tiers for both hands (**RH classifier** and **LH classifier**), the classifier type, whether it was entity, handling or body part. This tier was determinant in setting apart life-sized from model-sized signing perspectives.

Figure 32 illustrates annotated tiers in Study 2, both the common ones (translation, glosses for both hands, eye gaze, role and character) and the specific ones concerning the perspective and the classifier (in both hands). It shows a particular moment in the

narrative where the signer produces multiple perspectives by demonstrating two characters at the same time. In this example, the character (representing himself in the past) is expressed by the signer's face, body and left hand. In the snapshot of the annotated ELAN window, he is acting as if climbing a tree, using his left hand to hold the tree trunk in real scale. At the same time, his right hand represents a snake as a body part classifier.

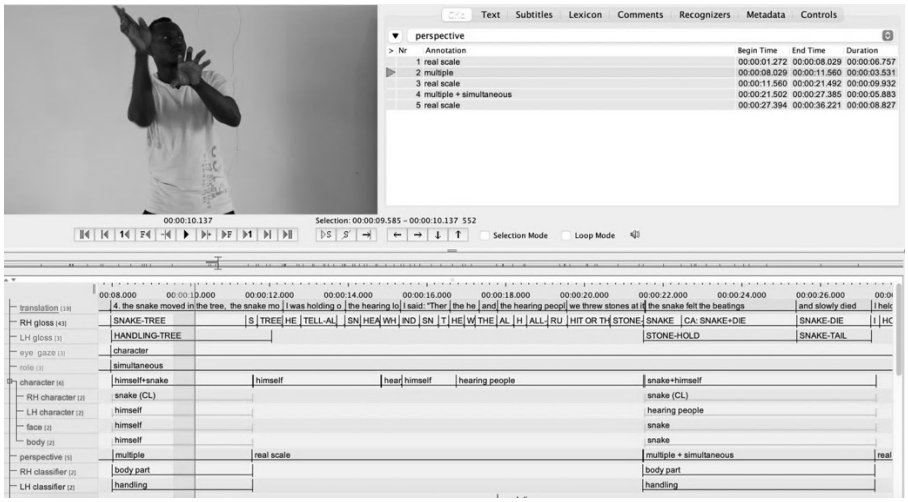


Figure 32. Example of annotated tiers for Study 2: common tiers and perspective and classifier tiers (LGG_03 narrative)

The annotations in the common tiers – translation, glosses (RH and LH), eye gaze and role – were used to confirm the signing perspective. In this sense, the eye gaze and the role tiers distinguished the narrator from the character. The eye gaze at hands was especially important in confirming the reduced scale. Finally, the character tiers (RH and LH, face, body and gaze at referent) were crucial to confirm the extent of the character embodiment, i.e., the number of articulators involved in constructed actions, which character was being embodied and in what way. The gaze at referent – parented by the character tier was used especially in telling apart characters involved in situations where more than one character was represented at the same time in multiple perspectives.

To provide a clearer idea of the proportional distribution of the signing perspectives in the narratives, I looked at the corresponding information on time duration. To do this I exported such information from ELAN to Microsoft Excel for each signing perspective and the character role, whether expressed by overt or partially overt constructed actions. In the end, I obtained the percentages corresponding to the

duration of each signing perspective concerning the total time of a narrative. In other words, if signers told narratives with different lengths, for instance, one very short and one very long, the percentage calculated for the main use of the real scale perspective would be similar in the end. After having identified the time for each perspective, I further divided the representation of characters in the real scale perspective alone, into overt and partially overt constructed actions. Finally, all percentages were added per language and additionally per gender in LGG.

After describing the annotation procedures in Study 2, I now turn to the annotations used in analysing role shifts and dialogues.

2.5.4 Study 3: Role shifts and dialogues

For Study 3, I analysed role shifts and (re)constructed dialogues, using the common tiers previously mentioned for translation, glosses for both hands, eye gaze, role and character. In addition, I used two more tiers specific to this study, one for role shift and another for constructed dialogue. Role shift refers to the transition between different characters. This may include, but not always, reported lines said by the characters in a constructed dialogue.

While the **eye gaze** and the **role** tiers flag character enactments, who was being enacted is identified in the **character** tier. Whenever two characters were being played in the narratives, I marked in the **role shift** tier the moment when the change between the characters involved in an interaction occurred and annotated which marker was used to signal the transition between characters. Similarly, in the **constructed dialogue** tier, I duplicated dialogues and monologues (or self-talks) from the translation tier.

Figure 33 shows a part of a narrative in AdaSL where the signer is telling that, as a boy, he put his arm in the hole and the snake was there. When his father sees him doing that, he tells him to get out of there and kills the snake when it comes out of the hole. Here, the signer reconstructs the dialogue between father and son, where the father scolds the son and explains the dangers and asks him not to put his arm in holes again. To illustrate this, the snapshot of the ELAN window shows how the translation of the dialogue was duplicated in the constructed dialogue tier. Besides doing a constructed dialogue, the signer does role shifts from father to son and son to father, which, in the corresponding ELAN tier is annotated at the moments when the shifts occur, indicating the marker produced in each shift.

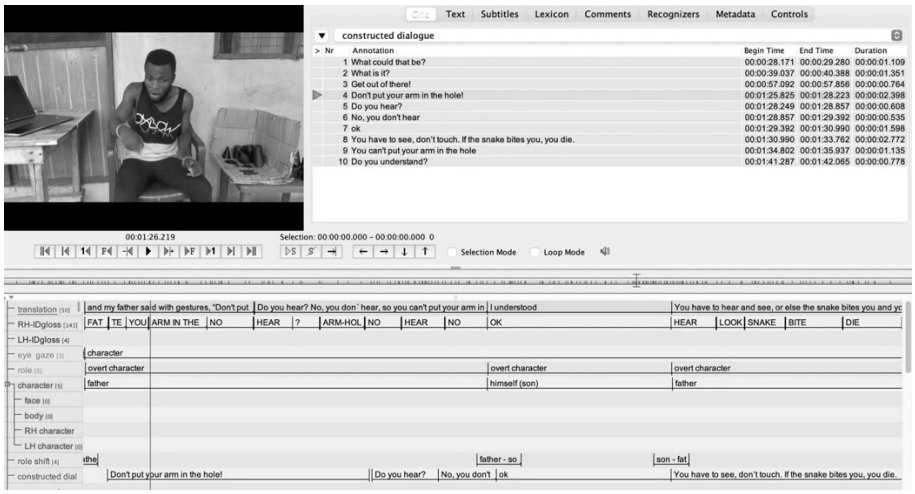


Figure 33. Example of annotated tiers for Study 3: common tiers and role shift and constructed dialogue tiers (ADA_07 narrative)

I have detailed here how role shifts and dialogues were annotated in their corresponding tiers, based on the characters previously identified in the common tiers. Next, I focus on the coding protocols used in the last study of this thesis about size and shape depictions of the animals encountered in the narratives.

2.5.5 Study 4: Animal depictions

Study 4 relies again on the common tiers for translation, glosses in both hands, eye gaze and role. Besides these, size and shape signs were annotated separately in each hand, concerning the type of handshape, iconic shape, iconic size in space and on the body, iconic movement and mouth movement. This study analyses only the size and shape signs that depict the animals encountered in the stories told by the signers in the three sign languages.

In this study, I based my annotation on a protocol developed by Victoria Nyst, Timothy Mac Hadjah, and myself. This schema for coding size and shape reflects more distinctions than previous schemas. It was used by Nyst to reveal differences in gestures in Africa and the Netherlands (Nyst 2016b) and has been improved over time. I used only part of the coding considered relevant for this study.

Since the meaning of the size and shape sign had been given in the **translation** tier, I indicated in the **gloss** tier all size and shape depictions by '**(S&S)**'. Then, for every signalled '(S&S)', I focused on the specific tiers for size and shape in both hands (**RH**

S&S and **LH S&S**). These have six children tiers each whose values specify iconic types for every size and shape sign: (1) handshape, (2) iconic shape, (3) iconic size in space, (4) iconic size in the body, (5) iconic movement and (6) mouth movement. Although the handshape and the mouth movement tiers give us phonological information, their values are analysed as part of the iconic depiction.

The options for annotating handshapes come from codes based on the Hamburg Notation System for sign languages (HamNoSys). However, instead of using the HamNoSys symbols, we used a table where we crossed letters horizontally and numbers vertically to identify the different handshapes. For example, a fist would be coded A1, as shown in Figure 34 below.

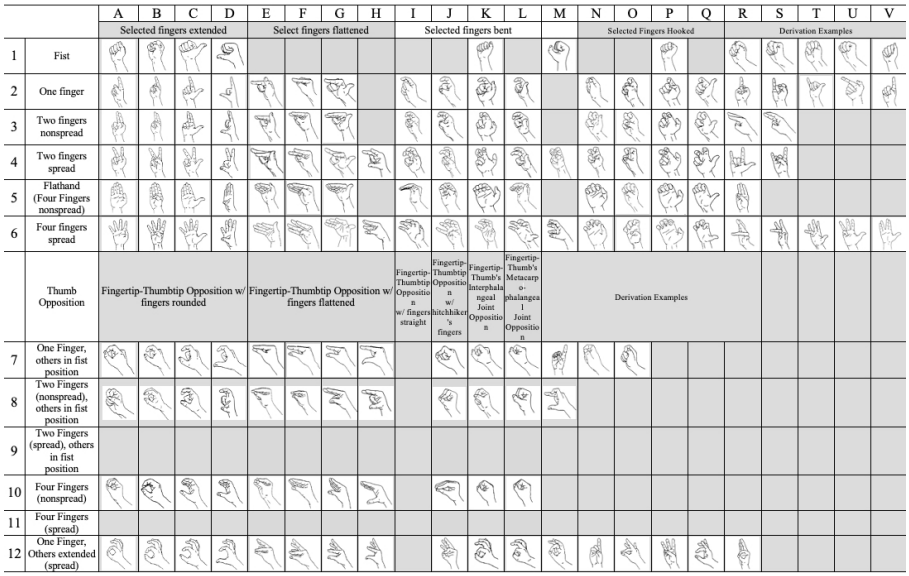


Figure 34. Adaptation of the HamNoSys chart for handshapes (Hanke 2010[17]), with letters added horizontally and numbers vertically

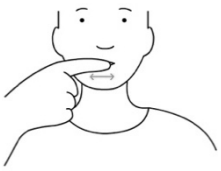
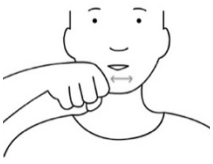
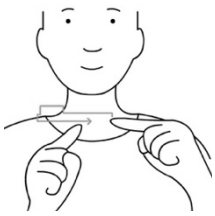
In the coding of iconicity, I follow Nyst's taxonomy of size and shape depictions in AdaSL (2016) further developed in the context of the larger research project on "Gesture to language" where this thesis is included. As mentioned above, the iconicity

[17] Chart by Thomas Hanke (2010-06-10) Drawings by Heiko Zienert, Olga Jeziorski and Andreas Hanß (https://www.sign-lang.unihamburg.de/dgskorpus/files/inhalt_pdf/HamNoSys_Handshapes.pdf).

of size and shape depictions is analysed separately for shape, size (in space and the body) and movement.

For the annotation of **iconic shape,** there are five possible values: entity I, when the shape of the hand represents an object; handling (H), when the hand represents itself by manipulating an object; tracing (T), when the object's shape is drawn in the air usually by the index finger; and two combinations with tracing, tracing + entity (T+E) and tracing + handling (T+H). Table 13 shows an example for the first three codes without the combinations: 'toothbrush' as entity (the index finger represents the toothbrush), handling (the hand holds the toothbrush) and tracing (the toothbrush is drawn in the air).

Table 13. Examples of different annotation values in coding iconic shape for the concept of 'toothbrush'

tier	**Iconic shape**		
code	Entity (E)	Handling (H)	Tracing (T)
example			
	'toothbrush'		

The two combinations with tracing were added later because they appeared in the data while coding it. Besides simply drawing in the air a specific shape, tracing can also be combined with an entity (T+E) representation, as in Figure 35a. Here, the depiction of a long snake – glossed as LONG(SNAKE) in AdaSL – is produced with the index finger representing the snake as an entity while the linear extending movement traces its length in the air. Similarly, tracing can be combined with a handling handshape (T+H). In Figure 35b, the snake, instead of being depicted by an entity handshape, is represented by handling it. Also, in this LaSiBo example for the same concept, the length of the snake is represented, in the same way, by being traced in the air.

a) AdaSL



LONG(SNAKE)
Tracing + Entity (T+E)

b) LaSiBo

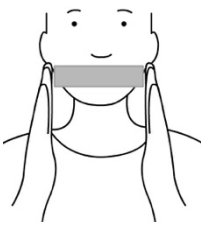
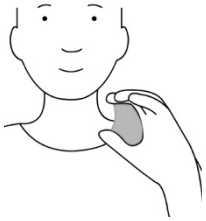
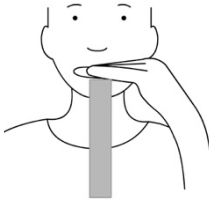


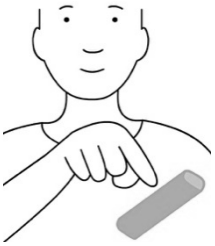
LONG(SNAKE)
Tracing + Handling (T+H)

Figure 35. Examples of different annotation values in coding iconic shape for the concept 'long snake' combining tracing with entity (a) and tracing with handling (b)

For **iconic size**, there are two overall groups: one indicating size in space and the other indicating size on the body. For **size in space**, there are five types, shown in Table 14 with their codes in parentheses: size with two hands (S2); hand internal (SI), where the size is measured between the fingers; size depicted between the hand and the ground (SG); between the hand and the body (SB) and other (O), such as pointing to the real size. All values included in the size in space tier depict the object's size in space, even if the delimitation is marked by body parts.

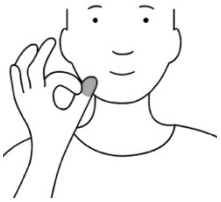
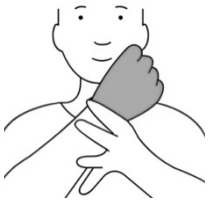
Table 14. Examples of different annotation values for iconic size in space

tier	**Size in space**		
code	with 2 hands (**S2**)	hand internal (**SI**)	hand and ground (**SG**)
example	 The box is this SIZE	 The ball is this SIZE	 The boy is this SIZE

code	hand and body (**SB**)	other in size (**O**)
example	 The swelling is this SIZE	 (Pointing to real SIZE)

When the signer depicts the size directly on body parts, I annotated such a sign in the **size in the body** tier. Here, the size and shape depiction was assigned with one of three values, as shown in Table 15: size measured with two hands in a body part (B2); size delimited in hand internal (B1), like when one finger marks the size on another finger; and inherent delimitation of the size of body parts (BN), such as marking on the hand its size.

Table 15. Examples of different annotation values for iconic size in the body

tier	**Size in the body**		
code	with 2 hands (**B2**)	hand internal (**BI**)	inherent delimitation (**BN**)
example	 The crown is this SIZE.	 The nut is of this SIZE.	 The tomato is this SIZE.

In addition to the tiers for iconic shape, iconic size in space and in the body, there is another tier focusing on movements that contribute to such iconic depictions. In the tier for **iconic movements**, I used three codes, as shown in Table 16: extent in shape (X), circumference shape, and movement for focus (F).

Table 16. Examples of different annotation values for iconic movements

tier	**Iconic movement**		
code	extent in shape (X)	circumference shape (CI)	movement for focus (F)
example	 The glass is this HIGH.	 The snake is this WIDE.	 The snake's head is this SIZE.

Finally, the depictions of size and shape can be combined with different mouth patterns. In the **mouth movement** tier, there are codes for a neutral mouth, mouthing (corresponding to full or parts of spoken words), other mouth patterns and iconic mouth movements. Previous analyses of size and shape depictions in AdaSL and LaSiBo (c.f., Nyst 2007, for AdaSL, and Morgado & Nyst 2021, for AdaSL and LaSiBo) have identified four different iconic movements: [o] shaped mouth, puffed cheeks, spread lips, and pursed lips. These are used as values in the present analysis, as shown in Figure 36.



puffed cheeks [o] shape mouth spread lips pursed lips

Figure 36. Examples of different annotation values for iconic mouth movements

Having described the taxonomic system used in the coding of size and shape depictions, I show next an example of the annotation on ELAN of two different ways of depicting a snake. In Figure 37a, the signer depicts the width of the snake by indicating an inherent delimitation of its size in the body with a movement for circumference shape combined with an o-shaped mouth pattern. In Figure 37b, the length of the snake is depicted by an entity handshape combined with tracing, i.e., with an extent in shape movement. Additionally, the signer presents spread lips.



Figure 37. Example of annotated tiers for Study 4: gloss tier and size and shape specific tiers (ADA_02 narrative)

The values coded for annotating size and shape depictions in ELAN in six different tiers for each hand cooccur with each other. In addition to the specific tiers, the signs describing the size and shape of the animals in the narratives were analysed in terms of who presented them and where they were presented. To check these aspects of the analysis in Study 4, I relied on the common tiers for eye gaze and role to understand if the animals were depicted by the narrator or the character. I also looked at the component tier to identify the moment within the narrative where the animal was described.

As thoroughly explained through the previous subsections, I used common tiers across the four studies. Apart from the content description in the translations and glosses

tiers, all studies used the distinction between the signer's roles of narrator and character made clear in the eye gaze and role tiers. Each study had then individual tiers aiming at a specific analysis. Study 1 focused on the tier delimitating the internal division of narrative components. Study 2 looked at the perspective and classifier tiers, as well as the details in the character tier on who the characters involved were. The latter was also very important for Study 3 in distinguishing role shifts and dialogues. These had, in addition, their specific tiers. Study 4 about the size and shape depictions of the animals in the narratives had a larger number of tiers to describe the exact type of depiction used.

To conclude, this chapter described the process undertaken before, during and after fieldwork. I described how I prepared for fieldwork and how it went about. Next, I explained who were the deaf participants in the three West African countries, how the filming was carried out and which data were collected. Finally, I detail how the narratives were set up for analysis through specific annotation and coding procedures in ELAN.

I now turn to the individual studies analysing the 45 selected narratives in the three sign languages, in four different studies. Study 1 focuses on the structure of the narratives, study 2 on the signing perspectives, Study 3 on specific narrative devices, namely on role shift and constructed dialogue, and Study 4 focuses on size and shape depictions.

PART II

STRUCTURE OF PERSONAL EXPERIENCE NARRATIVES

Chapter 3 – STUDY 1 Structure of personal experience narratives

3.1 Introduction

> *Ao contar estórias, situamos os outros e a nós mesmos numa rede de relações sociais, crenças, valores, ou seja, ao contar estórias, estamos construindo identidades.*
>
> [When we tell stories, we place others and ourselves in a network of social relations, beliefs, values, in other words, by telling stories, we are constructing identities.]
>
> (Liliana Cabral Bastos 2005, 81)

Storytelling is a human universal (Smith et al. 2017), in which events that unfold through time are communicated to an audience (Genette 1980; Bruner 1991). To use a widely-accepted definition for a **narrative** or story (the two are not distinguished here): "a narrative is an account of a sequence of events in the order in which they occurred to make a point" (Labov & Waletzky 1967). Stories also must include enough information for the audience to be able to imagine the world of the story in their minds: who, what, when, where, why and how. Thus, at a fundamental level, the **narrative structure** includes both (1) the **ordering of events** and (2) the **information** provided about those events. A further aspect of storytelling involves the ways that a storyteller makes the account compelling. Such narrative devices are crucial to telling a good story, and they are addressed in separate studies: Studies 2, 3, and 4 (Chapters 4–6).

In the current study here in Chapter 3, I focus specifically on narrative order and information, with the following main research question: how do signers of the three different sign languages (AdaSL, LaSiBo, LGG) structure their personal experience narratives? Even though storytelling is universal, it is mediated through both language and cultural knowledge (Dunbar 2014, 14013) and previous research has shown that it may not be until around 8–9 years of age that children exhibit full storytelling competence (Shapiro & Hudson 1991; Marjanovic-Umek et al. 2002). Further, true virtuosity in storytelling – whether in oral or literary traditions – is something that takes many more years to develop. For these reasons, it is not known to what extent storytelling conventions as linguistic constructions have developed for the signers in each of the three communities.

Developing storytelling skills not only requires basic linguistic structure (a lexicon, grammar, prosodic scaffolding, etc. [Sandler 2012; Stamp & Sandler 2021]), but also involves developing specific cultural and linguistic conventions for how to tell a story, as well as being able to consider what the audience or interlocutor knows (for the story to have a point), and knowing how to tell the story interestingly. As explained in

Chapter 1, the three languages in this research differ based on three **factors**: community size, time depth, and social interaction. To what extent is storytelling developed for the signers of these three languages when the language is relatively young (time depth), or there are not many communication partners (community size), or there are not many opportunities to tell stories (social interaction)? In this thesis, I pursue the hypothesis that social interaction is the primary factor leading to narrative development: the more a deaf group interacts, the faster the language develops, regardless of community size, or language age. Therefore, I predict that (1) AdaSL and LGG storytelling will be more developed than LaSiBo due to differences in social interaction, and (2) gender differences may appear in LGG (see §1.6.3). Since **AdaSL** is much older than the other languages, signers may have had time to develop a more conventional structure through accumulated interactions. The fact that **LGG** is the youngest, does not exclude a very high level of interactions in a short period due to the community size, which leads me to predict that LGG signers may also have evolved conventional narrative structures. At the same time, these interactions may be imbalanced by gender due to culturally marked differences in socialisation habits. Male LGG signers have many more socialisation opportunities, so their storytelling skills may be more advanced than female LGG signers. Finally, **LaSiBo** has had the lowest frequency of socialization opportunities, since they do not socialise as a group, but apparently only within the same pairs and not so actively, they are in their first generation of deaf signers and they constitute a very small community (§1.5; Tano 2016, 69 – 70). Therefore, storytelling in LaSiBo may be the least elaborated in terms of both structure (this chapter) and narrative devices (Chapters 5, 6, 7).

On the other hand, we also have to consider that, despite being unable to hear, the deaf are visual people that feed from gestures used by their surrounding hearing peers. If that is so, signers might have had countless opportunities to watch storytelling with all kinds of co-speech gestures from birth. Therefore, that gestural input may have given individuals in all these communities a kind of scaffolding for how to tell a story using their bodies and space: how much time it takes, the type of gestures involved, the expected reaction of the audience, etc. That argues for full narrative structure in all groups, not just AdaSL and LGG. Why? Also, if it is such a human universal to tell stories, won't all adults be able to do it to the same extent?

To test the predictions above, I elicited personal experience narratives with deaf signers from the villages of Adamorobe (Ghana; AdaSL) and Bouakako (Côte d'Ivoire; LaSiBo) and the city of Bissau (Guinea-Bissau; LGG). Specifically, I asked whether they had ever been in a life-threatening situation. Because the participants are mostly farmers who know the danger of snakes, I asked if they had ever encountered dangerous animals, in particular snakes. The question was posed in the same way to all deaf participants in the three different locations. This method of elicitation is well

known from the pioneering work of William Labov and Joshua Waletzky, to produce narratives of personal experiences that are relatively spontaneous and more likely to contain vernacular language than other types of narratives, such as retelling a myth or a fairytale. In the analysis, I use Labov & Waletzky's (L&W) model (1967). Since the topic of the story involves a particularly emotional moment, culminating in the encounter with a dangerous animal, I found in Freytag's pyramid (1894), the missing piece in L&W's model. Recognising the importance of the climax in this specific type of narrative, I propose to apply Freytag's structure shape to L&W's narrative parts, or components.

In this chapter, I first provide a background on previous research in §3.2, starting with the structural analysis of personal experience narratives in spoken languages, where I focus especially on Freytag's dramatic pyramid and Labov and Waletzky's model for the analysis of personal experience narratives. Due to the significance of such frameworks to this thesis, I propose joining the two by applying the pyramid to L&W's structure (§3.2.1). Then, I will show studies about the structure of personal experience narratives in sign languages (§3.2.2), with special attention to those involving the climax. In §3.3, I remind the research question for the study presented here. This is followed by an explanation of the methods in the analysis of the internal structure of personal experience narratives in the three sign languages (§3.4), which complement the information provided in Chapter 2. I then analyse the narratives of AdaSL, LaSiBo, and LGG in five sections for each narrative component: the orientation component (§3.5.1), the complication (§3.5.2.), the climax (3.5.3), the resolution (§3.5.4.) and the coda (3.5.5.). In each section, the linguistic content in each component, for each language, is described separately and then all languages are compared. In §3.6, I synthesize the comparison of all components by language. In §3.7, I discuss the findings concerning the literature. The chapter ends with the conclusion (§3.8).

3.2 Background on analysis of narrative structure in spoken and sign languages

Given that this thesis focuses on sign languages that are either used by very few deaf people, people with little educational skills, or for a short period, it was crucial to study an aspect of the signers' everyday lives that could emerge spontaneously. In this context, telling stories about one's own experiences seems suitable to test the influence of community size, language age and especially social interaction in language development.

Storytelling is a human universal that depends foremost on language (Sugiyama 2005, 181). Consequently, it derives from and develops with a community of speakers, presupposing the interaction between someone telling a story and another listening.

Under this assumption, will West African signers immersed in a traditional society of oral storytellers develop the ability to build a narrative? I am inclined to doubt it in cases where they do not socialise actively. One is only capable of telling a story after listening to others (Sugiyama 2005, 180). What is more, the skill to tell a story is shaped by social cooperation (Smith et al. 2017, 3 – 4), which, in turn, is strengthened by the ritual of storytelling (Dunbar 2014, 14013).

When sign language develops from the regular socialisation between deaf peers, storytelling naturally comes to life. Narrative components seem to be universal, especially concerning the temporal sequence of events (Sugiyama 2005, 183), the spatial setting (ibid., 186), "the essence of the story-character and motive" and the change between an action and a reaction. It is precisely the universality of such aspects that enables translating stories from and to distinct cultures (ibid., 180 – 181). Hence, the West African sign languages studied here will likely produce structured narratives. Will they also be able to develop skills to tell compelling stories?

Deaf people are expected to value storytelling as an important source of information. Narratives may have served in human evolution the fundamental function of exchanging personal experiences aiding the survival of the group (Sugiyama 2006, 331). Most important, successful narratives must trigger the interest of, i.e., emotions in, the audience (Habermas 2019, 51). Emotions are conveyed within social interactions from different perspectives to develop empathy (ibid., 5, 65). The more detailed the climax, the more vividly the interlocutor will (emotionally) experience it (ibid., 68). This is, of course, learned through the practice of both seeing and telling stories.

Since the narratives collected for this study are about animal attacks, how likely are the signers to tell emotional accounts? Storytelling requires capturing the interlocutor's attention for a longer period than in simple interactions. Thus, (skilled) narrators must constantly prove that their story is worthwhile while checking with their interlocutors about the story's interest (Habermas 2019, 24). The particular topic of the personal experience narratives of this thesis is considered universal for being related to human adaptation. Predator avoidance, i.e., animal attacks (Sugiyama 2006, 319, 325), including snake bites (ibid., 322) refers to a "folklore universal" that implies (1) the identification of dangerous animals and (2) strategies to avoid them (ibid., 321). Consequently, telling about threatening situations trigger basic emotions such as fear or anxiety (Habermas 2019, 7). For all the above reasons, it seems undeniable to expect that the narratives told by the signers in the three sign languages include a climax. This is, of course, in the case signers have socially developed the necessary empathy to share an emotional account with their interlocutor.

Since this thesis examines one particular type of narrative, the personal experience narrative, I will first look more broadly at how narrative form has been viewed and analysed over time. I will especially go through the work of Freytag on dramatic texts and the hallmark study by William Labov and Joshua Waletzky (1967), followed by Labov (1972; 2013) on the structure of personal experience narratives. Both Freytag and Labov & Waletzky's sources are essential because each posits different but largely corresponding structural parts of a narrative, providing a methodological framework for my analysis. While Freytag depicts the structure of emotional stories – like the ones involving life-threatening situations – with a triangle whose peak is the climax, Labov and Waletzky's model is particularly relevant to the current study by focusing on personal experience narratives. Finally, research into personal experience narratives in sign languages has also been resorting to Labov and Waletzky's model for structure analysis, while recognising the importance of a climax.

In this section, I first give a short overview of the structure of narratives in spoken languages (§3.2.1), where I go, in particular, through two highly influential models: Freytag's (1894) and Labov and Waletzky's (1967) and then propose to combine the two. Afterwards, I turn to the literature on narrative analyses of sign languages (§3.2.2), where I examine research on personal experience narratives that also include the climax.

3.2.1 Overview of structural analyses of narratives

In this thesis, I sustain my analysis on the general idea that there is a basic narrative structure, with a beginning, a middle and an end. I then consider the middle as the high point in attracting the audience's attention, especially in the type of emotional narratives that my study focuses on. Finally, I look at the exact type of narratives that were collected in the three African sign languages, concerning personal experiences of dangerous situations.

The Greek philosopher Aristotle is the first source in history to identify what seems universal in human storytelling, i.e., the most basic narrative parts. In his plays, he presented the idea that a whole is what has a beginning and middle and end (335 B.C.). Based on this idea, in the early 19th century, Freytag (1894) developed a dramatic sequence for literary and performative works, where the middle, i.e., the **climax**, is the most critical point of the story. This midpoint connects two main parts, the rise and the fall of the action. Labov and Waletzky's model was more expansive than Freytag's dramatic sequence and grounded in the storytelling of everyday people rather than playwrights and authors. Since I will base my analysis on the ideas proposed by both Freytag and Labov & Waletzky, I focus this overview on their work.

Freytag's dramatic pyramid

Freytag (1894) developed a pyramid to illustrate dramatic productions peaking at a **climax**. This structure model has been highly influential in the analysis of different types of stories (e.g., Cohn 2012; Yang et al. 2021).

His main idea derives from the observation that, in dramatic texts, the sequence of events is typically anchored on a contrast, like "the accomplishment of a deed and its reaction on the soul" (ibid., 104). In that centre lies the climax, which is the most important part of the dramatic story, where the action rises to and from where it falls afterwards (ibid., 105). Reflecting a pyramidal arrangement, known as the **dramatic pyramid**, illustrated below (see Figure 38). Here, the five-part drama starts with an introduction (1), that rises (2) towards the climax (3), i.e., the main scene, and then falls (4) to a catastrophe (5). He further distinguishes three dramatic moments: the exciting moment (a), between the introduction and the rise; the tragic moment (b), between the climax and the fall; and the last suspense (c), between the fall and the catastrophe. The last two are not mandatory (ibid., 114 – 115).

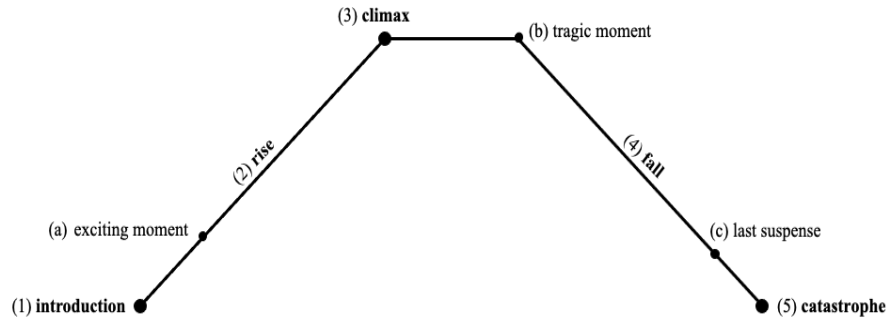


Figure 38. Freytag's dramatic pyramid comprising eight components: five drama parts (1–5) and three dramatic moments (a–b)

Hence, as illustrated above, Freytag proposes eight components (five drama parts, 1–5, and three dramatic moments, a–b) for the dramatic story:

1. **Introduction** (a prologue about what is presupposed for the action, containing the time and place of the action and additional brief characterisations, such as of the environment)
    a. **Exciting moment**, or complication (the beginning of the stirring action, the hero senses what follows and is set in motion)

2. **Rise** (progressing of the action, awakening of the audience's interest)
3. **Climax** (amplified scene resulting from the rising action and connecting point to what comes next as the effect)
    b. **Tragic moment** (the beginning of the counter-action which is closely united to the climax forming a double apex)
4. **Fall** (counter-action or reaction, followed by a sense of accomplishment or a new problem)
    c. **Last suspense** (aims at maintaining the interlocutor's interest)
5. **Catastrophe** (the closing action, the relief of the deed or purpose)

In a play, each part may consist of a short scene or a sequence of them, where the climax (the conflict, a decisive moment or an explosion) is the most enhanced scene (ibid., 115). The more the climax, is enriched, the higher the dramatic effect (ibid., 135).

When the sequence of events is delivered to an audience, what matters the most is not the event per se but the dramatic effect sparking emotions in the audience (ibid., 19). This is usually conveyed through the main character(s) in a way that the audience feels empathetic (ibid., 23). The dramatic effect results from a certain sociability, where communicated feelings are continuously expected to be mirrored by the audience (ibid., 52). Besides the "strong excitement of the characters" (ibid., 66), the audience's attention is maintained "through the progress of the action" (ibid., 40). Without that effect, the sequence of events is "lifeless" (ibid., 22).

Freytag argues that the ability to produce such an effect on the interlocutor presupposes "a certain degree of development when men have become accustomed to observing themselves and others critically under the impulse of a deed". He further suggests that the storyteller needs to freely master a language (ibid., 24) to set off feelings in others while telling a thrilling event (ibid., 25).

In the end, Freytag recognises that the dramatic author often gets inspired by life situations (ibid., 14), which are constrained to their essential aspects under a certain point of view (ibid.15). With this in mind, I now turn to Labov and Waletzky's study on personal experience narratives.

Labov & Waletzky's model

Specifically concerning narratives of personal experience, William Labov, who essentially established the field of sociolinguistics (Labov 1966, 1972, 1981, 1997,

2013 and Labov & Waletzky 1967), developed, in the modern era, one of the most influential structure models of narratives.

William Labov, together with Joshua Waletzky (1967), henceforth **L&W**, elicited hundreds of personal experience narratives from ordinary people rather than experienced storytellers. The original motivation of their research was not to devise a structure model for personal experience narratives. Instead, Labov wanted to argue that Black vernacular English should be recognised as a language in its own right and not as an incorrect or stunted version of standard English. He was able to show that these storytellers were as skilled, expressive and effective in their language use as those from any other speech community. In 2013, Labov made a brief comparison of personal experiences with the 'epic style' of old classics, concluding that, albeit spontaneous storytellers are not intentionally worried about academic requirements, they can be just as skilled as historians, who also have vernacular backgrounds (Johnstone 2016, 556).

In addition, the authors follow Todorov in suggesting that a personal story is ideally triggered off by something that comes along in a conversation and is thus more spontaneous. In such a context, the storyteller tends to turn it engaging and interesting to the audience (1979, 138) relying on narrative devices that mirror the actual linguistic potential of a given language at a given point in time. Therefore, when a surprising or dangerous incident that happened to the narrator is told without planning, it becomes a rich source for linguistic analysis. The naturalness of personal experience narratives contrasts with polished literary objects that may contain overly-formal language, such as tales, myths, folks, or legends.

The participants were not in the habit of gathering people around them to hear their stories, as in some traditional small-scale societies, so they were asked to tell about a remarkable episode that had happened to them as naturally as possible. To render narratives as spontaneous and appealing as possible, L&W (ibid., 30) decided to ask people about **dangerous situations**. They held face-to-face interviews that started with the question: "Were you ever in a situation where you were in danger of being killed?" When participants answered affirmatively that they had been in a dangerous situation, the interviewer asked, "What happened?", and the narrative would begin. This technique of eliciting a narrative with a question about life and death situations is aimed at distracting the participants from the formality or artifice of an interview context. In response to this prompt, they collected free narratives of thrilling experiences.

The people in L&W's study ranged from 10 to 72 years old identifying with working-class black Americans, from both rural and urban areas, and using the vernacular English of New York. None of the participants had finished high school. In their 1967

study, L&W chose just 14 adults out of six hundred narratives to exemplify the structure of personal experience narratives.

The analysis of narratives was done in a ground-up way to discover what the reoccurring parts of stories are. Such personal experiences told in a naturalistic way brought to light a more elaborate division of the structural parts than just the beginning, middle and end. The authors (ibid., 360) explain that this kind of narrative facilitates the intuitive recapitulation of past experiences by temporally sequencing the events. Thus, L&W argue that a personal experience narrative can only be identified as such if it has clauses that follow a timeline (ibid., 4).

In this way, it is always possible to distinguish the beginning, the middle and the end, but more specifically, each of these stages can be placed into the sequential narrative components that are listed in Figure 39. The temporal sequence in the stories expresses a structure containing the following five to six parts, as in Figure 40. In the course analysing spontaneously-created stories from people's personal lives, L&W developed a model that captured six components that reoccurred in all personal experience narratives, shown in Figure 39, along with their sequential position in the narrative: abstract, orientation, complication, resolution, and coda. In addition to these five sequential components, L&W describe an evaluation component that can appear throughout a narrative.

The **abstract** includes one or two clauses summarising the story before telling how something happened; for example, when one person started their narrative with "My brother put a knife to my head" (Labov & Waletzy 1967, 27 – 37). This brief phrase previews where the story is going. Then, after they were asked "How did it happen?", the rest of the narrative unfolds, starting with the orientation. L&W found that not all stories started with an abstract; therefore, it is an optional component.

The **orientation** component occurs in the beginning, and consists of a description that establishes time, place, characters and the activity or situation of the event as functions; it is the who-what-when-where component. Usually, the narrator describes it so that the addressee(s) can better imagine and understand the idea of the story. L&W (Ibid., 27) further state that not all narratives have an orientation (especially in children and less verbal adults who also fail to follow a temporal sequence) and that not all of their corresponding component has to have those four functions.

The **complication** is the main body of the narrative. De Fina & Georgakopoulou (2011) describe the complication as the narrative's skeleton, or backbone, as Linde describes it (1993, 68). It is when the action of the narrative begins, often in the past, with chronologically ordered narrative clauses, and it is conveyed to the audience what has happened. It should be told in a way that captivates the audience. In other words, Johnstone describes it as "recapitulate a sequence of events leading up to their

climax" (2016, 546), or the "high point of the narrative", as stated by Ozyildirim (2009, 1215).

The next component is the **resolution**, showing how the 'problem' is solved and that there is a conclusion to the narrative.

In the end, there is a **coda** when the narrator wraps up the story and turns to the audience. Not all of the narratives described in L&W's study had a coda after the resolution. Some examples of how people finish their stories include: That was it; And that was that; No more problems. The coda takes the narrator and the audience back to where they were at the beginning of the narrative.

How consistent are these structural components across narratives? L&W (1967) found that the abstract and the coda are optional, and don't appear in all narratives. In terms of length and content, a narrative can be quite short, with only two clauses, and still be complete if it has at least the complication, the resolution and the evaluation. They also found that even very long narratives have to comply with the condition of following the temporal line.

The **evaluation** expresses the reason why the story is being told. In stories without evaluation, the audience might think, "So what?". Narrators are constantly under pressure from the audience to make a story interesting, so they have to show how they felt at that moment, how they experienced it, and what they took from it. It is about what makes the story worth being told because it is about something dangerous, scary, wonderful or exciting. Storytellers in the L&W study wanted to show they had been in danger. The more convincing the story sounds, the more the audience feels involved. If the story is a vicarious experience (lived by others), uninteresting or weak, it presents a false claim. In their first approach to the evaluation, L&W distinguishes it as a separate component usually situated between the complication and the resolution, corresponding to the result of the sequence of events of the complication (ibid., 30), as if it were the climax. Under this assumption, they conceived a diagram (1967, 38), adapted in Figure 11, in which the narrative starts and ends at the moment when it is delivered to an audience. In their diamond-shaped graphic, there is an ascending line from the end of the orientation through the complication "up to the apex", which again seems to be a climax. At this apex, they circle the high point of the narrative, where "the evaluation suspends the action" (ibid., 37). They observe that this is where the narrators typically need to emphasise the emotional side of the story, i.e., their side. Then, the line descends through the resolution to the beginning of the coda.

Labov (1972) later modified and expanded the role of the evaluation component, on which the analyses described in Chapters 4, 5 and 6 will focus. He reanalysed the **evaluation component** as being ubiquitous rather than restricted to one chronological

stage in a narrative. He recognised that evaluation clauses were scattered throughout the narrative and formed a second-layer structure embedded within the timeline. He distinguished between referential narrative clauses that tell the sequence of events and evaluative clauses that show how the narrator feels about what has happened and why the story is being told. In 1972, Labov updates the diagram created in 1967, adapted in Figure 39, keeping the evaluation in a circle at the apex. He explains the circle as being the "focus of waves of evaluation that penetrate the narrative" (ibid, 369).

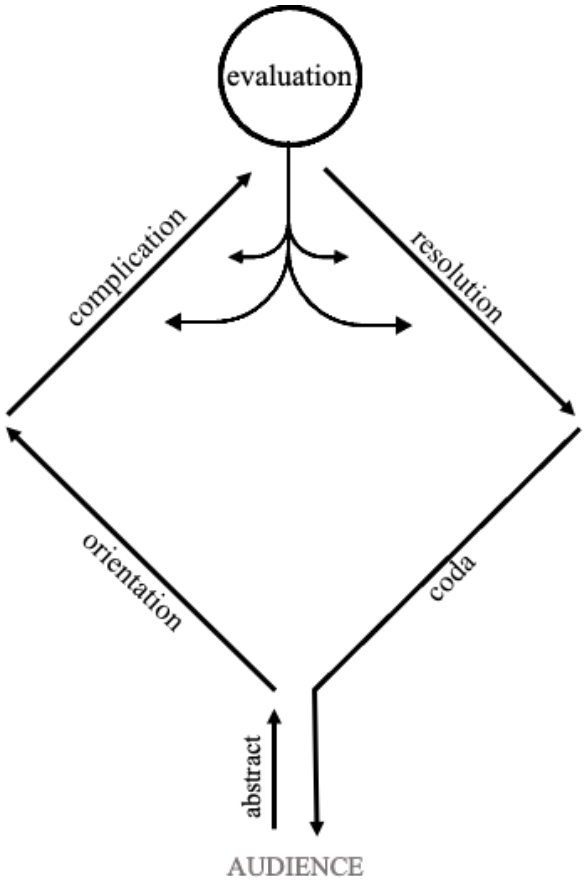


Figure 39. L&W's structure model comprising five sequential narrative components (1–5) and a ubiquitous component: the evaluation

In sum, the evaluation aims at turning the story compelling, which occurs through different narration modes (but see Chapter 4 for a detailed description of the different

types of evaluation). Typically, at the focus of the evaluation, in what could be interpreted as the climax, especially in emotional stories, the (skilled) storyteller may use quotations to convey dramatic force (Labov 1972, 372 – 373). Strategies involving reported speech or character enactment convey a higher level of emotional intensity (Koven 2012, 157). In contrast, the speaker addresses the interlocutor directly as a narrator, as a rule, at the beginning of the story, in the orientation, to contextualise what is being told (L&W 1967, 27), and then at the end, during the coda, to close the narrative (ibid., 35). In these moments, the narrator establishes the bridge between the surrounding interaction and the narrated event (Koven 2012, 154). The different types of evaluation will be further described in §4.2 since they are related especially to the devices enhancing the narrative analysed in Studies 2, 3 and 4. In Study 1, the evaluation will be referred only to what concerns the narration roles. Nonetheless, I should note that the evaluation has been one of the least understood and, hence, one of the most criticised aspects of L&W's model, as discussed below.

L&W 1967's research and subsequent Labov reanalysis of their work established a methodology and a structural model that has been highly influential up to the present moment (Alvanoudi 2021; Davydova 2022). However, it has not been free of criticism, especially in what concerns the fact that (1) narratives have been collected as monologues rather than construed within interaction; and that (2) they have been analysed around the temporal sequence rather than being centred on the experience itself; and, foremost, (3) it has not been easy to distinguish between narrative and evaluative clauses.

Concerning the first critique, some researchers point out that Labov based his entire analysis on monologues, contradicting the observation that narratives are embedded in interaction (Patterson 2011, 9; Johnstone 2016, 550; Schegloff 1997, 144). Sacks (1992) argues that stories need to be introduced, closed and adapted to the context of the conversation and its participants. Johnstone (2016) further states that stories are construed according to the influence of the participants who constantly add to them. Schegloff's critique is that the study does not report anything about the audience's interventions since there seems to be no interaction in Labov's data other than the elicitation question (1997, 144).

In response to these critiques, Labov justified his methodological options by first arguing that studies of spontaneous conversations also show a high frequency of monological narratives that hold the audience's attention in the same way as narratives elicited in interviews (Labov, 1997). More recently, Labov (2013) suggests that stories pre-exist to the moment they are told. That is, experiences are kept in the teller's memory until they are formulated into language for an audience. On that occasion, the language is usually adapted according to the type of interlocutor they

face. De Fina & Georgakopoulous (2011) explain that, although there seemingly was no interaction in Labov's work, participants appeared to have all the time they wanted to narrate their personal experiences without interruptions.

The second critique of Labov and L&W concerns the fact that the analysis takes the temporal order of the event as the basis of the narrative. Patterson (2011, 10) and Schegloff (1997, 555) argue that the main point of narratives is not to reveal the past but the personal experience itself. Instead, the experience should be analysed as the reason why the event exists, as controlling the recapitulation of events around itself. From their point of view, the experience is temporised and not the other way around, so the sequence is part of the creative process. In his elaboration on the evaluation component, Labov (2013) argues in his defence that evaluation, as the most essential component in a narrative, is all about the narrator's perspective on the experience and is not locked into a temporal order. Evaluation is what enriches the narrative.

Finally, the distinction between reference clauses in the primary structure, and evaluation clauses, in the so-called secondary structure has been problematic to identify for being so embedded in one another (i.e., Patterson, 2011). Again, Labov (1972) acknowledges that referential and evaluative functions may overlap.

Notwithstanding these critiques, L&W's work on the narrative structure has been – and continues to be – widely used, not only in linguistics but also in work related to identity building and socialisation (Goodwin 1990; Ochs & Capps 2001; Ozyildirim 2009; Bamberg 2010; de Fina & Georgakopoulous 2011; Johnstone 2016). Moreover, the fact that the model has continuously been applied in many languages (Koven 1998, Couto 2013, Kökpınar Kaya 2014, Guerrero González 2020) shows its robustness (De Fina & Georgakopoulous, 2011) and suggests that it does reflect universal tendencies in the structure of human narratives.

For these reasons, the L&W model would already be applicable in the current study, but it is even more appropriate because the personal experience narratives elicited in this research matches the methodology of L&W as well. The interviews on which their analysis and model were based were about dangerous, life-threatening situations. This perfectly coincides with the interviews done in the current study, in which signers of AdaSL, LaSiBo, and LGG narrate their personal experiences with dangerous animals. Also, Labov values the vernacular of ordinary people who are neither professional storytellers nor have finished school, which is also the case with the deaf people of the villages of Adamorobe and Bouakako (LGG signers have been to school). Besides the work on the structure, Labov also highlights evaluation in narratives. I believe that the study of narratives in these three sign languages will shed light on specific differences and similarities in the evaluation component, driven by sociolinguistic factors, such as the size of the deaf population and the age of the sign languages.

Although L&W's model seems to be suitable to test the narratives of animal attacks in the three sign languages, the lack of an explicit climax component makes it incomplete. It was evident to me, as their main interlocutor, that most signers told their stories progressing to a high point and from there descended to a conclusion. The fact that some signers highlighted the encounter with the animal more than others was puzzling, implying that this was also an ability to be developed over time and, most likely, over socialisation. Thus, I propose to combine Freytag's pyramid, centred at a climax, with L&W's components.

Applying Freytag's pyramid to L&W's narrative components

As just mentioned, it is necessary to see whether the two frameworks proposed by Freytag and by L&W overlap and whether a structural pyramid can be applied to L&W's components.

Here, I make a direct comparison between the frameworks proposed by Freytag (1894) and by L&W (1967) / Labov (1972). Even though Freytag describes dramatic productions – which are not at all the object of this study, I retain here the fact that he highlights the importance of the climax and of creating dramatic effects in the audience. On the other end, L&W's model focuses precisely on the type of narratives that I have collected, concerning personal experience narratives about threatening situations. In Table 17, I lay the two models side-by-side, showing that ultimately the proposed structure of both studies is not that dissimilar. The most important difference is that Freytag emphasises the climax, while L&W hardly mention it, if at all. Moreover, L&W's complication and resolution correspond to three components each in Freytag's framework. Otherwise, L&W's orientation and coda may easily overlap respectively with Freytag's introduction and catastrophe.

Table 17. Comparison between the organisation of narrative structures in Freytag and L&W

Freytag's pyramid (drama)		**L&W model** (personal experience narratives)	
component	content	content	component
		Summary of the story	abstract
introduction	Indication of time, place and environment	Indication of time, place, characters and situation	orientation
exciting moment	Beginning of action	Beginning of action Sequence of events Result of event sequence	complication
rise	Progress of action		
climax	Result of the rise		
tragic moment	Counter-action	Solving the problem Concluding the narrative	resolution
fall	Accomplishment		
last suspense	Additional interest		
catastrophe	Closing action or purpose	Returning to the audience	coda
		In any part of the narrative: Evaluation	

The fact that L&W include an abstract, while Freytag does not, may be because it is specific to personal experience narratives, or to how L&W (1967) conducted the interviews or both. Anyway, the abstract is only sometimes present in the narratives they analysed. Similarly, the coda, at the end of the narrative, when the narrator leaves the story and returns to the audience is not usually present in L&W's narratives. Freytag's catastrophe may include a purpose or the moral of the story before closing it, while, in L&W's coda, the narrator addresses the audience directly. Overall, even if there is no explicit climax in L&W's model, the complication, from the beginning of the action until the high point of the narrative, easily fits Freytag's components, starting at the exciting moment (or as he also designates it, the complication) and rising to the climax. Although described differently, the falling action in Freytag, right after the tragic moment, seems to correspond to L&W's resolution. The biggest difference lies in the last suspense which is understandable in a play to create emotion down to the end, unlike a personal experience narrative where the natural conclusion is the problem-solving.

Despite the different terminology, structural components do seem to overlap. Hence, to make the climax explicit and benefit from the visual layout of Freytag's structure,

Figure 40 presents L&W's components for personal experience narratives laid in a pyramid shape as first proposed by Freytag. Freytag's pyramid fundamentally subdivides the dramatic structure into a rise to and a fall from the climax. L&W model aligns with the main parts presented by Freytag, but the specific labels and structures reflect the types of components found in everyday narratives and stories from around the world. In the pyramid, I added to L&W's components Freytag's climax, of course, and two of the dramatic moments: the exciting moment (stirring the action) and the tragic moment (initiating the counter-action), anticipating their utility in content marking. Importantly, Labov's various types of evaluation can be anywhere in the structure, especially as part of the climax or merged with the complication and the resolution.

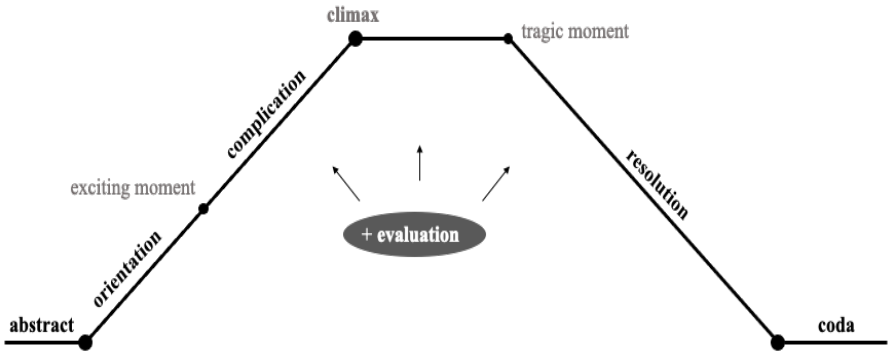


Figure 40. Freytag's pyramid applied to L&W's narrative components

Based on the combination of Freytag and L&W models, I found it useful to visually illustrate the type of personal experience narratives in the present study with a high moment at the animal encounter. This way, the climax was turned into a separate component situated at the peak of the pyramid and the structural components arising specifically from personal experience narratives were laid at the sides of the pyramid.

Finally, L&W and Labov's work is appropriate for the current study because the interviews they base their analysis on were about dangerous, life-threatening situations, coinciding perfectly with the interviews done for the study in this chapter, in which signers narrate their personal experiences with dangerous animals. Yet, L&W did not integrate any sign languages into their analysis. Does language in a different modality follow the same structural organisation as spoken languages? The next section will focus on previous analyses of narrative structure in sign languages.

3.2.2 Structure analysis of personal experience narratives sign language

The previous section presented two main models of narrative structure in spoken languages, including a benchmark model for how personal experience narratives are structured and encompassing some variability across speakers, languages, and cultures. In comparison, while there are several studies on personal experience narratives in sign languages (e.g., Bahan 2006; McIlroy & Storbeck 2011; de Vos 2012; Davidson 2017), there are very few on their internal structure. This section describes the existing published studies on the structure of personal experience narratives in sign language. All of them have also followed, in some way, L&W's model. In addition, some include the climax.

There is only one detailed study on personal experience narratives in sign language based on content analysis of narrative structure based on L&W's framework. In her book, Kirstin Mulrooney (2009) focuses on 12 personal experience narratives in ASL. From her analysis, she rearranges the narrative components and gives them new designations. Another detailed work of this sort is pursued by Sohre (2017). She analysed the structure of four personal experience narratives in Romanian Sign Language for her master's dissertation. Although she followed another model which in turn was partially based on Labov (1972), she used L&W's narrative components.

Other than these, smaller analyses of personal experience narratives test Labov's (1972) model. Wilson (1996) analysed one ASL narrative, Johnston & Schembri (2007) one narrative in Australian Sign Language (Auslan), and Sutton-Spence (2021) one narrative in Língua de Sinais Brasileira (Brazilian Sign Language – Libras). Interestingly, Sutton-Spence also felt the need to add the climax following Freytag's framework.

Besides content analyses of structural components, sign linguists have also looked at stylistic cues to mark narrative parts. There are two important studies of this kind, though not involving personal experience narratives. James Gee and Judy Kegl (1983) measured pauses as hierarchical boundaries (larger components including smaller components), while Ben Bahan and Sam Supalla (1995) observed different types of eye gaze, especially distinguishing the narrator from the character(s). Bahan & Supalla did not establish correspondences between prosodic boundaries indicated by eye gaze patterns and specific narrative parts, they rather pioneered a tentative effort in demonstrating such a possibility in smaller narrative units.

Besides analysing the structure based on content, Mulrooney (2009), Sohre (2017) and Wilson (1996) also used Gee & Kegl's (1983) method to identify prosodic boundaries. Moreover, Mulrooney analysed eye gaze patterns to distinguish the signer's roles. Although I mention Gee & Kegl approach since others have followed

it, I will not use pause marking in my analysis. Instead, I will rely on narration roles cued by the direction of eye gaze, as suggested by Bahan & Suppala and applied by Mulrooney. I am using eye gaze, especially in Studies 2 and 3 about narrative devices. In Study 1, I will look at the eye gaze as the main cue to indicate which role the signer is playing related only to its occurrence in specific narrative components.

Next, I go through the major findings of the structural analyses of personal experience narratives in sign language. I start with the more general conclusions coming out of the smaller studies to go then into more detailed results of in-depth studies involving content analysis of narrative components, namely by Mulrooney (2009) and Sohre (2017). Overall, these analyses lead us to conclude that personal experience narratives in sign language are structured similarly to equivalent narratives in spoken languages.

Three smaller studies followed Labov's (1972) framework. Johnston & Schembri (2007, 257 – 261) analysed an Auslan narrative where the signer tells about getting the teacher angry for being distracted in class. Sutton-Spence (2021, 119) focuses on a Libras narrative where the deaf signer tells about his attempts to kill a mouse. In addition to identifying all of Labov's components, she observes a climax before killing the rat when it is about to jump on the signer's face. Wilson (1996) analysed a personal experience – the Tobacco Story – told by a deaf signer in an informal context about a boy who spit tobacco out the window during class risking being caught. Curiously, going through the plots of these personal stories, the only one that mentions a climax involves the pursuit and killing of an animal, even if not dangerous. The climax is also mentioned by both Mulrooney (2009) and Sohre (2017) who will be discussed later on.

Both Johnston & Schembri (2007) and Sutton-Spence (2021) show that the personal experience narratives that they analysed have all of Labov's components. Wilson (1996) does not identify the abstract in her narrative, but the signer produces an entry in the story world, stating that he remembers something that happened to him in class (ibid., 169). She does not consider it an abstract since it does not represent a summary as L&W's put it. However, this seems to correspond to the story entrance in the other two narratives. Johnston & Schembri (2007, 258) considered the introductory sentence "Yes, I'll never forget this" as an abstract, though recognising that it does not stand for a summary. Similarly, Sutton-Spence (2021, 120) identified as an abstract the initial signer's statement about the narrative being a real situation that happened to him. Wilson does not mention the resolution either, but the long complication part is divided into two sections, which, in my interpretation of the story, would correspond to a complication followed by a resolution.

Although Wilson looked for pauses as proposed by Gee & Kegl (1986) to divide Labov's (1972) components, she ended up modifying the criterium to measure them,

finding them successful mainly in breaking the narrative into three main parts: beginning, middle and end (ibid., 167). She realised in her analysis that narrative devices were decisive in marking Labov's components (ibid., 106), and relied also on narration roles as suggested by Bahan & Supalla (ibid., 167). She concludes that roles played by the signer would be suitable for boundary marking (ibid., 173). For instance, in her narrative, the signer addresses the interlocutor in the orientation (ibid., 169) and the coda as a narrator (ibid., 173). Yet, the signer tells about the main events by embodying characters, which is manifested mainly by reproducing dialogues (ibid., 175) during the complication (including in what Wilson calls the second episode). Despite Wilson and L&W relating analogously narration roles and narrative components, neither of these works has systematised it.

The general assumption that the speaker's roles are crucial in involving the interlocutor, whether as the narrator or as a character – or both at the same time (e.g., Koven 2012), has also influenced Mulrooney's work (2009, 34 – 35). Mulrooney looked at 12 personal experience narratives in ASL from three different sources, ranging across a variety of topics that include the Tobacco Story analysed by Wilson (1996). As an example, one of the stories was about travelling episodes, where the signer lived the adventure of sleeping in an unoccupied firehouse (Ibid., 85) and endured communicating with a hearing person (Ibid., 87).

Like Wilson, Mulrooney also began by analysing pause breaks according to Gee & Kegl. In line with those discursive breaks, she observed slightly different narrative components from those of L&W, and, thus, gave them new designations to fit her analysis better (Ibid., 146). However, to identify content parts, she widened her analysis to include narration types, distinguishing narrator and character roles and their simultaneous use. To do so, she observed whether the eye gaze was addressed at the interlocutor during the narrator's role or was focused on the narrative event space as a character, as described by Bahan & Supalla (1995), but also in terms of narrative (or mental) space by Liddell (2003, but see §5.2.1 for a detailed description). She again suggests new terminology, distinguishing between the narrator as 'textual narration' – focusing attention on the story – and the character(s) as 'perceived narration' – focused on the past experience (ibid., 145). Following Liddell's framework, she also identifies the simultaneous narration, where the signer combines both the narrator and the character's roles. In these situations, the signer may embody the character in the past while adding information about the story. Similarly to L&W and Wilson, Mulrooney (2009, 95) can report a higher occurrence of the character's role (mostly in combination with the narrator's role) during the 'main event' (possibly corresponding to the complication and the resolution), precisely to express excitement. By such emotional displays, signers aim at involving their interlocutor in the story, creating empathy (ibid., 145) and arising interest (ibid., 120). In contrast, the narrator's role appears almost exclusively in the components preceding (which

she named ‘introduction’ and ‘background’) and following (designated by her as ‘explication’) the ‘main event’.

She finds no examples of abstracts like Wilson did not either (1996), or codas, and narratives typically conclude with the sign FINISH. She argues that components like abstract, complication with a climax and coda give the idea that the narrator has a narrative prepared, which can happen when it is told more than once (ibid., 146). Mulrooney clarifies that the fact that not all narratives have the totality of the components does not imply that they are incomplete, just as L&W (1967) have suggested before. She observes that all 12 narratives have an ‘introduction’, ‘main event’ and ‘closing’ as she designates them. Mulrooney also looks for the climax, as the result of the complication. She verifies that not all narratives have a climax and that the location of the climax can vary, whether at the beginning or the end of the ‘main event’ (ibid., 146).

She concludes that the structures of narratives in ASL are similar to those in spoken languages. However, she observes that such narratives have aspects unique to a signed modality, since in addition to signs, the information conveyed by the eye gaze, facial expressions, gestures, and the direction of signs complete the meaning of the narrative.

More recently, Sohre (2017) looked at the structure of personal experience narratives from social media (Facebook and YouTube) by deaf people fluent in Romanian Sign Language (LSR). Out of the four narratives, where the deaf are directed to the camera, two are about religious conversion. The third narrative is about the struggle of the signer to get his driver’s licence, and the fourth is about the experience of dealing with the hearing.

Her main aim was to compare her analysis with Mulrooney’s (2009) study on ASL narratives and with that of spoken language narratives included in the model she used. For the analysis of the narrative structure, Sohre followed a model by Dooley & Levinsohn (2000), which, in turn, used aspects of both Labov (1972) and Brewer (1984). At the prosodic level, she applied Gee & Kegl’s methodology of breaking the structure down according to the existing pauses.

Her analysis focused not only on the manual signs but also on non-manual features, such as the eye gaze (although results on this are not mentioned much in her study), body shifts and mouth morphemes. In addition, like Wilson and Mulrooney, Sohre looks for the hierarchical pauses proposed by Gee & Kegl. She states that pauses marking the abstract, orientation, and coda were easily identifiable. However, finding a break between the orientation and the complication was especially challenging. Thus, she relied on the moment where the signer started the story action to divide the two components (Sohre 2017, 47). In general, she noticed that pauses did not seem to align with the content type. When in the face of discrepancies, she looked at other

devices (ibid., 39), such as the signer's role. Besides Liddell's (2003) framework on narrative (or mental) spaces, she also relied on Metzger's (1995) description of enactment devices (see §4.2 for more details) – as Wilson has done – to observe the character's role. She concluded that character embodiment, including the enactment of dialogues, occurred mostly during the complication component. In contrast, and as expected, the signer plays the narrator's role in the orientation and the coda. Again, Sohre's work shows that pauses only sometimes express a transition between structural parts and that the signer's roles may help in marking narrative components.

In the end, Sohre's analysis of narratives in LSR aligned with Dooley & Levinsohn's model for spoken languages. Unlike Mulrooney's results for ASL, who had not observed the abstract or the coda in her analysis, Sohre's narratives include all of Labov's components: abstract, orientation, complication, resolution and coda. Moreover, although the narratives that she analysed were unemotional and did not refer to life-threatening situations, she finds the climax in the resolution just as Dooley & Levinsohn did.

The fact that narrators tend to embody characters during the climax, which can be perceived through the direction of eye gaze, is particularly relevant. Looking specifically at how the climax is produced in sign language, Hodge & Ferrara (2013) analyse retellings of 'Frog, where are you?' and 'The boy who cried wolf' stories in Auslan. They conclude that signers tend to retell the stories as the narrator during the introduction and the conclusion and as a character during the main events and the climax (ibid., 389).

Rachel Sutton-Spence (2021) in her book on literature in Libras shows preference in applying Freytag's pyramid to narratives in general (ibid., 116 – 117) and L&W's model to personal experience narratives in particular (ibid., 119 – 120). She notices, however, that, even if not reflecting the most common pattern, some stories do not have a climax, suggesting that it might depend on the plot itself. A climax implies a progression towards an emotional outburst and a subsequent change away from the problematic situation. Of course, this is not necessarily present in all stories, like the one about the deaf Indian trying different clothes and putting on make-up until getting completely ready (ibid., 118). This idea is observed by Cohn (2012; but see also Habermas 2019, 43, 46), who applies Freytag's pyramid to visual narratives. He further states that goal direction in a story depends on the information conveyed by the sequence of events rather than on the way it is told.

Supported by the fact that the climax was also included in the structural analyses by Sutton-Spence, Mulrooney and Sohre on personal experience narratives, I add the climax as a separate component between the complication and the resolution, as suggested for the role of the evaluation in Figure 40. Finally, considering the addition of the climax, I summarise in Table 18, the occurrences of the remaining narrative

components in the different studies presented here. Except for Mulrooney who proposed different content components, and Wilson that does not include the components that I have reinterpreted in the light of the other studies, all analyses present L&W's components in full.

Table 18. Occurrence of structural components in the studies of personal experience narratives in sign languages (in the order as they were discussed in this section)

Narrative components	Johnston & Schembri 2007	Sutton-Spence 2021	Wilson 1996	Mulrooney 2009	Sohre 2017
abstract	✓	✓	(✓)	-	✓
orientation	✓	✓	✓	✓	✓
complication	✓	✓	✓	✓	✓
climax		✓		✓	✓
resolution	✓	✓	(✓)	✓	✓
coda	✓	✓	✓	-	✓

In conclusion, while there are very few studies on the structure of personal experience narratives for sign languages, it is essential to acknowledge that such studies exist and have revealed significant similarities with spoken languages, such as an analogous structural organisation. Some of these studies have complemented the analysis of content parts with the observation of other narrative devices, such as the signer's roles, revealing, for instance, modality-specific devices of character embodiment. Therefore, I will consider the marking of narrative functions through eye gaze, as proposed by Bahan & Supalla, to try to establish a correspondence between the signer's roles and narrative components. In other words, I will look for enhancing strategies used by the signers to involve the audience in the narrative.

This overview of structure analysis of personal experience narratives in different sign languages shows that L&W's framework continues to influence the study of narrative structure partition based on content. Since I am looking at West African sign languages whose story building relies solely on interactive dynamics, a robust structure abstraction seemed more adequate, confirming L&W's model as the most appropriate for the study of AdaSL, LaSiBo and LGG. The primary motivation behind such methodological choice in this thesis is justified by the fact that the type of narrative collected by L&W and myself coincides, i.e., it concerns exclusively personal experiences in life-threatening situations. Precisely because L&W asked

their interviewees the question of whether they had ever been in a life-or-death situation, they were naturally led towards a climax. Thus, for this study, I also take into account such a component (as designed by Freytag), as well as devices aiming at arising interest in the interlocutor.

In the background of narrative structure analyses (§3.2), I first looked at the two main models that I will follow in this study (§3.2.1): Freytag's dramatic pyramid centred at a climax and L&W's structural components arising specifically from personal experience narratives. I then proposed to combine the two frameworks, by applying Freytag's pyramid, including the peak at a climax, to L&W's components, consisting of abstract, orientation, complication, resolution and coda. After, I looked at studies about the structure of personal experience narratives in sign language (§3.2.2). I was specifically concerned about how L&W's model was tested, whether climax was involved and to what extent narration roles were distributed across components. The following subsection focuses on the research question underlying the structural analysis of personal experience narratives in the three African sign languages.

3.3 Research questions

In the previous sections, I explored storytelling as a human universal, dependent on language development and social bonding. Also as folklore universal, the topic of animal attacks presupposes an emotional account arising the audience's interest. In this line of thought, I highlighted two models of narrative structure: Freytag's dramatic pyramid centred at a climax and Labov & Waletzky's model for personal experience narratives. Then, I looked at studies on the structure of personal experience narratives in sign languages, following L&W's model, eventually including climaxes and relying on the signer's roles to turn it compelling.

Since this thesis study focuses on three African sign languages with different community sizes, language ages and interaction patterns, I can observe whether such factors influence how signers structure their narratives and make them interesting around a climax.

Thus, the research questions for Study 1 are:

1) How do signers of the three sign languages structure their personal experience narratives? And the hypothesis is: The more languages are developed the more narratives will be structured according to what appear to be universal components (as represented by Labov & Waletzky's model). Hence, LaSiBo narratives and those by female LGG signers may not be as structured as the ones in the other two sign languages.

2) To what extent do signers of the three sign languages convey emotion in their personal experience narratives? And the hypothesis is: The more socialisation habits signers have the more the narrative will be emotional, by including a climax (as represented by Freytag) and distinct narration roles. Hence, LaSiBo narratives and those by female LGG signers may not have a marked climax as the ones in the other two sign languages.

To verify this, I analyse the personal experience narratives in 17 AdaSL narratives, 12 LaSiBo narratives and 16 LGG narratives. In the next subsection, I explain which methods were followed to analyse the structural components and enhancing devices in the personal experience narratives collected about animal attacks.

3.4 Methods for analysis

To answer the research question, I analyse personal experience narratives in three West African sign languages, following L&W's model to which I added Freytag's climax. In this section, I recall the methodology followed specifically in the analysis of narrative components.

The deaf participants of the three sign languages were filmed in the same way. I called them one by one and asked them: "Have you ever encountered a dangerous animal like a snake?". The collection resulted in a total of 45 narratives: 17 in AdaSL, 12 in LaSiBo and 16 in LGG.

I follow L&W's model because they obtained personal experience narratives by asking their interviewees a similar question, namely "Were you ever in a situation where you were in serious danger of being killed?". Thus, it was logical to test if the components that arose from their narratives would also occur in the same way in the narratives about animal attacks in the three sign languages with distinct backgrounds. Also, because the topic pitched during narrative elicitation potentially aimed at highly emotional accounts, Freytag's climax was included as an additional component between the two main middle parts: the complication and the resolution.

In line with L&W's content analysis, to which Freytag's climax was added, the criteria to distinguish components from one another were essentially based on the meaning of the utterances, which is summarised in Table 19 (see Chapter 2 for a detailed explanation with examples). In the **abstract**, I should find a summary of the topic. In the **orientation** component, I look for information about who, where, and when the story took place and eventually other details. The **complication** begins with an exciting moment, usually a verb of motion, and progresses until the moment immediately preceding the encounter with the animal. The **climax** goes from that encounter until the live contact with the animal is terminated. During the **resolution**

component, the attack is solved until the end of the narrative. Finally, in the **coda** component, the signer comes back to the audience to, eventually, add some comments related to his experience.

Table 19. Expected content summary in each narrative component

Narrative component	**Content**
abstract	Summary of the topic
orientation	Information on who, where, when and other details
complication	Beginning: stirring action to the animal's location End: just before encountering the animal
climax	Beginning: encounter with the animal End: termination of the live contact with the animal
resolution	Beginning: solving the attack (running away, killing it or other) End: end of the story
coda	Going back to the audience to add comments

Initially, to mark the boundaries between the components, I tested Gee & Kegl's method. However, the prosodic breaks with pauses did not match content units. Moreover, pauses were not consistent across signers, some used very few and others made many per line. For those reasons, I did not pursue this method for structure marking. Instead, I distinguished between the character's gaze and gaze on the audience as proposed by Bahan & Supalla (1995) to identify the signer's role, respectively as character or narrator. However, as described by Mulrooney (2009), simultaneous roles had to be considered. Thus, I also relied on character enactment types as described by Metzger (1995), influencing the analysis of Wilson (1996), Mulrooney (2009) and Sohre (2017). My analysis will be based on Metzger's work as well but mostly on Studies 2 and 3. Here, I will only use it to distinguish the signer's roles more accurately. Hence, apart from the narrator's role (looking at the audience), I distinguish between a fully **overt** character and a **partially overt** one, involving simultaneously the character and the narrator's explanations. I will keep in mind that, even in a double role, the character's role is focusing the interlocutor's attention on the event space (Mulrooney 2009, 37).

After dividing the narratives into components, I checked what was the signer's role – according to the direction of the eye gaze – in each component and the transitions between components. I recall here that the eye gaze is analysed in more detail in Studies 2 and 3.

The videos were annotated in ELAN, where specific tiers were used for this analysis: (1) **gloss** tier (divided into left and right hands whenever relevant); (2) **translation** tier (into English); (3) **component** tier (including all of L&W's components and Freytag's **climax**); (4) **eye gaze** tier (identifying either the character's eye gaze or the narrator's gaze on the audience); and (5) **role** (distinguishing between narrator, character and double role).

The annotations were then exported from Elan to Excel for content analysis. I watched and translated each narrative into English, then organised the translation by lines that are sequentially numbered (L&W 1967, 157 – 159, who order lines of narratives by letters), corresponding to minimal semantic units (usually comprised of one verb and its arguments, but also expressions). Finally, the lines were divided into the structural components. Components with one or two lines were considered **short** and with three or more lines were viewed as of **typical length**.

Line-by-line translations of all narratives in AdaSL, LaSiBo and LGG are in Appendices 1, 2 and 3 respectively. In the end, I built the pyramids combining both Freytag and L&W's models according to the time spent by the signers in each component. They were all made manually (see §2.8.2 for more details).

The following section presents the content analysis of the narrative structure in the three sign languages.

3.5 Descriptive analysis of narrative structure in AdaSL, LaSiBo, and LGG

The previous section described the methods applied in this study, concerning how the analysis of the personal experience narratives in the three sign languages was undertaken. In this section, I go through a descriptive analysis of the narrative structure in AdaSL, LaSiBo and LGG.

The internal structure of the narratives is analysed here, according to the research questions for this study, regarding how AdaSL, LaSiBo and LGG narratives fit Labov & Waletzky's model and to what extent the signers of these three languages follow all the steps of the model. The components used here were previously described for spoken narratives, in §3.2.1.

The structural components are applied in the analysis of the three sign languages in separate sections, corresponding to abstract, orientation, complication, climax, resolution and coda. The abstract is the summary of the whole story and is presented before starting the narrative. The orientation refers to the background part of the story, including the who, when and where. The complication is where the action is developed until reaching the goal of the story, or the climax. Then the resolution deals

with when and how the problem is solved. In the end, where the coda is, the narrator leaves the story and returns to the audience.

In this section, I provide a descriptive analysis of the narrative components, in different subsections. For example, subsection 3.5.1. focuses on the orientation of narratives in three sign languages separately. After the analysis of each language, a new subsection compares the three sign languages with each other. Next, the complication (§3.5.2.) is presented for each language, then compared and so on. In each subsection, the analysis is illustrated through relevant details and examples, such as sentences and pictures. The analysis of the narratives into structural components is in the Appendix.

All components are analysed except for the abstract since none of the narratives present it. One LaSiBo narrative did not produce a narrative as a sequence of events that happened in the past, being more descriptive. Thus, instead of 12 narratives, only 11 will be taken into account in LaSiBo. Of all the narratives collected in the three sign languages, most start with orientation (16/17 in AdaSL; 9/11 in LaSiBo; 13/16 in LGG). In the LGG narratives, the orientation is not produced by three of the eight women. All narratives present the middle part of the story, i.e., the complication, the climax and the resolution. However, most LaSiBo narratives and half of the LGG narratives by deaf women are extremely short. In the end, most narratives conclude with the coda component (15/17 in AdaSL; 9/11 in LaSiBo; 13/16 in LGG). Whenever relevant I will also refer to the signer's role to create dramatic effects through character embodiment (Freytag 1894, 19, 23).

3.5.1 Orientation

The orientation is the first component, concerning the setting up of the narrative in the beginning. Before orientation, there could have been an abstract, i.e., a summary of the story, that was not found in the narratives for this study. The orientation component is when the story presents the background, i.e., the when, who, where and other important details. These aim at giving the audience a better understanding of the event that follows. AdaSL narratives are presented first, followed by LaSiBo's and LGG and then I undertake a comparison between the three sign languages.

Orientation in AdaSL narratives

The orientation is the first component in the structure of personal experience narratives analysed here, where the storyteller presents the background of the story. In this subsection, I show several examples regarding that component in AdaSL. In AdaSL, 16 of the 17 narratives have the orientation component. The narrative that has

no orientation is a very short one beginning immediately with the action event, in ‘I was looking for snails in the forest. The thin snake came to me and I cut it’ (Narrative ADA_02, 13 seconds).

The other 16 narratives that have the orientation include, in this introductory section, the answers to the main questions – who (all 16), where (14 of 16) and when (8 of 16), as the example in (1). The length of the orientation varies between one (6 of 11) and eight lines (1 of 11).

(1) Orientation component in AdaSL

A long time ago, [when]

when I was a small boy, [when]

there, on the farm, [where]

I went with my father. [who]

I walked there [where]

and stayed there. [where]

My father went farming [other details]

until he finished his work. [when]

(Narrative ADA_07, lines 1-9)

Now, looking in more detail at the orientation in all AdaSL narratives, I describe, next, what is mentioned for the main questions, namely for who, where and when, in this order. All 16 narratives with orientation explicit the participant(s). In 14 narratives, the signers identify the who as themselves, as in (2a). Of these, three narratives have an additional character: ‘I went with my father’ (Narrative ADA_07, line 4); ‘my mother had a baby and I went farming’ (AdaSL Narrative ADA_11b, line 2); ‘Kaya and I’ (Narrative ADA_15a, line 1). In the other two narratives, the narrators tell about the experience of others, in these cases of their fathers.

Of the 14 narratives that mention the location, 9 refer to the farm, as in (2b), since most of the participants are farmers (see Chapter 2 for details on the participants). Even those who are not farmers have experience with farming because they accompany or help their parents who are so. Three narratives occur in the forest and one mentions 'here' looking for snails.

As for when sequences, five signers started the narrative with ‘A long time ago’, as illustrated in (2c). Two others indicate the time by other signs like ‘In the past’

(Narrative ADA_15a, line 1) or ‘My father was old but not dead yet, he was here’ (Narrative ADA_13, lines 1-3). Apart from these, a signer refers ‘in the morning’ (Narrative ADA_10, line 1), without specifying the when.

(2) Signs referring to the who (a), where (b) and when (c) contents in the orientation component in AdaSL

a.  b.  c. 

ME FARM LONG-TIME

Eight narratives (including two very short ones) do not indicate the when but seem to be in the present or are stated as a frequent situation, as in examples (3a,b).

(3) Orientation components without the when content in AdaSL

a. I stayed to pick up snails with my father. (Narrative ADA_06, line 1)

b. I was in the forest,

near the water and there were lots of fish.
There were also many snails. (Narrative ADA_14, lines 1-3)

In the setting up of the story in the orientation component in AdaSL narratives, between the who, the where and the when contents, the order can be different in each narrative, as in (4a,b,c).

(4) Order of who, where and when contents in the orientation component in AdaSL.

a. A long time ago, when I was a small boy, there, on the farm, I went with my father.



(Narrative ADA_07, lines 1–4)

b. I went to the farm in the morning.



(Narrative ADA_10, line 1)

c. A long time ago, I was coming back from the farm.



(Narrative ADA_12, lines 1-2)

These examples show that the order of the settings may be different. In addition to who, where and when contents, nine narratives have added other details that help to better understand the setting of the story, as in examples (5a,b,c,d).

(5) Orientation components with additional details in AdaSL

a. I put the cutlass under my arm. (Narrative ADA_08, line 2)
b. my mother had a baby (...) (Narrative ADA_11b, line 2)
c. He tied the branches and put them on his head. (Narrative ADA_11a, line 2)
d. when school was finished (…) (Narrative ADA_15b, line 3)

Finally, I observed that in 14 out of 16 narratives with orientation, the signers acted as narrators, as in (6). During the description of the scenario, those 14 signers maintained eye contact with the audience.

(6) Eye gaze directed at the audience in the orientation component in AdaSL



LONG-TIME ME NASWANA (cocoa farm)

(Narrative ADA_04, lines 1-3)

The other two signers who showed instead the character's gaze immersed themselves immediately into the narrative, describing the setting when already inside the story without looking at the physical addressee(s). I will go into more detail about embodiment types in Chapter 6 (Study 3).

In conclusion, 16 out of the 17 narratives have an introductory part, the orientation. Here, most of the narratives address the who (mostly the self, except for two about the fathers), and the where (typically in the farm) contents and half refer to the when (mainly as a long time ago), as shown in the relevant examples above. The contents on participants, location and time of the narrative were ordered differently across signers and little more than half added other details. Most signers played the narrator's role by looking at the audience while explaining the settings. Next, the results of the introduction of the narratives in LaSiBo are presented.

Orientation in LaSiBo narratives

It was shown that all narratives in AdaSL have the orientation component setting up the story except for a very short one. In the same way, LaSiBo narratives present this introductory component, containing the who, where and when contents, except for two of them.

Nine of the 11 narratives in LaSiBo present the background in the orientation, including the answers to the three questions: who (all 11), where (8 of 11) and when

(4 of 11), as in (7). In LaSiBo narratives, the length of the orientation varies between two and nine lines.

(7) Orientation component in LaSiBo

I went… farming. [who and where]

When I finished farming [when]

I ate. [other details]

At midday, I was farming. [when and where]

In the afternoon I picked the 'bag' up [when and other details]

And put it on my back. [other details]

(Narrative LAS_04, lines 1-6)

In all the narratives in LaSiBo the who is embodied by the signers themselves. For the eight narratives with where content, six signers indicate the location: three on the farm, in (8a), one on the road, in (8b), one in the house and one at the father's place, in (8d). The other two mentioned it as there, by pointing to the ground, in (8c) or to an abstract location.

(8) Signs referring to the where content in the orientation component in LaSiBo

a.  b.  c. 

FARM ROAD POINT (to ground)

The when content, in four LaSiBo narratives, is described in different ways, as in (9a,b).

(9) Orientation components referring to the when content in LaSiBo

a. At that time, I was not pregnant.

Her father (pointing to her daughter)
let me go there alone.
I ate and waited until the afternoon,

(Narrative LAS_01c, lines 1-4)

b. I was this size (looked around and pointed to a person) like that person.

I was this size.

(Narrative LAS_06a, lines 1-2)

Two other signers describe the when content in more detail, as in 'One day, after my bath in the night' (Narrative LAS_02b, lines 1-2) and 'I went… farming. When I finished farming, I ate. At midday, I was farming. In the afternoon (…)' (Narrative LAS_04, lines 1-5). However, they do not say exactly when. The remaining two signers do not mention when it occurred, it might have been a recent situation or it may be a frequent one as in the AdaSL narratives, as in examples in (10a,b).

(10) Orientation components without the when content in LaSiBo

a. The snake with this colour (pointing to his brown pants) with its head up.

It was there (pointing to the floor beside him).

(Narrative LAS_02a, lines 1-2)

b. On the farm, with things in my head,

The snake was on the ground in front of me,

I didn't see it

(Narrative LAS_06a)

In this introductory component in LaSiBo narratives, the order of the settings in the orientation differed in each narrative, as in the examples in (11a,b,c).

(11) Ordering of who, where and when contents in the orientation component in LaSiBo

I went to the farm with things on my head.
who where

(Narrative LAS_01a)

I was walking on the road. An animal was walking there and passed by my side.
who when who where

(Narrative LAS_01b)

One day, after my bath in the night, the snake passed here.
When who when who where

(Narrative LAS_02b)

These examples show that the order of the settings is always valid, even if it differs within narratives. Curiously, where is always last in these examples, leaving the when and who as the apparent flexible elements.

In addition to the who, where and when contents, six narratives have added other details that help to better understand the setting of the story (12a,b,c,d,e). The last fragment in the examples below (12e) shows enough details for the audience to better imagine the scenario of the narrative.

(12) Orientation components with additional details in LaSiBo

a. (...) I carry it on my head (…) (Narratives LAS_01a and LAS_06a)

b. The snake with this colour (…) (Narrative LAS_02a)

c. (...) Her father let me go there alone (…) I ate (…) (Narrative LAS_01c)

d. (...) snake passed by (Narrative LAS_02b)

e. I was this size like that person.

I was this size.

An animal with horns, gave birth, to a baby this size.

It was strong.

It was there, not here, at my father's place.

The animal gave birth,

it was a hiding place

and I didn't see it.

(Narrative LAS_06a, lines 1-8)

In seven of the nine narratives, signers look at the audience in the narrator's role during the setting up in the orientation component, as in (13).

(13) Eye gaze directed at the audience in the orientation component in AdaSL



THERE FATHER (place) ME THIS-SIZE

(Narrative ADA_06a, lines 1-6)

The signer who did not look at the audience (in his two narratives) had the eye gaze directed at the hands when explaining that 'One day, after my bath in the night, the snake passed here'. During this moment, his eye gaze was always following the signs.

To conclude, nine of the 11 narratives have the orientation component, where they all indicate the who as the self, most say the where and only a few refer to the when. The order of that content varied across signers, as it did for AdaSL, but the where was always placed last. Moreover, more than half added details and most looked at the audience as the narrator. In the next subsection, the results for the introduction of the narratives in LGG are presented.

Orientation in LGG narratives

By now the orientation component has been described in both AdaSL and LaSiBo narratives. In AdaSL, 16 out of the 17 narratives have orientation, while, in LaSiBo, nine out of the 11 do so. I will now focus on the orientation in LGG narratives.

Before describing this component in LGG, I must highlight that narratives were told differently by men and women. Overall, most of the women told simpler narratives when compared to the men. Throughout this chapter, I will show several examples showing such distinction. I will start with the orientation, which occurred in 13 out of the 16 personal experience narratives (all 8 men and 5 of 8 women). The length of this component varies between two and 15 lines in those produced by men and between one and eight lines in those by women.

The signers who present the orientation answer to who (8 of 8 men and 4 of 5 women), where (6 of 8 men and 4 of 5 women) and when (6 of 8 men and 4 of 5 women). Besides participants, location and time of the event, signers may also add other details as in (14). In this example, the who refers to himself, together with five hearing friends. The signer also specifies the when as a long time ago when he was a child and that it happened on a Monday. They had gone to pick cashew in an area where each one chose a tree, his located ahead. Thus, the where is described amongst the cashew trees, that, for being far away, could only be reached by car. The signer adds other details such as 'we were talking and time passed (...) we were walking and we arrived, we stopped'. These are the specifics of what he was doing before he got into the complication. In this way, several details allow the interlocutors to understand the story better, leading them to build a mental image of the events. This orientation is the longest in all LGG narratives.

(14) Example of an orientation component in LGG

a long time ago, [when]

I was a child. [who and when]

by car, there in the trees (of cashew) [where]

I was here with my father [who]

we were talking [other details]

and time passed by [when]

I arrived on Monday [when]

and I went to work. [where]

I and my hearing friends, 1, 2, 3, 4 and 5 together walked inside [who and other details]

we were walking [other details]

and arrived [other details]

we stopped [other details]

and stayed here [where]

each one went to a different tree [where]

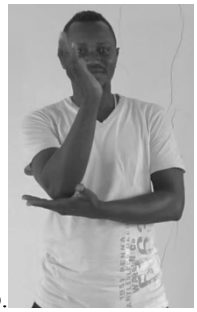
I went in this direction [where]

(Narrative LGG_06, lines 1-15)

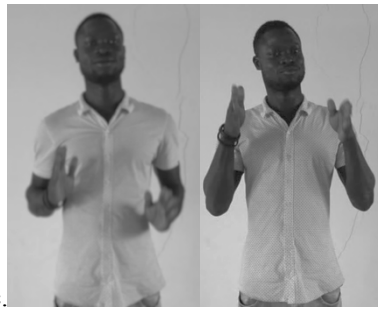
Of the 13 narratives with orientation, only one woman does not explicitly mention who the participant is. However, she indicates that it was in her house, implying that she was the character in her story. All other signers identified the main character as the self. Of these, two women are accompanied by hearing people and one deaf man by his father.

The reference to the location is given by six of the eight men. Five of them mention the trees, as in (15a) where they usually harvest cashew, as in (15b). The other tells the name of the island where he had been born and raised, Bubaque (15c). Four (of five) women also indicate the where: one in the trees, one at a hearing's house, one at home and one in the city of Bafatá (15d). In this example, the signers add details 'In Bafatá, a hearing had a deaf baby (me), I was born and then I grew up and then I don't know' (Narrative LLG_15).

(15) Signs referring to the where content in the orientation component in LGG

a.  b.   

TREE TREE CASHEW

c.  d. 

BUBAQUE (city name) BAFATÁ (city name)

The time of the event is determined in most of the narratives. All six men (of 8) mentioning when say it happened a long time ago, or when they were children. Of the four women (of 5) indicating time, three do it in the same way as the men. The other says it happened the year before. Narrative LGG_08 shows specific details, namely about when it happened, by referring to his age when, in his own words, he had a certain size as a child, as in (16).

(16) Example of specific details in orientation in LGG



ME LONG-TIME



CHILD. GROW-UP HEIGHT-SIZE

‘Long time ago, I was a child. Then I grew up and became a boy, about this size. ‘

(Narrative LGG_08)

There is another example of a signer describing when the story occurred, in ‘A long time ago at school. It was sometime after I was born, I don't know, I was a child. I was four years old, I don't remember, it was a long time ago’. In this example, the signer also mentions that she had been born there – even if she does not say the name of the place (Narrative LGG_16).

Although the order of the who, where, and when in the LGG orientations varies greatly, most start with the when (9 of 13), followed by the who (7 of 9) and the where (6 of 7). Sometimes, after using a certain order, signers go back to describing the who by adding more people in the narrative, or to the where, or the when.

Thus, in addition to the contents on participants, location and time of the event, nine out of the 16 narratives (six men and three women) have added other details that help understand better the setting of the story. For instance, three of the narratives present details about what they were doing before encountering the snake. One is shown above in (14) and the other two are shown below in (17). In (17a), the signer describes what he was wearing before he left home and, in (17b), he mentions that his father was cutting down the trees, and he was carrying food on his head.

(17) Orientation components with additional details in LGG

a. I changed the T-shirt to a sleeveless one and shorts.

I got dressed and I was ready.

(Narrative LGG_05, lines 1-4)

b. (…) Father was there amongst the trees cutting trees.

I had my food in a bowl

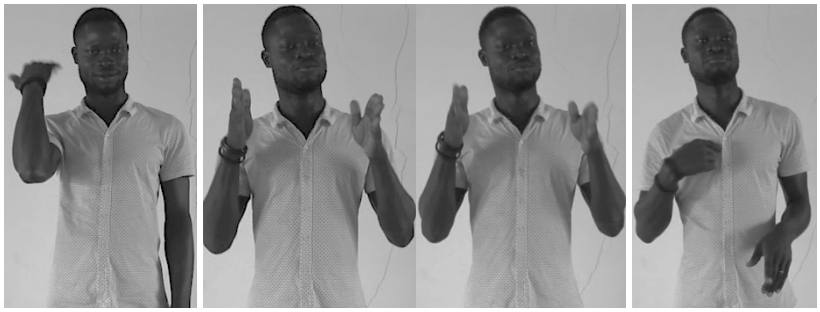
and I carried it on my head,

holding it with my hands.

(Narrative LGG_08, lines 4-7)

During this component, signers address the audience directly as the narrator in 12 out of the 13 narratives, as in (18).

(18) Eye gaze directed at the audience in the orientation component in LGG



LONG-TIME BUBAQUE ME

(Narrative LGG_02, lines 1-2)

In conclusion, of the 16 LGG narratives, three women did not include the orientation component. In this introduction, all but one of the women refer to the who as the self, and most mention the where (usually the cashew trees) and the when (typically as a child). Although the order of the contents varied, a consistent pattern arose in half of the settings, namely that of when – who – where. A little more than half also added details and almost all of them address the audience directly as narrator. After describing the orientation in LGG, I will now compare the results of the three languages.

Comparison of the orientation in the three sign languages

Most signers in all three sign languages do include orientation. In AdaSL, 16 of 17 narratives set up the story in the orientation component, while in LaSiBo nine out of 12 narratives present it and, in LGG, 13 of 16 have it (eight men and four women). These narratives have information related to at least one of the contents about the who (characters), the when (time) and the where (place).

The character's identification is the most frequent. AdaSL and LaSiBo narratives mention then the location and least often the time of the event. In LGG, the reference to both location and time is balanced. In the narratives with orientation, the character refers overwhelmingly to the self, except for two vicarious accounts in AdaSL experienced by the signers' fathers. The locations where encounters with animals are more likely to occur are the farm in Adamorobe and the (cashew) trees in Guinea-Bissau. I should also note that a few AdaSL and LGG signers say explicitly the names of certain locations, which was not found in LaSiBo. These personal experiences have for the most part occurred a long time ago.

The order of the settings varies, but, in LaSiBo, the location occurs always at the end and, in LGG, a consistent ordering of time, participant and location seems to be emerging. Also, many add other details to the setting. Most of the signers in the three sign languages acted as narrators directing their eye gaze at the audience. Although differences between male and female LGG signers start to arise in this component, the same was not observed in AdaSL in LaSiBo narratives.

After describing the introduction, I now move to the part when the action begins, i.e., the rising of the event. Again, first in AdaSL, then in LaSiBo, and finally in LGG, in separate subsections, followed by a comparison between the three sign languages of the study.

3.5.2 Complication

The complication component is where the action of the narrative begins, leading us to the goal of the narrative. This second component in AdaSL, LaSiBo and LGG narratives occurs after the description of the setting, which includes the characters, the location and the time of the event. Next, the second component is shown in AdaSL narratives, followed by LaSiBo's and then by LGG's. In the end, I compare the three sign languages.

Complication in AdaSL narratives

In the previous section, I showed that all AdaSL signers and most of LaSiBo's and LGG's present the background of the story in the orientation component. Next, in the complication, the audience is led to the story's objective. In this subsection, I move on to the following component, where the action begins, i.e., the complication, to find out whether the two village sign languages and LGG also use it. Before turning to LaSiBo's and LGG's analysis, I first look at the complication in AdaSL narratives.

All signers in Adamorobe produce the complication component, introducing the main event with the exciting moment, usually expressed by a motion verb, and embodying the character's role. The stirring action, as Freytag put it, aims, in these narratives, at the location of the animal. Nine different verbs are stirring the action in the complication. The one with the most occurrences is WALK, as shown in example (19). Besides this one, there are other verbs like LOOK-FOR, SEE and FARMING, among others. Then, most narrators encounter the snakes on the farm including on their way to or from there.

(19) Instances of the sign WALK in the complication component in AdaSL



Below it is shown how the transition occurs between the setting up of the story and the beginning of the main event, or between the orientation and the complication components, which occurred in the 16 narratives (of 17) that had the orientation. The narrative skipping the setting up starts right away with the complication. The transition usually occurs with stirring actions expressed by motion verbs, such as WALK, in (20a), LOOK-FOR, in (20b), and CATCH, in (20c).

(20) Transitions between the orientation and the complication components in AdaSL

a.

orientation	1. I went farming
	2. and it was raining.
complication	3. I was walking around looking for snails
	4. but there was none.
	5. I sat down to rest
	6. and drank water.
	7. I looked for snails again.
	8. In my bag, there was a cutlass.
	9. was looking for it in my bag.

(Narrative ADA_05)

b.

orientation	1. I stayed to pick snails with father.
complication	2. I was looking for snails. 3. Amongst the leaves, 4. there was something big curled up 5. with its head moving.

(Narrative ADA_06)

c.

orientation	1. I was in the forest, near the water 2. and there were lots of fish. 3. There were also many snails.
complication	4. I was catching them 5. and putting them in the bag. 6. I was surprised. 7. There were really many snails 8. and I was surprised. 9. I, alone, caught a lot of snails up to this size 10. Snails were crawling. 11. I was catching snails by myself everywhere.

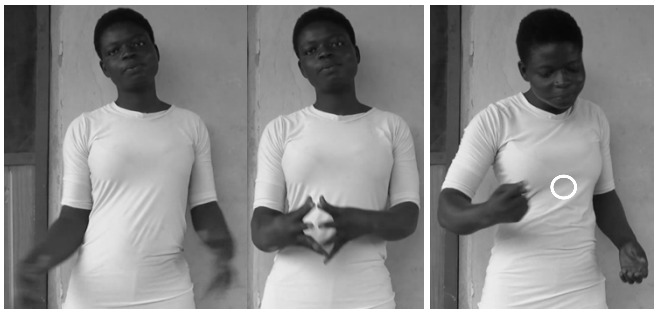
(Narrative ADA_16)

In (20a), above, the signer acts like herself, during most of the rising action, or the complication component, adding only two free clauses as side comments to say she had a cutlass in her bag and to describe the size of the swelling (both by looking at the audience). In (20b), the signer also acts as herself throughout most of the story, except when she describes the snake with free clauses. During the whole storyline, she never establishes eye contact with the addressee. In the same way, the signer, in (20c), never looks at the audience, except to show the size of the snails he caught on one occurrence, and, a second time, right at the end of the narrative, to conclude the narrative by signing the act of covering a hole in the ground. The signer embodies all narrative actions, clearly changing characters without mentioning them explicitly,

which shows that the signers are in the past exactly when it happened during the complication.

The 14 (of 17) narratives setting up the orientation in the narrator's role embody the character when entering the complication component, as in (21), showing that they are mentally travelling to the past event.

(21) Shift between signer's roles, from the narrator, in the orientation, to the character, in the complication in AdaSL narratives



gloss	FOREST	LOOK-FOR
gaze	audience	character
comp.	orientation	complication

(Narrative ADA_01, lines 1-2)

In this component, the Adamorobe signers embody the actions themselves as if they were in a past event. Their eye gaze is like the character reenacting what happened as close as possible. Most of the narratives are told in the first person, i.e., according to their own experience. Even though the embodiment of characters is addressed here, it is treated only later, with more detail, in Chapter 5.

All 17 signers present the complication component. Most complication components in AdaSL have a reasonable length since 11 of them have between three and 12 lines. Of the six remaining narratives, two have a one-line complication, two have a very short complication and climax and two others are overall very short.

In the 16 narratives with the orientation component, signers proceed from there to the beginning of the main event in the complication. This component is stirred by an exciting moment, expressed by a motion verb, like WALK. Here, all signers embody the character throughout most of the rising action, which will be further analysed in Chapter 5. Next, I look at the complication component in the LaSiBo narratives.

Complication in LaSiBo narratives

Having seen that all narratives in AdaSL have the part in which there is a preparation for the climax, i.e., the complication, I now turn to the same part in the LaSiBo narratives. Again, several examples are shown here, with special attention to the transition between background and the beginning of the main event, or the orientation and the complication, through stirring actions aiming at the location of the animal and the change of the signer's role, as in AdaSL narratives.

In LaSiBo, all 11 narratives begin the complication, where the story is set off, with an exciting moment expressed by a motion verb – eight begin with WALK, as in (22a,b).

(22) Signs referring to the motion verb WALK in the complication component in LaSiBo

a.  b. 

Another narrative, without a background, started the story immediately with the complication component. The signer starts with WALK, in pantomime, by using the whole body and no signed descriptions, in (22). The preparation for the climax in the complication of this narrative has three clauses in pantomime referring to the past event.

(22) Beginning of the complication component without orientation in LaSiBo



'I was walking and saw it. I took a step back. It was there. I cut it.'

(Narrative LAS_05a)

Of the seven narratives that were told during the orientation in the narrator's role, six shift to the character's gaze, as in (23). In the 11 narratives with complication, only one was told as the narrator. In the remaining ten narratives, signers embody the characters while in the complication when preparing for the climax. Worth noting here is that, in six narratives, signers embody fully the character, resembling pantomimes. In narratives beginning the complication with a stirring action, signers instantly embody the character, which will be looked at in depth in Chapter 5.

(23) Shift between signer's roles, from the narrator, in the orientation, to the character, in the complication in LaSiBo narratives



gloss	MIDDAY	WALK
gaze	audience	character
comp.	orientation	complication

(Narrative LAS_04, lines 4-7)

A striking characteristic of LaSiBo complication components is that they are overall very short (9 of 11). In fact, in LaSiBo, nine narratives (of 11) quickly move to the peak of the narrative right after the motion verb. Of these eight have only one line and the other has two lines. Importantly, eight complication components move on to an equally short climax. Below, I show examples of very short complication components occurring in LaSiBo narratives, as examples (24a,b,c). In (24c), the narrative skips the orientation component and starts with the complication.

(24) Short complication components in LaSiBo

a.

orientation	
complication	1. I was walking
climax	2. and it bit my leg

(Narrative LAS_04)

b.

orientation	
complication	1. 9. I was walking
climax	2. 10. And a big snake appeared.

(Narrative LAS_08)

c.

orientation	
complication	1. The gazelle passed by running to that way.
climax	2. Later, it came back, 3. I was surprised.

(Narrative LAS_05b)

All 11 LaSiBo narratives present a complication component, setting off the story with motion verbs, mainly WALK, similar to AdaSL. The majority of signers also enter the past event, by embodying the characters. This is especially evident in narratives that show a transition from the orientation to the complication by a change of the signer's

role, from narrator to character. In LaSiBo, a little more than half of the character's roles are fully enacted as pantomimes.

Overall, the complication components are very short, thus under-investing in the emotional preparation for the climax. Next, I analyse the complication in both male and female LGG signers.

Complication in LGG narratives

After observing the complication component in both AdaSL and LaSiBo, I will now analyse it in LGG narratives, separately in men and women.

All 16 LGG signers produce the rising of the action and introduce it with an exciting moment. Also, in this component, all signers embody the character except for two women. The stirring actions at the beginning of all complications are expressed by motion verbs, mainly WALK (7 of 16), as in (25), but also CLIMB or PICK, among a few others. This was also the case of the three narratives by deaf women that started straight into the complication without previously producing an orientation.

(25) Signs referring to the motion verb WALK in the complication component in LGG



Three out of the eight women do not produce the orientation component, starting the narrative immediately by signing the verb WALK in the complication (Narratives LGG_09, LGG_10 and LGG_12). Two of them start with the action 'I was walking' (Narratives LGG_09 and LGG_12). In the third one, the signer starts with 'The snake... the snake... and then she says I was walking' (Narrative LGG_10).

All signers, but two women, embody the character throughout most of this component. Signers that presented the orientation as a narrator (12 of 13) redirect their eye gaze from the audience to the character's event when moving to the complication, as shown in (26).

(26) Shift of signer's role from narrator to character between the orientation and the complication in LGG narratives

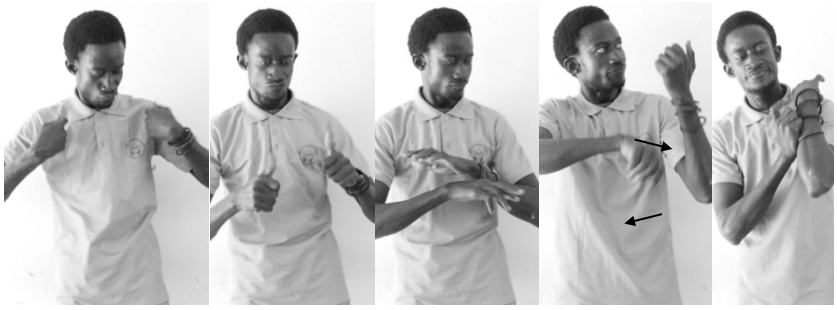


gloss	KID	CLIMB
gaze	audience	character
comp.	orientation	complication

(Narrative LGG_03)

The only male signer that does not change between roles, maintains a double role as both narrator and character, starting at the orientation and continuing from there. In the orientation, he explained that he changed what he was wearing, looking at the clothes on himself and the bag on his shoulder while embodying the character in 'I changed the T-shirt to a sleeveless one and shorts. I dressed and I was ready' (Narrative LGG_05). When he signs the motion verb, in 'I was adjusting the bag', he sets off the exciting moment moving to the next component while keeping the character's role, in (27).

(27) Character role in the transition from orientation to complication



gloss	DRESS	READY	FINISH	BAG-ADJUST	BAG-HOLD
gaze	character				
comp.	orientation			complication	

'I dressed and I was ready. I was adjusting a bag (…)'

(Narrative LGG_05)

The five women who started the orientation as narrators change their eye gaze direction to the event space when entering the complication, in a double role as both character and narrator, in (28a,b).

(28) Shift of eye gaze between the orientation and the complication components in LGG narratives

a. 

RHgloss	KNOW-NOT	SNAKE	ME	SEE
LHgloss		-	-	-
gaze	audience	character		
Comp.	orientation	complication		

'I don't know. I saw the snake'

b. 

RHgloss	FRIENDS	THREE	ME	WALK
LHgloss	-	-	WALK	
eye gaze	audience	character		
comp	orientation	complication		

'There were three hearing friends. I was walking'.

(Narrative LGG_11)

During the complication, most LGG signers change the direction of their eye gaze. In addition to the character's role, they may return to the audience to add information or comment on some aspect of the story, such as describing the snake. Before reaching the climax, they describe what they were doing, whether they were picking cashew, outside the city of Bissau, or simply at home or walking around.

There are only two short complication components in the narratives by deaf men. In contrast, five of the eight women produce a very short complication. Three of them move straight to an equally short climax, while the other two are part of overall short narratives.

In two of such narratives, the criterium to end the complication at the physical encounter with the animal had to be reanalysed. In these cases, they see the snake right after the orientation but do not react to it. Thus, I considered the encounter as the trigger to the climax only when the character becomes aware of the danger. One of them (Narrative LGG_14) has very short orientation, complication and climax components within only four lines, in (29a). The other (Narrative LGG_15) has a 10-line complication about the fact that she knew the snake was there but she did not find it threatening. She understands the danger only when her father sees it and reacts to the threat, in (29b).

(29) Neutral reaction to the snake in the complication in LGG

a.

orientation	Last year, in my house.
complication	I saw a snake
climax	and I was afraid. I saw the snake

(Narrative LGG_14)

b.

orientation	In Bafatá, a hearing had a deaf baby (me), I was born and then I grew up and then I don't know.
complication	I saw the snake

	and then I didn't mind it. I was taking cashew. The snake crawled. I was taking cashew. I didn't know it. The snake crawled here (near the feet). I didn't see it. I was here and I was taking cashew.
climax	My father saw it. My father ran

(Narrative LGG_15)

To conclude, all LGG signers introduce the complication component with a stirring action, especially set off by WALK and most embody the character's role. This becomes clearer when switching their eye gaze from the audience to the character's role in the transition between orientation and complication. Differences appear in narratives by female signers either by showing extremely short complications or by encountering the snake right away and not reacting to it. Next, I compare the complication in the three sign languages.

Comparison of the complication in the three sign languages

The three sign languages present the complication in all narratives. This component is always introduced by a stirring action and by the character's embodiment. Here, the narrator travels back in time and enters the event where the encounter with the animal happens. They build up the setting of the narrated event in their own signing space.

The exciting moment of the narrative introducing the complication component is usually expressed by a motion verb, mainly WALK (4 of 17 in AdaSL, 8 of 11 in LaSiBo, 7 in 16 in LGG). Most transitions between the orientation and the complication involve switching the direction of the eye gaze from the audience as narrator to the character's role (all 14 in AdaSL, 6 of 7 in LaSiBo, all 13 in LGG). Overall, the complication in LaSiBo narratives (9 of 11) is very short. This is also the case in five narratives by female LGG signers.

The complication is followed by the climax component which will be first described in AdaSL, then in LaSiBo and LGG. In the end, there is a comparison between the three sign languages.

3.5.3 Climax

The previous component, the complication, pushes the narrative towards the goal of the story, its highest peak, designated as the climax. Labov & Waletzky conducted a question that prompted respondents to tell a personal experience that would lead them to a point in the telling of the event. The question was whether they had ever experienced a life-or-death situation. This naturally has the telling of the event including moments of emotional suspense until it reaches the climax as described by Freytag. Given that a similar question was asked to AdaSL, LaSiBo and LGG signers about encounters with potentially dangerous animals, I now look into the climax component in each of the three sign languages separately.

Climax in AdaSL narratives

After presenting the complication, AdaSL narratives are analysed concerning the subsequent component in the internal structure, designated as the climax.

All of the 17 narratives in AdaSL have a climax, where the goal of the story rises to a peak in the form of a dangerous or scary event. Because the narratives are about attacks by snakes (13 of 17), wasps/bees (2 of 17) or lions (2 of 17), which are potentially dangerous animals, the high point of the narrative is the encounter with the dangerous animal. Although five of the 17 narratives present it very briefly, in most of them (11 of 17), the moment of the encounter is previously prepared. In this way, there is an emotional preparation that leads the audience to the climax. It is also the case, in AdaSL narratives, that character embodiment involves more than one character, in enacted dialogues (see next chapters for more details), as in (30a,b,c,d).

(30) Climax component in AdaSL

a. I didn't hear anything, but my father heard it and came to me. I had my arm in the hole and my father said, 'Get out of there!'.

(Narrative ADA_07)

b. I walked quietly and told my mother the lion was there and we had to leave. 'When he sees you, he eats you and pulls out the meat and that's it.'

'Don't come closer, go away.'. She was coming and looking. 'No, go back!' I ran away. The lion ate the man's head.

(Narrative ADA_12)

c. I pointed at it. 'What is it? Is it a rat? Ah!'. The snake's head raised, I saw it and I was scared.

(Narrative ADA_06)

d. That's when I saw a snake and I was surprised. It was a big snake with spots on the body. The snake's head stood up and poked its tongue out moving sideways. The snake was big, had spots on its body and was curled up. The head rose, I was surprised and I screamed. The snake was strong. I was blessing myself and praying to God. I said, 'Thank you, Jesus Christ, thank you, God and Jesus Christ. 'I pray to God and Jesus Christ'. 'Please bless me with life'. 'Thank you, God, and I will pray, Jesus Christ'. I prepared myself by grabbing the cutlass (…)

(Narrative ADA_15)

Narrative ADA_15 has the longest climax, with 16 lines. Here, the signer was catching snails when he comes across a python. He describes it, while role shifting between himself and the python, and acts as praying before killing it with a cutlass, in (30d). More details about these aspects are given in Chapter 5. In addition to the 12 narratives with a climax component with at least three lines, four other narratives, in (31a,b,c), summarise such component in only one line and a last with two lines. Of these short climaxes, one is included in an overall short narrative and three follow an equally short complication.

(31) One-line climax components in AdaSL

b. (...) I saw a snake. (Narrative ADA_01)

c. (…) A wasp stung me on the face. (Narrative ADA_05)

d. (…) a snake bit his leg. (Narrative ADA_14)

AdaSL narratives show moments of emotion throughout the middle part of the story: the complication, the climax and the resolution. However, the highest emotional point occurs in the climax after an emotional preparation during the complication. In (32a), the signer puts his arm in the hole creating suspense. He repeats this action several times, increasing the suspense until the father arrives and tells him to get out of there. In (32b), the signer notices something among the leaves but does not know what it is, which triggers an emotional response to that suspicion, that later turns out to be a python.

(32) Emotional preparation for the climax in the complication in AdaSL Narratives

a.  b. 

In the exact moment when they encounter the dangerous animal, in the climax, the emotion is enhanced. The facial expression of the embodied character shows fear, fright, or surprise. Some include the description of the size and shape of the animal (see Study 4 in Chapter 6 for more details). For instance, in (33a) the signer looks at the snake and signs SNAKE while indicating with her facial expression that it was a big snake. In (33b), the signer signs SEE and presents a facial expression of distress. In (c) the signer embodies the character's reaction of surprise at what he sees.

(33) Emotional moment in the snake encounter in the climax in AdaSL Narratives

a.  b.  c. 

Some signers continue to show emotion after the climax, i.e., in the resolution. In (34), the two signers only had the opportunity to see the animal after they had killed it, showing facial expressions of a big surprise. The signer, in (34a), brings his fist to his mouth (this is a common gesture in Ghana to express a big surprise) when seeing the snake. In (34b), while signing how big the lion was, the signer expresses through her face a mix of surprise and fear.

(34) Emotional reaction after the climax in the resolution in AdaSL narratives

a.  b. 

To conclude, all 17 narratives have a climax component, most about encountering a snake. Many signers enhance the dramatic effect of the climax, which had been built up since the complication. Nonetheless, a few of the narratives have a very short middle part showing the goal of the story, i.e., the encounter with a dangerous animal.

Having presented the analyses on the climax component in AdaSL narratives, I now turn to that same part in LaSiBo narratives.

Climax in LaSiBo narratives

After the observations of the climax component, i.e., the peak of the story, in most of the AdaSL narratives, it becomes clear that LaSiBo narratives do not show that part, at least not in the same way. The examples below illustrate encounters with animals in LaSiBo, eight with snakes and three with animals with horns. In nine of the 11 LaSiBo narratives, there is a very short climax with only one or two lines and eight follow an equally short complication.

For a better understanding of how the encounter with the animal is only briefly mentioned by LaSiBo signers, I present some examples below. In nine narratives, the emotional preparation for the climax in the complication is introduced by an exciting moment expressed by a motion verb such as WALK. This is immediately followed by the peak of the story, which corresponds to the animal attack, as in the examples underlined in (35a,b,c).

(35) Brief presentation of the encounter with the snake in LaSiBo

a. 

WALK POINT STEP-BACK

'I was walking, it [snake] passed by me, and stepped back.'

complication climax resolution

(Narrative LAS_01a)

b. 

WALK POINT BIT SCARY

'I was walking and the snake crawled up my leg and bit me. I got scared, I held my leg.'

complication climax resolutio

(LaSiBo Narrative LAS_02a)

c. 

WALK POINT BIT. LOOK NOT

'I was walking and it [snake] bit my leg. I looked for it but didn't find it.'

complication climax resolution

(Narrative LAS_04)

I did not observe any significant emotional moments, during the preparation for the climax nor during the climax itself. The signer, in (32) above, was the only one expressing an emotion very briefly, where she looks at the ground and jumps

backwards. This is the only clear emotion I found in the 11 narratives. In (33), the signer had just been bitten and shakes his body quickly but barely shows any emotion. Similarly, in (34), the signer was also bitten but without expressing pain or fear.

In conclusion, although all 11 LaSiBo narratives present the climax component, most are very short and come after an equally short complication. This shows that emotional enhancement is not valued in these personal experience accounts. As AdaSL, most are about snake encounters, but unlike the signers in Adamorobe, the encounter is only briefly mentioned. I now turn to the climax in LGG narratives.

Climax in LGG narratives

As in AdaSL and LaSiBo, all LGG narratives also have a climax. However, as in LaSiBo where the climax is mostly very short, so are most of the ones produced by female LGG signers. Also in LGG, all narratives are about encounters with snakes, except for one about a dog attack.

In general, the climax in narratives told by deaf men is quite long (5 of 8 have between 9 and 12 lines) and the few remaining have a reasonable length (between 3 and 4 lines). In contrast, although two women present long climaxes (with 12 and 17 lines, in [36e]), five are very short (1 and 2 lines) and the other has three lines, in (36a). Importantly, three of those short climaxes follow a short complication, in (36c,d), and one other is part of an overall short narrative, in (36b).

(36) Climax components in LGG

a. (…) What is it? It was a dog barking. (Narrative LGG_09)

b. (...) I grabbed the snake. (Narrative LGG_10)

c. (…) and the snake lifted its head and I got scared. (Narrative LGG_12)

d. (…) we were afraid of the snake. Together we ran. (Narrative LGG_13)

e. (…) they saw it, they opened their eyes, ran and cut it down. The snake was big. I didn't know anything, I was holding things on my head and walking. The hearing people called me and told me: "There is a big snake". I didn't know, I opened my eyes and said,

> "Really?". I left the things from my head things on the floor, I went running and saw it.. It's big! (Narrative LGG_11)

The animal encounters by LGG signers are all with snakes, except for one with a dog. The one involving the dog is a very short narrative, where she sees the dog, gets scared and runs away. In most of the narratives about encounters with snakes, signers saw them on the ground, got scared, ran away and moved on to the resolution component, where they ask for help to kill it. Five signers tell their experience of seeing the snake on a tree. Four of them are men who were picking cashew nuts from the tree when they came across the snake. These moments are dramatized through the use of dialogues or monologues in seven narratives, where five are told by men and two by women.

In LGG narratives, signers produce emotional moments in the climax. For instance, in (37a), the signer had explained in the complication that the snake was on the tree, hidden in the branches and he did not realise it while he was up there picking cashews. This creates a moment of suspense. When he finally sees that the snake is over him, he quickly gets down from the tree and moves to the resolution component (Narrative LGG_06). In (37b), the signer, who was embodying a character walking with a bag on his shoulder, also creates suspense, by suddenly looking at the ground and remaining motionless, his gaze fixed on something. Then he asks himself if it was a snake and suddenly runs for help. The emotional account continues until help arrives and people hit the snake.

(37) Emotional moment in the snake encounter in the climax by male signers in LGG narratives

a.  b. 

In the female LGG signers, one enhances the expression of emotion in her narrative more than the other. She describes that, when she was walking, in the resolution, someone told her that there was a big snake. At this moment her eyes open wide. When she went to see the snake, in the climax, in (38a), she opens her eyes again while signing BIG (more details on the animal's size and shape in Chapter 6). The other female signers simplify the emotional moment by signing SCARED, in (38b,c,d) with fearful facial expressions without extending it.

(38) Emotional moment in the snake encounter in the climax by female signers in LGG narratives

a.  b. 

All LGG narratives have a climax. Those produced by men are mostly quite long and a little more than half had been previously prepared in the complication. Differently, most of the women's narratives are very short, like LaSiBo's, although a couple of women do produce long climaxes. As expected by the way it is structured across signers, the climax by deaf men conveys enhanced dramatic effects. I have reached the end of the analysis in LGG and now move on to the comparison of the three sign languages in the climax component.

Comparison of the climax in the three sign languages

The climax is the peak of the story. In the case of AdaSL, LaSiBo and LGG narratives, the goal of the story is the moment when the signer meets the dangerous animal. All narratives in AdaSL and LGG by deaf men have the climax component enhanced. Although most signers are completely immersed in the past event, most narratives in LaSiBo and by female LGG signers have a very short climax, where the animal attack is referred to only in one or two lines, occurring right after an equally short preparation in the complication.

Labov & Waletzky say that not all narratives follow the same order of components in the narrative structure. However, they all have to present the order of events according to a timeline. Moreover, they state that the narrative structure is complete only if it has at least the complication, the evaluation (which would include the emotional enhancement in the climax, and other narrative devices described further in Chapters 4, 5 and 6) and the resolution, i.e., a whole development around the main event, preparing, experiencing and solving it. In addition to this, Freytag shows the centrality of the climax as the peak of the narrative.

Most narratives in LaSiBo enter the goal of the story right after the motion verb WALK. The character usually starts walking and then finds the snake. Almost along the same line are the preparation and the climax itself. However, neither is the audience prepared to arrive at the peak nor can this climax be compelling. Moreover, half of the women in the LGG narratives also had a very short climax mostly coming after an equally short complication. Although it is all very sudden, showing the least emotional enactments, LaSiBo narratives and those by female LGG signers follow an order of events within a timeline.

The moments of emotion last longer in AdaSL narratives and those by male LGG signers, beginning at the complication component, progressing to the climax and continuing in the resolution. These narratives show an emotionally enhanced climax, with character embodiments, including dialogues between characters, which will be developed in the next chapters.

The next subsection focuses on the component that follows the climax, i.e., the resolution. Again, first I will analyse the narratives in AdaSL, then in LaSiBo and finally in LGG.

3.5.4 Resolution

The resolution component is the fourth component in narratives. It is a component where the storytellers solve the problem after they have reached the goal of the story. They come down from that peak by solving the event. I will observe the resolution component in three sign languages and finally compare the sign languages with each other.

Resolution in AdaSL narratives

In the previous section, it was shown that most AdaSL narratives have the climax component, while most LaSiBo narratives and half of those produced by female LGG signers present it very briefly. I now look at the subsequent narrative component, the

resolution of the event, in AdaSL, illustrating with several examples the moments that come after the goal of the story.

All narratives in AdaSL have a resolution, after the climax. In these animal attack narratives, the resolution comes right after the dangerous animal appears and it's when the signers react to it explaining how they deal with it once they see it. The resolution continues until they are out of danger, in the case of the narratives in AdaSL, LaSiBo and LGG. At the resolution, in AdaSL narratives, the story continues as in the preparation for the complication, with character embodiment to convey the past event.

In the resolution, the animal is killed (7 of 17), whether by being cut or shot, or it bites (6 of 17) – or stings (on one occasion) – the character who then focuses on the wound, runs away or shoots it. It can also happen that the character simply runs away. Overall, the signer keeps embodying the character, while explaining what happened and sometimes alternating briefly to the narrator's role.

To give a clear overview of the resolution of the event in AdaSL narratives, I detail, next, how signers react to the encounter with the dangerous animal. In Narratives ADA_02 and ADA_07, the protagonists are frightened when they see the snake and so they run away. One falls and calls for help, her father appears and takes her to safety. The other runs away until she reaches a safe place. In Narrative ADA_12, a snake bites his leg, so he runs away and calls for help. Someone manages to get the snake's tooth out and clean the wound. Someone else, seeing the snake, prays and kills it with a cutlass. He burns the snake and covers it.

In Narratives ADA_05 and ADA_15a, both signers were picking snails. Then, one of them is attacked by wasps. She tries to ward off the wasps on her body, but her face gets swollen. She tries to clean herself and take some medicine. The swelling reduces and she burns the hive. The other narrative is about two characters who find a hive, fetch a stone, throw it at the hive and escape without being attacked.

Narratives ADA11b and ADA_15b are about lions. In both of them, the lion is shot and dies. After it dies, one of the signers explains that the lion is cut into pieces, and the meat is shared between several people. The other signer describes the animal in detail, we said that 'the lion is very big… ahh... its body was strong, its claws were dirty, it was big, it could attack us. Ahh… Its teeth were the size of the index finger. Too many teeth. Its head was big, the eyes were big, the mouth was wide and the jaws were huge. It was bad'.

There are six narratives with a very long resolution of the event (between 15 and 26 lines) when compared to the previous components. Here, signers go into detail on how to deal with the dangerous animal and be safer, as in (39).

(39) Long resolution component in AdaSL

My father cut off the snake's head with the cutlass. The snake's head opened. The mouth was broken. I was scared and afraid. My father pulled the snake out of the hole. It was a big and very long snake.

He pulled it out and put it on the branch of a tree. I calmed down and my father said with gestures, 'Don't put your arm in the hole! Do you hear? No, you don't hear so you can't put your arm in the hole. You have to see, don't touch. If the snake bites you, you die.'. I was troubled, I should not have put my arm in the hole. I began to tremble with fear. My father kept asking me, 'Do you understand?'.

My father lit a fire, grabbed the snake from the branch and put it in the fire. He buried it and covered it. The fire is over.

Narrative ADA_07 (lines 27-51)

Except for the two short one-line action fallings within overall short narratives (one of these does not even have a coda component), there is only one other short resolution with two lines. Of the remaining 14 resolution components, one follows a one-line climax, but the complication had also been long, and another comes after a one-line complication and climax components. Importantly, five detailed resolutions are length-wise balanced with the preceding components concerning the middle part of the story, although one of them does not proceed to the closing part in the coda.

To conclude, all narratives in AdaSL have a resolution component, mainly involving killing the animal or being wounded by it, while embodying the character. To illustrate how signers solved the situation, several examples were presented here, some longer than others. Most resolution components in AdaSL are quite detailed and many follow an overall emotionally enhanced main event. Next, I focus on LaSiBo narratives in search of their resolution components.

Resolution in LaSiBo narratives

Knowing that all 17 narratives in AdaSL have the resolution component, after the climax, I now look at several examples in LaSiBo narratives that contain this same part, even if they showed a very short climax, moving directly from preparing to solving it.

In all 11 LaSiBo narratives, the resolution of the event continues from the climax, where the problem is solved. The resolution comes right after the dangerous animal appears and it refers to the way they face it and how they deal with it once they see it,

until they reach a safe place, as was the case in AdaSL narratives. In nine of the 11 narratives, signers keep embodying the character, two of them fully, while the other two are told in the narrator's role, as occurred in the climax.

As mentioned in the previous component, LaSiBo's accounts are mainly about snakes, except for three narratives, involving animals with horns, which appear to be a gazelle and a cow. In two of them, when the characters see the animal, they run away but the animal manages to attack them with their horns (Narratives LAS_01b and LAS_06a). In one of them, the character falls and hits his head on the ground. He then tries to throw stones and runs away (LaSiBo Narrative LAS_01b). On the other, she also falls when the animal attacks. After that, she complains to the owner of the animal, who gives her money to go to the hospital (Narrative LAS_06a).

In the eight narratives about snakes, three signers, i.e., the characters they are embodying, claim to have killed the snake. One of them has the shortest resolution of all narratives, of only one sentence: 'I cut it' (Narrative LAS_05a). Narrative LAS_05a is the same one in which the pantomime occurs at the beginning of the event in the complication but does not have background information in the orientation component. In one other narrative, some extra information is added after the main character kills the snake: 'After killing five of them, it was finished; I left the snake and I killed it. Then, I relaxed, stayed [or waited]' (Narrative LAS_05b). In the third narrative of the sort, the signer throws a stone at the snake without saying if it died. He simply says that, after hitting it, he prepares the medicine to put on the wound and then he goes to sleep (Narrative LAS_02b). In the other narratives (3 of 11), the characters run away when they see it. They feel the bite, but they do not see it. They then ask for help and take it away. In the remaining narratives (4 of 11), the character is bitten and focuses on the wound.

Unlike the AdaSL narratives, in which snakes are usually burned and buried, LaSiBo signers do not explain what they do with the dead snakes, they do not try to communicate to the interlocutor a lesson from the encounter. This seems important because their experience stays personal and is not reframed within a broader context, as is done by AdaSL signers. The account that was excluded from the structural analysis (the twelfth video collected for this study, Narrative LAS_05a) is more descriptive in the sense that the signer says what is usually done when facing a snake, and how it can be killed and then eaten or sold. However, he does not look at his audience, as if he was speaking alone, thus not really explaining it to us.

Contrasting with overall short complication and climax components, the resolution is longer than the previous two components (between 4 and 16 lines), in the majority of the narratives (10 of 11). However, two of them end precisely with the resolution without proceeding to the coda. Moreover, the only narrative whose middle components are length-wise balanced is told in the narrator's role.

In sum, all LaSiBo narratives solve the situation in the resolution component, whether by telling about being wounded and dealing with it, running away or killing the animal. The majority present the resolution by enacting the character and spend much more time in this component than in the two previous ones. The next subsection focuses on the resolution component in LGG narratives.

Resolution in LGG narratives

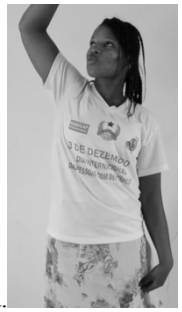
During the resolution, most signers describe what happens after they have found the animal during the climax. So far, the resolution has been described in AdaSL and LaSiBo narratives. Now I analyse this component in LGG narratives.

All narratives in LGG have the resolution as a component, mostly by embodying the character. Only two of the female signers tell it as narrators. When encountering the snake, the men typically run away (3 of 8), beat the snake (2 of 8) or both, i.e., run for help and then beat the snake (3 of 8). Importantly, they only beat the snake with stones or a stick until it dies when accompanied by other people, usually hearing. This is the case with the majority of the women who beat the snake with other people (4 of 8) and of one who also ran for help and came back to beat the snake (1 of 8).

The two remaining narratives told by deaf women did not solve the dangerous encounter with the snake believably. One of them saw the snake and got scared, then the snake bit her and she says she dies. After I asked her if she had really died, she retold it by saying that it hurt a lot (Narrative LGG_12). In the other one, which is overall very short, the signer grabs the snake in the climax and then says, in the resolution, that it became stretched out. She described it with her own body as she was the snake herself, in (39a). Finally, the female signer encountering a dog simply ran away, in a very short resolution.

As in Narrative LGG_10, where the female signer embodies the snake, in (40a), so does the male signer in Narrative LGG_03, in (40b). To enhance his experience, he enacts the animal, as if he was the snake being attacked, feeling the beating and dying. Again, these aspects will be further discussed in Chapter 5.

(40) Embodying the snake in the resolution in LGG

a. 

(Narrative LGG_10)

b. 

'The snake felt the beatings and slowly died. The snake's tail was shaking.'

(Narrative LGG_03)

In two of the narratives, signers add that they cooked and ate the snake. In one of them told by a female signer, she enacts a dialogue between her and a hearing friend about deciding on whether they would eat it or not (Narrative LGG_16). This resolution comes after a long climax. The narrative with the longest resolution, with 17 lines (Narrative LGG_11), also followed by a long climax is told by a female signer. In this narrative (Narrative LGG_11), the signer explains the whole process she went through after killing the snake. She describes that they hung it up, peeled off its skin from top to bottom, laid it down, cut it into slices and cooked it. In the end, other people were called up to eat it. During this description, she embodies the character to tell her own experience, in (41).

(41) Details in the resolution in LGG

They were beating it and it died. Six hearing people picked up the snake. They took it to the house. The hearing and I hanged the head of the snake. We cut the skin from

top to bottom. We remove the skin from top to bottom. We removed the head and the head was broken. We cut it into slices and put it on the fire. I lit the fire and cooked it. Time passed and it was ready. The hearing people came and sat down. I served the food to them.

Narrative LGG_11 (lines 31-47)

Most resolutions in LGG narratives have at least three lines (7 of 8 by deaf men and 6 of 8 by deaf women). Five male and five female signers produce quite long resolutions (between 6 and 10 lines in the men and between 8 and 17 lines in the women). Of these, half follow equally long climaxes (3 by men and 2 by women) but two end their reports in the resolution without proceeding to the coda component.

In conclusion, all LGG signers react to the encounter occurring almost always with snakes. In these resolutions, characters mostly enacted show how they dealt with it, which was mainly by running away or by beating it to death. Differently from AdaSL, deaf people in Guinea-Bissau kill the snake accompanied by hearing people. The majority of these components are long and almost half follow an also long climax, especially the ones produced by men. This demonstrates that dramatic effects initiated in previous components continue until the attack is solved in almost all narratives by male signers and only a couple by female signers. Next, I compare this analysis with the corresponding findings in AdaSL and LaSiBo.

Comparison of the resolution in the three sign languages

All narratives in the three sign languages have a resolution component, coming right after the encounter with the dangerous animal, where the character reacts to it. In these West African settings, the majority of the personal experiences refer to snakes. When encountering them, most characters kill them or run away from them.

Most narratives include character embodiment in the resolution component except for a few in LaSiBo and by female LGG signers that tell the account in the narrator's role. Overall, this component is quite detailed in the three sign languages. However, the main difference is that many AdaSL and male LGG signers and a couple of female LGG signers had built emotional growth throughout the previous components.

Finally, in the next section, the present analysis of AdaSL, LaSiBo and LGG narratives looks at the last component, the coda, in the three sign languages separately.

3.5.5 Coda

The coda is the last component of the personal experience narrative structure when the narrator returns to the real present and the audience. Before this moment, the signer had already told about the personal experience, usually in the first person, embodying the character(s) according to a timeline in the past, from the setting up of the story in the orientation to the resolution of the event.

The coda component can end the narratives such as That was it, No more problems, among others. To see how AdaSL, LaSiBo and LGG signers enclose the personal narrations, I move forward to the analysis of the coda component in each of the sign languages, followed by a comparison between the three of them.

Coda in AdaSL narratives

The coda is the moment when the narrator turns to the audience. I now look at how AdaSL signers finish their personal stories.

In AdaSL, 15 out of 17 narratives have a coda, where the signers shift back to the audience as narrators. Furthermore, they seem to end similarly to Labov & Waletzky's narratives ending with ‘That was it’ and ‘No more problem’ (§2.5.1). In AdaSL codas signers finish their narratives with statements such as ‘that’s all’ or ‘it was over’ which usually, depending on the context, correspond to my own free translation of the sign FINISH. Half of them are very short (eight have one line and two have two lines). The signers of those short codas end their stories by looking directly at the audience and by, as in (42a,b).

(42) Direction of eye gaze during the coda in AdaSL

a. 

RHgloss	BACK	HERE	FINISH
LHgloss	-		
gaze	character	audience	
Comp.	resolution	coda	

'I got back here. That's all.'
(Narrative ADA_04)

b. 

RHgloss	FIRE	DECREASE	FINISH
LHgloss			
gaze	character	audience	
Comp.	resolution	coda	

'The fire decreased and it was over.'
(Narrative ADA_05)

Six narratives have a coda with more than three lines. For example, in one of them, the signer looks at the audience at the last moment of the resolution and moves to the coda, by signing 'I was tired' and then, in the coda, 'I laid down, I was tired. They saw that I was tired and brought me to the hospital but it was expensive' (Narrative ADA_10). Three of these codas are especially long (between 12 and 15 lines).

The one with the longest coda has an equally long resolution. This story about a lion attack (Narrative ADA_11b) seems to end with its disappearance, but then a witchcraft story goes on, in which the lion turns into a person to steal a baby and as soon as it has the baby, it runs away, it turns back into a lion and eats the baby. The signer ends by looking at the audience and saying this was a true story, 'It was over. Everyone was afraid, they went by car to look for the lion, but he never showed up again… yes it's true…' So, probably the coda of this story would be at the end of the witchcraft part, rather than the disappearance of the lion after the encounter. I later asked to confirm this story, and I was told that this is a story believed as being real by the people in the village.

Another narrative ending with a long coda had a long climax. This story from the AdaSL corpus, filmed in 2000, ends with the sign 'covered it'. At that moment, the signer looks at the audience and pauses, indicating that the story has finished. He then goes back to the audience and begins the description of the snake with free clauses, and embodiment, and ends with a question, 'The snake was too big, strong and long. I cut it. I cut the head's snake… yeah… it was in the forest and it had spots on the body. It can bite and eat you. I was looking for the 'animal', It was hunting for prey, to eat and swallow me completely… I screamed… its belly filled up a lot… ahh… rats, pigs, dogs, chickens, turkeys… do you know what a turkey is?' (Narrative ADA_14).

In the last narrative with a long coda component, the signer also repeats the story afterwards but adds new information, such as the fact that her friend and herself were in different spaces, one on each side, and that they caught 15 snails (Narrative ADA_15a).

To conclude, most AdaSL narratives end with the coda component told in the narrator's role. Half of the signers conclude by signing FINISH. Although a little more than half are very short, a few of them have prolonged it by going back to the story after finishing it, to repeat some parts or add information without being asked about it. Next, I turn to LaSiBo narratives to see if they have the coda component.

Coda in LaSiBo narratives

In the previous section, it was shown that 15 of 17 narratives in AdaSL have the coda component. To illustrate how the coda is in LaSiBo narratives, I show several examples.

Nine out of 11 LaSiBo narratives have a coda and seven of them are told in the narrator's role, making the coda identifiable when signers look at the audience, after the resolution component, as in (43).

(43) Direction of eye gaze during the coda in LaSiBo

a. 

RHgloss	SEE	NOTHING	DAYS	SWELL
LHgloss				
eye gaze	character		audience	
comp	resolution		coda	

'I was looking for it and I didn't find it. One day later. The leg had swollen.'
(Narrative LAS_04)

Of the nine codas, six say FINISH, usually as the last sign, except for (39).



RHgloss	FINISH	WALK	STRONG
LHgloss			
gaze	character		audience
Comp.	resolution		coda

'I was finished and walked. I was stronger.'
(Narrative LAS_02a)

Three of the coda components are very short, with no more than two lines long. For instance, signers simply say 'The leg was fine a few days later. Finished' (Narrative LAS_01a, lines 13-14) and 'I walked, I ran away' (Narrative LAS_02a, lines 11-12). In four other narratives, the coda is quite long (between 6 and 15 lines), for instance, to make a complaint, in (44).

(44) Long coda with additional information in LaSiBo

I went alone to the farm. Her father spent his time wandering around [pointing to her daughter]. I was looking for him and I didn't find him. I was alone, someone could kill me, then he didn't want to walk with me anymore and that was it.

(Narrative LAS_01c, lines 28-34)

Finally, two others are extremely long (with 38 and 46 lines) – when compared to their previous components and even to the two other sign languages in this study. Here, the signers add new information, as in (45).

(45) Extremely long coda with additional information in LaSiBo

It was heavy. I could take it and put it on my head with some effort, but my neck could get weak. No, I didn't want to. I cut it into slices and everyone took a piece. I was relaxed. I sliced it, I shared it around with nine people. Then I had no more. It isn't good to hide it, just give it. It is good to share. No need to pay for it right away. It was an ox with a long horn. It tried to hit me and I avoided it, it went away. It wanted to fight with me but I avoided it and it ran away. Later, a long time after that, I went farming in the field. There, I didn't see it, it was dark and I didn't see it. It was dark at night, the animal passed by and I didn't see it. I looked at it and I called someone [?]. I was surprised. We handled the animal and I pulled it up. I tied it. It went for sale and that was it.

(Narrative LAS_05b, lines 8-45)

At the end of the first six narratives collected in 2019, signers were asked to describe the snake, because, unlike the AdaSL signers, most had not done it during the narrative. They then said what the snake looked like and some went back to the story, adding, eventually, new information, as in (46). In this example, the complete signed production that was collected then is shown to make clear how, after the narrative, the signer repeats some information that is in the background, i.e., in the orientation, and the development, i.e., in the complication and the resolution. For the structure analysis, I only analysed the first part of the elicitation. Nonetheless, I found it useful to illustrate how a coda, resulting from interaction prompted a repetition of what they had said before in these particular signers.

(46) Repeated information in grey after the coda in LaSiBo

orientation	1. Well… I went… I went to the farm
	2. I put things on my head
	3. I went to the farm with things on my head
complication	4. And I was walking
climax	5. It (snake) passed by me
resolution	6. and stepped back
	7. I ran away…
	8. The snake bit me
	9. and I was hurt
	10. Someone took me on their back

	11. We walked
coda	12. The leg was fine a few days later. 13. Finished.
Prompted response to the clarification request	14. It's this size… more or less… it's the pinky size… 15. (She looked around for some to show the exact size but couldn't find it). 16. It's the arm size… with spots… more or less...
repeated narrative	17. I saw the snake, 18. And I stepped back 19. The snake passed by me
additional information	20. I called people, showed it to them
repeated narrative	21. and ran away with 'things' on my head 22. I walked 23. I got scared and stepped back 24. I looked for the snake 25. I ran away breathing fast. 26. Finished.

(Narrative LAS_01a)

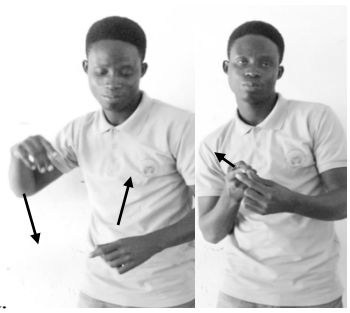
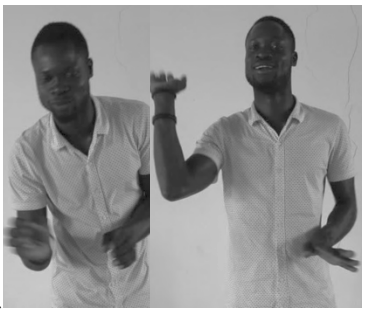
In the last six narratives, filmed more recently in 2021, signers were not asked about the description of the animal, but they did retell the same story anyway, even without describing the snake. In this case, I considered it as part of the coda component, as in (45a,b), above.

In sum, most LaSiBo narratives have a coda component which is usually introduced by the signer's eye gaze directed at the addressee. In more than half of the narratives, the signers end it with FINISH and extend it to repeat or add information, regardless of being asked for clarifications about how the animal looked like. Next, I turn to the coda in LGG narratives.

Coda in LGG narratives

As in AdaSL and LaSiBo, not all signers produce a coda in LGG, one man and one woman do not present it, finishing their stories in the resolution. Also, like AdaSL signers, all LGG signers that embodied a character in the previous component address now the audience as narrators, showing a clear change in their eye gaze between the last two components, as in (47). The signer that did not change her eye gaze during the transition between the resolution and the coda kept it on the audience until the end.

(47) Shift of the eye gaze between the resolution and the coda in LGG

a.  b. 

RHgloss / LHgloss	HIT	'LONG' (S&S*)	LOOK-NOT	AWAY
gaze	audience	character	audience	character
comp.	resolution	coda	resolution	coda

*Size and Shape depictions (Chapter 7 for more details).

c. 

RHgloss	KEEP	DIE
LHgloss		
gaze	audience	character
comp.	resolution	coda

Signers typically finish their narratives by putting down their hands, which is probably because they are very used to being filmed in a school context. Nonetheless, some sign FINISH at the end (4 of 7 men and 2 of 7 women). Most LGG narratives have a very short coda (eleven with one line and one with two lines).

In the end, because only three signers had described the animals during the narrative, I asked the others that had not previously mentioned it (13 of 16) what the animal looked like. They then described it without any further comments. (see Chapter 7 for details on the descriptions of the snakes as a type of evaluation). In one of these (with three lines), apart from adding the size of the snake, the male signer says that he hit it and it died (in Narrative LGG_06).

The longest coda, with four lines, was produced by the female signer that had already told an overall long narrative, with the longest climax and resolution components of all LGG signers. In this coda, she tells that she cooked the snake and gave it to people to eat. She comments that she does not eat snakes because she is afraid of doing so and finishes her account by saying THANK-YOU (Narrative LGG_11), in (48).

(48) Comments in the coda in LGG



LHgloss	HEARING	EAT	ME	EAT	NOTHING	ME
gaze	character		audience			
comp.	resolution		coda			



LHgloss	EAT	HEARING	ME	SEE	AFRAID	THANK-YOU
eye gaze	audience					
comp	coda					

'I served the food to them I didn't eat it. I have not eaten it because I am afraid. Thank you!'
(Narrative LGG_11)

The majority of LGG signers produce a coda component as narrators, most of them shifting their eye gaze between the resolution and the coda. Less than half sign finish at the end. This component contrasts with the other two sign languages for being overall very short. I now move on to the comparison between the codas in the three languages.

Comparison of coda in the three languages

The coda component is the last component and ends with the narrator wrapping the narrative up and returning to the audience within the present moment. This final component may include comments by the narrator directed at the audience.

The majority of the narratives in the three sign languages have a coda component, where the conclusion is expressed clearly to the audience, about half with the sign FINISH. At this point, all AdaSL and LGG signers direct their eye gaze to the audience, while a couple of LaSiBo signers do not look at the audience for the entire time.

Overall, codas are very short in LGG, showing ease in front of the camera and awareness in making a clear end. In contrast, a few AdaSL and LaSiBo codas are quite long, but for different reasons. Signers in Adamorobe seem enthusiastic about adding comments or enhancing a particular aspect of the story, while in Bouakako emphasis and clarifications took the form of mainly just repeating information.

After going through the descriptive analysis of the five structural components in the three sign languages, I now present a synthesis of the results as a whole.

3.6 Synthesis of the results

In the previous section, the structure analysis was made for each component in each sign language. At the end of each component analysis, a comparison of the three sign languages was made per component. This section aims at giving a general overview of the 44 personal experience narratives analysed in the three West African sign languages.

As explained in §3.2.1 (see Figure 40), I propose to combine Freytag's pyramid, including the climax with L&W's components. The left side of the pyramid starts rising with the orientation and goes through the complication until the climax which can last until the tragic moment, as proposed by Freytag, resulting in a double peak pyramid ending at the falling line of the resolution. The coda is not included in the descendant curve since it is no longer describing the sequence of events. Therefore, it is represented by a flat line following the pyramid shape.

What is overwhelmingly similar between the three sign languages is the alternation between the signer's roles throughout the narrative, from narrator to character and back to the narrator, as shown in Figure 41. Most signers start and end their narratives in the narrator's role, looking at their interlocutor. Then, during the middle components – which are produced by everyone – where the story rises in the complication to the climax and falls from there, through the resolution, they typically

enact the character(s). There were only a few exceptions. The orientation was presented a few times under the character's role in the three languages (2 of 16 in AdaSL, 2 of 11 in LaSiBo, and 1 of 8 in male LGG signers). Similarly, in the coda, only two LaSiBo narratives did not return to the narrator's role. Curiously, in the three middle components, two narratives in LaSiBo and two by female LGG signers were not told as a character, but as a narrator unlike everyone else.

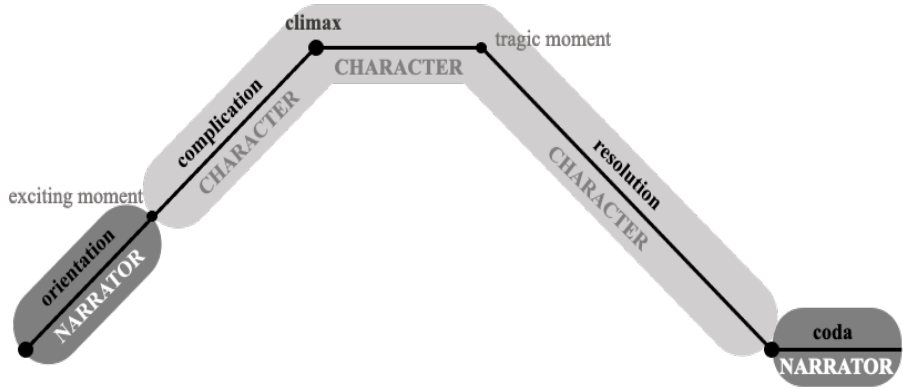


Figure 41. Signer's roles during the structural components

Looking at the results of the narratives as a whole, it becomes evident that they all follow a universal sequence with a beginning, middle and end. As shown in Table 20, the orientation and the coda components are present in the majority of the narratives (male LGG signers are the only ones producing the totality of the orientation components). The middle components, however, where the sequence of events is narrated, are always included. The biggest difference is that LaSiBo and female LGG signers tend to produce very short complication and climax components, with only one or two lines, as shown in Table 20, in the numbers shaded in grey. I note here that, even if AdaSL and female LGG signers show similar numbers in those components, they were interpreted in proportion to the total of narratives analysed. Another distinction that comes to light is longer codas in LaSiBo narratives. Notwithstanding, it is important to keep in mind that Labov & Waletzky state that rather than the length of the narrative, what matters is that the narrative follows a timeline (subsection 3.2.1.), which they all do.

Table 20. Summary of component production in the narratives studied, distinguishing the total of components from the very short ones (with one to two lines); these are shaded in grey when they occur in higher proportions

		orientation		**complication**		**climax**		**resolution**		**coda**	
		total	short	total	short	total	short	total	short	total	short
AdaSL	17	**16**	9	**17**	6	**17**	5	**17**	3	**15**	9
LaSiBo	11	**9**	1	**11**	9	**11**	9	**11**	1	**9**	3
LGG men	8	**8**	4	**8**	2	**8**	-	**8**	1	**7**	6
LGG wome	8	**5**	2	**8**	5	**8**	5	**8**	2	**7**	6

To better visualise how the structure of the narratives is produced by the signers, the pyramid combining both Freytag's and L&W's models was drawn to represent each component with a numbered line: (1) orientation; (2) complication; (3) climax; (4) resolution; (5) coda. Each line was then adjusted to include the time, measured in seconds and milliseconds, spent in the corresponding components. Critically, the length of each line in the pyramid reflecting the duration of its matching component does not always correspond to the number of lines in the translated text. In other words, one translated unit can be signed slowly or repeatedly. Otherwise, a sequence of lines in the text can be signed very quickly.

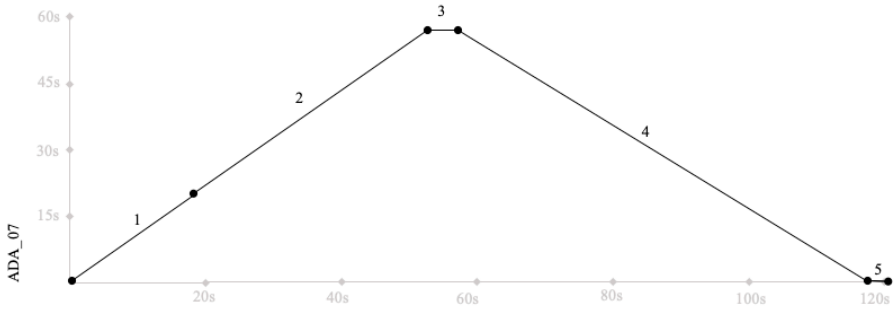
All narratives were able to be expressed in a pyramid, although of different sizes and shapes. Below, examples of pyramids are shown for the three sign languages. For considerations of space, not all pyramids are presented here. Instead, they were chosen

and grouped according to similar patterns and represented by prototype examples in each language.

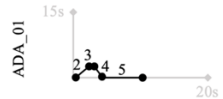
In AdaSL narratives, one particular narrative is highlighted, in (49a), for being the longest and highly balanced along its components (ADA_05 is similar to this one but with half its length and with a very short climax). This narrative (ADA_07) was produced by one of the younger signers, bilingual in AdaSL and Ghanaian Sign Language. In contrast, there are two very short narratives (AdaSL 1, AdaSL 2) with a similar shape, represented below in (48b). Other quite balanced narratives (ADA_06, ADA_09, ADA_11b, ADA_15a; and ADA_04 with double the length) are exemplified by the one in (49c). To illustrate unbalanced pyramids, the example in (49d), shows a very short complication (also ADA_08), followed by a reasonably long climax (also ADA_10, ADA_12) and a very long resolution (all of the previous and also ADA_13). Finally, a longer climax (ADA_03, ADA_14, ADA_15b) is an aspect that becomes clear in the pyramids for AdaSL narratives, as in (49e).

(49) Structure pyramids of AdaSL narratives

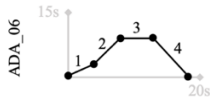
a.



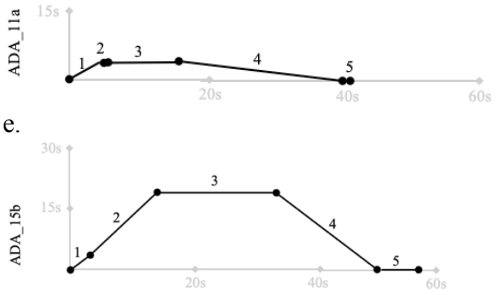
b.



c.

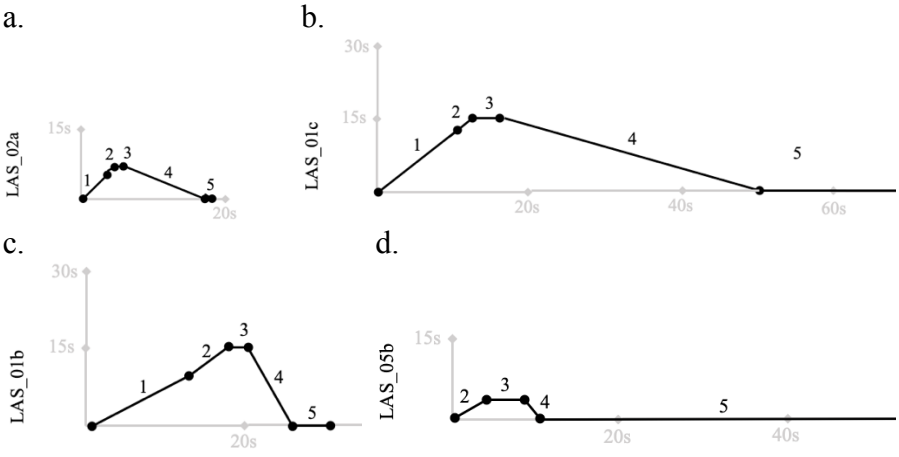


d.



Overall, AdaSL narratives correspond to balanced pyramid shapes with longer climaxes. In contrast, LaSiBo narratives present extremely short complication and climax components (LAS_01a, LAS_02a, LAS_02b), as in (50a), which may combine with a longer orientation (LAS_03, LAS_04) or resolution (LAS_06a). Others stand out especially because of their longer resolution (LAS_01c), as in (50b), or a longer orientation (LAS_01b, LAS_06a), as in (50c), or very long codas (LAS_05a, LAS_05b), as in (50d). These pyramids illustrate how less balanced they are in relation to the ones in AdaSL. In LaSiBo narratives, signers seem to quickly go through what is supposed to be the more important part of the story.

(50) Structure pyramids of LaSiBo narratives

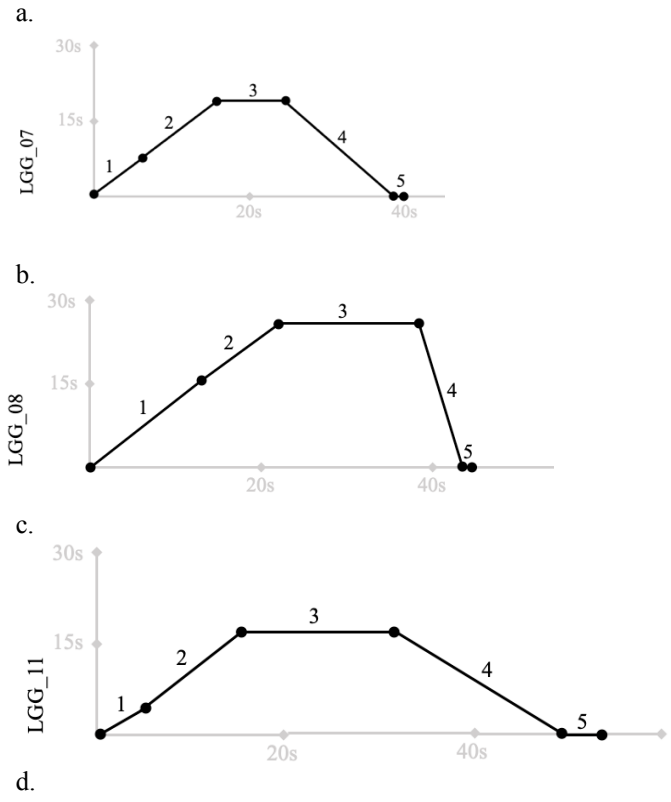


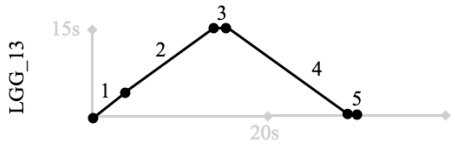
Similarly to AdaSL, narratives produced by male LGG signers are also quite balanced (LGG_01, LGG_07), as in (51a), even if they have a slightly shorter complication

(LGG_02, LGG_04), a longer resolution (LGG_03) or a shorter one (LGG_05). It can also be the case where the orientation is longer and the resolution is shorter (LGG_06, LGG_08), as in (51b). Overall, it is clear in these narratives that they spend time on the climax.

When looking at the pyramids of the narratives by female LGG signers it becomes clearer that they are overall balanced between components. The narrative with the longer climax (LGG_11), in (51c), results in a shape similar to two others (LGG_12, LGG_16), which contrasts with the remaining narratives by deaf women for generally having a very short climax (LGG 13, LGG 15), as in (51d). Of these, three are overall very short (LGG_9, LGG_10, LGG_14). Such a distinction may hint at two different socialisation patterns in women, those benefiting from more time within the deaf community and those more constrained to their hearing families.

(51) Structure pyramids of LGG narratives by male (a,b) and female signers (c,d)





In this way, the similarities and differences between the languages become more evident. On the whole, it is shown that AdaSL and LGG narratives have more balanced components. This means that the content that is expected to appear in each component is proportionally distributed within the overall structure aligning with the pyramid shape. In contrast, narratives that have extremely short middle components, such as the complication and the climax, or unexpectedly long orientation or resolution components, seem to the interlocutor as oddly unbalanced. This is the case of some of the narratives produced by LaSiBo and female LGG signers.

3.7 Discussion

Aligning the results of this analysis with the findings of previous studies in personal experience narratives in other sign languages (see Table 18), it is possible to establish correspondences, while adding a step further to the understanding of narrative structure in the signed modality.

Overall, as seen in Table 20, the large majority of the narratives in this study include the totality of L&W's components, except for the abstract, which was not found in Mulrooney's (2009) analysis, where she used different partitions and designations. Sohre (2017) argued that the abstract occurred as one with the orientation component. Wilson (1996) did not identify it either. However, the type of introductory statement in the narrative she analysed was equivalent to the ones in the narratives analysed by Johnston & Schembri (2007) and Sutton-Spence (2021) who interpreted it as an abstract. In the African narratives studied here, no abstracts were found probably because signers were answering the question, I had asked them. For that reason, they may not have felt the need to summarise what was their narrative about.

All the studies in personal experience narratives in different sign languages also included the orientation component, where the context of the story is given. Again, Mulrooney proposed this initial part be divided into the introduction (where the story starts with a topic) and background (with basic information about participants and the story's location) instead of designating it as orientation. I should note here that L&W suggest that this introductory component is not an essential part of the structure. In fact, despite being present in most of the West African narratives, it does not occur in three (out of 12) LaSiBo narratives and three (out of eight) narratives by female LGG signers.

All authors recognise the importance of the narrative's middle part as fundamental in the account of a personal experience, especially, if the topic involves an emotional event. Although the complication (Mulrooney labels it as main event) is identified throughout their analysis, not all mention the climax. Mulrooney does observe it but not always and in different locations of the main event, either at the beginning or at the end (remembering here that her 'main event' would correspond to the complication and the resolution). In Sohre's work on Romanian Sign Language (LSR), the climax is usually located in the resolution, where the event is solved, though in one of the narratives it occurs in the orientation, where the story is set up. It is important to remember that the personal experience narratives analysed in ASL and LSR are not about life-or-death situations. Such threatening situations, as in the case of an animal attack, naturally imply an emotional peak. Thus, their findings (obtained under different methods and for different topics) do not align at all with the results presented in this study where the climax, as I interpreted it, between the encounter with the animal and Freytag's tragic moment (killing the animal or running away from it), was always situated between the complication and the resolution, even if very briefly. Such a position of the climax was considered similarly by Sutton-Spence. She also found a double peak climax, as situated between a climatic point – when the mouse escapes a stick stroke – and the climax – when the mouse is finally killed (2021, 120), which I paralleled to Freytag's tragic moment.

A crucial reason for the presence of the climax in the African narratives is that the stories were precisely about encountering an animal. Therefore, all signers but one intuitively told about it. The only signer that did not produce a narrative about an animal attack describes instead different types of snakes and what usually people do with them. This LaSiBo signer seems to socialise very little with their deaf and hearing peers. Tano was not able to identify a habitual interaction partner for this signer in particular (2016, 77). Such a descriptive vicarious account was excluded from Study 1 due to the lack of structural components. However, it was included all the same in the remaining three studies on narrative devices since they could occur independently of a storyline.

Except for Johnston & Schembri (2007) and Sutton-Spence who clearly identify the outcome of the story, the resolution was the component that led to more ambiguous interpretations in the studies of other sign languages. Because Mulrooney proposes different categories it is not evident where the resolution would occur in her structural distribution. Similarly, even though Wilson follows L&W's partition, she does not mention the resolution component in her analysis, jumping from a long complication to the coda. Sohre acknowledges some difficulty in separating the complication from the resolution but she does observe it. In the analysis of the West African narratives, the resolution developed from the tragic moment on. It concerned the elaboration of

how signers dealt with the animal they encountered, which was mostly by killing it or running away.

Finally, although the coda was present in all the personal experience narratives analysed in the other sign languages, except for Mulrooney, two (of 17) AdaSL signers, three (of 12) LaSiBo signers and three (one of eight men and two of eight women) LGG signers did not produce it.

Having compared the structural components in different studies, again must be mentioned that the personal experience narratives analysed by the several authors are about distinct topics and none involve a life-threatening situation. They are mostly about past experiences, like travelling, school episodes, or other events not involving a danger to the self. Hence, the topic of an animal attack could be fundamental in triggering a (dramatic) structure building up towards a climax and descending from there to deal with the aftermath. In the end, the 45 narratives collected for this study are truly comparable only to those analysed by L&W, who also asked their interviewees about life-threatening situations.

The old AdaSL and the macro-community LGG (especially the deaf men) show narratives structured according to L&W's model and including Freytag's climax. In contrast, signers that socialise less, namely Bouakako's deaf villagers and the deaf women in Bissau, although presenting the same components, distributed them differently. As a distinctive pattern, most LaSiBo signers and half of the female LGG signers produced extremely short complication and climax components, usually condensed in a single utterance. This leads to the conclusion that a basic narrative structure, including an orientation, a complication, a climax, a resolution and a coda, seems to be universal, at least for this type of personal experience narrative. Moreover, addressing directly the audience in the initial contextualisation and the closing of the story, and embodying the character while telling about the sequence of events, is also highly intuitive. However, involving the interlocutors in the narrative by emotionally preparing the high point of the narrative, lingering in the excitement of the climax and maintaining their interest during the reactions, has to be learned through social interactions.

Whilst the sign language in the village of Adamorobe is used only by a small group of 33 deaf people today, used by several generations. It is assumed therefore to have developed linguistic structures over time, and consequently over numerous opportunities for social interaction. Deaf villagers have strong socialisation habits with each other, especially between age peers. Also, the fact that it became part of the village life across generations, turned it (even if strongly influenced by local gestures) into the usual form of communication with and between the deaf. In this sense, deaf people in Adamorobe spontaneously use their sign language to tell about their everyday experiences to interlocutors who value signing skills. Similarly, in Bissau,

deaf men meet every day for long hours in different spaces and with a variety of interlocutors. On these occasions, they exchange personal experiences and naturally place more value on those that are more compelling. Such a context enables both individuals and the language community as a whole to gradually grow as (skilled) storytellers. Thus, language age and frequency of social interactions both support the development of well-structured emotional narratives. As opposed to these two groups, the six deaf people in Bouakako have specific hearing peers as their preferred interlocutors and apparently interact with other deaf only in pairs. Consequently, they have not benefited during their lifetime from opportunities to enjoy others telling stories and develop their storytelling abilities which are manifested in their unemotional accounts collected for this study. Although the deaf women in Bissau are not able to socialise as much as their male peers due to cultural constraints, they have, nevertheless, had access to a wide variety of deaf interlocutors during the short lifespan of the local deaf community. The fact that they spend less time than the men interacting in LGG seems to account for the striking differences in the narrative structures between the two genders.

At the same time, the evidence for less compelling narratives told by Bouakako and female LGG signers strongly suggests that a gestural environment and potentially regular interactions with hearing people are insufficient to create the conditions for language development.

In sum, the hypothesis for this study was supported. Both language age, in the case of AdaSL, and frequency of interaction, evident in male LGG signers, seem to be crucial factors for the development of narrative structuring. Moreover, those factors also appear to determine the ability to make the narratives compelling to their audience through an enhanced climax.

The overall results concerning the structural components were discussed here, enabling the identification of salient patterns in their distribution, and aligning them with the signer's role, whether as the narrator or as a character. Results were also interpreted in the face of the literature in search of similarities and distinctions when possible. The following section presents the main conclusions of this first study on the structural analysis of personal experience narratives in the three sign languages.

3.8 Conclusion

Subsection 3.5 described the components of narrative structure in the three sign languages. In general, they all follow a temporal order with a beginning, a middle and an end. The model of Labov & Waletzky allows a more detailed analysis, adding more

components than those three main parts. All of such components were identified in the three sign languages.

During Labov and Waletzky's initial component, the orientation (if we disregard the abstract), and the final one, the coda, signers usually look at the audience. In the orientation, signers typically describe the character(s), the location, and the event's time. This contextual information, like sketching the scenario before introducing the events, is essential for the audience's understanding of the story. For that reason, signers focus directly on the audience to ensure it is being conveyed clearly. When signers look away from the audience and turn their eyes to the imaginary event being told about, they stop acting as the narrator and enter the story by embodying a character. This change in the eye gaze marks a break between components, in this case, between the orientation and the complication. At the end of the narrative, signers return their gaze to the audience for the coda component to eventually add a few final comments and indicate that the narrative is over.

Although storytelling is a human universal it depends on language and cultural knowledge to take form (Dunbar 2014). What seems to emerge in the first place is the temporal sequence of events which is expressed in all narratives told in the three sign languages. L&W had already acknowledged that personal experiences are only identified as such when they follow a timeline. Similarly, the story is also centred on a character with a motive that triggers a reaction (Sugiyama 2005).

What is strikingly different between the storytellers of the three West African sign languages is the degree of emotional investment in sharing a potentially exciting event with their audience. Those with the least opportunities to socialise do not seem to be aware of the importance of turning their stories compelling to the addressee. This may be due to a lack of skills or the necessary empathy with the interlocutors. Thus, narratives produced by LaSiBo and most female LGG signers demonstrate that they have not learned through social practice how to tell stories. It is not only because their sign language is still in the first generation since male LGG signers have developed that ability within the same time span, but because they do not engage in frequent interactions. They may not have been valued enough by their communicative partners to learn how to spark emotions with their accounts. However, most of them intuitively start and end the narrative as narrators, addressing the audience directly, while enacting characters in the middle part of the story. In this context, character embodiment could be the natural way for a deaf person to express their actions in the past, rather than an enhancement strategy (see Chapter 5 for more details).

What is evident is that narratives told in the old sign language of Adamorobe or by the vibrant male storytellers of the new deaf community of Bissau are highly compelling. Their skills in conveying dramatic intensity to their narratives appear in narration strategies such as character embodiment, including dialogues, alternating or

simultaneously with side explanations. This is done in such an enhanced way that the audience is transported to the narrated event.

I focus next on the types of evaluation aiming at enhancing the narratives (Chapter 4). In sign languages, those types of evaluation can be expressed by particular narrative devices. I look at signing perspectives to refer to story elements in different scales (Chapter 5), how lines in self-talks and dialogues are expressed (Chapter 6), as well as how signers describe the main point of their personal experience accounts: the animals encountered (Chapter 7). These narrative devices are the highlight of the narratives, it is what the signers do to captivate the audience's attention.

PART III

NARRATIVE DEVICES

Chapter 4 – Narrative devices used in the evaluation component

4.1 Introduction

As explained in the previous chapter, Labov & Waletzky's (1967) narrative structure model is divided into five components: the abstract, the orientation, the complicating action, the resolution and the coda. The **evaluation** component is a boundless component that acts as a second layer embedded in the structure of the narrative. It brings the story to life and shows how the narrator feels about what has happened and why the story is worth being watched. It invites the audience into the narrator's personal experience.

To clarify the difference between a narrative with and without evaluation clauses, I present an example of my own experience in two versions: (1) a temporally-ordered narrative without evaluation, and (2) a narrative that is equivalent in basic events, but with evaluation clauses added (Table 21).

Table 21. Example of a personal experience narrative without and with evaluation clauses[18]

(1) Narrative without evaluation ↓	**(2) Narrative with evaluation** ↓
Abstract	
I have a snake phobia and there were so many when I went snorkelling.	
Orientation	
I have a phobia of snakes. I had gone on holiday to Brazil for Christmas. It was very hot there and it was the best time for diving or snorkelling in the sea and watching the sea life. I always did that and always took my diving goggles and fins with me. It was one of my favourite hobbies.	
Complication	
The first time I snorkelled there I saw snakes and went back to the beach. Then I tried another beach further away and saw snakes again. There were people who had also seen snakes in the	I was so excited, as soon as I got to the beach, I put on my diving goggles, grabbed my water camera and put on my fins. I went into the water. I was so happy and calm. The sea gives me so

[18] The italics indicate here my own translations into English.

sea.	much peace. I started to swim and I saw very colourful fish and took pictures. I got close to some corals and saw in a hole a long, curly white thing with brown spots, I didn't know what it was, the first thing I thought was "Could it be a moray?", but it was too thin to be a moray. I got a chill, I thought I'd better get out of there. I got out of there and focused on the fish but there was something very similar again and this time very visible: it was a snake. I panicked. I wasn't far from the beach, so I quickly got out of there. My friend who was on the beach asked me "What happened?" and I told her "There are snakes everywhere!". My love for the sea is very deep and I didn't want to give up, so I tried another beach further away and saw snakes like that one again. There were really a lot of them. There were people saying "Here is a snake!", over and over again by several people on the beach.
Resolution	
I gave up on going snorkelling during those holidays.	Even though, I loved to do snorkel I couldn't do it anymore during those holidays. It was really frustrating, but the fobia of snakes was stronger.
Coda	
Since then, I have avoided diving in warm waters.	

In the two versions presented above, the one that is catchier and better at holding the audience's attention is the one containing evaluation phrases. For example, adding what I was feeling at the time ("I was so excited", "I was so happy and calm"…) turns the story more emotional and helps the audience relate to it. Riessman describes the

evaluation as the "soul of the narrative" (1993, 3). However, evaluation is complex. Labov (1972) addresses this complexity by introducing different types of evaluation, as described below. To preview later chapters, these types of evaluation are relevant when analysing different devices for how signers make narratives engaging.

4.2 Background on the evaluation component

As seen in the previous chapter, the evaluation corresponds to the most crucial component of a narrative, enhancing it and making it appealing to an audience. To turn it more engaging, the storyteller can use different narration modes. Dramatic force is conveyed especially by expressing the character's viewpoint, whether by enacting actions (e.g., pretending to look inside a box) or quoting lines (e.g., "she said, 'I don't know what that is!'"). Of course, the storyteller's perspective on the experience can also be communicated directly to the audience (e.g., "At that point, I didn't know what was happening").

Since the evaluation concerns arising the emotional intensity of the interlocutors, it was first situated by L&W between the complication and the resolution, i.e., in the climax, where the action is suspended (1967, 37). Later, Labov (1972) maintained that the evaluation is usually centred at the apex of the narrative, but found that it also can occur throughout the remaining components.

4.2.1 Overview of evaluation types

Labov (1972) followed up on his previous work with Waletzky by describing and further classifying the evaluation component in more detail. He suggests different types, four of which I focus on for this study. Narrators can interrupt the narrative to address the audience to add comments or clarifications (**external evaluation**); they can dramatise actions to express what characters do (**evaluative action**); they can quote feelings or characters' lines in monologues or dialogues (**embedding of evaluation**); or they can suspend the action to draw attention on a relevant part of the narrative (**evaluation by suspension of the action**).

External evaluation is when the narrator interrupts the narrative and turns directly to the audience to add a comment, as in the following examples by Labov (1972, 371): "It was the strangest feeling because you couldn't tell if they were gonna make it; but it was quite an experience". According to Labov, this can be considered the most simple evaluation type since it is generally used by less skilled storytellers.

Evaluation by suspension of the action is when the narrator interrupts the emotional flow of the story to enhance an aspect crucial to the story's point in separate sentences

without changing the temporal sequence. The embedding of evaluation type can also imply a suspension of the action.

Evaluative action is when the narrator tells what the characters do. It is dramatised action, as in the examples: "I was shakin' like a leaf" (ibid., 373); "And we were sitting with our feet, just sitting there waiting for this thing to start. People in the back are saying prayers" (ibid., 374).

Embedding of evaluation is when the narrator tells what the characters say. Here, the narrator can quote sentiments, the main character talking to someone else or lines told by other characters. Thus, to enhance the dramatic effect, it may involve self-talk, as in thoughts or monologues ("I just closed my eyes I said 'Oh my God, here it is!'"), self-quotes addressed at someone else ("I say, 'Calvin, I'll bust your head for that'" [ibid., 372]), or other characters' quotes, in dialogues ("Lloyde Burrows, said 'You better pack up and get out because that son of a bitch never forgives anything once he gets it in his head.'" [ibid., 373]). Labov adds that the technique of embedding the evaluation in quotations is used especially by highly skilled storytellers (ibid., 373).

Labov also describes a type of evaluation so embedded in the narrative structure that it becomes part of the syntactic construction itself, called **internal evaluation**. Labov indicates that only the most fluent storytellers can use internal evaluation. I will not look into this specific evaluation type, since it focuses on syntactical elements (intensifiers, comparators, correlatives and explicatives [ibid., 378-393]) which are beyond the scope of the present analysis on narrative devices. However, it is important to keep in mind that because it is so embedded within the discourse structure, it frequently cooccurs with the other evaluation types. For instance, **intensifiers** involving gestures ("I say [sound] like that; and the rock say [slap!]"), **expressive phonology** prosody (And we were fightin' for a lo-o-ong ti-i-me, buddy), **onomatopoeias** (Powww!!; shhh!), **quantifiers** (He had cuts all over; I knocked him all out in the street) and **repetitions** ("And he didn't come back, and he didn't come back") are specific linguistic elements likely to occur within the embedding of the evaluation type.

4.2.2 Analysis of evaluative devices in sign language narratives

Labov's (1972) evaluation component has been analysed by some of the authors that studied personal experience narratives, namely Wilson (1996) and Mulrooney (2009) in American Sign Language (ASL) and Sohre (2017) in Romanian Sign Language (LSR).

Wilson, in her analysis of the Tobacco Story, distinguishes the external evaluation, where the narrator comments on the narrative events, through the use of **lexical signs**

(1996, 161). She then focuses mainly on evaluative clauses in both internal and embedded evaluation (Wilson subsumes both under the umbrella term internal evaluation [ibid., 165]), expressed by repetitions, aspectual inflections and expressive phonology (prosody). In the signed modality, the latter corresponds to pantomimes and iconic facial expressions (e.g., surprised, innocent, stern) which are called **constructed action** by Metzger (1995). For instance, in the narrative Wilson analysed, instead of using the ASL lexical signs for 'look', 'chew' and 'spit', the signer embodies the character by miming the actions themselves (ibid., 163). Besides such constructed action, Wilson argues that **role shifts** and **constructed dialogues** (Tannen 1989), are also evaluative devices in reproducing dialogues. These will be discussed in more detail in the following Chapter 6.

Mulrooney attributes the evaluation component to the signer's adoption of different roles in the story, whether as the narrator or as a character. She finds that while in the **narrator's role** telling the audience about what happened, ASL signers provide contextual information by using **lexical signs** and certain **classifiers**, i.e., handshapes representing semantic features of referents (Frishberg 1975). When humans are represented as **entity classifiers**, this typically occurs in a reduced scale), as if on a stage in front of the signer. In contrast, when in the **character's role**, signers guide the audience to experience the past event through constructed actions and constructed dialogues (2009, 34) and the action takes place in the scale of the real world (real scale).

In her analysis of ASL narratives, Mulrooney views the structural components differently from L&W, and she renames the evaluation component as elaboration, where signers "provide additional detail and make a narrative more than a mere sequential list of events." Telling not only what but how or why something happened to engage the audience with the narrative can be expressed by both the narrator's and the character's role (ibid., 98). Thus, a signer can be looking up, embodying a character and, simultaneously, as the narrator, uses a lexical sign to express shock (2009, 38).

Mulrooney finds six types of information that can be included in the elaboration of sign language narratives: (1) **addressing the interlocutor** to ascertain comprehension of the story (ibid., 124–125); (2) **providing supplemental information** to clarify aspects of the story to the audience (ibid., 123); (3) **describing objects**, topography and spatial arrangements between entities (ibid., 120–122); (4) **describing movements** of entities (ibid., 105–114); (5) **expressing emotional** responses (ibid., 118–120); and (6) **constructing dialogues between characters** (ibid. 114–117). Since the first three types are mostly produced within the narrator's role they correspond to the external evaluation, while types (4) and (5) can be either external or conveyed by a character through constructed action. This contrasts with constructed

dialogues that are entirely embedded within the narrative through character embodiment.

Similar to the ASL narratives, in LSR narratives, Sohre also found embedded evaluative devices such as **sentiment quotes** (e.g., in the signed passage translated as, "I was upset and I was broken-hearted" [2017, 54]) and **constructed dialogues**, such as the dialogue with a doctor saying to a deaf person that he could not drive (ibid., 55).

Table 22 summarises the findings of the three authors that studied the evaluation component in personal experience narratives in sign languages: Wilson (1996), Mulrooney (2009) and Sohre (2017). This table also relates the evaluation types defined by Labov (1972) to the specific devices used in sign languages and to the signer's roles. I do not include in this table the internal evaluation as observed by Wilson, since it is out of the scope of this study.

Table 22. Evaluation types in sign language narratives, with corresponding devices and roles

Evaluation types	**Devices in sign language narratives**	**Role**	**Study**
External evaluation	Lexical signs, Classifiers	Narrator	Wilson (ASL; 1996), Mulrooney (ASL; 2009)
Evaluative action	Constructed action	Character	Mulrooney (ASL; 2009)
Embedding of evaluation	Constructed dialogue, Role shift	Character	Wilson (ASL; 1996), Mulrooney (ASL; 2009), Sohre (LSR; 2017)

The clear distinction between evaluative devices depending on whether the signer is a narrator or a character points again to the importance of cues given by the direction of the **eye gaze** (see also §3.2.2 for the role of eye gaze related to structural components). Besides being an important cue to identify narrative components (Study 1), eye gaze also is informative about which signing perspective is being used (Study 2) and if the signers are enacting more than one character at a time during role shifts (Study 3).

Moreover, it is possible to relate the signer's roles to time; that is, **real time** versus **narrative time**. If the storyteller is looking directly at the audience as the narrator, the time is the actual present (real time), but if the eye gaze turns away, the story leads the audience to the past tense to the experience lived by the characters (narrative time). Thus, eye gaze is a crucial marker of narrative structure in sign languages, and therefore very important for interlocutors to track to follow a story, as well as important for researchers to track by encoding it in their analyses.

Bahan & Supalla (1995) examined the influence of eye gaze in the story Bird of a different feather, told by Bahan himself (Bahan & Supalla 1992). Here, they found three types of eye gaze marking narrative functions played by the storyteller: (1) gaze at the audience, (2) character's gaze and (3) gaze at the hands.

When there is a **gaze on the audience,** the narrator acknowledges the audience's presence. While inside the story, the narrator can still make comments and evaluations. However, when the narrator moves the gaze away, the audience is informed that the narrator is leaving such a role and is moving into playing a character.

When the storyteller embodies a character, the audience is no longer looked at but is instead witnessing the **character's gaze**. If more than one character is present, the signing storyteller embodies the role of a first character and slightly orients their body toward a second character, which is imagined to be located at some specific point in space. The first character may also enter into dialogue with the second character as if talking to a real person. When the latter responds, the signer shifts roles (i.e., role shift), moving the head towards the opposite direction as if talking to the first character.

Finally, Bahan and Supalla found that when the ASL storyteller's **gaze is on the hands**, the signer is not playing the role of the narrator or a character but is instead part of the narrative events. It can depict an event or describe objects and actions playing out in the signing space, as if on a stage in front of the signer. They argue that when the eyes focus on the hands moving in the space in front of the signer on this reduced scale (e.g., with a hand representing a character in an event), it no longer belongs exactly to the narrator nor the character, but is instead deeply embedded in the narrative in a way unique to sign languages (1995, 179). At the same time, this use of reduced scale may not exist in all sign languages (Nyst 2007), so it is not known if eye gaze on the hands will be observed in narratives in the three sign languages in the current study. In sum, it is possible to conclude that the eye gaze behaviour plays an essential function in marking the moments when the storyteller is the narrator, a character or is doing a description.

4.3 Research questions

As seen in Study 1, narratives should be organised according to a prototypical structure and dramatically enhanced by a climax. Considering the importance of the evaluation component to the expression of emotional intensity, the following studies look at the narrative devices as the instruments responsible for conveying dramatic force, not only within the climax but throughout the narrative.

To answer the main research questions related to sign language age, community size and interaction patterns between deaf peers, I compare the narrative devices in the three African sign languages studied here. I aim to observe whether those factors influence how signers turn their narratives compelling through modality-specific evaluative devices.

It may be important to briefly address what appears to be a potential contradiction in expectations from spoken languages on the one hand and sign languages on the other, in terms of what counts as skilled storytelling. From Labov's work on storytelling in spoken languages, we would expect that external evaluation will be used more often by less skilled. Yet, for sign languages, it might first appear that the simplest and therefore least-skilled way to tell a story in a signed language would be through pantomime, acting out all the parts in an event, which would be akin to the evaluative action. Therefore, in the following analyses, I assume that in sign languages the external evaluation might be as simple as the evaluative action.

The main question to all three studies is **How do signers of the three sign languages enhance their narratives through particular evaluative devices?** This is then specified for each study.

Study 2: Signing perspectives

> Research question 2: **To what extent do signers of the three sign languages produce signing perspectives to enhance their narratives?**
>
> Hypothesis: Signers naturally use constructed actions in the first person, unlike the reduced scale perspective. The reduced scale will probably have developed over time and frequent socialisation and will, thus, not be found in LaSiBo (see Chapter 5).

Study 3: Role shift and constructed dialogue

> Research question 3: **To what extent do signers of the three sign languages produce role shift and constructed dialogue to enhance their narratives?**

Hypothesis: Narrative devices may require time and regular social interactions to develop. Therefore, emerging sign languages with little socialisation between peers, i.e., LaSiBo, may still need to be able to shift between roles and construct dialogues (see Chapter 6).

Study 4: Animal depictions

Research question 4: **To what extent do signers of the three sign languages depict the animal's size and shape to enhance their narratives?**

Hypothesis: Narrative devices may require time and regular social interactions to develop. Therefore, signers using only on a few occasions their young sign language with each other, like the ones from Bouakako, may still need to be able to clarify to the audience what the animal looks like to turn the story more interesting (see Chapter 7).

To answer the question in the three studies on narrative devices I analyse them following specific terms based on the literature, which are described next.

4.4 Correspondences between evaluation types and signed narrative devices

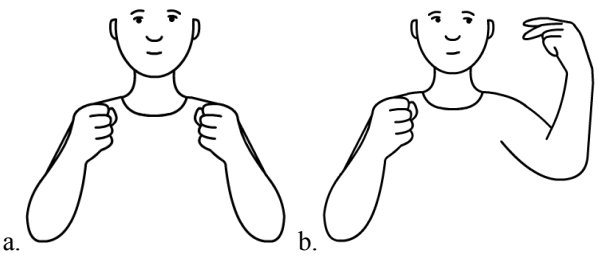
This section sets up the next three studies, going deeper into systematising the correspondence between evaluation types described by Labov (1972) and narrative devices in sign languages. Such a relationship is based on previous work done in personal experience narratives by Wilson (1996), Mulrooney (2009) and Sohre (2017). Besides the evaluative devices, Table 23 includes the cues to identify them in sign languages, namely the signer's role as indicated by the direction of eye gaze and the kind of signs used.

Table 23. Correspondences between evaluation types and signed narrative devices

Evaluation types	**Spoken languages** (Labov 1972)	**Signed devices**	**Role**	**Cues**	**Study**
External evaluation	Addressing the audience to add information	Descriptions of entities and spatial arrangements	Narrator	Gaze on audience Gaze at the hands Lexical signs Classifiers	2 4

Evaluation by suspension of the action	Calling attention to a relevant part of the narrative	Descriptions of entities	Narrator	Gaze on audience	4
Evaluative action	Dramatising actions	Constructed action, Role shift	Character	Character's gaze	2 3
Embedding of evaluation	Quoting sentiments, in monologues and dialogues	Role shift, Constructed dialogue	Character	Character's gaze	3 4

Study 2 analyses the **signing perspectives**, i.e., how the story elements, especially the characters are portrayed, throughout the narratives. Signing perspectives involve both constructed actions and descriptions, expressing mainly the evaluative action. This is the case of the **real scale perspective** including constructed actions produced overtly (in Figure 42a) or combined with narrations; **multiple perspectives** representing the interaction between two or more characters at the same time (in Figure 42b); and **simultaneous perspectives** concerning the expression of the same character in both the real and the reduced scale (in Figure 42c). The latter two perspectives usually imply the cooccurrence of constructed actions and classifiers. When real scale or multiple perspectives express lines in self-talk or dialogues they are an embedding of evaluation. Although they are included here they are analysed in detail only in Study 3. Finally, the **reduced scale perspective** refers to spatial arrangements (in Figure 42d) in external evaluation.



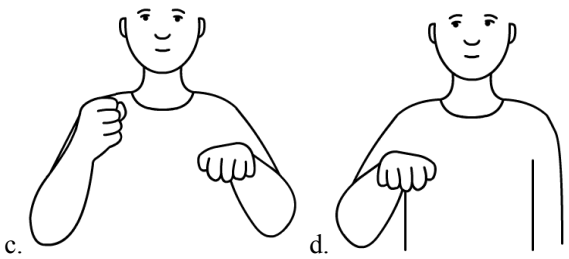


Figure 42. Signing perspectives: representing 'driving' by (a) holding the steering wheel in a real scale perspective; (b) holding the steering wheel and using a classifier for 'being looked at by someone else' in multiple perspectives; (c) holding the steering wheel and using a model-sized classifier for 'moving car' in simultaneous perspectives; and (d) using a model-sized classifier for 'moving car' in a reduced scale perspective

Study 3 focuses on role shifts, i.e., changes between characters, and constructed dialogues, which add emotional intensity. **Role shifts** may refer to the interaction between characters without necessarily involving dialogues. In these cases, actions are dramatised, or constructed as evaluative action. **Constructed dialogues** may also include self-talk. Either way, this device is an embedding of evaluation produced always within the character's role.

Study 4 analyses the **descriptions of the animals** in the narratives, considering that they represent the main point of the collected accounts of animal attacks. In this sense, depicting the size and shape of the animal encountered is expected to add dramatic force to the narrative. In this evaluation by suspension of the action, the sequence of events is interrupted to enhance the antagonist in the story. Signers may **suspend the narrative** thread to look at the audience as the narrator to depict the animal. Otherwise, they can tell how the animal looks like within a **self-talk** or a **dialogue**, as a character in an embedding of evaluation. When the animal is presented to the audience by the narrator with the intent of **clarification** rather than of conveying emotional enhancement, it is instead an external evaluation. In all animal descriptions, the analysis focuses on specific **size and shape depicting signs**.

Since the evaluation involves both the narrator's and the character's roles, which have been thoroughly discussed in the previous study concerning the narrative structure, Table 24 aims at making clear the engagement of those roles in the different narrative devices, distinguishing them from neutral narrations told without any particular enhancements.

Table 24. Narration roles involved in the evaluative devices of Studies 2, 3 and 4

	Character	Narrator
STUDY 2		
Signing perspectives		
Real scale		
- overt constructed actions	x	
- partially overt constructed actions	x	x
Multiple (two or more characters)	x	x
Simultaneous (one character in two scales)	x	x
Reduced scale		x
STUDY 3		
Role shift	x	
Constructed dialogue	x	
STUDY 4		
Size and shape depictions	x	x
Neutral narrations		x

Having established the bridge between Labov's evaluation types and the narrative devices analysed in this thesis, I will no longer focus on the evaluation types per se but rather on the corresponding devices. Of course, it is crucial to keep in mind that these devices are evaluative. Hence, they aim at turning the narratives more compelling each in its way. In each study, the analysis will look at the extent to which they are produced in the three sign languages. Having clarified how the three studies on narrative devices relate to evaluation types, I move next to Study 2 on signing perspectives.

Chapter 5 – STUDY 2 Narrative devices: Signing perspectives

5.1 Introduction

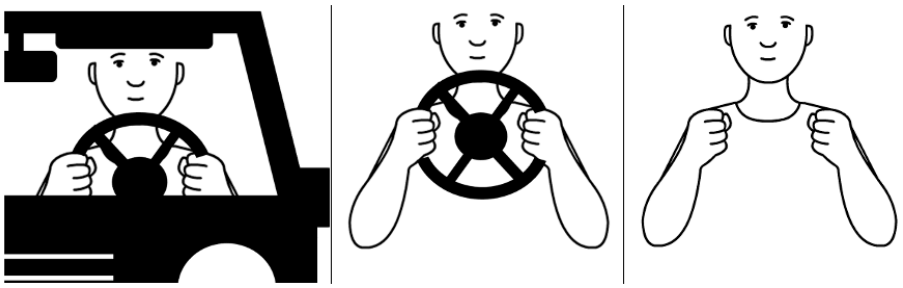
When storytellers tell a story, they usually express in words the images in their heads as they build a story and convey a message inviting the audience to create their images and interpretations (Zeni 2018, 40). Storytellers can assume the role of the narrator throughout their stories, they can embody characters and tell the story through their viewpoint, or they may alternate between the two strategies.

In Study 1, it became clear that, as a general rule, signers of the three sign languages start and end their narratives as narrators and, in between, enact characters (see Chapter 3 for more details). When telling a story, storytellers can use various narrative devices to maintain the audience's attention (Labov 1972, 370; Colaço, 2020, 32). For instance, they can perform the role of characters as if in a play by reconstructing their actions and interacting with life-sized story elements within the space around them (Perniss 2007a, 1316). Moreover, they can play more than one character at a time or portray one character with two different scales using other articulators. Otherwise, signers can arrange and manipulate model-sized elements in their signing space as if in a puppet show (Perniss 2007a, 1317).

Such distinct strategies in telling about narrative events make the stories more appealing to deaf and signing audiences (Pyers and Senghas 2007, 283). In that way, signing perspectives express the evaluation component in personal experience narratives. This is distinct from the structural components since it can overlap with the time-aligned structural components. According to Labov and Waletzky (1967; hereafter L&W), storytellers enrich the narrative through evaluative devices. This way, they hold the interlocutors' attention by inviting them to emotionally enter the event and experience it similarly.

Like Labov (1972) stresses the importance of the evaluation component in spoken languages, so is it also a factor in sign languages (c.f., Wilson 1996; Mulrooney 2009; and Sohre 2017). In this chapter, I look at one of the evaluative devices in sign languages, concerning the **perspectives** adopted by signers while telling their narratives. They can embody a character and act within the moment of the event, as if in a play (Labov 1972) (real scale perspective, in Figure 42a) or at least two characters (multiple perspectives, in Figure 42b). Otherwise, signers can represent a character using two different scales at a time (simultaneous perspectives, in Figure 42c). In addition, they can choose to narrate their own experiences without going into details and maintaining the narrator's perspective (reduced scale perspective, in Figure 42d). The four perspective types analysed in this study are referred to within a graduated scale, with the real scale perspective at one end and the reduced at the other end.

a. real scale perspective



b. simultaneous perspectives



c. multiple perspectives



d. reduced scale

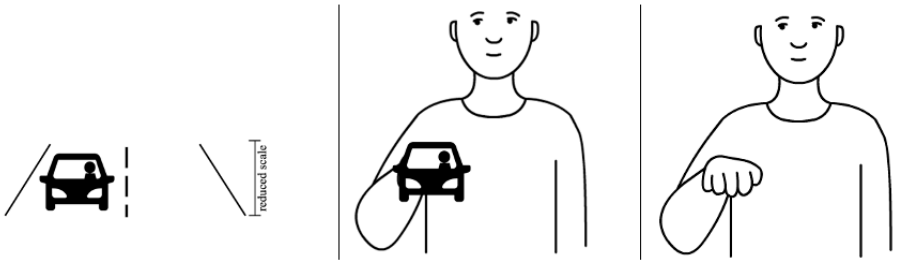


Figure 43. Signing perspectives: acting as if driving by holding a steering wheel in a real scale perspective (a); as if driving while being looked at by someone else by

representing the eyes with a two-finger handshape in multiple perspectives (b); as if driving a moving car represented by flat hand, palm downward in simultaneous perspectives (c); and a moving car using a model-sized classifier in a reduced scale perspective (d)

This chapter focuses on which of these perspectives that signers in the three sign languages use during their personal experience narratives. As explained in the previous chapter (see Table 23 in §4.4), signers can tell their stories neutrally as narrators or they can make them more compelling by portraying elements, especially characters, in different scales. To this purpose, signers can embody characters while adding – or not – additional information, or engage the audience in the story setting by laying it out on reduced scale. Because neutral narrations are not considered evaluative they will not be analysed in Study 2.

This chapter starts by looking at the literature background on signing perspectives (§5.2). First, it gives an overview of the four types of signing perspectives analysed here (§5.2.1). Then, it looks at previous studies of signing perspectives in personal experience narratives (§5.2.2) and specifically in emerging and village sign languages (§5.2.3). Next, the research questions for Study 2 (§5.3) as well as a summary of the methods used in the analysis are reprised (§5.4). Afterwards, the analysis of the four perspectives is presented in the three sign languages included in this thesis (§5.5). The analysis starts with the real scale perspective (§5.5.1), followed by multiple (§5.5.2), simultaneous (§5.5.3) and the reduced scale perspective (§5.5.4). Finally, the chapter synthesises the results (§5.6), discusses them concerning the literature (§5.7) and finishes with a conclusion (§5.8).

5.2 Background on signing perspectives

Signers can tell their narratives either through the narrator's perspective or by somehow representing a character. If the narrator becomes the character, they assume a real scale perspective. If the signer remains in a narrator mode, their explanations usually rely on lexical signs, but the narrator can also create descriptions based on model-sized **classifiers** in which a hand represents a physical entity – either animate (e.g., a person or animal) or inanimate (e.g., the car in Fig. 42, house, stick, etc.), as suggested by Mulrooney (2009, 34). This literature review seeks to systematise how such dual perspectives of narrator and character, and combinations therein (e.g., involving classifiers), have been analysed and classified by previous scholars.

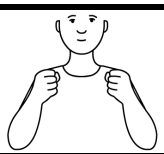
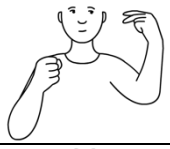
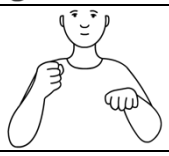
Here I summarise the signing perspectives in terms of the taxonomy adopted in this study. Table 25 shows that the **real scale perspective** (Dudis 2004; Perniss 2007a)[19] relies on life-sized referents and is expressed by character embodiment, which is called **constructed action** (Fig. 42a). Such embodiment may have different degrees, from being primarily enacted by a character to cooccurring with utterances produced by the narrator. The first form is called **overt constructed actions** by Cormier et al. (2015). In the second form, these authors distinguish between reduced and subtle constructed actions, but in this chapter, I will refer to these as **partially overt constructed actions** (partially overt CA), in contrast to overt constructed actions (overt CA). Partially overt constructed actions include mainly narrative information given with lexical signs and classifiers. In this study, I distinguish between life and model-sized classifiers, although they have been termed differently elsewhere (e.g., by Perniss 2007a, 1319, as large-scale and small-scale size and shape specifiers or SASS).

To indicate referents in the story – i.e., various characters and actions, each type of signing perspective uses different linguistic resources. Referents can be indicated through constructed action, such as directing eye gaze and communication to another character while enacting some part of the story, or referents can be indicated in the character handling some object (using a handling classifier, referred to here as **life-sized classifiers**). This is the representation method used in a real scale perspective. Another way to indicate referents, mentioned above, is through the use of entity classifiers, such as a handshape that represents a human. This method is tied to the reduced scale perspective, in which the linguistic referent is **model-sized classifiers** – i.e., in the 'puppet show' dimension (Perniss 2007b). Some model-sized entity classifiers are represented by body parts, like a "V" handshape standing for two legs or two eyes; these are called **body part** classifiers (Supalla 1986).

Multiple perspectives (Liddell 2003 uses the term multiple blend) express the interaction between different characters through constructed action and classifiers, which are usually life-sized but also model-sized. **Simultaneous perspectives** (as designated by Perniss 2007a) represent one character in life-sized and model-sized at the same time, by relying respectively on constructed action and classifiers. Finally, the **reduced scale perspective** uses only model-sized classifiers (as coined by Perniss 2007a) to display both animated and inanimated referents in the signing space.

[19] Dudis coined the term *real scale*, while Perniss added the term *perspective*.

Table 25. Taxonomy used in this study to describe signing perspectives

Perspective[b] type		**Scale**	**Representation of referents**
	**Real scale**[a]	Life-sized[b]	Constructed action - overt CA[c] - partially overt CA
	**Multiple**[d] (≥ 2 characters)	Life-sized [+model-sized]	Constructed action+ Classifiers (life or model-sized)
	**Simultaneous**[b] (same character)	Life-sized +model-sized	Constructed action+ Classifiers (model-sized)
	**Reduced scale**[b]	Model-sized[b]	Classifiers (model-sized)

[a]Dudis 2004, [b]Perniss 2007a, [c]Cormier et al. 2015

In sum, a story can be told with constructed actions, by fully embodying characters through real scale bodily and manual movements or eventually adding lexical signs (real scale perspective). In addition, character embodiment may cooccur with classifiers to represent interactions between two or more characters (multiple characters). Otherwise, while the body enacts a character, the hands may simultaneously refer to that character using model-sized classifiers (simultaneous perspectives). Finally, events can be told by manipulating the signing space with reduced scale classifiers (reduced scale perspective).

Throughout this chapter, I repeatedly refer to the two concepts of **constructed action**, i.e., character embodiment, and **classifiers**, i.e., handshapes that stand for referent categories (further described in the next subsection). Above, I have alluded to how they relate to the perspectives, but in brief: constructed actions are always life-sized, whereas classifiers may represent referents in both real and reduced scales. In this chapter, I will use the terms real scale and life-sized interchangeabley. Also, the terms reduced scale and model-sized will often refer to the same phenomena. Of course, the first terms – real and reduced scale – specifically designate perspective types, while the second ones – life-sized and model-sized – refer specifically to the scale of

referents. In addition, I use the terms character embodiments, enactments or dramatisations as equivalent terms to constructed actions.

It is important to note that scholars have viewed the phenomena discussed in this chapter in a variety of ways, which also leads to different terms and categories. For example, they have used different terms for the character's role, such as role playing (Lidell 1980), enactment (Hodge & Ferrara 2013) and personification (Baker 2017). Metzger (1995) introduces the term constructed action (CA) to refer to the moment when the signer plays the character by embodying actions, utterances, emotions, feelings, or thoughts. She adapted this designation from Tannen (1986; 1989), who coined the term **constructed dialogue** (which I also use; see Chapter 6) as a replacement for 'reported speech'. Tannen argues that narrators do not retell a dialogue exactly how it happened, but rather as close to it as possible, i.e., they (re)construct the dialogue. Metzger applies this term constructed dialogue to sign language discourse, arguing that it coincides with the construction of characters' actions, behaviour and emotions, not precisely as it happened, but as similarly as possible (1995, 256-257). **Constructed action** or CA seems to be the most commonly-used term (Quinto-Pozos 2007; Beal-Alvarez & Trussell 2015; Cormier et al. 2015; Jantunen 2017, Puupponen et al. 2022, Ferrara & Johnston 2014).

In summary, CA can fully engage the body to interpret a life-sized character, playing actions on a real scale. Dramatisations can also be combined with classifiers to represent different characters or the same character in different scales. It is implicit that character enactments express equally character shifts, dialogues or thoughts (Liddell 2003, 158-164), using both lexical signs and classifiers. Although role shift and constructed dialogue rely on CA, this device will be discussed separately in Chapter 6. Finally, in the absence of life-sized character embodiments, signers display classifiers on a reduced scale in the space in front of them.

The following subsection gives a detailed overview of the four perspective types: (1) real scale; (2) multiple perspectives; (3) simultaneous; and (4) reduced scale.

5.2.1 Overview of signing perspective types

Real scale perspective

Telling about events from a real scale perspective involves character embodiment, i.e., constructed action (CA), based on the assumption that 'I am the character' (Sutton-Spence 2021). Besides being designated as constructed action (Metzger 1995; Cormier et al. 2015), real scale character enactments have been studied in sign

languages under other labels, such as participant viewpoint (Dudis 2004) or character perspective in which the signer may use life-sized handling classifiers referring to the manipulation of referents in their actual size and shape (Perniss 2007a, 1330).

Other than assuming the character's standpoint, the CA can be looked at according to the perception of the signer's surroundings, as a surrogate space, where there is a blend between the real space around the signers and the space of the event (Liddell 2003). Liddell (2003) based his work on a general cognitive process described by Fauconnier and Turner (1994, 1996), where two mental spaces serve as the input for a third blended space. Liddell exemplifies such a process with a cartoon of Garfield and Jon. In the cartoon, Garfield sits on the sofa in front of the television, and Jon stands up to his right. As shown in Figure 44, the cartoon is the event space, and the signer embodying and describing the cartoon is in the real space. Together they project a third space called surrogate blend. The signer playing the character Garfield is in a surrogate space. The elements that are around him are also surrogates inside that same space. When looking up, the signer who plays the cat presents a new element in the space, Jon, who becomes an invisible surrogate, while Garfield is the visible surrogate. All this surrogate space occurs on a real scale perspective.

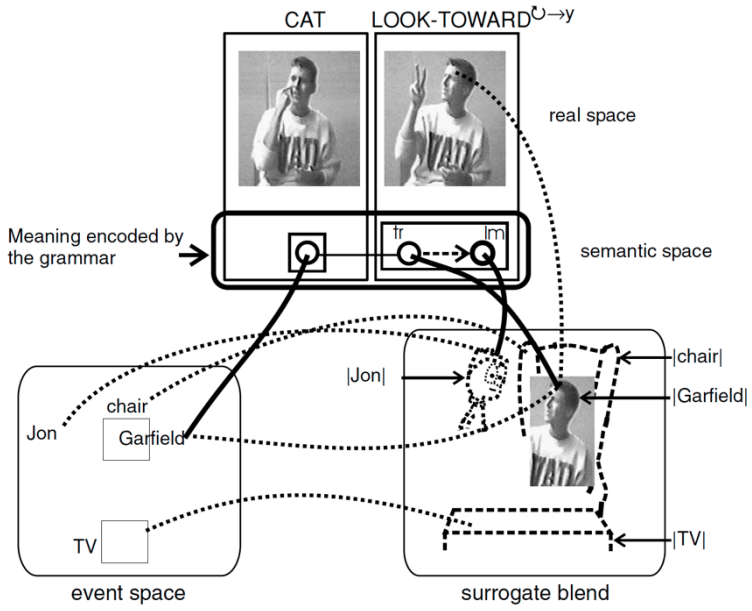


Figure 44. Creation of a surrogate space by the signer blending the real space and the event space (in Liddell 2003, 152)

The audience watching the signer understands that there are two elements in the signer's space: the one that is being played by the signer, which is Garfield, and the one that Garfield looks at, which is Jon, presented as a new surrogate. The cartoon that was watched (event space) and the cartoon that was processed by the brain (mental space) are mapped into real space. The elements are mapped so that the audience perceives where they are located, namely where the television and the sofa are in relation to the characters, Garfield and Jon. The elements can be placed near the signer and further away. They can be above or behind the signer within their signing space.

In surrogate space, there can be moments of full CA, where the whole body, including the hands, represents only the character. Still, there can also be moments where the hands or other body articulator is no longer part of the CA (Liddell 2003, 155 – 157). This implies that CA may be expressed in different degrees, from full enactments as a character to partial embodiments cooccurring with utterances produced by the narrator.

Metzger (1995, 262 – 264) distinguishes different forms of CA. The one expressed at its fullest, involves primarily the body, shoulders, trunk, head, face, eye gaze and hands, combined, eventually, with limited use of lexical signs and classifiers, is designated as a direct action (ibid., 263). For resembling mime, Liddell and Metzger (1998, 673) consider it gestural, which refers to an ongoing discussion (Lillo-Martin 2012; Kegl 1985; Quinto-Pozos & Mehta 2010). Similarly, Cormier and colleagues (2015,19) present distinct types of CA. When the signer acts mainly as a character, instead of as the narrator, they label it as **overt CA**.

The intermediary stage involving simultaneously character embodiment and narration with lexical signs and classifiers directed at the audience is termed by Metzger (1995) as direct and indirect actions. Not exactly alike, Cormier and colleagues (2015) consider that, in this form of CA, which they label as reduced CA, the signer acts mainly as a character and second as the narrator. This form of CA involves the most articulators since the signer can use facial expressions and body movements as a character while the hands produce lexical signs as the narrator.

When the CA is reduced to a minimum, the narrator steps further in and takes the stage in what has been labelled by Metzger (1995) as indirect actions. In this form of CA, the narrator plays the leading role with limited involvement of the body. Cormier and colleagues (2015) designate such a form where the signer acts mainly as the narrator and second as a character as a subtle CA. Here, the character's role is reduced, and the narrator's role is increased. Thus, the narrator can tell the story and, at the very least, have some articulator in the body representing a character. Finally, when the

signer acts mainly as the narrator, and there is no character dramatisation at all, Cormier and colleagues (2015,19) state that CA is non-existent, or none.

Another type of CA is the embodiment of animals or objects. Rachel Sutton-Spence highlights anthropomorphism in deaf literature, such as poetry, visual vernacular, children's stories and fables (Sutton-Spence & Napoli 2010; Sutton-Spence & Kaneko 2017; Sutton-Spence 2021; Baker 2017; Asmal & Kaneko 2020). Such embodiment of animals, other living beings, like trees, or objects, like a ball, is very common in folkloric deaf literature (Sutton-Spence & Kaneko 2017 and Sutton-Spence 2021). Anthropomorphism is yet to be studied in personal experience narratives. Nonetheless, Sutton-Spence describes a personal experience narrated by a deaf man telling his experience with a mouse in Brazilian Sign Language (Libras). He embodies the mouse in some moments of his narrative, using facial expressions and body movements to represent the mouse in detail. She also adds that during anthropomorphism, signers may use classifiers.

Hodge and Ferrara (2014) observe that the way signers tell their narratives is influenced by their background, experience as storytellers, age or education. For instance, when comparing the use of CA in younger and older adults, Puupponen and colleagues (2022) see that overt CA is used more often by older deaf people. Such a result may have to do with educational policies affecting successive generations of deaf people, namely by a decrease in the number of deaf peers with whom interact.

Thus, CA is a mime-like form to represent characters' experiences on a real scale, which is overwhelmingly used in sign languages. When the embodied character interacts with someone else represented by a life-sized classifier, then we are facing multiple perspectives, which are reviewed next.

Multiple perspectives

If one character can be expressed under a real scale perspective, as shown above, how can the interaction between characters be represented? Here, the signer acts as two or more characters simultaneously, using different articulators, in what Cormier and colleagues (2015) designate as mixed CA, Dudis (2004) as partitionable zones in a single blend and Liddell (2003) as a multiple blend. Although Cormier and colleagues do not refer to which perspective is used in these interactions, Dudis places character representation on the same scale, while Liddell considers the combination of CA with classifiers in different scales.

Dudis exemplifies such multiple perspectives with a signer acting as being punched or, actually, as punching himself on the chin (2004, 231). This way, the signer embodies one character and the arm and hand act as if belonging to another character,

being both represented as life-sized from the character's perspective. He further adds that this is so straightforward that even gesturers express it in the same way (ibid., 236).

The moment when two perspectives come together, or there are multiple perspectives expressed not only by the hands but also by other nonmanual articulators, are called by Dudis nonmanual partitionable zones. He exemplifies these with the case of a signer showing suspicion through his facial expression without lexical signs. At the same time, the hand articulates a body part classifier, with the “V” handshape representing someone's eyes looking at him. Here, two characters are expressed simultaneously, one by the signer’s facial expression and the other by the classifier's handshape (2004, 234 – 235).

In the example given by Liddell (2003), where Garfield is sitting on a sofa, the signer embodies Garfield's character by tilting the head slightly upwards and looking up on a real scale. While the signer’s facial expression represents the main character, the handshape "V" stands for a secondary character looking at the main character. In this case, there is contact between characters. In particular, the signer’s gaze embodying the main character is directed towards the hand that represents the second character looking towards the signer (Dudis 2004). Thus, the signer’s eye gaze from the character’s perspective is directed at the second hand, i.e., the second character.

Liddell (2003) further describes a multiple blend by representing different elements under distinct scalar perspectives. Liddell illustrates this with a signer embodying a character, while the left hand represents a police car passing in front of him as an entity classifier. The signer acts as a character on a real scale, and the hand represents a car on a reduced scale, involving both real and reduced scale perspectives and more than one referent at the same time (2003, 307 – 308).

After describing the interaction between characters, usually expressed by a combination of CA and life-sized classifiers, I discuss next how the same character is represented simultaneously with different scales.

Simultaneous perspectives

While the two perspectives described previously refer to character embodiments and their interactions with their surroundings, the third perspective described here expresses the same character simultaneously in real and reduced scale. This way, signers embody a character acting in their life-sized space, while using a model-sized figure to represent that same character (Perniss 2007b; Sutton-Spence 2021). These simultaneous representations of the same referents in different scales have been designated as simultaneous perspectives (Perniss 2007a), double perspectives (Perniss

2007b), simultaneous blends (Liddell 2003) or scalar properties of blends (Dudis 2004).

Liddell (2003) illustrates this phenomenon with a signer enacting Garfield looking up by tilting the head slightly upwards and directing his eye gaze upwards on a real scale. While the signer looks up, within the character's gaze, acting as if he were Garfield, his hand represents Garfield's eyes directed upwards with the body part classifier produced with the handshape "V". In this way, even if it seems that there are four eyes, the reality is that the same character is again expressed simultaneously with different articulators.

Dudis exemplifies this perspective type with the signer enacting a life-sized motorbiker while the hand represents the motorbike with an entity classifier. It is the same event represented simultaneously in different scales. He further adds that the elements do not establish contact with each other. Perniss (2007a) demonstrates simultaneous perspectives with an example where a signer embodies a driver stopping at an intersection and looking both ways. Here, the left hand represents the vehicle as an entity classifier (2007a, 1320).

After describing a signer producing the same character in both scales, real and reduced, at the same time, I focus next on spatial arrangements set up in the signing space by the narrator in a reduced scale perspective.

Reduced scale perspective

The three signing perspectives explained above involve constructed actions to different degrees. In contrast, the reduced scale perspective, which Sutton-Spence (2021) puts as 'These are the characters', does not involve character enactments. Again, this signing perspective, where the narrator is outside the event arranging it on a reduced scale, has been labelled differently as a global viewpoint (Dudis 2004) or observer perspective (Perniss 2007a). This suggests that story elements are set up in the signing space as model-sized miniatures in a depicting space (Liddell 2003).

The fact is that, when telling a narrative, signers usually start by giving the audience a mental picture of the event space from a reduced scale perspective (Poulin & Miller 1995). In this three-dimensional special arrangement, the signer resorts mainly to model-sized classifiers (Sutton-Space 2021, 52). Such prototypical handshapes stand for semantic features, while also representing their actions and locations as depicting verbs (Liddell 2003, 263) or classifier predicates (e.g., Perniss 2007a). The most common reduced scale classifier is designated generally as an entity classifier, where the size and shape of an object are mapped into the shape of the hand(s) and, eventually the arm(s).

Each sign language has its own set of handshapes that can be manipulated within a reduced scale space. For instance, in American Sign Language (ASL), the '3' handshape (thumb, index, and middle fingers stretched) can represent a car (Sutton-Spence 2021) or a motorbike, which can be placed over the other hand with an open palm handshape as the ground, both as entity classifiers for a motorbike going uphill on a steep road (Dudis 2004, 225). In British Sign Language (as well as in Portuguese Sign Language, LGP), a car is represented instead by the downward-facing open palm handshape (Sutton-Spence 2021, 51).

However, in the real scale perspective, the handling classifier is used together with the entity classifier. The handling classifier may also occur in the reduced scale, where the entity classifier is standard. Although this is rare in German sign language, her study with Özyürek (2008) showed that it is pretty common in Türk İşaret Dili (Turkish Sign Language).

The reduced scale perspective can be combined with partially overt constructed actions where the signer usually embodies the character's gaze. Otherwise, when narrating only under a reduced scale perspective, the eye gaze is generally on the hands, which Perniss (2007a) does not clearly assign to the narrator or the character.

Having presented the two four types of signing perspectives, I look next at the studies on signing perspectives specifically on personal experience narratives.

5.2.2 Signing perspectives in personal experience narratives

The previous subsections focused on signing perspectives in all types of storytelling. What about in personal experience narratives? In the literature review on the structure model in sign language narratives, in §1.2.5., I discussed more in-depth work by three scholars, Wilson (1996), Mulrooney (2009) and Sohre (2013), who analysed signing perspectives as evaluative devices in personal experience narratives.

Wilson (1996) saw that in her data, a personal experience narrative in American Sign Language (ASL), the signer preferred to dramatise actions rather than to describe them with lexical signs. Both Mulrooney (2009) and Sohre (2013) analysed their narratives (respectively 12 ASL narratives and four in Romanian Sign Language, LSR) according to Liddell's (2003) model of blended mental spaces, finding real and reduced scale perspectives.

Mulrooney concluded that signing perspectives depend on the information expressed. Hence, factual information is given by the narrator usually at the beginning and the end of the narrative. In the middle parts of the story, signers tell about events or reactions to those events mainly through a combination of CA with the information

given by the narrator, while in more emotional moments they tend to rely on overt enactments. Similarly, Sohre observed that the real scale perspective was especially frequent during the complication and the resolution components.

After summarising the findings of the few studies on signing perspectives in personal experience narratives, I turn to previous work on signing perspectives in emerging and village sign languages.

5.2.3 Signing perspectives in emerging and village sign languages

Having explained the four perspective types in depth, I now explore what we know already – before the research in this study – on perspective-taking in signers from young or emerging sign languages (e.g., Pyers & Senghas 2007; Stamp & Sandler 2021) and village sign languages (e.g., Nyst 2007a; De Vos 2012a; Edward 2021). This issue also involves consideration of gesture, homesigning, and language acquisition in children, which I will briefly touch on.

Concerning **gesture** and **sign language acquisition**, the most common perspective is expressed by real scale constructed actions involving the signer's body to enact a character. Real scale is used by both non-signers when gesturing (McNeill 1992; Godoy 2020) and hearing children very early on (McNeill 1992); for example, when they move their bodies without music to represent 'dance' (Iverson et al. 2008, 4). The real scale perspective is also used by deaf children before the third year of life (Loew 1984; Lillo-Martin & Quadros 2011; Smith & Cormier 2014). Then, at around three years old, ASL-exposed deaf children start producing constructions of entities (e.g., people, vehicles) on a reduced scale (Slobin et al. 2003). At eight, they play with this type of reduced scale ASL classifiers (Smith & Cormier 2014), but even by 12, most still do not master them (Slobin et al. 2003). This indicates that there might be a parallel developmental phase at the individual level and the language level.

When it comes to deaf individuals who grow up without fluent signing interlocutors and no compensatory language training (e.g., audiological interventions), they are usually called '**homesigners**'. Morford and Kegl (2000) distinguish between isolated homesigners and homesigners in contact with other deaf people using the visual-spatial modality alone. These authors have observed that isolated homesigners use only the real scale perspective, engaging the whole body to represent actions and handling imaginary objects (2000, 377). However, homesigners in contact are observed to replace the actions of the legs with the arms and hands, i.e., with body part classifiers and entity classifiers to represent objects (but not human entities) in addition to handling signs (2000, 378). In this case, the use of classifiers suggests that its emergence may be driven by the interactions in the signed modality.

In **emerging sign languages**, it has been shown that real scale character embodiment is the first signing perspective to appear, which is attributed to the imitation of human actions as the most "immediate resource" to signers (Stamp & Sandler 2021, 2). In Idioma de Señas de Nicaragua (Nicaraguan Sign Language, ISN), which emerged about 40 years ago, signers also use the real scale perspective. However, they do not consistently set up reduced scale referents in space within the narrative (Pyers & Senghas 2007). It appears that by interacting with other deaf people over time, signers come to use different perspectives, especially when it comes to involving the reduced scale (Stamp & Sandler 2021; Morford & Kegl 2000). In this way, both **language age** and **interaction** between deaf peers seem to be relevant factors in the development of linguistic devices related to real and reduced scale perspectives.

In Israel, there are three relatively young sign languages (of about 90 years ago, see Chapter 1 for more details): Israel Sign Language (ISL or Shassi), Al-Sayyid Bedouin Sign Language (ABSL) and Kufr Qasem Sign Language (KQSL). The last two ones have developed in villages, where KQSL is used by a smaller deaf population than ABSL. Studies of these three sign languages have identified a proportional use of the real scale perspective according to the size of the deaf population. In other words, KQSL signers produce much more overt constructed actions than ISL. Inversely, the authors found that multiple perspectives are produced often by ISL signers, followed by those of ABSL and were seldom verified in KQSL (Stamp & Sandler 2021, 14). The authors suggest that the **larger size of the deaf community** – and, importantly, not the **age** – in ISL, promotes faster development of more complex devices (Aronoff et al. 2008; Meir 2012; Stamp & Sandler 2021).

Previous work has also been done on one of the languages in the current study, Adamorobe Sign Language (AdaSL), a village sign language with a much longer **time depth** (ca. 200 years and 30 deaf people, see Chapter 1 for more details). In her research of AdaSL, Nyst (2007) did not find the reduced scale perspective nor moving entity classifiers in the retellings of the Tweety and Sylvester cartoon. For example, the two-legged classifier found in most Western sign languages was unattested in AdaSL (Nyst 2007a, 196). However, Edward (2021) later compared AdaSL and Ghanaian Sign Language (GSL; a school-based sign language with an ASL substrate) and showed that some AdaSL signers (six of ten) did use the reduced scale perspective. Through elicited descriptions of short videos featuring real people as actors rather than cartoons, she observed that signers produced entity classifiers. Such an elicitation methodology prompting responses for instance to 'boy and girl ride [a bicycle] towards each other' was likely decisive in obtaining classifiers like opposing upward index fingers to represent two people riding towards each other (Edward 2021, 204), as shown in Figure 45.



CL_E (boy); mov. right to left
CL_E (girl); mov. left to right

Figure 45. Representation of two people running into each other with the index fingers pointing upwards in AdaSL (in Edward 2021, 202)

Although this coincides with a GSL classifier (GSL also has a second two-legged classifier to represent a human figure), signers of both AdaSL and GSL produced the real scale perspective much more frequently. It is important to remember that the deaf people in Adamorobe are in contact with GSL (the younger generation is schooled in the national sign language, and the Sunday mass is given in that language by a deaf priest). Thus, since they can use GSL to communicate with outsiders (see Chapter 1 for more details), **borrowing** might have influenced AdaSL data on the reduced scale collected by Edward (2021, 347).

Another village, in Benkgala, Bali (see Chapter 1 for more details), has a similar deaf population to Adamorobe, and its sign language, Kata Kolok, also has a long **time depth** (De Vos 2012a). De Vos collected narratives from personal experience in Kata Kolok and shows that the signers use real and reduced scale. However, unlike AdaSL, Kata Kolok signers make extensive use of model-sized classifiers. The perspective they used the most was the reduced scale perspective. For example, in one of the narratives, the right hand would represent a man while the left depicted a tree, both as entity classifiers. In another narrative, the signer narrates an accident between a truck and a motorbike by clashing both hands with each other in reduced scale, as shown in Figure 46.

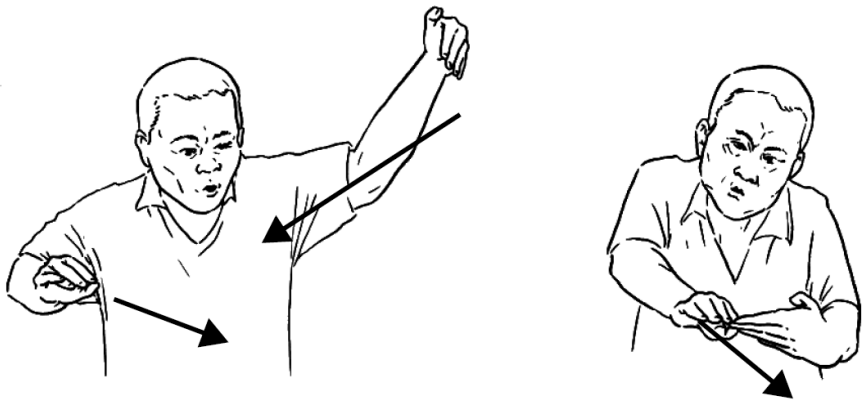


Figure 46. Representation of two referents (a truck and a motorbike) with entity classifiers in reduced scale perspective in Kata Kolok (in de Vos 2012, 280)

In Kata Kolok, the classifier representing a person is the whole hand in a vertical position, all fingers up. When doing the walking movement, the forearm moves vertically up and down (de Vos 2012a, 101). Kata Kolok classifiers vary in orientation and movement but within a smaller set of handshapes when compared to other macro-community sign languages (Marsaja 2008). Therefore, such a description of Kata Kolok's signing perspectives, suggests that time depth may be especially important to the development of narrative devices related to signing perspectives.

However, the differential use of perspectives in distinct village sign languages may be influenced by the **type of elicitation materials**. Stamp and Sandler hypothesise that the elicitation material can limit the spontaneity of signing expression (2021, 15). Also, Nyst points out that cartoons are not part of signers' lives in Adamorobe – nor are films for that matter, I must add. In the current study, I did not use any elicitation materials to collect signing productions as naturally as possible.

To sum up, we see that the real scale perspective is present when sign language first emerges, whether in an individual or a community, while the other perspectives appear over time depending on the size of the deaf population and their interaction patterns – or even the age of the signer learning a language that uses multiple perspectives. In the young sign language of ISN in Nicaragua, signers rarely use classifiers in the reduced scale perspective in their narratives (Pyers & Senghas 2007, 292). In contrast, Kata Kolok – which is similar in the number of signers and language age to the sign language of Adamorobe – uses the reduced scale perspective often. Again, this is not the case in the not-so-old micro-community sign languages of the

Al-Sayyid Bedouin tribe and the city of Kufr Qasem, in Israel, where the real scale perspective is preferred.

It is possible, then, to conclude that the development of linguistic structures, particularly of narrative devices, depends not only on the age of the language but also on the size of the community (Stamp & Sandler 2021). Furthermore, it is crucial to remember that the type of elicitation materials can influence the authenticity of the signers' productions.

The overall focus of this thesis is on narratives of personal experience in three sign languages, collected only by asking a question, without any elicitation material. Two of the sign languages are villages of different time depths, and one is an emerging school-based sign language of about 20 years (see Chapter 1 for more details). Thus, comparing the three languages is relevant to understanding how community size, language age and interaction patterns between deaf peers influence the development of narrative devices.

This subsection reviewed in the literature the four signing perspectives analysed here. First, each of the signing perspective types was described (§5.2.1). Then, previous studies on signing perspectives in personal experience narratives (§5.2.2) and emerging and village sign languages were presented. In the following section, I pose the research questions specific to Study 2.

5.3 Research question

The three sign languages studied here have different sociolinguistic backgrounds. Two are used by micro-communities (AdaSL and LaSiBo) and one by a macro-community (LGG). One is very old (AdaSL) and two are very young (LaSiBo and LGG). What does this predict about the types of signing perspectives that may be used in personal experience narratives in each community?

Studies of emerging sign languages show that signers prefer using the real scale perspective, except for the macro-community ISL, where more than one perspective occurs. It is important to remember that ISL – and the two village sign languages of Israel – are about 90 years old, while ISN, the other macro-community sign language, is about 40 years. Out of this set of emerging sign languages, the one with both a larger community and a deeper time depth, ISL, shows the faster development of signing perspectives. In village sign languages, the surge of the reduced scale perspective does not seem to be time-dependent. Although its occurrence in AdaSL may be questionable, it has developed in Kata Kolok, which has a similar community size and language age.

The fact that the three sign languages have distinct backgrounds may show which factors determine how different signing perspectives develop, whether the size of the community, time depth of the language or frequency of social interactions between deaf peers.

To seek it, this study poses the following research question:

To what extent do signers of the three sign languages produce signing perspectives to enhance their narratives? The hypothesis is that signers in all languages will prefer to use the real scale perspective. Also, the reduced scale is not predicted to appear in languages with a shallow time depth – i.e., those in an earlier stage of language development – regardless of the size of the community and number of interactions. Specifically, this means that I would not expect a reduced scale perspective to be found in either LaSiBo or LGG. Moreover, the use of reduced scale has yet to be fully attested in AdaSL (across multiple signers), but based on the longer time depth, the prediction is that it would be used.

To answer the research question and test the hypotheses, I will analyse the signing perspectives in the personal experience narratives in the three West African sign languages. The following section focuses on the methods for the analysis of the four types of signing perspectives.

5.4 Methods for the analysis

With the research question in mind, I revisit the methods used in the analysis of the signing perspectives previously described in subsection 2.5.4. As in Study 1 on the narrative structure, the remaining three studies on narrative devices are based on the same data of personal experience narratives: 17 in AdaSL, 12 in LaSiBo and 16 in LGG.

The analysis for the present study is based again on coding in ELAN annotations. Five ELAN tiers are shared with other studies – translation, glosses for the right and left hand, role and eye gaze – and three others are specific to Study 2 – perspectives and classifiers for each hand. Table 26 provides further details on the tiers, namely the type of annotation and a brief description.

Table 26. Overview of ELAN tiers for Study 2

Parent tiers ↳ Children tiers	**Controlled vocabulary**	**Brief description**
Translation	text	Free translation
RH gloss LH gloss	text	Narrow translation
Eye gaze	- gaze on the audience - character's gaze - gaze at the hands	Identifies the narrator's role Identifies the character's role Identifies the reduced scale
Role	- narrator - overt constructed actions - partially overt constructed actions	Specifies the signer's role type
Character ↳ RH character ↳ LH character ↳ face ↳ body	text	Specifies who the character is in different articulators
↳ gaze at referent		Identifies who or what the character is looking at
Perspective	- real scale - multiple - simultaneous - reduced scale	Specifies the signing perspective type
RH classifier LH classifier	- entity - handling - body part	Specifies the classifier type in signing perspectives

I followed a set of criteria to distinguish the perspectives from one another (in the **perspective** tier), as follows.

(1) In the **real scale perspective**, i.e., to determine if the signer is embodying a character using life-sized constructed actions, the signer should have a character's gaze (in the eye gaze tier) and play the role of a character. The character can be fully embodied as an overt constructed action (in the role tier) by involving as many articulators as needed (RH and LH, face and body in the character tier). Otherwise, the enactment can be combined with narrations as a partially overt constructed action (in the role tier). In this case, only part of the articulators acts as a character (in the character tier), while the other part, usually the hand(s) plays the narrator by using

lexical signs (identifiable in the gloss tiers). The enacted character may use handling classifiers, since they are life-sized, whereas narrations – in the narrator's role or combined with a partially overt constructed action – may use entity or body part classifiers, in both scales (in the classifier tiers), as long as they are not representing another character (assigned to multiple perspectives) or the same character in reduced scale (assigned to simultaneous perspectives).

I also note that the real scale perspective includes lines in constructed dialogues, whether they refer to self-talk or are addressed to someone. However, these particular instances are analysed later in Study 3 on role shift and constructed dialogue.

(2) In **multiple perspectives**, the signer plays a partially overt character's role (in the role tier), since part of the articulators, usually the hand (in the RH or the LH character tier), represents an additional character with whom the embodied character interacts. Because signers are representing multiple perspectives by more than one character, they should have either a character's gaze (in the eye gaze tier) or a gaze at referent (in the character tier) which is directed at the narrated interactive partner. The additional character in the interaction can be represented by life-sized classifiers, whether handling or entity or by a body part classifier (in the classifier tier).

(3) In **simultaneous perspectives**, the signer plays again a partially overt character's role (in the role tier) with a character's gaze (in the eye gaze tier). In contrast to multiple perspectives, here the hand(s) (RH or LH character tier) represents the same character as the embodied one, but on a reduced scale. For that purpose, signers use a model-sized classifier, whether an entity or a body part (in the classifier tier).

(4) In a **reduced scale perspective**, the signer plays the narrator (in the role tier) and may have his gaze on the audience. However, it can also be the case that the gaze is at the hands (in the gaze tier) looking at the display of model-sized elements in the signing space. These elements are expressed by reduced scale classifiers, whether entity or body part (in the classifier tier).

Proportion of narrative time per perspective. After distinguishing the perspectives and whether the character was fully overt or partially overt in the real scale perspective, I calculated the time used by the signers in each perspective type and calculated the time as a percentage of the whole narrative for a better understanding of the distribution in signing perspectives per narrative and consequently per language (see §2.5.4 for more details).

Of course, in some of the moments throughout the narratives, signers also convey events neutrally as narrators (**neutral narration**), as explored in Study 1. The time spent in neutral narration was not the main focus of Study 2 because the goal is to examine perspectives as enhancing devices. However, to understand the total time

dedicated to the perspectives in the narratives, the proportion of neutral narrations, which involve mostly lexical signs, is calculated for a general overview of the preferences in the narration styles per language. Yet, the relevance of neutral narration as a proportion of narrative time is later considered alongside the other perspectives.

Table 27 shows the duration of each perspective type and of neutral narrations in narrative LGG_06 to make clear how their proportional distribution was calculated. This narrative has a total time of 39 seconds and 24 milliseconds (00:39:24). Here, the signer dedicated 15 seconds and eleven milliseconds to neutral narrations, thirteen seconds and five milliseconds (00:13:05) to the real scale perspective, two seconds and 38 milliseconds (00:02:38) to multiple perspectives, five seconds and 49 milliseconds (00:05:49) to simultaneous perspective, and four seconds and 47 milliseconds (00:04:47) to the reduced scale perspective. Thus, considering the total time of the narrative, narration styles were distributed proportionally in 33% of neutral narrations, 33% in the real scale perspective, 7% in multiple perspectives, 15% in simultaneous perspectives and 12% in the reduced scale perspective. The time told in the real scale was further divided into overt and partially overt constructed actions. In this narrative, the signer uses over overt CA for five seconds and thirteen milliseconds (00:05:13) and partially overt CA for seven seconds and 52 milliseconds (00:07:52), this corresponds respectively to 13% and 20% of the total time of the narrative.

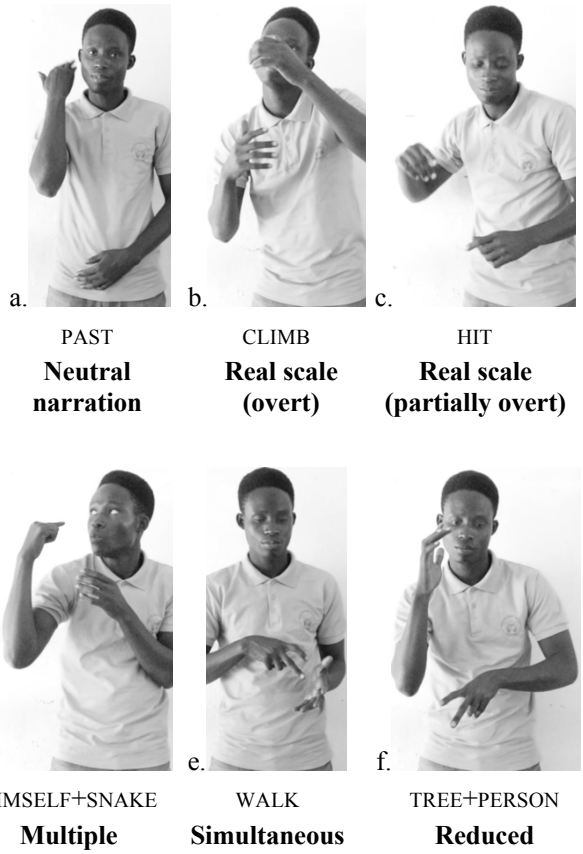
Table 27. Duration and proportional distribution of signing perspectives and neutral narrations in narrative LGG_06

Narrative LGG_06	Time	Proportion
Total time	00:39:30	100%
Real scale	00:13:05	**33%**
overt constructed action	00:05:13	13%
partially overt constructed action	00:07:52	20%
Multiple	00:02:38	**7%**
Simultaneous	00:05:49	**15%**
Reduced scale	00:04:47	**12%**
Neutral narration	00:13:05	33%

The examples in (52) from an LGG male signer illustrate each narration form. In (52a), the signer is in the narrator's role, with a neutral body position, looking directly at the audience and signing PAST to indicate when the narrated event occurred. In (52b), the signer is acting in overt CA as if climbing a tree. In (52c), he expresses a

partially overt CA by enacting the character looking at the snake while making the lexical sign for HIT. In (52d), the signer produces multiple perspectives by embodying the character looking at the snake while representing the snake with his right hand looking at him. In (52e), he is moving his head as if walking on a real scale while signing WALK on a reduced scale. Finally, in (52f), the signer explains the human character is walking by a tree.

(52) Examples of (a) neutral narration and signing perspective types: real scale in (b) overt CA and in (c) partially overt CA, (d) multiple, (e) simultaneous and (f) reduced scale in narrative LGG_06



After calculating the time in each perspective – and in neutral narrations – in each signer, and their proportions per narrative, I computed the average proportional durations per sign language, and, in LGG, also per gender.

Based on these methods, the summary results are presented next, followed by a descriptive analysis for each signing perspective. The descriptive analysis first details the real scale perspective concerning life-sized character enactments (§5.5.1); then multiple perspectives displaying more than one character at a time (§5.5.2); followed by simultaneous perspectives representing the same character in both scales (§5.5.3); and finally the reduced scale perspective involving the manipulation of model-sized entities in the signing space (§5.5.4). Within each one of them, a description is provided per language.

5.5 Descriptive analysis of signing perspectives

Having defined the methodological approach for this study, signing perspectives are now presented in terms of their proportional distribution per language. The involvement of articulators in distinguishing roles and the type of classifiers to refer to story elements will be detailed further when relevant to each perspective type in the following subsections.

The summary results in Table 28 show that signers of all three sign languages use the real scale perspective in personal experience narratives far more than the other perspective types. This conforms to my expectations based on previous research in sign languages, child language acquisition and gesture research about real scale as being foundational.

However, another hypothesis was not supported. I predicted that the reduced scale would take time to emerge, regardless of community size and interactions; however, signers of the oldest language, AdaSL, were not found to use any reduced scale, while one group of signers in the youngest language, LGG men, were the only group that were documented as using reduced scale. This may indicate that interaction patterns are more important than time depth (comparison with AdaSL) or community size (comparison with LGG women).

Table 28 relates with each proportion the actual number of narratives and the total times of all narratives per perspective – and neutral narrations – in each language and for the two genders in LGG. It is made clear how strikingly higher the proportion of neutral narration in LaSiBo signers is and how they are using these perspective strategies so much less. In contrast, there is a high variability in perspectives used by male LGG signers.

Table 28. Proportional distribution of signing perspective types in the three sign languages

Perspective	AdaSL			LaSiBo			LGG					
							men			women		
Real scale	**17**	**11:17:44**	**75%**	**10**	**03:11:42**	**41%**	**8**	**02:09:23**	**46%**	**6**	**02:18:31**	**50%**
overt CA	16	02:14:42	15%	10	01:59:46	26%	8	00:30:08	11%	4	00:30:45	11%
partially overt CA	17	09:03:02	60%	10	01:11:56	15%	8	01:39:15	35%	6	01:47:46	39%
Multiple	**9**	**00:22:16**	**2%**	**4**	**00:04:39**	**1%**	**6**	**00:22:10**	**8%**	**2**	**00:07:19**	**3%**
Simultaneous	-	-	-	-	-	-	**5**	**00:17:24**	**6%**	**2**	**00:03:29**	**1%**
Reduced scale	-	-	-	-	-	-	**6**	**00:32:00**	**11%**	-	-	-
Neutral narration	**15**	**03:27:55**	**23%**	**11**	**04:35:26**	**58%**	**7**	**01:24:50**	**30%**	**7**	**02:05:28**	**46%**
TOTALS	**17**	**15:07:55**	**100%**	**12**	**07:51:47**	**100 %**	**8**	**04:45:47**	**100 %**	**8**	**04:34:47**	**100 %**
	Narratives	Time	Proportion	Narrative	Time	Proportion	Narrative	Time	Proportion	Narrative	Time	Proportion

As expected, the analysis shows a difference between female and male LGG signers, especially in the use of other perspectives than the real scale, which is reflected in the Table above. This prompted me to go back and analyse the data in terms of differences by gender in AdaSL and LaSiBo, too; however, I found no differences of the sort in those two languages. For this reason, I report the findings as **four distinct populations**: AdaSL, LaSiBo, LGG men, and LGG women. Examples of each perspective type are provided in the following subsections.

Next, I focus first on the analysis of the real scale perspective, corresponding to life-sized constructed actions, which can be fully or partially overt, in the three sign languages.

5.5.1 Real scale perspective

The section above shows that all three sign languages have the real scale perspective. As the most intuitive type, signers are predicted to make use of life-sized constructed actions, which imply manipulating space on a real scale through character enactments. In this perspective, character embodiment can be expressed fully, with overt constructed actions (CA), or combined with side information given by the narrator, as partially overt (CA).

Regarding the real scale perspective, the emphasis of this study is on the character's role since the narrator part, which involves mainly the use of lexical signs and classifiers, has been discussed in Chapter 3, especially concerning the eye gaze directed at the audience. An exception is made in the reduced scale perspective (in §4.4.2.), where more has to be said about the narrator's role within a specific perspective type involving mostly model-sized classifiers. AdaSL is described first, followed by LaSiBo and then by LGG.

Real scale perspective in AdaSL narratives

In the AdaSL narratives about animal attacks, signers dedicated most of their storytelling time to the real scale perspective, expressed by life-sized character enactments, i.e., constructed actions, or CA (75%). These were mostly combined with narrations involving lexical signs and classifiers, designated in this study as partially overt constructed actions (60%). In contrast, in all AdaSL narratives collected for this study, little time was spent on full enactments, called here overt constructed actions (15%). The description of the findings begins with the latter and proceeds next to the possible combinations observed in the partially overt CA.

In the overt CA, signers typically enact characters with their whole bodies, expressing emotional states with their facial expressions, and directing their eye gaze as reliving past events. For instance, in (53), the AdaSL signer acts as if warding off wasps off her face and body with her hands, while her facial expression shows distress (Narrative ADA_05).

(53) Overt constructed action to express BODY-WARD-OFF(BEES) in AdaSL



During moments of overt CA, signers can also act as if manipulating some life-sized referent with their hands, with handling handshapes as shown in (54a–d). For instance, in (54a), while moving her shoulders to enact a character that limps and expresses

pain with her face, the signer acts as if holding someone with her left hand (Narrative ADA_11a). In (54b), the signer acts as if bringing someone from one place to another. He looks at the (invisible) victim (his father) whilst the hands grab him from one place to the other (Narrative ADA_13). Finally, in (54c), the signer acts as if throwing a stone at a snake. While the hand holds an invisible stone and throws it at the imaginary snake, she looks in that direction and expresses affliction through her facial expression (Narrative ADA_09).

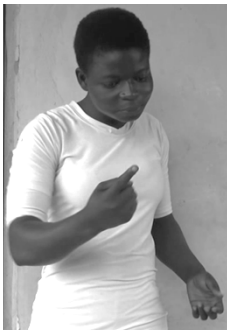
(54) Overt constructed actions with handling handshapes to express (a) LIMP+HOLD, (b) BRING (SOMEONE) and (c) THROW(STONE) in AdaSL

a.  b.  c. 

In partially overt constructed actions, representing the large majority of occurrences in AdaSL narratives, the body, including the eye gaze and facial expressions, enacts a character, while the hands produce lexical signs and classifiers. These combinations of real scale character embodiments with side narrations are illustrated next, first in combinations with lexical signs, in (54a–d) and then with classifiers (54a–b).

In (55a) the signer narrates that the character is looking for something while moving the body and directing the eye gaze accordingly as the character. The same is observed for the lexical signs WALK, in (55b), and SHOOT, in (55c). Finally, in (55d), only the eye gaze is in the character's role, expressing surprise. In this case, the lexical sign for SNAKE is combined with a [o] shaped mouth movement (see Chapter 7 for similar examples of such a mouth movement). I should note here that the lexicalised signs in (55a–b) are based on entity handshapes.

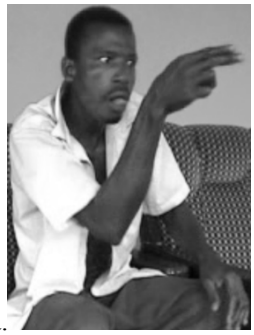
(55) Partially overt constructed actions with lexical signs to express (a) LOOKING-FOR, (b) WALK, (c) SHOOT and (d) SNAKE in AdaSL

a.  b. 

c.  d. 

In AdaSL, most classifiers used in combination with partially overt constructed actions refer to body parts, as shown in (56a–b). In (56a), the signer enacts himself as a snake by putting the tongue out while simultaneously using his hand to represent the snake's tongue (Narrative ADA_14). In another example, the signer enacts the snake with her facial expression while the arm and the fist represent the snake (56b) (Narrative ADA_09).

(56) Partially overt constructed actions with body part classifiers to express (a) TONGUE (SNAKE) and (b) HEAD(SNAKE) in AdaSL

a.  b. 

Importantly, these body part classifiers are life-sized, if they were model-sized these instances would be assigned to simultaneous perspectives, i.e., to the representation of the same character in both real and reduced scales.

Most narratives in AdaSL embody characters in a real scale perspective using life-sized constructed actions, which include handling handshapes. The large majority of the occurrences in this perspective combine real scale enactments with side narrations, especially by adding lexical signs, but also body part classifiers, in partially overt constructed actions. This indicates that signers in a community of about 30 deaf people using a very old sign language (see §1.4 for more details) have developed the necessary narrative skills to combine information by the narrator with the emotional intensity of character embodiments. Also, the fact that classifiers used in the real scale perspective are typically life-sized confirms an idiosyncratic preference in this language. The following subsection focuses on the real scale perspective in LaSiBo narratives.

Real scale perspective in LaSiBo narratives

After observing that signers in AdaSL use the real scale perspective combined with additional narrations most of the time in their narratives, I now turn to the analysis of this perspective in LaSiBo narratives. LaSiBo signers use preferably the real scale perspective (41% of the time) as do signers in AdaSL. However, contrasting with AdaSL, LaSiBo signers use more full character embodiments, i.e., overt constructed actions (26%), rather than combining them with additional information given by the narrator in partially overt constructed actions (15%).

Except for one signer who told her stories only in neutral narration, the remaining five LaSiBo signers produced more than in AdaSL the most intuitive type of character embodiment, in overt constructed actions, by involving the whole body and hands as part of a character. For instance, in (57a), the signer leans down and holds her leg and her facial expression shows pain as a reaction to a snake bite (Narrative LAS_01a). In (57b), the signer involves the whole body in his overt constructed action by moving his arms and legs. Similarly, the signer in (57c) jumps backwards to express fear.

(57) Overt constructed actions to express (a) LEG-PAIN, (b) WALK and (c) SCARED in LaSiBo

a.  b. 

c. 

While in the example above, the signer grabs her leg, it can also be the case where LaSiBo signers use handling handshapes. In (58a), the signer leans down to tie an invisible bandage on her leg where a snake had bitten her to prevent the poison from spreading (narrative LAS_06a). Also, in (58b), the signer picks up an imaginary stone, almost touching the ground, and throws it at an invisible snake (Narrative LAS_02b). In the last example, in (58c), the signer is holding a glass and preparing a medicine drink to protect him from snakes.

(58) Overt constructed actions with handling handshapes to express (a) LEG-TIE, (b) THROW (STONE) and (c) PUT-IN-GLASS in LaSiBo

a.  b. 

c. 

I observed that during these moments, LaSiBo signers often extend their enactments to a very large signing space, like leaning down, in (58a) or touching the ground, in (58b). These enactments are larger than the extent of the signing space in the AdaSL narratives. It has the effect of mapping even more closely real-life actions, like pantomimes.

Inversely to AdaSL, LaSiBo signers accompanied character enactments with lexical signs on only a few occasions. In the character role expressed by body movements and eye gaze, the signer in (59a) acts as if asking everyone for money while using the lexical sign for BEG. Similarly, the signer in (59b) acts as if looking for the whereabouts of the snake, while using the lexical sign LOOK-FOR and then, in (59c) as if cutting the snake.

(59) Partially overt constructed actions with lexical signs to express (a) BEG, (b) LOOK(SNAKE) and (c) CUT in LaSiBo

a.  b.  c. 

Recall that, in the village of Bouakako, only six deaf people use sign language for at most the last 50 years (see §1.5 for more details). Hence, with much fewer deaf signers and a much shorter language time depth, LaSiBo presents the reverse proportions in the forms of constructed actions to the ones in AdaSL. In LaSiBo narratives, signers produce more overt character embodiments than in AdaSL. In addition, the signing space used in the real scale perspective is larger than in AdaSL since it can involve the ground and moving the legs. Finally, in partially overt constructed actions, signers seem to combine character embodiments only with lexical signs. Contrasting with AdaSL which presented body part classifiers, no signs of the sort were found in such additional narrations in LaSiBo.

In the face of these distinct results in the two villages, how then is the real scale perspective in a school-based sign language? To understand this, I now look at LGG.

Real scale perspective in LGG narratives

Having seen how the real scale perspective is expressed in AdaSL and LaSiBo, I now focus on the 20-year-old macro-community LGG. Here, I present the results separately per gender since, unlike the deaf people in the villages, the differences between male and female LGG signers were more significant.

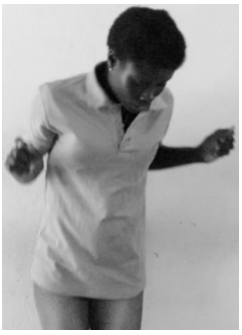
In the same way as AdaSL and LaSiBo, the real scale was the most used perspective in LGG narratives, quite evenly in both men (46%) and women (50%), except for two women who told their narratives solely in neutral narration. This means that LGG signers have a similar proportion of real scale perspectives to LaSiBo (41%).

However, as AdaSL (with respectively 60% and 15%), LGG presents more partially overt construction actions (35% in men and 39% in women) than overt ones (11% in

the two genders). Although all men expressed both overt and partially overt constructed actions, this was not the case with women. Aside from the two women that told their narratives only with neutral narrations, two others did not produce overt embodiments at all, only partially overt ones. This is to say that in real scale character embodiments, LGG signers preferably combined their character enactments with additional information. Curiously, they present fewer occurrences of overt constructed actions when compared with the other groups. I recall that, in opposition, LaSiBo signers used such a form of full character embodiments the most in comparison to the other languages.

Although in a smaller proportion, both genders use life-sized character enactments, in overt constructed actions, by involving the whole body and the hands to directly represent actions. In (60a), the signer acts as if warding off an invisible snake that had fallen from a tree over him, while his facial and bodily expressions show fear (Narrative LGG_04). In (60b), the signer also expresses fear when facing the snake but she reacts by slightly jumping backwards.

(60) Overt constructed actions to express (a) WARD-OFF and (b) SCARED in LGG

a.   b. 

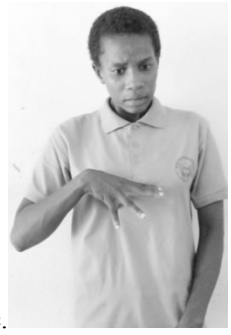
In such full embodiments, signers can also perform actions while holding something. For instance, the signer in (61a) is acting as if throwing rocks at a snake on the ground (Narrative LGG_03). Also, in (61b), the signer holds a big imaginary snake and lifts it, showing an effort by puffing her cheeks (Narrative LGG_11).

(61) Overt constructed actions with handling handshapes to express (a) THROW(STONE) and (b) HOLD(SNAKE) in LGG

a.  b. 

Apart from these, LGG signers combine, in a larger proportion, character embodiments with additional information. In these partially overt construction actions, LGG signers use lexical signs, as in AdaSL and LaSiBo. To illustrate this, the signer in (62a) embodies the character holding a bag on his shoulder and spotting a snake on the ground while signing LOOK, which is also directed downwards. In (62b), he signs SCREAM while calling out for help in distress. In (62c), the signer embodies a character looking at a snake in the ground and shows fear with her facial expression as she signs SCARED. This is similar to the example in (62d), but here she signs HIT instead.

(62) Partially overt constructed actions with lexical signs to express (a) SEE, (b) SCREAM, (c) SCARED and (d) HIT in LGG.

a.  b.  c. 

d. 

Apart from lexical signs, men and women in LGG also add entity classifiers to their character enactments, like, in (63a), where the signer acts as if walking with a hoe – represented by his arm and index finger in a hook handshape – on his shoulder. In (63b) the signer spills water – represented by her wide open hands – on the snake.

(63) Partially constructed actions with entity classifiers representing objects (a) AXE and (b) WATER in LGG.

a.  b. 

Recall that LGG has been used for 20 years in the city capital of Guinea-Bissau where there is a growing deaf community, with approximately 500 deaf people. Thus, similarities with AdaSL indicate that not only language age but community size seems to play an important role in developing narrative skills. As was observed in AdaSL, LGG signers, in both genders, preferred using the real scale perspective, combining often constructed actions with lexical signs. In sum, the fact that LGG is used by a macro-community meeting daily on school premises and around the city's neighbourhoods (see §1.6 for more details), may justify the differences concerning LaSiBo found in this perspective.

After wrapping up the real scale perspective analysis in the three languages, I now move on to the following perspective, involving multiple characters at the same time, which also occurred in the three sign languages though in a very small proportion.

5.5.2 Multiple perspectives

The present subsection analyses multiple perspectives, where the signer enacts more than one character at the same time. Signers can embody one character while their hand represents another. Signers of all three sign languages have produced it. The analysis begins with AdaSL narratives, followed by LaSiBo's and then by LGG's.

Multiple perspectives in AdaSL narratives

Besides the real scale perspective, AdaSL signers also use multiple perspectives, even if only 2% of the time in their narratives (in 9 of 17 narratives). I have to note that such a low percentage corresponds to several quick moments where the main character interacts with an animal or with a secondary character. It is also important to remember, as shown in Study 1, that AdaSL narratives are overall longer than those in the other sign languages.

Most instances in multiple perspectives are about animal attacks, such as snakes, wasps or lions. Here, signers typically enact the victims of the attacks, while their hand represents the animal striking. For instance, signers can express two characters simultaneously with the claw handshape standing for the mouth of a big snake biting on the character's leg, as shown in (64a–c), or of a lion biting on the character's head, in (64d).

(64) Multiple perspectives involving character embodiment and claw handshapes representing bites with body contact by snakes (a, b, c) and a lion (d) in AdaSL

a.  b. 

c.  d. 

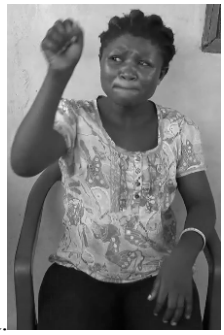
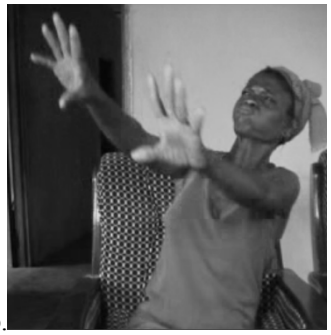
In other cases, while signers express the victim's distress, their hands can represent, at the same time, the animal sting. Again, the handshape can stand for small snakes stinging the victim's leg, as shown in (65a–b) or a wasp stinging the character's face, in (65c).

(65) Multiple perspectives involving character embodiment and handshapes representing stings with body contact by snakes (a–b) and wasps (c) in AdaSL

a.  b.  c. 

AdaSL signers, while enacting the victim, also use the hand to represent animals but without contacting the body as in the previous examples. In (66a), the hand stands for a big snake with its head held high as the victim looks at it with fear. In (66b), the hands act for wasps flying as the signer's facial expression combines the two characters: the puffed cheeks intensify the number of wasps, while she looks up at the swarm.

(66) Multiple perspectives involving character embodiment and handshapes representing a snake (a) and wasps (b) approaching without body contact in AdaSL

a.  b. 

Besides these examples of interactions with animals, there are other involving interactions with people. In (67), she is limping in pain while the hand acts as a secondary character helping out.

(67) Multiple perspectives involving character embodiment and a handling handshape representing another human character with body contact in AdaSL



In sum, although with an overall minimal percentage, multiple perspectives are used consistently across AdaSL signers to show interactions between the main character and the animal encountered or some secondary character at the same time. After presenting the analysis of the multiple perspectives in AdaSL narratives, I now move on to LaSiBo.

Multiple perspectives in LaSiBo narratives

Contrasting with the previous subsection where multiple perspectives in AdaSL narratives were illustrated with several examples, there are much fewer occurrences in LaSiBo (1%). They correspond to little examples because narratives in LaSiBo are overall much shorter than AdaSL's. Moreover, only four of the 12 narratives presented multiple perspectives. I only observed situations where the hand represents the snake biting the leg of the victim, as shown in (68a–d).

(68) Multiple perspectives involving character embodiment and claw handshapes representing snake bites with body contact in LaSiBo

a.  b. 

c.  d. 

These examples found in the twelve LaSiBo narratives express a very tiny proportion of the use of multiple perspectives. This may indicate the underdevelopment of such a device in LaSiBo. Next, I turn to the analysis of this perspective type in LGG.

Multiple perspectives in LGG narratives

In the previous subsections, it was observed that AdaSL and LaSiBo have a very small percentage of multiple perspectives, although AdaSL narratives, which are longer, present more occurrences than the much shorter ones in LaSiBo. How is it then in LGG? The examples found in the young school-based sign language correspond to slightly higher proportions in both genders (8% in men and 3% in women). Although all but two men produced multiple perspectives in their narratives, only two women expressed them. Nonetheless, they show a greater variety in the expression of multiple perspectives.

All LGG narratives are about snake attacks, so the interactions observed in multiple perspectives typically involve snakes. As in the two other sign languages, there are instances in LGG involving body contact between the character and the snake. For instance, in (69a), the signer is bitten on her leg by a snake which is represented by her hand. In (69b), the signer is sleeping under a tree when a snake falls over him. While signing that he was sleeping with the left hand, the right hand represents the snake falling on him, as he expresses his surprise with his face.

(69) Multiple perspectives involving character embodiment and handshapes representing snakes to express BITE(LEG) (a) and [SLEEP] FALL(SNAKE)-ON-ME (b) with body contact in LGG

a.  b. 

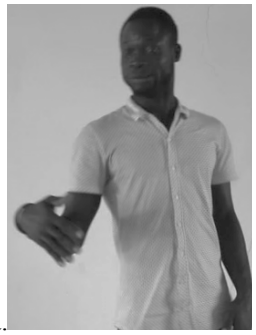
Interestingly, to convey a more dramatic effect, LGG signers also do the opposite of the previous examples by embodying the snake being handled by the human character(s). In (69a), the signer acts as if he was the snake being struck by rocks that are being thrown by the human character represented by the hands. Similarly, in (69b) she also embodies the snake but as being hanged in a hook – represented by the left hand – while held by the human character with the right hand.

(70) Multiple perspectives involving snake embodiment and handshapes representing the human character throwing rocks (a) and holding the snake (b) with body contact in LGG

a.  b. 

Other moments refer to character interactions without body contact. In (71a), the signer acts as if walking while the right hand represents the snake on the ground passing in front of him. When he sees it, he leans back. Similarly, in (71b), after being struck, the snake – represented by the signer's right hand – jumps in the air, while the character looks at it expressing surprise.

(71) Multiple perspectives involving character embodiment and handshapes representing the snake passing in front (a) and over the signer (b) without body contact in LGG

a.  b. 

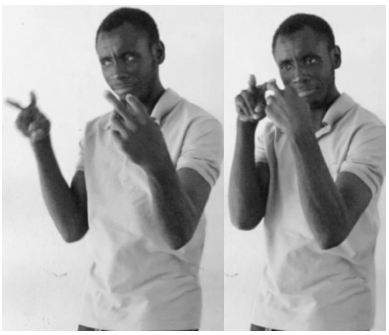
LGG male signers only typically encounter the snake on top of a tree. Here, while embodying the character grabbing the trunk or a branch, the other hand represents the snake, as shown in (72a–c).

(72) Multiple perspectives involving character embodiment holding on to the tree and handshapes representing the snake in front of them (a–c) without body contact in LGG

a.  b.  c. 

In a final example, the signer explains that he and the snake were looking at each other by using the body part handshapes representing the eyes in each, as shown in (73).

(73) Multiple perspectives involving character embodiment with handshapes representing the eyes of both the snake and the human character without body contact in LGG



Having described the use of multiple perspectives, it is possible to conclude that LGG signers present a larger variety of forms when compared to the other two sign languages, especially the men with a bigger proportion in the use of this perspective.

This may indicate that the frequency of social interactions may have developed this device.

I now move to the next subsection focusing on simultaneous perspectives, i.e., the representation of the same character simultaneously in real and reduced scales, which occurs only in LGG.

5.5.3 Simultaneous perspectives

So far, it has been observed that all three sign languages have a real scale and multiple perspectives, the first one in a much bigger proportion than the second. Simultaneous perspectives representing the same character occur only in LGG signers. In LGG, five deaf men and two deaf women produced real and reduced perspectives simultaneously for the same character, thus, with a more expressive percentage in men than in women (6% and 1%, respectively).

The most used model-sized classifier was the inverted V handshape representing a reduced scale body part, the legs, as shown in (74a–c). Although it is a very common classifier in Western sign languages, it does not occur in either of the two village sign languages in this study. The WALK sign is the only one female LGG signers use in simultaneous perspective.

(74) Simultaneous perspectives involving character embodiment with the body part handshape for WALK (a–b) in LGG

a.  b.  c. 

In the examples below, while signing WALK in reduced scale, the left hand acts as if holding a bowl on his head, in (75a), or it stands for an axe being carried on the character's shoulder as an entity classifier, in (75b).

(75) Simultaneous perspectives involving character embodiment with the body part handshape for WALK and the other hand with the handling handshape for BASKET-ON-HEAD (a) and the entity classifier for HOE-ON-SHOULDER (b) in LGG

a.  b. 

Besides the classifier for one person walking, LGG signers also produce a classifier for many people walking. In (76a), the signer tells about the arrival of several hearing people coming from different directions arriving together to help out. While using the reduced scale classifier, the signer leans back and forward to simulate the character's reaction to the crowd's arrival. In (76b), the female signer explains that she was going with three friends to fetch water from a well. When she embodies the character by moving her head and shoulders in real scale, she produces a reduced scale classifier for several legs walking.

(76) Simultaneous perspectives involving character embodiment with the classifier for CROWD (a) and for MANY-PEOPLE-WALK(b) in LGG

a. 

b. 

As seen above, LGG signers did simultaneous perspectives in different ways, especially involving the classifier for WALK while enacting a character in real scale. This perspective type and the WALK classifier were observed only in LGG, in both men and women, not in the other two village sign languages. This confirms the lack of model-sized classifiers in AdaSL demonstrated in the literature and its absence in LaSiBo, probably due to its sociolinguistic characteristics.

The following subsection focuses on the last perspective type, the reduced scale perspectives, concerning precisely the use of model-sized classifiers, which again occurs only in LGG, and to be more exact, are only produced by men.

5.5.4 Reduced scale perspective

The previous subsections focused on the perspectives involving real scale constructed actions and combinations therein with lexical signs and classifiers. I recall that the real scale perspective is preferred by signers, in general, and AdaSL and LGG signers readily add classifiers. However, so far, only LGG signers, both men and women, presented classifiers on a reduced scale, namely in simultaneous perspectives. Now, the reduced scale perspective was found only in the narratives by male LGG signers (11%).

The reduced scale perspective occurred in six of the eight narratives by male LGG signers. In these cases, signers describe the referents' location in the signing space. In Chapter 3, on the study of narrative structure, it was observed that signers started by telling the when, where and who elements of the narrative in the first component, the orientation. Here, signers typically act as narrators. In addition, to describe exact locations, male LGG signers resort to the reduced scale perspective, usually making use of model-sized lexical signs and classifiers.

For instance, the signer in (77) places in the signing space the reduced scale lexical signs STAY and TREE to explain that he was by the tree (Narrative LGG_04).

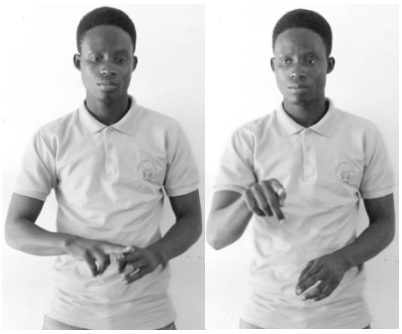
(77) Reduced scale perspective with lexical signs in LGG



STAY TREE
'I was by the tree'

Another strategy observed in these LGG narratives is pointing within the model-sized setup to the referents' locations. In (78), the signer explains what his location was in relation to the rest of the group, by signing STAY HERE.

(78) Reduced scale perspective with pointing signs in LGG



STAY HERE
'I was staying here'

This same signer goes on to say that people spread out walking by the cashew trees, in (79a). Similarly, in (79b), another signer tells how he was passing by a tree (Narrative LGG_08).

(79) Reduced scale perspective with two model-sized classifiers in LGG

a.  

PEOPLE AROUND WALK-BY-TREE
'Each one went to a different tree.'

b. 

WALK-BY-TREE
'I was here passing by a tree.'

Finally, in (80), the signer tells about the character running away from the snake and climbing a tree to hide. Here, although the right arm represents a tree, the index and middle fingers depict someone's legs, as if sitting on the tree top. Thus, interestingly, he modifies the sign for TREE to add a human figure on top of it by turning the handshape of the tree foliage into a two-legged human classifier (Narrative LGG_01). Contrasting with the remaining occurrences of reduced scale, this one happens at the climax (see Chapter 3 for more details) rather than at the beginning, like the examples above.

(80) Reduced scale perspective with one model-sized classifier to represent two referents in LGG



ON-TOP-OF-TREE
'I hid on top of a tree'

To conclude, in addition to the other three perspectives, personal experience narratives told by deaf men in LGG present the reduced scale perspective as well, even if just in a small percentage within the narratives. This perspective was produced only by male LGG signers usually in the beginning to set up the story elements. This is curious since LGG is the youngest of the three sign languages, differing only in the size of the community, which is much larger. The fact that men produced and women did not implies that the frequency of social interactions may play a crucial role in the development of such perspective.

The analysis of the reduced scale perspective was the last one presented here in this study. The following section presents a synthesis of the results in all four perspectives in the three languages, recalling that AdaSL and LaSiBo show only the real scale and multiple perspectives.

5.6 Synthesis of the results

All three sign languages reveal that the real scale perspective is used much more often than the other perspectives. All three languages also contain multiple perspectives involving the representation of more than one character at the same time but in a much lower proportion. However, only LGG signers produced model-sized signs both in the simultaneous representation of the same character in two scales and the reduced scale perspective.

To have a clear picture of the actual use of the four perspectives within the whole of the narratives, it is crucial to look at them not only in relation to each other but also to the time spent by the signers in neutral narrations. Figure 47 shows that AdaSL signers produced far more real scale perspectives than those in the other two languages. It also makes clear that LaSiBo narratives present the largest proportion of overt constructed actions. Importantly, it brings to light the prominence of neutral narrations, mostly in LaSiBo signers (58%) and female LGG signers (46%) showing that least experienced language groups rely the most on such a narration type.

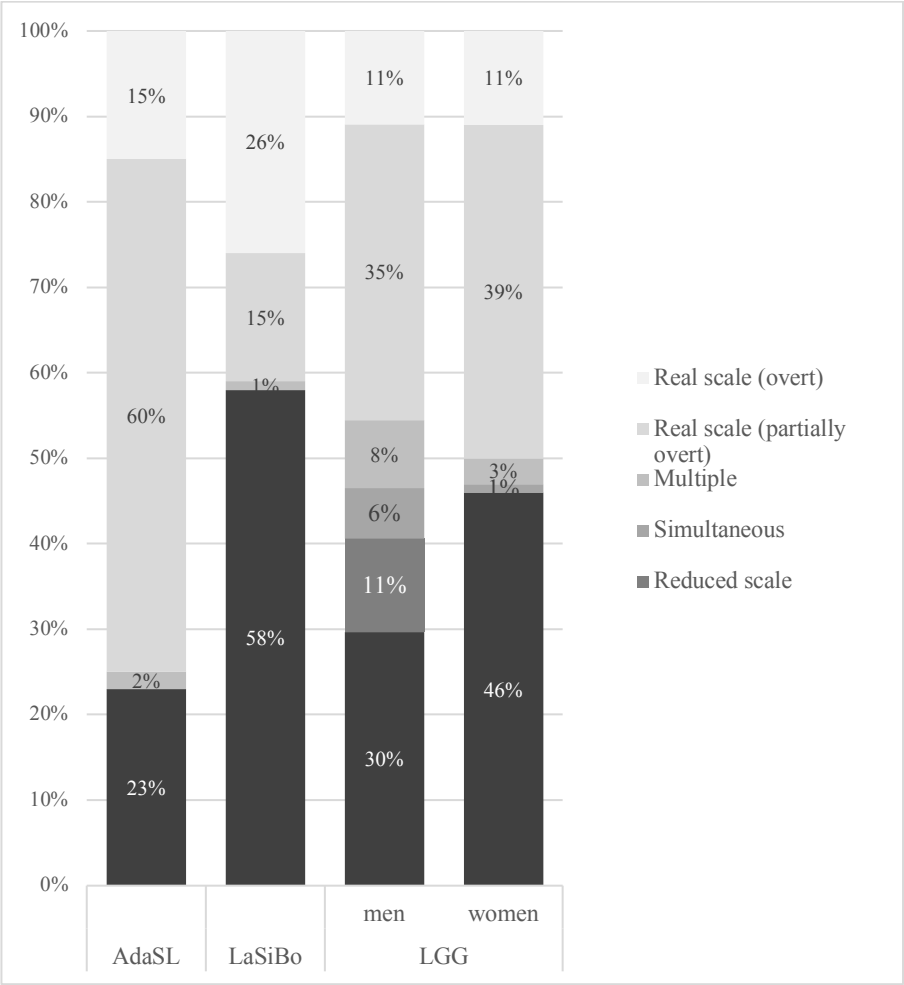


Figure 47. Proportion of the four perspectives and neutral narrations in the four groups: AdaSL, LaSiBo and LGG per gender

When looking at the real scale perspective individually in each of the three sign languages, it becomes evident that this is the preferred perspective by all signers. What is striking in this perspective is that LaSiBo signers favour overt constructed actions, within a typically larger signing space, contrasting with the other groups who use more partially overt constructed actions instead. Moreover, while all signers combine their character embodiments with lexical signs, differences surface when it comes to classifiers. Body part classifiers were also typically added in this perspective by AdaSL signers and entity ones by LGG's, unlike LaSiBo signers who do not tend to

use classifiers in this form of combined embodiments. This clearly shows a tendency from life-sized to model-sized representations that may be dependent on socialisation since it is observed in male LGG signers and not in AdaSL.

The analysis of this first perspective as the most used in the three languages draws attention to individual preferences in each language, namely of partially overt constructed actions in AdaSL and overt ones in LaSiBo. AdaSL uses overwhelmingly partially overt constructed actions as an alternative enhancing device to neutral narrations, by using life-sized classifiers especially to represent animal body parts. Such a distinction demonstrates that combining neutral narrations with a straightforward embodiment develops over the practice of storytelling that exists in the deaf group of Adamorobe, but apparently not with the one in Bouakako.

In LGG, even if, at first sight, there are no significant differences in the real scale perspective between genders, the fact that women use much time in their narratives with neutral narrations makes them more similar to LaSiBo. The biggest difference between men and women in LGG is that, instead of using neutral narrations as women do, men diversify the use of perspectives, expressing all four of them, especially those involving model-sized referents. The fact that men use all four perspectives is again proof that the acquisition of narrative skills is motivated by intensive socialisation practices.

Although the proportion of multiple perspectives is small in the narratives of all three sign languages, male LGG signers show a relatively higher percentage. Multiple perspectives most commonly expressed the embodied characters being attacked by animals represented by the signers' hands, which implied contact between hand and body. LaSiBo had fewer occurrences, and male LGG signers most of them.

AdaSL and LGG signers expressed multiple perspectives in other ways besides having their hands representing animal bites. Their hands may also represent an animal's body part without any physical contact with the signer. In addition, LGG signers, both men and women, embodied the snakes being handled by the human characters. Finally, male LGG signers alone produced multiple perspectives representing a different character in each hand.

In the remaining two perspectives, both men and women express simultaneous perspectives in LGG, but only men produce the reduced scale one. Simultaneous representations of the same character with a life-sized enactment are usually combined in LGG with the two-legged handshape for WALK. Additionally, while signing WALK men may produce a classifier with the other hand as part of the constructed action. Similarly, when displaying model-sized elements within the signing space, men place lexical signs on specific locations or point at them or use classifiers, including with the two hands.

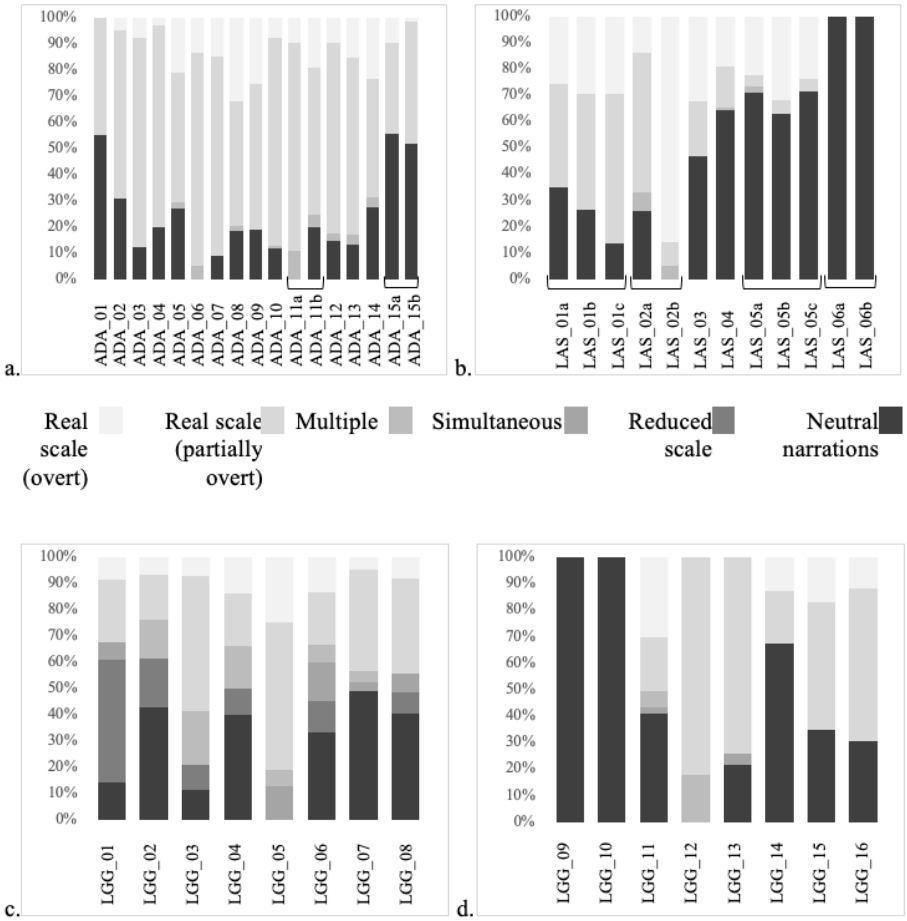


Figure 48. Proportion of the four perspectives and neutral narrations in each of the four groups, with square brackets indicating the same signers: (a) AdaSL, (b) LaSiBo, (c) male LGG, (d) female LGG signers

Looking first at the graphic shape of AdaSL narratives as a whole, in Figure 45a, it becomes evident that AdaSL signers are quite consistent in using, in general, more partially overt constructed actions in the real scale perspective and less neutral narrations.

Figure 45c shows that four of six LaSiBo signers produce their narratives mostly in neutral narrations and also with more overt than partially overt constructed actions (LAS#03–#06). One of these signers, LAS#06 tlls her two narratives only neutrally, i.e., without expressing any constructed actions. Still, this deaf woman corresponds to the one married to the hearing man fluent in LaSiBo and friends with the other deaf

woman in the village and the deaf man who is the best friend of her husband. In contrast, narrative LAS_02a relies mainly on partially overt CA. This narrative and the three ones produced by LAS#01 bear a bigger resemblance to the narratives in AdaSL. However, the only factor that seems to link these two signers is the fact that they are the younger siblings of older deaf brothers.

In LGG narratives told by deaf men, the greater consistency that becomes evident in Figure 45c is that they produce, besides the perspectives involving constructed actions, the ones implying the use of reduced scale classifiers. Of the eight narratives, five (LGG#02, #04, #06–#08) show a higher proportion of neutral narrations balanced in the remaining of their narratives with a diversity of perspective uses. This is the most striking aspect distinguishing narratives told by male LGG signers from those told in the other language groups. Such diversity corroborates the importance of socialisation to develop narrative skills. In other words, a multitude of interaction partners and frequent opportunities to watch stories being told and to experience storytelling will polish the ability to tell compelling narratives.

As shown in 45d, LGG narratives told by deaf women display higher variability between each other when compared to the other groups, probably reflecting different socialisation habits. Worth highlighting is LGG_11 as the narrative that resembles most of the ones produced by men. Of all the female signers, LGG#11 expresses a higher variety of perspectives, namely all but the reduced scale. It also corresponds to the second longer one produced by women. To understand LGG_11 being more similar to narratives by deaf men may be justified by the possibility that this female signer in particular socialises more than their peers outside of school.

All in all, when looking at the results for developmental patterns in narrative devices it seems that younger languages rely more on neutral narrations – when comparing LaSiBo and LGG to AdaSL. Constructed actions would gradually gain space within the narratives as it is the most prominent perspective in all groups. However, the combination of real scale enactments with narrations would probably require time to refine, as AdaSL signers use partially overt constructed actions in a much larger proportion. Lastly, the diversification of perspectives may be stimulated by interaction patterns, namely by a greater variety of partners and frequency of exchanges, as made clear in narratives produced by men in LGG.

5.7 Discussion

This study confirms the real scale as the most ready-to-use perspective, as observed in non-signing gesturers or children acquiring language (e.g., McNeill 1992). Life-sized enactments are also the first representative device to appear in deaf children when beginning to use sign language (e.g., Lillo-Martin & Quadros 2011),

homesigners (e.g., Morford & Kegl 2000) and emerging sign languages (e.g., Stamp & Sandler 2021). This seems to justify the larger expression of overt constructed actions in LaSiBo, as a young family sign language, which was also observed in KQSL, used by 100 deaf people.

The appearance of classifiers seems to require time since they only appear later on in the development of sign language in deaf children (c.f., Slobin 2003) and in the emergence of sign language (c.f., Pyers & Senghas 2007 for the Idioma de Señas de Nicaragua). Additionally, the influence of signed interactions has been proven to stimulate their use in homesigners in contact with other deaf people (c.f., Morford & Kegl 2000). However, the present study demonstrates that social interactions rather than time seem to be crucial to the emergence of classifiers, due to their greater expression in LGG narratives produced by men than in the much older AdaSL.

In what concerns the use of entity classifiers in AdaSL it is important to clarify that they occur often to represent life-sized referents, but no model-sized handshapes were observed in the narratives collected for this study. This confirms previous findings by Nyst (2007) of what seems to be a linguistic particularity of this language. In contrast to AdaSL, signers of Kata Kolok, which is also a very old language used by a deaf community of similar size, use consistently and frequently reduced scale classifiers. In the end, languages might just differ in a typological way when it comes to classifiers, as suggested by Morgan (2020, 66) about the lack of a reduced scale classifier system.

What about multiple perspectives? The interaction between two characters in multiple perspectives is easily produced by representing someone else's hand with our hand contacting our body, like representing being punched in the face (Dudis 2004). Even non-signers use multiple perspectives with gestures (Dudis 2014). Thus, signers of all three sign languages studied here were able to express the act of being bitten by an animal in this way, with the hand representing the animal's mouth. However, when this interaction occurred without body contact, usually involving looking at the entity represented by the hand (Dudis 2004), both AdaSL and LGG signers expressed it but not LaSiBo signers. I should note here that all classifiers observed in this perspective were life-sized. It is, then, safe to assume that higher use of multiple perspectives in LGG, especially in men, may be influenced by the size of the deaf community. This study presents similar results to the ones obtained by the Israeli team, where the three sign languages (two in villages, ABSL and KQSL, and the national ISL) with similar time depths show that the community size is crucial for the development of the sign language. This has been demonstrated by the fact that the three sign languages of Israel, with approximate time depths, express it the more frequently the greater number of signers who use it (c.f., Stamp & Sandler 2021).

Interestingly, the partial or full personification of an animal – the device of anthropomorphism common in deaf literature (e.g. Sutton-Spence 2021) – was observed only in AdaSL and LGG, suggesting that it is a more elaborated practice in storytelling. This is also indicated by the expressive use of the reduced scale perspective by male LGG signers.

To conclude, this study answers the research question by making clear the extent to which the signers of the three sign languages produce signing perspectives to enhance their narratives. Here, the hypothesis that signers use preferably the real scale perspective is confirmed. However, against what was expected, the reduced scale appeared only in the youngest of the three sign languages, LGG, revealing that, more than age, the community is crucial to this aspect. The variability in perspectives used by male LGG signers indicates more enhanced narrative skills. This contrasts with the high proportion of neutral narration in LaSiBo narratives. Also, the fact that female LGG signers use multiple and simultaneous perspectives but not the reduced scale perspective demonstrates that they do not completely let go of embodiment. Such a leap forward would take something additional in linguistic structure and conventional form to accomplish, like more frequent socialisation. Finally, by being present in the three sign languages, including LaSiBo, the use of multiple perspectives proves that life-sized representations of characters precede the scalar reduction of referents. In the end, it was also confirmed that AdaSL signers, at least in these narratives, do not use the reduced scale. For not being a time-dependent feature, as it occurs in LGG, this analysis supports the idea that the lack of a classifier system is typological.

In the end, the comparison between micro and macro community sign languages points to the importance of the frequency of social interactions in developing narrative devices. At the same time, the language time depth also has an important influence on that development. All aspects considered the frequency of interactions between deaf peers brings to light differences between the performances of deaf men and women in the school-based sign language of Guinea-Bissau. Such a difference brings the narration style of female LGG signers closer to LaSiBo signers. Again, the critical differentiating factor, here, resides in the interaction practices that are shown to be crucial for that development.

5.8 Conclusion

It is crucial to keep in mind the distinct sociolinguistic backgrounds of the sign languages in this study when comparing them. Despite being used in West African villages, AdaSL has emerged for several generations, while LaSiBo is still in its first generation. LGG is the youngest of the three and, in contrast, is used by a large deaf community (see Chapter 1 for more details).

The results concerning the four perspectives in the three sign languages show that all three sign languages favour the real scale over the other perspectives. Other than the real scale, AdaSL and LaSiBo narratives present only multiple perspectives, involving the interaction between the embodied character and a hand playing another element. Apart from a bigger proportion of the real scale, male LGG signers use the remaining three perspectives quite evenly. When playing characters on a real scale, signers perform their actions overtly with their whole bodies or in combination with lexical signs or classifiers. LaSiBo presents a higher proportion of overt constructed actions and very few classifiers. AdaSL and LGG signers do use classifiers but of different kinds. AdaSL presents more body part classifiers while LGG favours entity classifiers, including model-sized ones.

The fact that the older sign language, AdaSL, uses overwhelmingly partially overt constructed actions may indicate that signers have refined over time the need to narrate with the will to turn their stories more compelling. On the contrary, LaSiBo narratives are told mostly as neutral narrations, which is also the case in narratives told by deaf women in LGG. The fact that they interact less than men in LGG may pattern their narratives in the same way. This seems to indicate that less intense habits of socialisation with deaf peers due to a short language time depth and few interactive partners may slow down the development of such enhancing narrative devices. The significant differences between male and female LGG signers indicate that the frequency and variability of communicative interactions may be crucial to developing narrative devices, such as the simultaneous and reduced scale perspectives.

This chapter concludes the second study. The next one presents the third study about narrative devices which are also part of the evaluation component proposed by Labov (1972), namely about constructed dialogues.

Chapter 6 – STUDY 3 Narrative devices: Role shifts and constructed dialogues

6.1 Introduction

This chapter continues to explore narrative devices used in the evaluation component of personal experience narratives in three sign languages in West Africa. The data analysed in this study is the same as from Studies 1 (Chapter 3) and 2 (Chapter 5). Here, in Study 3, I focus on the narrative devices of role shifting (changing between characters) and constructing dialogues (reporting speech), which are related but not dependent on each other.

Just like in the previous study, the devices analysed here are also related to constructed actions, but in different ways. In this study, **role shift** designates, "the punctual transition between character roles within constructed action" (Puupponen et al. 2022, 20), while **constructed dialogue** is considered a form of **constructed action** involving quotations (Metzger 1995, 258).

Role shifts occur mainly in constructed dialogues, but not always because they can also occur between instances of action embodiments by different characters. In turn, constructed dialogues entail mostly role shifts between characters, but not entirely since they can also include monologues.

The present analysis does not include transitions between the roles of the narrator and a character because they were already treated in **Study 1**. Transitions between characters were not handled in Study 2 since the representation of characters was focused on the embodiment itself whether of single characters in the real scale and the simultaneous perspectives or of multiple characters at the same time. In this study, I look at sequential representations of characters, and the transitions occurring in between. In **Study 2**, quoted material, or constructed dialogues, was included in the time calculation of the real scale perspective, as overt constructed actions, for being completely embedded in the character. However, such material is only analysed here. Figure 49 clarifies the relationship between the concepts involved.

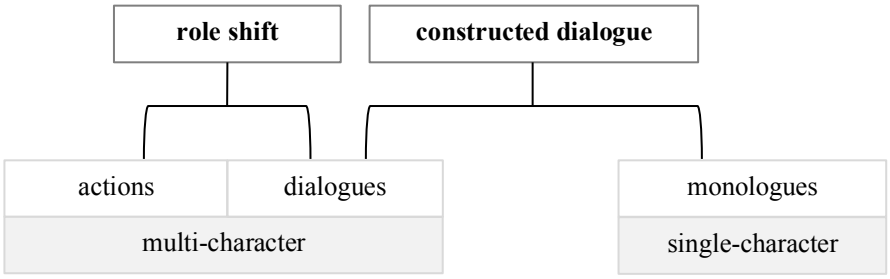


Figure 49. Relationship between the concepts related to role shift and constructed dialogue

Character embodiment is one of the most enhancing narrative devices since it conveys emotional intensity to engage the interlocutor with the past event (see Chapter 5 for more details). Signers seem to easily embody characters as observed in the preferential use of the real scale perspective (in Chapter 5). However, to convey unambiguous narratives, enacted characters need to be clearly indicated. Identifying referents and maintaining their reference adequately throughout a story requires linguistic and narrative skills that take time to develop (Morgan 2005, 327). Thus, such a phenomenon typical of storytelling is usually mastered only by skilled signers (Lillo-Martin 2012, 368). Similarly, while it is more straightforward to reproduce one's own quotes whether as thoughts or addressed at someone else, only highly skilled storytellers will be able to report what others have said in such an embedding of evaluation (Labov 1972, 373).

I begin Study 3 with the literature review (§6.2) on role shift (§6.2.1) and constructed dialogue (§6.2.2). Then, I pose the research questions for this study (§6.3) and describe the methods for the analysis (§6.4). Afterwards, I describe the analysis (§6.5). In the end, I synthesise the results (§6.6), discuss them concerning the literature (§6.7) and draw the relevant conclusions about this study on the three sign languages (§6.8).

6.2 Background on role shift and constructed dialogue

The constant alternation between narration styles, including descriptions of what characters do, think or say, is typical of stories told in spoken languages. Signed narratives express these descriptions through constructed actions and dialogues, involving shifts between characters (Lillo-Martin 2012, 373).

Role shift could be generally defined as a device where "the signer 'assumes' the 'role' of a 'character'" (Padden 1986, 49, quotation marks on the original) or, in other words, becomes someone else (de Vos 2012, 206). Such a device can express both

non-quotational and quotational information (Pfau & Quer 2010, 396). The non-quotational use refers to the reproduction of a character's doings, commonly designated as **constructed actions**, while the quotational use of role shift corresponds to a character's sayings, known as **constructed dialogue** (Lillo-Martin & Quadros 2011, 625). Following up on this idea, Schlenker (2017) termed them, respectively, as **action role shift** and attitude role shift. What they have in common is that they both represent the event from the character's viewpoint (Lillo-Martin 2012, 370) and what distinguishes them is the form of the reported material, whether full body enactments or speech quotations (Pyers & Senghas 2007, 282).

However, role shift will not refer here to the material reported in character enactments, but to the "overt operation by which the signer signals that he adopts the perspective of another individual" (Schlenker 2017, 2). I will, crucially, distinguish between **action role shifts** (as termed by Schlenker 2017), i.e., changes between characters expressing **constructed actions** (as introduced by Metzger 1995), and **quotational role shifts** (as designated by Pfau & Quer 2010), involving constructed dialogues (as coined by Tannen 1986) between at least two characters. Constructed dialogues include reported speech produced by a single character, as quotes of thoughts or feelings, that, inevitably, do not entail role shifting (just like an individual action does not). To clearly distinguish multi from single-character quotational instances without role shift, I propose the term **constructed monologues**. Finally, the **transition** between characters (as put by Puupponen et al. 2022, 20) is indicated by specific **manual** and **non-manual markers** (as used by Emmorey & Reilly 1998).

As seen in the previous study, constructed actions refer to character embodiments, of both human and non-human referents (anthropomorphism), usually of one character at a time (in the real scale and simultaneous perspectives) but also of more than one character at the same time (in **multiple perspectives**). As a form of constructed action that includes quotes, constructed dialogue (Metzger 1995, 258) was included in the previous study for the sake of calculating the proportional durations of signing perspectives within the narratives. Similarly, role shift was also interpreted as a "sub-case of constructed action" (Lillo-Martin & Quadros 2011, 626) and was, thus, equally, included in the overall time computing. These devices are analysed in detail here and will include information on the duration of such embodiments from a real scale – or eventually a multiple – perspective.

Figure 50 seeks to clarify the relationship between Studies 2 and 3 on narrative devices that are interconnected by different forms of constructed action, whilst illustrating how the two devices in this study relate to each other and, finally, how the taxonomy used here is operationalised.

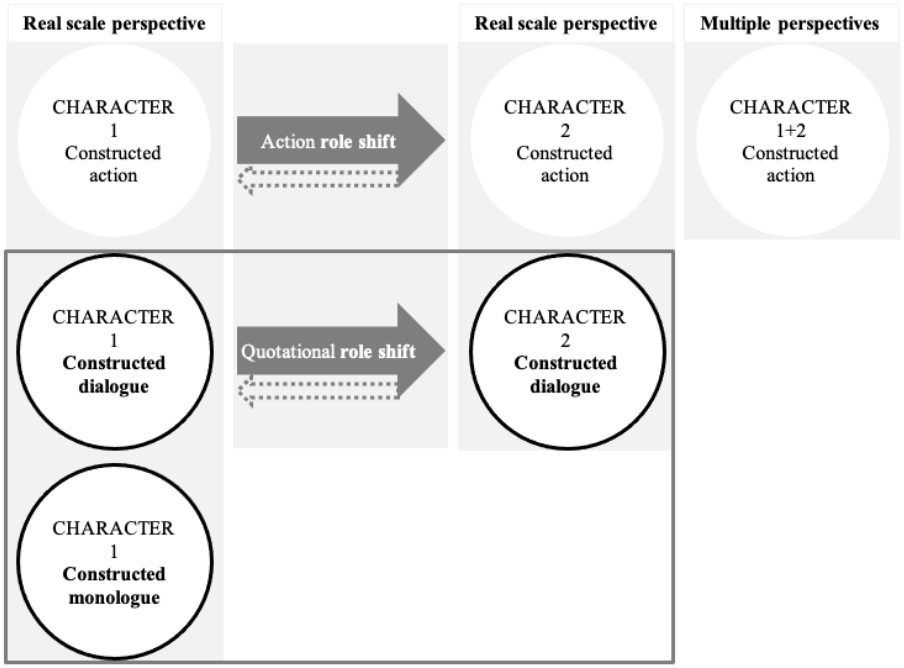


Figure 50. Taxonomy used in this study to describe types of role shifts and of constructed dialogue in relation to signing perspectives

As in Study 2, I continue to use the notions of character embodiments, enactments or dramatisations interchangeably as equivalent terms to constructed actions. Although constructed dialogue is generally used as a larger category that includes any kind of quoted speech (as stated in the title of this study), it is also used specifically here to address multi-character contexts in opposition to single-character ones in constructed monologues. Monologues can also be referred to as self-talk. Quotational material of all sorts includes quotations, quotes, quoted speech, reported speech and propositions indistinctly.

Finally, I recall that shifts between the narrator and characters are not analysed here as they were already treated in Study 1. The present study focuses only on shifts between characters and on quotational material. The literature review concerning role shift and constructed dialogue is presented next separately, keeping in mind that there are aspects where they touch each other.

6.2.1 Overview of role shift types

The act of shifting into a role can be seen as both taking (Pfau & Quer 2010, 396) and maintaining that role (Morgan 2005, 319) or simply as the "punctual transition" into a role (Puupponen et al. 2022, 20), which is the approach I adopt here. Such a transition can occur between the narrator and a character or between characters. Again, this study analyses only shifts between characters (see Study 1 for more details on the changes between the narrator and the character's roles). Finally, characters may be either doing or saying something.

When signers shift from the narrator role, in which they address the audience, to a character role, they take on the viewpoint and actions of a specific character. Thus, from a **neutral narration** or a description in a reduced scale perspective, the signer can dramatise the actions of a character from a real scale or simultaneous perspective. These constructed actions may represent someone driving a car, holding a life-sized steering wheel, and focusing on an imaginary road. Or else they may enact a character as if swimming in the sea, their cheeks filled with air holding their breath, and watching imaginary fish.

When the signer embodying the driver waves at someone, or the swimmer reaches out to touch what could be a fish, an interaction is triggered, i.e., a single-character context becomes a **multi-character** one. However, the signer only shifts to the other character involved in the interaction to convey some kind of response. In this sense, the signer can shift into the person on the sidewalk waving back at the driver or into the fish nibbling the diver's finger. From a real scale perspective, the fish can be the object of anthropomorphism, for instance, if the mouth of the fish is mapped on the signer's mouth with the finger in it. Otherwise, the fish can be represented by the signer's hand grabbing the signer's finger from multiple perspectives. This shows that there are different ways in which signers represent more than one character: either one at a time, such as giving a book to another character and then acting as if receiving it, or simultaneously, like walking side by side with someone else (Liddell 2003). However, the shift between characters has necessarily to occur sequentially since, even if represented in multiple perspectives, the focus has to change from one character to the other. The most usual way is for signers to become one character first and then become a second one in sequential order. Shifts occurring between constructed actions by different characters have been designated as action role shifts (Schlenker 2017) or non-quotational role shifts (Pfau & Quer 2010).

In that example above involving the embodiment of a driver, if instead of waving at someone, the driver stops the car to ask for directions and then another character responds, the signer, besides expressing the characters' actions, is also reporting a dialogue between them. Role shifts in dialogues are especially common (Bahan & Petitto 1980). To distinguish them from action role shifts, the ones in dialogues have

been called attitude role shifts (Schlenker 2017) or quotational role shifts (Pfau & Quer 2010). These will be further discussed in the next subsection.

Role shifting between constructed actions by different characters has been shown to emerge earlier in life than those involving reported speech (Lillo-Martin & Quadros 2011, 632-3). Either way, the transition between characters' constructed actions or dialogues should implicate "an overt operation by which the signer signals that he adopts the perspective of another individual" (Schlenker 2017, 2). It is through such a contrastive role shifting (Padden 1986, 50) that character reference is made clear during a narrative.

Role shift markers

Explicitly identifying whose role is being played and maintaining that identification throughout a story is a skill that seems to appear only later in childhood (Lillo-Martin & Quadros 2011, 632-3). Passages from one character to the other that are not signalled in any way lead to ambiguities. Thus, storytellers have to develop the ability to inform about who is acting or speaking to create clear and engaging sequences of events.

To prevent ambiguities about who the character enacted is, signers have at their disposal both **manual** and **non-manual markers** (Lillo-Martin & Quadros 2011). Even though these markers are connecting constructed actions or dialogues, they are not necessarily part of the character embodiment per se since they aim foremost at informing about the change occurring in between (Kocab et al. 2015, 2). Role shifting marked manually includes lexical and indexical signs, while the one signalled non-manually involves body shifts, changes in the eye gaze and specific facial expressions.

Manual markers rely on lexical labels and descriptions to identify the character being referred to, along with pronominal shifts, which are also used in spoken languages. Such pronominals are expressed in the signed modality by indexical points to the self or to a location in space to indicate an additional character, which Kocab and colleagues designated as point-to-chest and point-to-space (ibid.).

Non-manual markers were first described as contrast types in body changes, which Padden distinguished as forward-back and side-to-side. In the first one, more straightforward, the signer changes between characters by moving the body slightly forward and then slightly to the back. In the second type of contrast, the signer turns slightly from one side to the other, assigning each side of the body to a character (1986, 50-51). A change in body position – affecting also the position of the shoulders and, eventually, the head – tends to accompany a change in the role that the signer is adopting.

Besides body changes, modifications in the direction of the eye gaze (c.f., Bahan and Supalla 1995) can also be considered essential clues in tracking the shift between roles in sign language discourse (Padden 1986; Bahan & Supalla 1995; Lillo-Martin & Klima 1980; Lillo-Martin 1992; Pyers & Senghas 2007). The switch between the gaze at the audience, in the narrator's role, and the character's gaze, embedded in the narrated event, clearly distinguishes narration roles (see Study 1 for the type of narration role associated with each structural component). Thus, the character's gaze is crucial in ascertaining that someone other than the narrator is being dramatised (see Study 2 for character embodiment in the signing perspectives, namely, in real scale, multiple and simultaneous perspectives). What changes occur, then, in multi-character contexts? While assuming a character's role interacting with an additional character, the eye gaze may turn to the assigned location of that referent (Padden 1986, 53; Liddell and Metzger 1998, 672). In this way, in a sequential interaction between characters, the gaze at the referent is an important cue in identifying who is taking the floor at that moment.

Another common non-manual marker in role shifting is a change in the facial expression which is usually entrenched in the character's enactments. Thus, when signers switch from one character to the other, their facial expressions are likely to accompany that shift (e.g., Schlenker 2017, 20).

Kocab, Pyers and Senghas (2015) looked at the emergence of referential markers in ISN, the young sign language of Nicaragua, by comparing language performances in deaf adults divided into two age groups. Their study showed that role shift markers required time to develop in range and frequency (ibid., 10). Nonetheless, manual marking, especially in lexically labelling referents – appears before the non-manual (ibid., 9). In these, consistently shifting between facial expressions associated with distinct characters seems to be acquired only later (Emmorey and Reilly 1998, 89).

6.2.2 Overview of constructed dialogues

As a form of constructed action involving quotations, constructed dialogue reproduces past quotations, not precisely as they were told, but as similarly as possible (Metzger 1995, 256–258). Tannen argues that "reported speech is a misnomer" (1986, 311) because when speakers quote what they said in a past event, they are not retelling the exact words but rather the same message by constructing a facsimile of the dialogue. Thus, she proposed to replace the term reported speech with constructed dialogue.

Like dialogues created by fiction writers where characters and lines are constructed, accounts of actual events in personal experience narratives – the subject of this thesis – are also repeated not as initially told but as close reconstructions. Tannen also references Labov's (1972) work when noting that the first-person dialogues in

personal experience narratives are more vivid than third-person ones. A dialogue can be reproduced only from one of the character's viewpoints, especially if storytellers are quoting themselves.

When the storyteller reports propositions from more than one intervener in multi-character contexts, a role shift is bound to occur. These two phenomena are so interconnected that the quotational use of role shift has been the most described in the literature (Quer 2018, 277).

Constructed monologues

In its general sense, the notion of constructed dialogues does not imply exclusively speech interactions in multiple-character contexts. It can also refer to monologues produced by a single character. To distinguish them from dialogues entailing role shifting, we might call these **constructed monologues**. They can express inner thoughts, feelings, emotions or self-talk while the embodied character experiences events alone.

Such constructed monologues in sign language can be mistaken for comments from the narrator since this happens when the signer uses lexical signs while acting as a character. Cormier and colleagues exemplify this with a signer, within a narrative, saying "I want to cook something" (2015, 4). In this case, the signer does not represent just an action because there is also quoted speech, or dialogue because there is no additional character, but rather the character's own thought about the event.

As a final note, research in the emerging sign language of Nicaragua and the acquisition by deaf children of the narrative devices analysed here have shown that the operations implicated in this study develop differently over time. Thus, shifts between constructed actions by different characters are acquired before clear representations of dialogues and, here, the first-person viewpoint is more straightforward than reproducing someone else's. Also, manual markers in character shifting precede non-manual markers, where changes in body postures seem to be easier to express than in facial expressions. Based on these assumptions, I present, in the next section, the research questions for Study 3.

6.3 Research questions

In the previous section, I described role shifts and constructed dialogues as rich tools used by storytellers to enhance their narratives. Here, I revisit the research questions

leading to the analysis of specific narrative devices in emerging and village sign languages.

The motivation for the research in this thesis is that sign language narratives are understudied outside of a few dominant national sign languages, and at the same time such narratives can be linguistically very rich. The overarching research question of this thesis is what types of narrative linguistic structures are found in sign languages like the three in this study (AdaSL, LaSiBo, LGG) that have different community sizes, language ages and interaction habits? Specifically, for the study of narrative devices, I ask **how do signers of the three sign languages enhance their narratives through particular evaluative devices.**

In Study 3, I analyse how signers make use of role shifts and constructed dialogues in personal experience narratives in the three languages. The specific research question is: **To what extent do signers of the three sign languages produce role shifts and constructed dialogues to enhance their narratives?** I hypothesize these narrative devices may require time and regular social interactions to develop. Therefore, emerging sign languages with little socialisation between peers, i.e., LaSiBo, may still need to be able to **shift between roles** and **construct dialogues** effectively to convey clear and engaging narratives.

As described further in the next section, the three levels of analysis in this study are focused on (1) time proportions dedicated to the character's role in constructed actions and dialogues, including for each type of character enacted; (2) the number of characters represented and of role shift markers, in terms of range and frequency; and (3) a description of different ways of reporting events – actions and dialogues – in multi-character contexts and monologues.

The prediction is that the sign languages with more interactions, either throughout their lifetimes (AdaSL) or as a result of a relatively large population in constant interaction with each other (LGG men) will use role shifts and constructed dialogues more often and effectively than in sign languages with fewer interactions overall (LaSiBo, LGG women). To analyse such narrative devices, I explain next what methods were used in this study.

6.4 Methods for the analysis of role shifts and constructed dialogues

To test the hypothesis for this study, I recall now the methods described in subsection 2.5.5 (but see Chapter 2 for more information about how the narratives were collected, processed, and coded). Study 3 uses the same data as in the other studies; that is, personal experience narratives that describe animal encounters. The number of

narratives is as follows: 17 AdaSL narratives, 12 LaSiBo narratives and 16 LGG narratives.

As in the other studies, this analysis relies also on ELAN annotations. Five ELAN tiers are common to all studies (translation, glosses for both hands, eye gaze and role), one is shared with Study 2 (character) and two are specific to Study 3 (role shift and constructed dialogue). Table 29 describes briefly each tier indicating the corresponding annotation type.

Table 29. Overview of ELAN tiers for Study 3

Parent tiers ↳ Children tiers	**Controlled vocabulary**	**Brief description**
Translation	text	Free translation
RH gloss	text	Narrow translation
LH gloss		
Eye gaze	- gaze on the audience - character's gaze	Identifies the narrator's role Identifies the character's role
Role	- narrator - overt constructed actions - partially overt constructed actions	Specifies the signer's role type
Character	text	Specifies who the character is
↳ gaze at referent		Identifies who or what the character is looking at
Role shift	- lexical label - point-to-self - point-to-space - body shift - facial expression	Specifies the marker in the role shift
Constructed dialogue	Dialogue: text Monologue: text	Duplicates translated quotations in dialogues and monologues

I recall that Study 1 had already observed role switches between the narrator and the character when moving on from the first structural component to the second one. In other words, the narrator begins by setting up the who, when and where and then

introduces the character within the event. At the end of the narrative, the embodied character typically switches to the narrator by directing the eye gaze back to the audience. In such shifts between the narrator's and the character's roles, the direction of the eye gaze is, in fact, an important cue.

The analysis for this study focused only on the **character's role** which was identified by the character's gaze (in the eye gaze tier) and the use of constructed actions – both overt and partially overt (in the role tier) and, crucially, in the character tier. The character tier distinguishes who is being 'played' or embodied so it contains an open value where every character is named as (HIM/HER)SELF, FATHER, SNAKE, and so on. Considering that these narratives are about personal experiences, the main character is expected to correspond to the signer him/herself in the past.

In **multi-character** contexts, the interaction could be further distinguished if the character's gaze at referent tier named an additional character. Also, the role shift tier identified the first marker – whether manual or non-manual – signalling a change between characters. As a side note, in multi-character contexts with a role shift where characters are represented at the same time in multiple perspectives, the characters from and to which the shift occurs are named in the character tier, even though they are further identified in the children tiers of the character tier, concerning both hands, body and face representations (see §2.5.5 and §5.4 for further details). The character named in the character tier is the one leading the focus in the shift.

Multi-character contexts include dialogues, whose translations were duplicated in the constructed dialogue tier. To differentiate these from **monologues** occurring in a single-character context, translated quotations were preceded in the annotation by 'dialogue:' or 'monologue:'.

With these annotations in hand, I proceeded with different approaches to analyse the data. Following up on the proportional distribution of signing perspectives in the narratives, in Study 2, I focused in this study only on the time dedicated within the narratives to the characters' roles. I recall that characters can be represented on a real scale (in overt and partially overt constructed actions), with multiple and simultaneous perspectives. Of these, the most used perspective was the real scale. There were then very few occurrences of multiple perspectives in the three sign languages and even fewer of simultaneous perspectives only in LGG. Thus, nearly all instances of constructed dialogue and role shift are produced in the real scale perspective.

The reduced scale perspective and neutral narrations are told by the narrator. The total time of narratives told in the character's role, as shown in Table 30, maintains the actual values obtained in Study 2 in each language (see Table 28 in §5.5). Importantly, the number of narratives decreases in LaSiBo and by female LGG signers because two narratives in each group were told entirely in the narrator's role.

Table 30. Proportional time told in the character's role in the three sign languages

Perspectives in the **character's role**	AdaSL			LaSiBo			LGG					
							men			women		
	Narratives	Time	Proportion	Narratives	Time	Proportion	Narratives	Time	Proportion	Narratives	Time	Proportion
Real scale	17	11:17:44	75%	10	03:11:42	41%	8	02:09:23	45%	6	02:18:31	50%
Multiple	9	00:22:16	2%	4	00:04:39	1%	6	00:22:10	8%	2	00:07:19	3%
Simultaneous	-	-	-	-	-	-	5	00:17:24	6%	2	00:03:29	1%
TOTALS	**17**	**11:40:00**	**77%**	**10**	**03:16:21**	**42%**	**8**	**02:48:57**	**59%**	**6**	**02:29:19**	**54%**

Within the total time dedicated to the characters in each narrative, I began by **(1)** distinguishing the **time told with constructed actions** from the one involving quotations in **constructed dialogues** (and monologues). Then, **(1a)** within each of these proportions, I divided the time spent on the character representing the **self** from the time spent on the embodiment of additional characters. In the latter, **(1b)** I further distinguished the time portraying **other people** from the one referring to **animals** – the main topic of the narratives collected in this thesis.

Afterwards, **(2)** I calculated the **number of characters** embodied in each narrative and the **number of times that each character was enacted**, in both constructed actions and dialogues. Based on this, **(2a)** I counted the number of **role shifts** and occurrences of each **marker type**.

Finally, **(3)** I looked at the **reported material** and how it was expressed. Within a multi-character context, I analysed whether the interaction occurred **(3a)** in a one-way directionality when only the **first-person viewpoint** is represented, or **(3b)** by embodying the **other character responding** as well. As a last point, I observed **(3c)** the types of **monologues** reported in the narratives. To provide a general view of the different levels of analysis, Figure 51 systematises how they relate to each other.

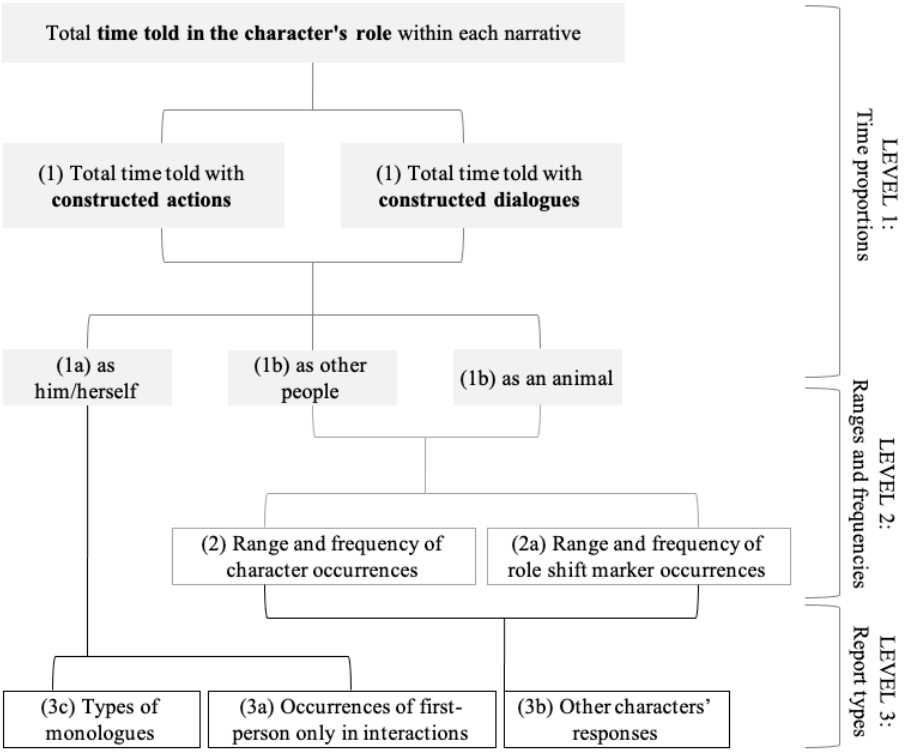


Figure 51. Levels of analysis in Study 3

Based on these levels of analysis, the results per language will be presented in the next section first for **action role shifts**, i.e., concerning the interactions between characters embodying **constructed actions**, (§6.5.1); then for **constructed dialogues**, involving quotations in interactions between characters (§6.5.2); and finally for **constructed monologues**, concerning quotations in self-talk (§6.5.3).

6.5 Descriptive analysis of role shifts and constructed dialogues

The present section focuses on describing additional devices enriching narratives. Role shift is one of those devices in which the storyteller has to make clear to the audience who is who. Dialogues usually make use of role shifts between characters. Otherwise, storytellers can construct monologues or express the character's thoughts. Labov & Waletzky (1967) argued that constructed dialogues made the narrative come alive, stimulating the audience's interest. How do signers in these three sign languages

proceed when there is more than one character in the play? And how effectively do they report quotations?

Looking only at character embodiments in the narratives collected for this study, in Table 31, it is not surprising that constructed actions are produced much more frequently than constructed dialogues. No quotations were observed in LaSiBo and only two female LGG signers reported speech in their narrative. What is more, signers are enacting themselves in the past in the majority of the time dedicated to the character role. Only on a few occasions do they enact a character other than themselves, and mainly while doing something rather than talking. Here, in LaSiBo, there is only one narrative where the signer enacts one other character, an animal. Finally, included in the constructed dialogues where signers quote themselves, there are five instances with monologues in AdaSL and one in each gender group in LGG.

Table 31. Proportional distribution of character embodiments in constructed actions and dialogues in the three sign languages

		AdaSL			LaSiBo			LGG					
								men			women		
Constructed actions	Self	17	09:49:49	**65%**	10	03:09:39	**41%**	8	02:00:29	**42%**	6	01:42:49	**37%**
	Other	12	00:51:16	**6%**	1	00:02:03	0,4%	5	00:32:09	**11%**	5	00:30:29	**11%**
Constructed dialogues	Self	8	00:49:53	**5%**	-	-	-	6	00:15:29	**5%**	1	00:00:35	0,2 %
	Other	1	00:09:02	**1%**	-	-	-	2	00:00:50	0,3%	2	00:04:38	**2%**
TOTALS		**17**	**11:40:00**	**77%**	**10**	**03:16:21**	**41%**	**8**	**02:48:57**	**59%**	**6**	**02:29:19**	**54%**
		Narratives	Time	Proportion	Narratives	Time	Proportion	Narratives	Time	Proportion	Narratives	Time	Proportion

In multi-character contexts, involving the embodiment of other characters, role shifts were strikingly marked with lexical labels, in both AdaSL and LGG. These manual markers were followed from a distance by the non-manual ones, namely body shifts. Changes in facial expressions occurred only in AdaSL and significantly. There is only one role shift observed in LaSiBo involving an animal, where the human character changes back to herself with a body shift. Importantly, a small part of these non-manuals and the point-to-chest markers referred back to the self, i.e., the character representing signers in their past experiences. It must also be noted that all role shifts that were not marked concern constructed dialogues told in the first-person only, without getting any response back.

Again, as was the case in the previous study, the proportions of character embodiments, in each language, consist of different numbers of narratives and corresponding durations. This affects foremost the situations where actual numbers

are compared, as in occurrences of role shift markers in 12 AdaSL narratives, one in LaSiBo and five in each gender group in LGG. Table 32 shows a high divergence in the total amount of role shift markers. However, by looking closely at the differences between categories, it is possible to see that lexical labels are the preferred marker, followed by changes in facial expressions in AdaSL and body shifts in LGG. The latter is also the only role shift marker used in LaSiBo.

Table 32. Range and frequency of role shift markers in the three sign languages

		AdaSL	LaSiBo	LGG	
				men	woman
Manual markers	Lexical label	24	-	6	7
	Point-to-chest	2		1	2
	Point-to-space	-		1	-
Non-manual markers	Body shift	5	1	4	2
	Facial expression	12	-	-	-
	None	6	-	4	2
	Total manual	**26**	**-**	**8**	**9**
	Total non-manual	**18**	**1**	**4**	**2**
	Narratives	12/17	1/12	5/8	5/8

This general overview of the results reveals distinctions between the three languages that have been unveiled over the previous two studies. In what the narrative devices studied here are concerned, LaSiBo signers are shown to be especially unprepared as effective storytellers in comparison to signers of the older sign language and the larger deaf community.

Results are described next for action role shifts (§6.5.1), between characters dramatising constructed actions in the three sign languages. Afterwards, constructed dialogues are presented for instances in the first-person only and with quotational role shifts (§6.5.2) in AdaSL and LGG. Lastly, monologues are illustrated in AdaSL and one by a male LGG signer (§6.5.3).

6.5.1 Action role shifts

The embodiment of their own character in life-sized constructed actions occurred in all narratives except for two in LaSiBo and two by female LGG signers that were told as neutral narrations. However, additional characters interacting in constructed actions appear in even lesser narratives, namely in a bit more than half of them in AdaSL and LGG and in only one in LaSiBo. In AdaSL, almost half of these involve interactions with the animal, as does the only one in LaSiBo and only one per gender in LGG. All action role shifts observed are marked, mostly with a lexical label, but also with a change in the facial expression.

Since action role shifts occurred in all three sign languages, results are presented first in AdaSL, then in LaSiBo and finally in LGG. Findings show which additional characters are represented and how they are referenced by the signer.

Action role shifts in AdaSL narratives

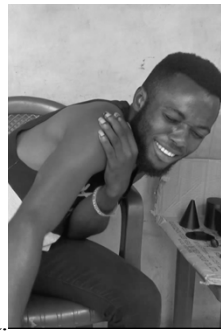
Twelve out of the 17 AdaSL narratives contain role shifts between characters. However, the time dedicated to embodying other characters is very little (6%). This time was evenly distributed between the representation of an additional person (in 11 of the 12 narratives with embodiments of others) and the animal (in 7 of 12 narratives). The other human character was usually a man or the character's father. In fact, two of the narratives are actually vicarious in that they tell the father's experience with an animal attack. Of the animals, snakes are as expected the most mentioned one, followed by a lion in two narratives.

Every time a new character was introduced it was signalled explicitly, in the large majority of the occurrences through lexical labels. Out of 19 references to other characters (11 people and 8 animals), all but three were previously labelled. Shifts to and from animals were also marked by body shifts and changes in facial expressions, more than in human characters. What is more, of the 12 narratives involving the enactment of others, signers went back to the character representing themselves in half of those narratives, signalling the shift mainly with their facial expressions (in nine of 12 markings).

The example in (81) illustrates role shifting between the signer's own character and another person, in this case, between himself in the past event and his father. In this story, he was putting his hand in a hole in the ground as a young boy. Playing himself, as if with his whole arm inside a hole, he expresses effort through his face, in (81a). He then signals that his father is entering the scene with a lexical label, i.e., by signing FATHER, and enacts him right away, in (81b). When his father saw what he was doing, he walks quickly and in distress towards him to warn him of the danger. When the

signer goes back to himself with the arm on the hole there's a clear-cut change in his facial expression, in (81c).

(81) Action role shifts between (a and c) himself and (b) his father marked by a lexical label and facial expression in AdaSL (ADA_07 narrative)

a.  b.   c. 

gloss	HAND-IN-HOLE	FATHER	WALK	HAND-IN-HOLE
character	**himself**	**father**		**himself**
gaze at referent	-	at himself		-
role shift		**lexical label**		**facial expression**

'I was putting my hand in a hole. My father saw me and came to me. I kept putting my hand in the hole.'

In (82) the signer is telling the experience of her father in being attacked by a snake. So, in this vicarious narrative, she enacts her father as the main character and, in the particular moment illustrated by this example, her father had just been attacked by a snake and was expressing pain, in (82a). She then introduces a new character, with the sign MAN, a lexical label, and readily enacts him as if running to the victim and picking him up, accented by her body and facial expression, in (82b).

(82) Action role shift between (a) her father and (b) a man marked by a lexical label in AdaSL (ADA_11a narrative)

a. b.



gloss	PAIN	MAN	RUN	TAKE
character	**father**	**man**		
role shift		**lexical label**		

'He kept screaming. A man ran to him and picked him up.'

In (83), the signer shifts roles between her own character and the snake, in (83a) and then between another human character and the snake, in (83b). She is first enacting the snake together with an entity classifier in real scale and then marks the shift with a point-to-chest for ME, and continues saying she sees the snake, in (83a). Later on in the same narratives, the signer embodies an additional character as if shooting the snake and, with a body shift, she becomes the snake dying, in (83b).

(83) Action role shift between (a) the snake and herself marked by a point-to-chest and (b) between a man and the snake marked by a body shift in AdaSL (ADA_09 narrative)

a.



gloss	BIG-SNAKE	ME	SEE
character	**snake**	**herself**	
role shift		**point-to-chest**	

'I saw a big snake.'

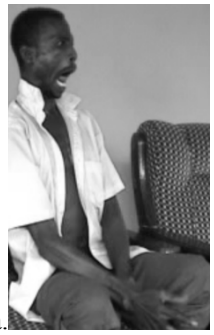
b. 

gloss	SHOOT		DEAD	
character	**man**		**snake**	
role shift		**body shift**		

'The man shot the snake and it died.'

Similarly, in (84), the AdaSL signer shifts between himself and the snake and then back to himself by marking it only with a change in facial expression. He tells about the moment when he came across the snake, leaning back with his body and expressing fear with his face, in (84a). Immediately after, he embodies the snake while representing the snake's tongue with his hand as an entity classifier, by clearly changing his facial expression to show threat, in (84b). As he portrays a menacing snake, he returns to himself being scared, pointing at the snake with, again a distinct facial expression of fear, in (84c).

(84) Action role shift between (a and c) himself and the (b) snake marked by a change in facial expression in AdaSL (ADA_14 narrative)

a.  b.  c. 

gloss	-	SNAKE-TONGUE (CL)	POINT
character	**himself**	**snake**	**himself**
gaze at referent	at the snake	at himself	at the snake
role shift	**facial expression**		**facial expression**

'I was afraid. (…) The snake's head stood up and poked its tongue out, moving sideways. (…) I was afraid.'

These examples show that AdaSL signers switch between themselves and another person or the animal encountered, and then, eventually, back to themselves, with ease taking advantage of both manual and non-manual markers. They shift roles in different ways, usually with a lexical label, but also with changes in facial expressions and body shifts. This shows that AdaSL signers seem to effectively change between characters by signalling it clearly. How is this device handled in LaSiBo, a much younger and used by a much smaller population than AdaSL?

Action role shifts in LaSiBo narratives

After observing a significant range of role shifting between acting characters in AdaSL, a high contrast becomes evident with LaSiBo. Only one of the 12 narratives shows the embodiment of a character other than the self, an animal with horns. This embodiment is introduced by a lexical label, in (85a), though it is not preceded by the human character but by a neutral narration, thus it is not a switch between characters. However, after enacting the animal walking by, in (85b), she switches to her own character in the past with a body shift, in (85c).

(85) Action role shift introduced by (a) a lexical label for (b) an animal with horns and (c) herself (c) marked by a body shift in LaSiBo (LAS_01b narrative)

a.  b.  c. 

gloss	ANIMAL	WALKING		WALK	
character	**animal**			**herself**	
role shift			**body shift**		

Thus, in the one instance in LaSiBo where a character other than the self, an animal, is embodied right after being labelled, it shifts back to the self by leaning back. This minimal occurrence is strikingly different from the diversity of examples observed in AdaSL. I now turn to the even younger LGG used by a macro deaf community.

Action role shifts in LGG narratives

The previous subsection showed that in the family sign language used in the village of Bouakako, only one signer embodied a character other than the self, concerning the animal, contrasting with a high variety of occurrences in AdaSL narratives. What do action role shifts look like in the emerging sign language of Guinea-Bissau? Are there differences between genders?

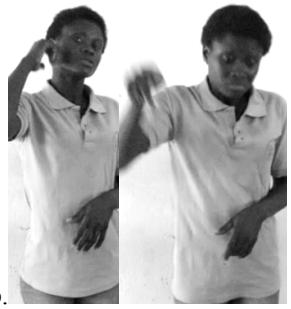
The results of the analysis show that five signers in each gender group embodied other characters in a proportion higher (11%) than in AdaSL. However, unlike AdaSL, LGG signers enacted other people, usually hearing men, much more often (in all five narratives) than the snake (in two narratives told by men and one by a woman).

Similar to AdaSL, there are 19 references to other characters (11 by men and 8 by women), but much fewer to animals. Again, all human characters were previously labelled. In addition, subsequent mentions could involve a body shift and on one occasion (by a deaf man) a pointing sign was also used. Body shifting was the only non-manual observed in LGG and also the only one signalling the switch to the snake. Shifts to and from animals were also marked by body shifts and changes in facial expressions, more than in human characters. Less expressively than in AdaSL, only a

few LGG signers (two men and one woman) went back to the character representing themselves, signalling the return either with a point-to-chest or a body shift. Interestingly, two LGG male signers change roles with the snake within multiple perspectives, as the only occurrences in the data analysed here.

To illustrate role shifts between the character representing themselves and the additional human character, the signer in (86a) signals herself with a point-to-chest before telling that she was walking to call a hearing person after spotting a snake. Then, she signs HEARING and enacts that other character walking back to the place where the snake was, in (86b). At that location, she shifts her body and returns to her own character and as if looking at the hearing, she points at the snake, in (86c).

(86) Action role shifts introduced by a point-to-chest for herself (a) and by a lexical label for the hearing (b) and with a body shift back to herself (c) in LGG (LGG_16 narrative)

a.  b.  c. 

gloss	ME	WALK	HEARING	WALK	POINT
character	**herself**		**hearing**		**herself**
gaze at referent				at the snake	at the hearing
role shift			**lexical label**		**body shift**

'I walked to the hearing. The hearing came and I pointed at where the snake was.'

Although, in (87), the markers are similar to the previous example, here the embodiment of his own character in the past is in multiple perspectives together with a snake represented by his right hand as an entity classifier. In this example, the signer switches between himself, as the son, and his father. He begins by telling that he was up on a tree harvesting cashew while unknowingly he had a snake hanging over him, in (87a). He then signs FATHER and enacts his father on the ground looking up at the tree, noticing the snake right next to his son and throwing something at it, in (87b). At

the end of this excerpt, he goes back to embody his own character seeing the snake in front of him, again in multiple perspectives, in (87c).

(87) Action role shift between (a) himself and (b) his father marked by a lexical label and then (c) a return to himself with a body shift in LGG (LGG_06 narrative)

a. b.



gloss	SNAKE	FATHER	LOOK	SURPRISE	THROW	SNAKE
RH character	snake	**father**				snake
LH character	**himself**					**himself**
gaze at referent			at himself			at the snake
role shift		**lexical label**			**body shift**	

'The snake was over me. Father was below and looked up at it surprised: He threw [something]. The snake was by my side and I saw it.'

In (88), the signer shifts between himself hitting the snake, in (88a), and the snake being hit, using also multiple perspectives, in (88b). Unlike (88c) where the focus is on his own character being surprised by the snake, in (88b) the focus is on the snake being hit with rocks. Here he first enacts himself by throwing rocks at the snake, in (88a). With a body shift, he becomes the snake being hit, while his left keeps throwing rocks, in (88b) and gradually he embodies solely the snake dying, in (88c). This is followed by a point-to-chest signalling the shift back to himself where he then acts as if picking the snake up, in (88d).

(88) Action role shift between (a) himself and (b and c) the snake marked by a body shift and then (d) a return to himself with a point-to-chest in LGG (LGG_03 narrative)

a. b. c. d.



gloss	THROW -ROCK	BE-HIT	DIE	ME	GRAB
RH character	**himself**	**snake**	**snake**	**himself**	
LH character		himself			
gaze at referent	at the snake				at the snake
role shift		**body shift**		**point-to-chest**	

'We threw stones at it. The snake felt the beatings and slowly died. I grabbed it.'

Although proportionally LGG signers dedicated much more time than AdaSL to the embodiment of other characters, they did less so with the snakes and without relying on facial expressions as non-manual markers in role shifts. What is striking in LGG, especially in men, is role shifting involving multiple perspectives. LaSiBo signers enacted another character with constructed actions only once, making it hardly surprising that there are no occurrences of reported speech in this language. Thus, the following subsection presents role shifts with constructed dialogues in LGG and AdaSL.

6.5.2 Constructed dialogues

Having observed that both AdaSL and LGG signers do embody other characters, though in a small proportion of the total time of the narratives, and mark role shifts effectively within constructed actions, I now analyse role shifts between constructed dialogues in these two sign languages. Both AdaSL and LGG (especially male) signers do show a small time proportion of reported speech in their narratives, most of it in the first person and without getting a response from the interlocutor. The few

two-way dialogues are marked with a lexical label or a change in the facial expression when switching characters.

In contrast, in the 12 LaSiBo narratives, just as there was only one character embodied by the signer other than themselves in the past, none presents quotational material. Female LGG signers also show a minimal percentage of quotations when compared to men or AdaSL signers. This lack of occurrences indicates the underdevelopment of such narrative devices in these two groups.

In the previous subsection, the results were shown only for the instances where other characters in constructed actions were represented as naturally implicating a role shift. Differently, the present subsection describes all instances that contain quotations, which include those produced only in the first person. Here, I present such occurrences whenever they are explicitly directed at someone. This is distinct from self-talk whose results are described in §6.5.3. Results on quotations in constructed dialogues are described first in AdaSL and then in LGG.

Constructed dialogues in AdaSL narratives

Although with the same time proportion as constructed actions by other characters (6%), constructed dialogues are observed in fewer narratives (eight of 17). Of these, a third are treated here (the remaining are monologues).

In AdaSL data, there is only one dialogue where both parties are represented and, consequently, a role shift occurs, first indicated with a lexical label and then with a change in facial expression. Five narratives present only the first-person viewpoint in a dialogue, even if two instances refer to one-way interventions of others.

I begin by illustrating a quotation told by the character enacting the signer in the past event. In her story, shown in (89), she had just seen a lion and rushed to warn her mother. At this moment in the storyline, she is telling her mother that the lion was there and she had to leave or she could risk being eaten. This is just a small part of a longer speech report told in the first person. However, she does not inform her audience of how her mother reacted to such a warning.

(89) Constructed dialogue in the first person only told by herself to her mother in AdaSL (ADA_11b narrative)



gloss	LION	GO-AWAY	LOOK	CL:LION-BITE
character	**herself**			
gaze at referent	at her mother		at the lion	at her mother
constructed dialogue	**Dialogue**: "The lion is there and you have to leave. When it sees you, it can eat you."			

In another narrative, the signer, enacting himself, tells a woman that his leg hurts, and then signs WOMAN. After this introduction, while keeping his left hand on his hurt leg, he embodies the woman and, from multiple perspectives, reports her speech. Thus, in (90), the woman is telling him how worried she was, asks him about the attack, and expresses relief in the end. Again, his character does not react to the woman's propositions. It is also curious that all the signs reproducing the woman's line exist as gestures in Ghana. Hence the signer may be reporting here a hearing person's way of talking.

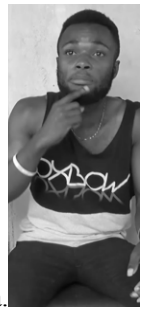
(90) Constructed dialogue in the first person only told by a woman to him in AdaSL (ADA_08 narrative)



RH gloss	LONG-AGO	AH	HOW?	KILL?	GOOD	GOD	BLESS
LH gloss	-	HOLD-LEG					
RH character	**woman**	**woman**					
LH character		himself					
constructed dialogue	**Dialogue**: "I waited for a long time. What happened? Did you kill it? God bless you."						

The one dialogue where the two characters intervene occurs between his father and himself. The signer begins by indicating that his father is taking the stage next with a lexical label, in (91a). He then embodies his father reproaching him with gestures for having put his arm in the hole, warning him of the danger of a snake appearing and biting him to death, in (91b). In the end, he replies briefly as his young self, in (91c). This shift is marked by a change in his facial expression.

(91) Constructed dialogue with role shift introduced with (a) a lexical label between (b) his father and (c) him in AdaSL (ADA_07 narrative)

a.  b. 

gloss	FATHER	YOU	PUT-ARM-IN-HOLE	NO	HEAR
character	**father**				
gaze at referent		at himself			
role shift					
constructed dialogue		**Dialogue**: "Don't put your arm in the hole! Do you hear? (...)"			



gloss	HEAR	NO	SNAKE-BITE
character	**father**		
gaze at referent	at himself		
role shift			
constructed dialogue	**Dialogue**: "Do you hear? If the snake bites you (...)"		


c.

gloss	DIE	SEE	NO	OK
character	**father**			**himself**
gaze at referent	at himself			at his father
role shift			**facial expression**	
constructed dialogue	**Dialogue**: (…) you die. You have to see, don't touch."			"Ok"

When looking at the narratives as a whole, dialogues reported in AdaSL correspond only to a small time proportion. However, the few occurrences include reconstructed lines told by other characters and one dialogue with a role shift marked by a change in the facial expression for a response from the interlocutor. These may indicate that AdaSL signers do use these devices in their narratives with some ease.

Considering that the findings in the action role shifts were quite similar between AdaSL and LGG, I now turn to this macro-community sign language to analyse the occurrences of constructed dialogues in both genders.

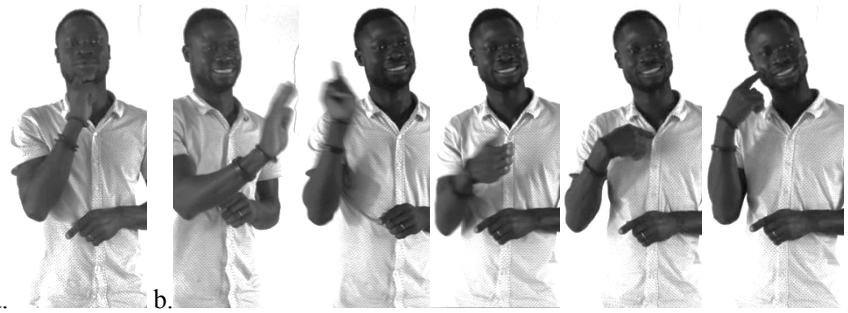
Constructed dialogues in LGG narratives

Unlike action role shifts that showed quite similar results in men and women, the use of constructed dialogues is strikingly different. This way, male LGG signers present again similar proportions of constructed dialogues to AdaSL. Like AdaSL, men in LGG partake in four dialogues only in the first person (as themselves) and in two dialogues with feedback. In these dialogues, the role shift is usually introduced by a lexical label. In contrast, there are just two women reporting speech in the first person only, but as told by a character other than themselves.

Most commonly, signers report speech told by their own character in the past in the first person only, i.e., without getting a propositional response from the interlocutor. In (92), the signer tells how he had just seen a snake and goes back to his father to

warn him. When he addresses his father, he identifies him with a lexical label, in (92a), before quoting himself, in (92b). Although there is no response from his father, the character representing himself takes him to the snake's location after the warning.

(92) Constructed dialogue in the first person only addressed at his father identified with (a) a lexical label told (b) by himself in LGG (LGG_02 narrative)

a. b. 

gloss	FATHER	CALL	THERE	SNAKE	I	SEE
character		**himself**				
gaze at referent		at his father				
constructed dialogue		**Dialogue**: "I saw a snake there."				

In the next example, the signer is saying goodbye to his mother before leaving for work – he will encounter the snake on his way there. Differently from the previous example, the signer embeds the identification of the addressee, his mother, in (93a), within his own quotation, in (93a,c). Again, there is no reaction from his mother in this one-way dialogue.

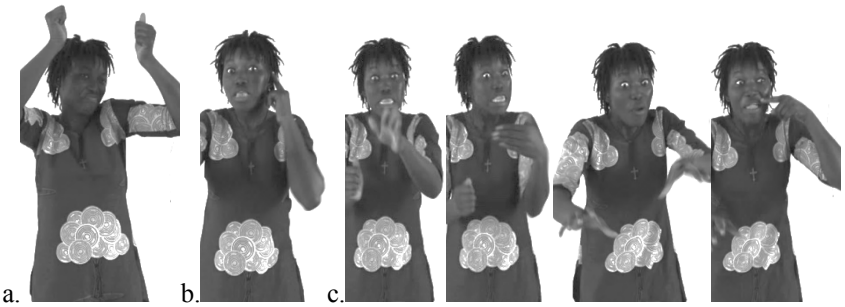
(93) Constructed dialogue in the first person only told (a and c) by himself to his mother identifies with (b) a lexical label in LGG (LGG_05 narrative)

a.  b.  c. 

gloss	BYE	MOTHER	I	WORK	GO
character	**himself**				
gaze at referent	at his mother				
constructed dialogue	**Dialogue**: "Goodbye, mother! I am going to work."				

Although there are only two women reporting dialogues in LGG narratives, they both quote a character other than themselves. One of them is warned by someone else about a big snake nearby, as shown in (94). While she was embodying her own character walking with a bowl on her head, in (94a), she shifts role by signing HEARING, in (94b). Then, she quotes the hearing warning her about a snake in their whereabouts, in (94c).

(94) Constructed dialogue in the first person only with a role shift between (a) herself marked by (a) a lexical label (c) told by a hearing to her in LGG (LGG_11 narrative)



a. b. c.

gloss	HOLD-BOWL	HEARING	CALL	SNAKE	BIG	LOOK
character	myself	**hearing**				
gaze at referent		at herself				
role shift		**lexical label**				
constructed dialogue			**Dialogue**: "There is a big snake. Look!"			

Interestingly, many of the male signers from Guinea-Bissau had similar experiences when encountering snakes. They pulled back, called out for help, told the other people where the snake was, and everyone came and killed it. Thus, the two constructed dialogues with role shifts by male LGG signers include depicting more than one person as the interlocutor.

The example below, in (95), is one of those cases. The signer's character was up on the tree harvesting cashew. There, he sees a snake and scared descends quickly, falling, in (95a). He then signs HEARING and indicates that is going to tell it to everyone, in (95b). After this introduction, he begins to quote himself saying that there was a big snake on the tree, in (95c). At the end of his statement, he switches roles to the hearing with a lexical label, in (95d), and enacts the other character to reply, in (95e).

(95) Constructed dialogue preceded by (a) a constructed action, and (b) the identification of the addressee, with (c) the quotation told by himself followed by a role shift marked with (d) a lexical label to (e) the other character in LGG (LGG_07 narrative)

a.  b. 

gloss	DESCEND-TREE	FALL	HEARING	TELL-EVERYONE
character	himself			

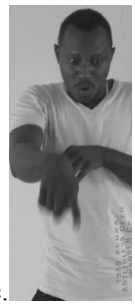
c.  d.  e. 

RH gloss	SNAKE	BIG	SNAKE	HEARING	REALLY?
LH gloss			THERE		
character	**himself**				**hearing**
gaze at referent	at the hearing	at the snake			at himself
role shift				**lexical label**	
constructed dialogue	**Dialogue**: "There's a big snake on the tree, It's there."				"Really?"

The other example in the LGG data with a marked role shift depicts a similar situation, but the signer's character tells everyone from up the tree about a snake on the ground,

in (96a). Therefore, when he signs HEARING, he immediately embodies (one of) the characters on the ground responding while looking up, in (96b). He then shifts again to his own character pointing down at the snake's location, in (96c) and closes the reported quotations by shifting one last to the hearing character(s), signalling it one more time with a lexical label to say that the snake had been finally spotted, in (96d).

(96) Constructed dialogue between (a and c) himself and (b and d) hearing people marked with (b and d) a lexical label and (c) a body shift in LGG (LGG_03 narrative)

a.  b.  c. 

gloss	TELL-EVERYONE	HEARING	WHAT?	THERE
character	**himself**		**hearing**	**himself**
gaze at referent	at the hearing	at himself		at the hearing
role shift		**lexical label**	**body shift**	
constructed dialogue			**Dialogue**: "What?"	"There!"



d.

gloss	SNAKE	THERE	HEARING	LOOK	THERE
character	**himself**		**hearing**		
gaze at referent	at the hearing		at himself	at the snake	
role shift			**lexical label**		
constructed dialogue	**Dialogue**: "There's a snake over there."				"It's there"

In sum, women in LGG produced but two dialogues in the first person only, which distinguishes them slightly from the total absence of reported speech in LaSiBo. On the other hand, male LGG signers' occurrences were quite similar to AdaSL in terms of time proportion within the narratives collected and the type of examples observed.

Most instances containing constructed dialogues refer to quotations addressed at someone but without getting any response back from the interlocutor. These quotations were in most cases told by the signers' own characters. However, on two occasions, in both AdaSL and LGG narratives by women, the embodied character is someone other than themselves in the past event. Finally, there are very few constructed dialogues where both parties intervene and there is role shifting between them, one in AdaSL and two by male LGG signers. Similarly, in the next subsection, it is shown that monologues are observed in these same groups.

6.5.3 Constructed monologues

Besides reporting speech in the first person addressed at someone else, the signers' own characters also produce monologues, usually related to the encounter with the animal. In AdaSL there are five monologues, whereas in LGG there is one in each gender group. All monologues – except for one – are very short and either express a rhetorical question about what could it be before actually seeing the animal or express

surprise at how big the animal is. The only long monologue is in AdaSL and reproduces a prayer in fear when facing the snake. Again, findings are shown first in AdaSL and then in LGG.

Constructed monologues in AdaSL narratives

There are five monologues in AdaSL all related to the moment where the signers' characters encounter the snake. Three of them are produced before seeing it, and they wonder what it is. One occurs at the encounter itself when the signer begins praying and the fifth one is produced afterwards showing surprise about the snake's size.

In the monologues told before the encounter with the snake, the characters representing the signers in the past event express curiosity about something strange. In (97a), she acts as if looking at the bushes where something seemed to be moving and wonders to herself what could that be (ADA_06 narrative). Similarly, the character, in (97b), after looking into a hole and seeing something moving, asks himself what was there in that hole that he was pointing to. This signer produces two similar monologues in different moments of his narrative (ADA_07 narrative).

(97) Constructed monologues occurring before encountering the snake in AdaSL

a. 

gloss	POINT	WHAT?	MOUSE?
character	**herself**		
gaze at referent	at the bushes		
constructed dialogue	**Monologue**: "What is it? Is it a rat?"		

b. 

gloss	POINT	WHAT?
character	**himself**	
gaze at referent	at the hole	
constructed dialogue	**Monologue**: "What could that be?"	

In another monologue, the longest one in AdaSL, the character had just seen the snake and, terrified, starts praying, as if asking for divine salvation from that life-threatening situation, in (98). Here, only an excerpt showing the main content of the whole prayer is presented for space's sake, since it is quite repetitive (ADA_14 narrative). Again, such propositions are produced in the character's role to himself in what could be an internal thought or self-talk.

(98) Constructed monologue occurring during the encounter with the snake in AdaSL



gloss	PRAY	BLESS	JESUS-CHRIST
character	**himself**		
constructed dialogue	**Monologue**: "I pray to you to bless me with life, Jesus Christ."		

In the last monologue, in (99), the character playing the signer in the past event reacts to seeing the snake, by commenting to himself about its big size (ADA_08 narrative). As it will be described in the next study on the description of the animals encountered, this would be a strategy used by signers to convey the animal's size and shape (see Chapter 7 for more details).

(99) Constructed monologues occurring after encountering the snake in AdaSL



gloss	AH	BIG
character	**himself**	
gaze at referent	at the snake	
constructed dialogue	**Monologue**: "Ah! It was big".	

To conclude, AdaSL signers quote themselves in the past in the form of monologues, whether to express internal thoughts, as when wondering what could something out of the ordinary be, or to pray for help in a situation of great distress or to emotionally react to something surprisingly unexpected, such as a big a snake. Next, I look at how LGG signers express their monologues.

Constructed monologues in LGG narratives

In AdaSL, a few characters reliving their past experience talk to themselves right before, during and after encountering the snake. Similarly to AdaSL, one man in LGG asks himself in the narrated event what was it that he was seeing, and one woman expresses surprise about the size of the snake.

In the first example, shown in (100a), the signer acts as if walking, seeing a snake on the ground, and, while signing SNAKE, he expresses doubt with his body and face, as an internal thought (LGG_05 narrative). In the second example, just like it occurred in AdaSL, the character embodied representing herself shows great surprise at the size of the snake, in (100b). This last instance will also be analysed in the next study on the strategies used to depict the animals (see Chapter 7 for more details).

(100) Constructed monologues in LGG

a.



b.



gloss	SNAKE	BIG
character	**himself**	**herself**
gaze at referent	at the snake	at the snake
constructed dialogue	**Monologue**: "Is it a snake?"	**Monologue:** "It's big!"

To summarise, although men and women show similar occurrences in constructed monologues and even in role shifts between constructed actions, quotations reported in dialogues revealed major differences between genders. Overall, male LGG signers patterned more like AdaSL, while women's instances were closer to LaSiBo's. Such findings strengthen general tendencies distinguishing the four groups that have been unveiled throughout the previous studies. In the following section, the results of the use of role shifts and constructed dialogues are synthesised in the three sign languages.

6.6 Synthesis of the results

The narratives of the three sign languages were told most of the time in the character's role, as shown in Study 2 on signing perspectives. In the present study, that character

embodiment is analysed more closely in terms of the embodiment of characters other than themselves and subsequent interactions between characters within the stories.

Character enactment can be done especially in the real scale perspective, both overt and partially overt, but also in multiple and simultaneous perspectives (see Chapter 5 for more details). With that in mind, the time proportion in each language for such constructed actions was looked at as the time signers dedicated to constructing their own actions in the narrated events or the actions of others. In addition, all time spent in constructing dialogues was also taken into account, both told by themselves and by others.

As the narratives collected refer to personal experiences, it was no surprise to observe that the embodiment of their own characters in the past was expressed much more often than that of other characters. Figure 52, also makes clear that constructed actions were produced overwhelmingly more than constructed dialogues in the three languages. Only one LaSiBo signer is enacting an animal very briefly. The proportion of constructed actions played by other characters was equivalent in the two LGG gender groups and almost double the proportion in AdaSL narratives. In contrast, AdaSL and male LGG signers quoted equally in the first person, though the women in LGG were able to quote others in a larger proportion.

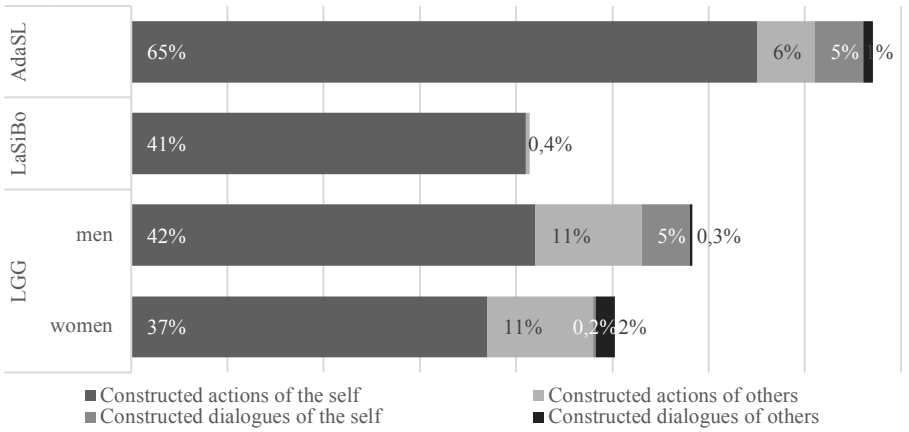


Figure 52. Proportion of constructed actions and constructed dialogues by their own character and of others in the four groups: AdaSL, LaSiBo and LGG per gender

When looking now at multi-character contexts, where role shifts are expected to occur if not frequently at least effectively, results are presented again proportionally for AdaSL and LGG per gender. As already mentioned above, in LaSiBo, there is only

one animal embodiment. This LaSiBo signer produces a role shift and marks it with a body shift. As shown in Figure 53, in the narratives where other characters were enacted (calculated as 100%), AdaSL and male LGG signers enacted other characters more often than the group of women (in dark grey in Figure 53). A striking difference, though, is in the use of markers in switching from one character to the other. Lexical labels are by far the preferred way of signalling a shift (in dark pink in Figure 53), especially in AdaSL. This older sign language presents also a remarkable use of non-manual markers, namely by relying on changes in the facial expression (in light pink in Figure 53). This is significantly different from LGG, where the men shift between characters with their bodies, while women hardly do so.

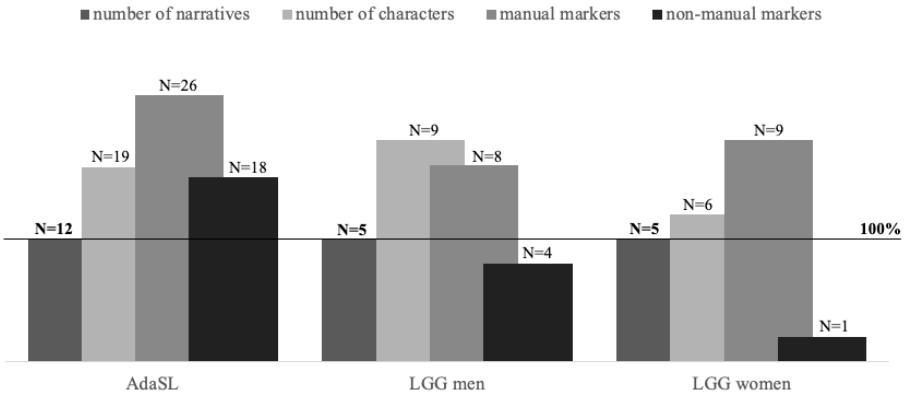


Figure 53. Proportion of narratives, other character embodiments, manual and non-manual markers in the three groups: AdaSL and LGG per gender

In all 12 AdaSL narratives, except one, signers embody an additional character, usually a man or the signer's father. Inclusively, in two of these narratives, signers tell vicariously about their father's experience with an animal attack. In only half of those narratives (seven of 12) do signers embody the animals (five snakes, two lions and one snail). All shifts to other characters, except for one man and two animals, are marked with a lexical label and subsequently, in half of the narratives, with non-manual markers, mostly in shifts to animal characters and by changing the facial expression. Marking switches to human characters with lexical labels also occurs preferentially in the ten LGG narratives (five in each gender group). However, the use of non-manual markers is highly distinct from AdaSL. In LGG, only a few body shifts occur to signal the change to the animal character (two by men and one by a woman). Importantly, even though there are fewer animal embodiments in LGG, the two men that interact with the snake do so from multiple perspectives.

Quotations are reported much less than actions. LaSiBo signers do not quote in their narratives, and only two female LGG signers do so in the first person only. AdaSL and male LGG signers pattern similarly: five narratives in AdaSL and four by male LGG signers are told in the first person only, without getting any response back. The difference is that, in two instances, AdaSL signers are enacting other characters, just like in the two instances produced by women in LGG. Also, the only bidirectional dialogues in the collected data are observed in one AdaSL narrative and two in LGG told by men. Shifts in such two-way dialogues are marked lexically, especially in LGG, and with a change in facial expression, mostly in AdaSL. Finally, five monologues were observed in AdaSL and only two in LGG, one by each gender. Nonetheless, the content of these constructed monologues was very similar in the two languages. Here, signers wonder what would be something that would turn out to be the snake or they react after seeing it to its big size.

To understand eventual idiosyncrasies in the narratives collected, Figure 54 presents them with their real time and the corresponding distribution of action role shifts involving the embodiment of other characters (subtitled as CA by other) and constructed dialogues in the first person, in monologues and in two-way dialogues with role shifting (subtitled as dialogue with RS). All narratives are shown for AdaSL (in Figure 54a) and LGG (in Figures 54c and d). The ones with instances where these devices occur are bordered with a box. In LaSiBo, only the narrative where the role shift with an animal character is shown (in Figure 54b).

At first glance, there are longer narratives in AdaSL (the longest has a bit more than two minutes) when compared to LGG (where the longest has a bit more than one minute). Despite differences in length, it becomes clear that the embodiment of characters other than themselves is evenly distributed within the narratives. In addition, instances of first-person only in dialogues are more spread out along the narratives in both AdaSL and male LGG signers.

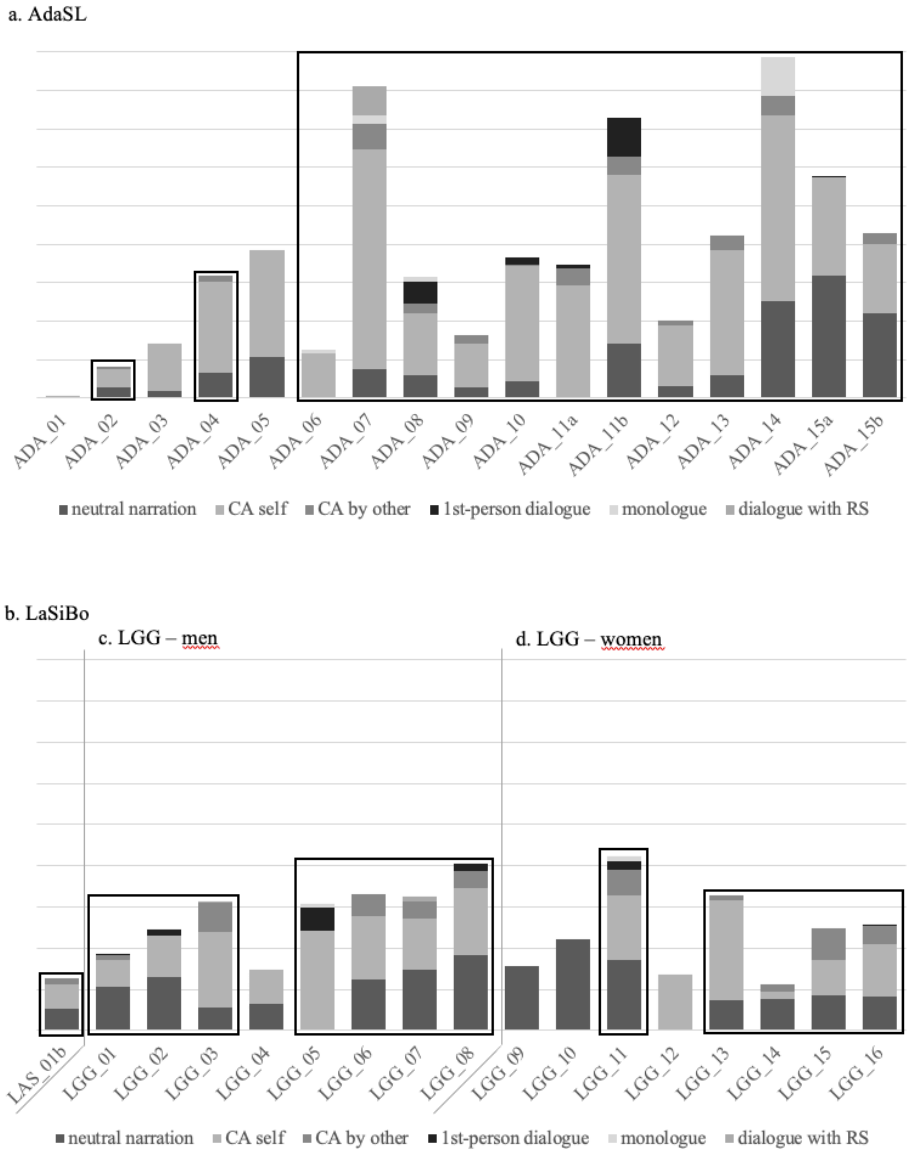


Figure 54. Distribution of neutral narrations, constructed actions (CA) by their own character (self) and by others, constructed dialogues in the first person, with role shift (RS) and monologues in the four groups: AdaSL, LaSiBo and LGG per gender, with the occurrences within squares

When trying to capture patterns in the use of reported speech in AdaSL (in Figure 51a), what is highlighted are individual narratives, such as ADA_07. This personal experience is told by the young bilingual deaf young man who has been the only one so far in Adamorobe to enter university. Similarly, ADA#08, although older than ADA#07, has also had much access to Ghanaian Sign Language. The remaining narratives involving reported speech are told by ADA#14, ADA#11 (with two narratives) and ADA#10, who are some of the elders in Adamorobe. This may indicate that, in AdaSL, older signers tend to be more skilled storytellers, as much as those who have had more socialising opportunities outside the village.

The LaSiBo signer LAS#01 had already shown similar results to AdaSL in Study 2 on signing perspectives. Her outperformance was hypothesised then to be due to having an older deaf brother. Also, as it was difficult to find justifications for different performances in male LGG signers in Study 2, so it is here. However, what is made clear here is that reported speech in this group is overall very short, except for LGG_05, corresponding to the only narrative told by men that did not use any neutral narration. Finally, in the women, LGG_11 stands out again for quoting more than her female peers as was already the case in Study 2. I recall that, in the use of signing perspectives, LGG#11 presented higher diversity, including the reduced scale. For that reason, it was suggested that this particular signer may socialise more outside school than the other women included in this study.

In sum, role shifts are practically inexistent in LaSiBo, whereas in the other languages, though in a small proportion, they occur effectively for being almost always signalled, especially by lexical labels. AdaSL signers distinguish themselves from LGG by using much more non-manual markers in action role shifting. As hinted at by the two previous studies in this thesis, gender groups in LGG show some differences. In this study, the distinction is made clear only in what concerns constructed dialogues, where men were more productive, as much as AdaSL signers were too. For being less used in the narratives, reported quotations appear to be the hardest narrative device to master by storytellers.

All in all, both language age in AdaSL and the frequency of social interactions by men in LGG seem to play a crucial role in developing this ability, as was already suggested in the two previous studies in this thesis. This is consistent with AdaSL signers being used to telling stories to each other for generations and with male LGG signers doing it also intensely daily with a large variety of interactive partners (see Chapter 1 for more details). Next, I relate the results from this study with the literature.

6.7 Discussion

In the previous section, I provided a synthesis of the results obtained in the descriptive analysis of role shifts and constructed dialogues in the three sign languages, illustrating the differences between the four language groups: AdaSL, LaSiBo, LGG women, and LGG men.

The present study confirms previous statements from the literature related to role shifts and constructed dialogues. Overall, in reporting both actions and quotations, the first-person viewpoint is preferred, as expected. In particular, it is demonstrated here that shifting between acting characters arises first than the one involving quotations, paralleling language development by a community with its acquisition in children (e.g., Lillo-Martin & Quadros 2011).

For narratives to be easy to follow and engage the interlocutor, storytellers have to be able to avoid ambiguities when referring to different characters, marking role shifts between them. Again, previous studies have shown that lexical labels to signal role shifts appear before non-manual markers (e.g., Kocab, Pyers and Senghas 2015 for the emerging sign language of Nicaragua), which matches the tendency in the young LGG for lexical marking in comparison to the older AdaSL favouring non-manuals, especially changes in facial expressions. This way, AdaSL corroborates observations for language acquisition in that consistent use of facial expressions in character shifting requires time to develop (e.g., Emmorey and Reilly 1998). Non-manuals in LGG refer mainly to body shifts, thus previewing that such a marker may precede the signalling of role shifting with facial expressions.

To briefly relate the literature, the present findings and the research questions and hypothesis for this study, I present next Table 33. It shows the proportion in the use of role shifts and constructed dialogues and the number and range of role shift markers used in the personal experience narratives in the four language groups according to the order in which they are expected to develop. This way, it becomes clearer that a pattern is emerging from the studies presented so far in distinguishing the four groups from each other. In other words, the smaller deaf group using LaSiBo is systematically lacking certain devices, while AdaSL, in contrast, seems to have developed most of them. In between, female LGG signers tend to patter more like LaSiBo and men like AdaSL signers.

Table 33. Order of emergence of role shift and constructed dialogue devices in the four groups: AdaSL, LaSiBo and LGG per gender

Emergence order	AdaSL		LaSiBo		LGG			
					men		women	
first-person actions	x	65%	x	41%	x	42%	x	37%
action role shifts	x	6%	x	0,4%	x	11%	x	11%
first-person quotations	x	5%			x	5%	x	2%
quotational role shifts	x	1%			x	0,3%		
lexical marking	x	24/44			x	6/13	x	7/11
body shift marking	x	5/44	x	1/1	x	1/16	x	2/11
facial expression marking	x	12/44						

To answer the research question for Study 3, the narrative devices studied here – role shifts and constructed dialogues – seem to develop differently in the four groups. I thus revisit my hypothesis that narrative devices may require regular social interactions to develop. Concerning the **amount of time** needed for a language to develop, the hypothesis holds for the young and emerging LaSiBo because of its limited narrative devices, but not for LGG, which is even younger but patterns more like AdaSL. In the older AdaSL, signers spontaneously produce role shifts and constructed dialogues in their narratives, and so do LGG signers – but LGG male signers in particular. In contrast, these narrative devices were almost completely absent in LaSiBo.

If time alone does not explain the development of narrative devices, then it seems likely that **interaction between deaf people** is a crucial factor to develop sign language. LGG is younger than LaSiBo, but its signers interact intensively in a larger deaf community. This hypothesis is further strengthened by looking at the difference between male and female LGG signers. As explained in §1.6, the young and growing LGG deaf community in Bissau is made up equally of both male and female signers, but they have different social patterns Men are more able to spend a lot of time with other deaf interlocutors, while women have fewer opportunities to interact due to household duties, childcare, and other aspects of female gender roles. I propose that this also explains the smaller proportion of narrative devices that women LGG signers produce.

Yet what is it specifically about frequent interactions that might lead to the development of narrative structure? Recall Labov's theory that such devices are rich instruments in the evaluation part of storytelling because they enhance narratives and make them more compelling to the listener or viewer. If this is correct, then it may be that frequent interactions are pivotal because they provide a training space for signers to try out new linguistic strategies and see how interlocutors react. Or it may be that there is a competitive aspect that prompts signers to try different strategies to pull attention toward themselves. Or perhaps when small innovations occur in storytelling and there is a large audience, these new techniques more easily take hold and get re-used. This is a topic for future research.

When it comes to role shifts and constructed dialogues, why would more use of these specific linguistic devices be more compelling? For one, only highly skilled storytellers seem to be able to embed other people's quotations in their narratives conveying dramatic force (Labov 1972, 373). Representing other characters by embodying them and interacting with them as a multifaceted actor is sure to grasp an audience's attention. Thus, it is unsurprising that more engaging stories rely on the type of devices that make interlocutors relive the narrated event as if they were themselves experiencing it.

6.8 Conclusion

Studies 2 and 3 focus on narrative devices as part of the evaluation component responsible for enhancing stories and captivating the audience's attention. The personal experience narratives told spontaneously and without preparation in the three West African sign languages object of this thesis have been looked at from different angles. Study 3 focused on two narrative devices, role shift and constructed dialogue, confirming distinctions between the language groups already revealed in the previous two studies.

This study showed that, in LGG, a very young sign language, deaf men use more narrative devices than women. Their signing resembles AdaSL signers, where the language is many generations old, at least in these two narrative devices. In both cases, signers produced role shifts and constructed dialogues spontaneously and without planning. In LaSiBo, only one signer did a role shift, and no constructed dialogues were found in the narratives. In fact, in what the narrative devices are concerned, LaSiBo signers – and most female LGG signers – seem to be especially unprepared as effective storytellers in comparison to AdaSL and male LGG signers.

The ability to use such devices effectively, in AdaSL and LGG, even if in small proportions, confirms the hypotheses concerning the factors leading to its development. Thus, with time, as in AdaSL, and over frequent social interactions

between deaf peers, as in AdaSL and LGG, especially in the men, stories come to be told without ambiguities and resorting to a greater variety of devices to reproduce actions and quotations by different characters.

From this, I conclude that the development of narrative devices may be a consequence of interaction habits in different sign language communities. I move now to the next chapter and the last study on narrative devices and of this thesis which continues to investigate different aspects of the evaluation component in sign language narratives.

Chapter 7 – STUDY 4 Narrative devices: Animal depictions

7.1 Introduction

In this chapter, I investigate a final narrative device in the personal experience narratives of the three sign languages collected in different West African sites. Considering that the narratives were elicited by the question "Have you ever encountered a dangerous animal?", it was expected that the animals would be a central aspect of the stories. Thus, Study 4 focuses on how the signers refer to the animals encountered. The more the animal is enhanced, in terms of how dangerous it looks, the more emotional intensity is conveyed to the audience, enabling them to relive the encounter in their imagination.

Animal depictions occur in the narratives because they were motivated by a prompt about encounters with frightening animals. Such depictions refer to the **size and shape** of the animals, i.e., to how big or small, how long or wide they are. To understand how much the narratives are enhanced in this study, I look at the depiction of the animal, as the point of their personal experiences. Such enhancement is measured in terms of the depiction's occurrence within the climax and the diversity of depicted features. To follow up on this, the analysis is organised into two levels. The first is focused on the context in which the animals are referred to within the narratives to verify how much they are entrenched in the most emotional part of the story. The other zooms in on the depiction types to check how varied they are in the three sign languages, AdaSL, LaSiBo and LGG.

The intentional captivation of the audience's attention corresponds to the evaluation component enriching the narrative as Labov (1972) described. As described in Chapter 4, certain evaluation types are expressed in the narrative devices of Studies 2 to 4 (see §4.4 for more details). The reference to the animals adding dramatic force to these narratives can be conveyed by three of those types: (1) external evaluation, when the narrator interrupts the narrative and addresses the audience to add comments or information; (2) evaluation by suspension of the action, when the narrator interrupts the sequence of events to emphasise the hero's antagonist in the story; and (3) embedding of evaluation, included in quotations told by characters within the storyline. In this way, the animal can be either simply portrayed by the narrator, in (1), or enhanced to the audience during the emotional part of the story, in (2). Otherwise, it can be presented by the embodied character while talking about it, in (3). Such techniques to describe the animal – which is the point of the accounts collected for this thesis – pull the audience into the encounter.

With those different possibilities in mind, Study 4 is related to the additional information transmitted within the narrator's role to the audience (in Study 1), and to

assessments about the animal conveyed through embedded quotations (in Study 3). The present analysis focuses only on the references to the animal that aim expressly at its intentional identification and depiction. Such references exclude representations of constructed actions involving the animal. In other words, the analysis does not consider instances where the animal is being held, partially represented by a body part classifier or fully embodied by the signer anthropomorphically while doing something in the real scale perspective (see §5.5.1 for more details). It also disregards the occurrences where the animal is represented approaching or attacking the character from multiple perspectives (see §5.5.2 for more details). Thus, the representations of the animal within constructed actions analysed in Study 2 are not included here.

In this chapter, I review what is already known about the representation of animals (in §7.2.1) and size and shape depictions (in §7.2.2) in the three sign languages, with special attention to differences between them and to what this may indicate about the signing communities. There is published work on this topic in both Adamorobe Sign Language (AdaSL) and Langue des Signes de Bouakako (LaSiBo), while such depictions in Língua Gestual Guineense (LGG) are yet to be explored. Next, I recall the research questions (in §7.3) and resume the methods for the analysis (in §7.4). The descriptive analysis starts with the contexts of the depiction (in §7.5.1) followed by the depictions of size (in §7.5.2) per language, first AdaSL, then LaSiBo and finally LGG. After the analysis, I present the synthesis of the results (in §7.6), a discussion relating the results to previous descriptions of the three sign languages (in §7.7) and end with a conclusion (in §7.8).

7.2 Background on animal depictions

The present background focuses only on previous descriptions of the three sign languages studied here: AdaSL, LaSiBo and LGG. It begins by reviewing the strategies used by signers in representing animals (in §7.2.1) and then zooms into the depictions of size and shape (in §7.2.2).

In sign languages, animals are often represented by being personified, i.e., by mapping on the signer's body corresponding body parts of the animal. In this study, I will keep designating this strategy **anthropomorphism**, as used in Study 2 on signing perspectives, especially when involving the embodiment of animals. In this type of animal representation, body parts of the animal usually rely on **tracing movements** on the signer's body or **entity handshapes**. When the shape of the hand represents the shape of a referent, I also keep designating it as an entity handshape as was the case in Study 2. Such entity handshapes may be used to represent the whole body of smaller animals as well.

Entity handshapes are especially useful to represent the size and shape of smaller animals or the body parts of larger ones. Otherwise, size dimensions, in particular, can be measured in the signing **space**, for instance between the hands, or on the **body**, like making use of the circular shape of a finger or an arm. In this study, I chose to group the depictions of size in different dimensions: **large and small**, **length**, **height** and **width**. The depiction of shape is addressed by anthropomorphic strategies or the use of entity handshapes, which are described in the following subsection.

7.2.1 Overview of animal representations

The representation of animals in both sign language and silent gestures seems to rely on similar strategies (Hwang et al. 2017). The most common is mapping parts of the animal's body on their corresponding parts of a person's body, as an **anthropomorphism** (Sutton-Spence 2021). A well-known example of such a personification strategy is representing a horned animal, with the index fingers on the sides of the person's head (Hochegger 1979, 32, for a gesture in Central Africa), to represent, for instance, a 'cow' (Richie et al. 2014, 186). Another strategy, especially for smaller animals, is mapping the size and shape of the animal on the shape of the hand and, if needed, of the arm, as in the two flat hands joined by the thumbs to represent the **entity** of a 'butterfly' (Ortega & Ozyurek 2020).

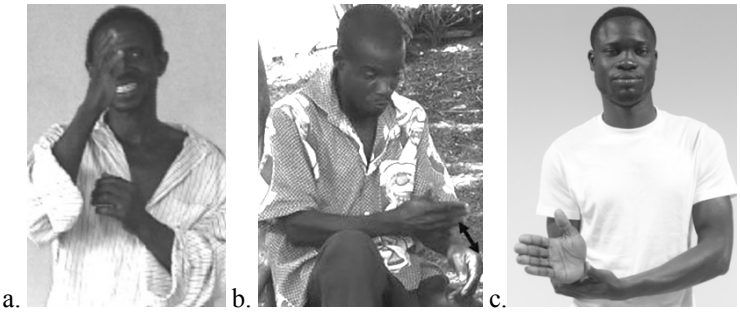
There are other ways of representing animals manually, that do not involve depicting their size and shape. These may relate animals to actions with which they are usually associated, like acting as if holding reins to refer to a horse (Hwang et al. 2017, 594) or reproducing a habitual action of the animal like stinging for an insect (Hochegger 1979, 156). Because they do not refer to the physical aspects of the animal, I will not further discuss these here.

Animal representations in AdaSL, LaSiBo and LGG

To show how animals can be represented in the three sign languages of this study, I use pictures of signs that have been published so far. The aim is to systematise different strategies for depicting animal features in these languages. I first show representations of animals with entity handshapes. Then, I present anthropomorphic ways of mapping body parts of the animal on the human body. The depiction of an animal's physicality may rely on entity – or other – handshapes on specific body locations, eventually combined with tracing movements.

Establishing correspondences between an animal's size and shape and a handshape is affordable mainly for smaller animals. These cases are designated as **entity**

handshapes. This is illustrated with the sign for fish represented by a flat hand in the three languages, AdaSL (Figure 55a), LaSiBo (Figure 55bc) and LGG (Figure 55c).



a. FISH (AdaSL) b. FISH (LaSiBo) c. FISH (LGG)

Figure 55. Signs with entity handshapes for FISH in AdaSL (Nyst 2007) (a), LaSiBo (Tano & Nyst) (b), and LGG (Martins & Morgado 2017) (d)

An entity handshape can take different forms depending on the shape of the referent itself. For instance, a thin crawling animal, like a WORM, is likely to be represented by the index finger (Figure 56a), while a thicker one, such as a snake, is rather depicted by the hand and arm (Figure 56b). In these examples from LGG, a boa is distinguished from a smaller snake by being articulated together with an iconic mouth movement where the swollen cheeks indicate a big size (Figure 56c).



a. WORM b. SNAKE c. BOA (LGG)

Figure 56. Signs with entity handshapes for WORM (a), SNAKE (b) and BOA (c) in LGG (Martins & Morgado 2017)

Looking at anthropomorphic representations of animals, it is possible to observe that body parts of the animal can be mapped on the signer's body with entity handshapes. For instance, the index fingers stand for horns in OX in LGG (Figure 57a) and for trunk in ELEPHANT in LaSiBo (Figure 57d). In addition, a **tracing movement** can be added to the **entity handshape** to depict the size of the horns or the trunk. The index fingers can be combined with the tracing movement for COW in LGG (Figure 57b), and for ELEPHANT in AdaSL (Figure 57e), or with different entity handshapes, such as the fists for COW in AdaSL (Figure 57c) or with the whole arm for ELEPHANT in LGG (Figure 57f).

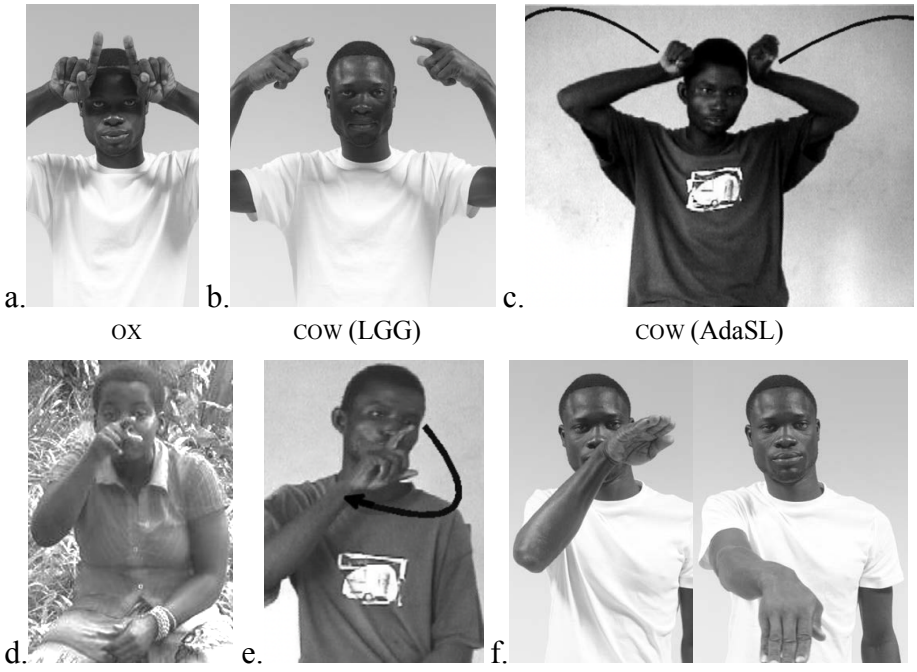


Figure 57. Signs with entity handshapes without movement for OX (a) in LGG and ELEPHANT in LaSiBo (d) and combined with tracing movements for COW in LGG (b) and in AdaSL (c) and for ELEPHANT in AdaSL (e) (Nyst 2007) and LGG (f) (Martins & Morgado 2017)

Tracing movements can also depict shapes on the body, like delineating big round eyes around the signer's eyes for OWL in LGG (Figure 58a). Otherwise, the signer can outline a shape in the neutral space, even if the starting location is on the body, like

drawing pointed years for WOLF in LGG (Figure 58b). In these examples, the index finger is only outlining a shape, it is not representing an entity.



a. OWL b. WOLF (LGG)

Figure 58. Signs with tracing movements for OWL on the body (a) and WOLF in the neutral space (b) in LGG (Martins & Morgado 2017)

In addition, Nyst observes a technique that seems unusual in other sign languages, which was also observed as a gesture in central Africa (Hochegger1979, 134, for 'pulling' the ears up to mean 'long ears'). Since it involves pulling, it uses **handling handshapes** combined with **tracing movements** in space. In the examples below, the signer holds his ears and virtually pulls them to represent a RAT (Figure 59a) and the nose forward to depict a long beak for TURKEY (Figure 59b) in AdaSL. In LGG, this strategy is also observed for RABBIT by pulling the teeth down and then the ears up (Figure 59c).



a. RAT b. TURKEY (AdaSL) c. RABBIT (LGG)

Figure 59. Signs with handling handshapes combined with tracing movements for RAT (a) and TURKEY (b) in AdaSL (Nyst 2007, 2016) and RABBIT in LGG (c) (Martins & Morgado 2017)

This analysis of signs to represent animals collected in previous works on the three sign languages is taken to be an indicator of the strategies that signers may use to express the size and shape of concrete entities. This thesis is the first attempt to pursue such a description in LGG through my analysis of how signers describe dangerous animals in personal experience narratives and what categories they use.

7.2.2 Overview of size depictions

Keeping the focus on the possibilities in describing animals, I will narrow down this overview to the notion of size. When referring to such a measurable magnitude, the two most general terms that come to mind are 'large' and 'small' – or 'big' and 'little', but it can also be looked at in terms of linear dimensions, such as length, height and width.

Such notions are so visually motivated that they are commonly depicted with the hands and the body, being often preceded in spoken languages by 'like this' (Cooperrider 2019, 183, 222-223). A **large** size is likely to be depicted between the two hands in space (e.g., Iverson et al. 2019, 4, for toddlers). A **small size** would instead rely on the fingertips (e.g., de Jorio 2000, 229-230, for the Neapolitan gesture).

The **height** can be measured by different handshapes between the hand and the ground (Brookes 2004, 201). Sometimes, gesturers express height differently based on humaneness. This distinction occurs in parts of Africa, where, for instance, using the palm down for animals and the bent palm up for people is observed (c.f., Kirby 1989, 12, for Ghana; Creider 1977 and 5, Claessen 1982, 175, for Kenya).

Contrasting with depicting size in the space for 'large' and height, gesture collections in different parts of Africa show that size depictions tend to be body-based when referring to length and width. In Kenya, hearing gesturers depict the **length** of a large fish between points at the end of the extended arm and the shoulder and delimited using the other hand (Claessen 1982, 173). Additionally, the size of a small fish is marked at the wrist with the other hand. Tano and Nyst (2018) found signers marking size on the shoulder of the same arm with the other hand, but not on the shoulder of the other arm as Claessen describes in Kenya. Similarly, in Central Africa, **width** is expressed by parts of the arm and leg (Hochegger 1979, 64). Specifying this dimension on the leg has also been observed in gesturers in Ghana (Hadjah, forthcoming) and in the Ivory Coast (Tano & Nyst 2018, 8). Such a preference for the use of body-based size depictions contrasts with gesturers of European origin (Nyst 2016, comparing Anyi and Dutch gesturers).

The fact that notions concerning size are so easily depicted in gestures by hearing people is likely to make them available to deaf people. Nyst demonstrated that size and shape depictions are used similarly by both deaf from Bouakako, Adamorobe and Bamako, in Mali, and hearing speakers of Bamanan, Anyi, Dida, and Akan (2018, 372-373). Nyst and Tano also compare the AdaSL and LaSiBo signs of size and shape with the gestures of Anyi speakers in the Ivory Coast, concluding that gesturers, unlike signers, point at elements in the environment to show size (2018, 16). Moreover, West African signers seem to use few space-based size and shape depictions, when compared to Western sign languages of European origin (Nyst 2018, comparing three West African sign languages and three sign languages of European origin). With this potential gestural base in mind, I focus next specifically on the depictions of size and shape that have already been described in the three sign languages studied in the present thesis.

Size and shape depictions in AdaSL, LaSiBo and LGG

There are already important descriptions of the depiction of size and shape in AdaSL and LaSiBo, undertaken by both Nyst and Tano. LGG has no such research done yet on this particular area, but, for the notions of size, the LGG dictionaries are used here whenever possible. In the present overview, considering the magnitudes needed to describe animals, especially snakes, I look foremost at the dimensions of size: large and small, length and width.

For AdaSL, the first description of size and shape specifiers is found in the thesis of Nyst (2007). The specifiers or depictions – I prefer the term 'depictions' in this study – of size and shape in LaSiBo were later described and compared with AdaSL (Nyst 2018; Tano & Nyst 2018). In a schema based on Nyst's work (2007, 2016a, 2018;

Nyst et al. 2021; Morgado & Nyst 2022), the expression of size as treated in this study is distinguished mainly by two features, whether they are (1) **space-based** or (2) **body-based**, as shown in Table 34. If the size is measured in space, it can be delimited horizontally for length – and large/small – (1a) between the hands and for height (1b) between the hand and the ground. When the affordances of the body are put to use for size depiction, the smaller the size the more the delimitation will be concentrated on the (2a and b) fingers. In opposition, larger sizes can be marked from the (2c) the hand all through (2d) the arm up to the shoulders.

In addition, tracing movements are crucial to (3a) extending the size of a shape, in both the space and (3b) the body, which can be expressed by (3c) entity or (3d) handling handshapes. The depiction of width can also be depicted (1a) in space between the hands or (1c) internally within the hand. Otherwise, it is marked in (2b–f) the body with one or both hands depending on the size, especially to delimit the width of a cylindrical shape together with (3 e–h) a circular movement around the body part. Here, it varies from smaller (2b and 3e) on the finger and (2c and 3f) the hand to larger on (2c and 3g) the arm or (2e and 3h) leg.

Table 34. Categories for size depiction (1) in space, (2) on the body and (3) with movement

	Size		**Large**	**Small**	**Length**	**Height**	**Width**
1.space-based	a) between the hands		x		x		x
	b) between the hand and the ground					x	
	c) internally within the hand			x			x
2.body-based	a) internally on the finger of the same hand			x			
	b) inherently with the hand on the finger, c) on the hand or d) on the arm		x	x x	x		x x x
	e) inherently with one or two hands on the leg f) or the body					x	x

					x		
3.movement	a) tracing for extension, in space and b) on the body, eventually with c) entity or d) handling handshapes				x		
	e) delineating a circumference on the finger, f) the hand, g) the arm or h) the leg						x

For the sake of simplification, I refer to size dimensions as distinguished mainly for being space or body-based and as being especially delimited by a tracing movement for length and a circular movement for width. The depiction of size can also be made conceptually, i.e., in terms of its relative or absolute dimensions. The **relative size** is understood as an abstract measure applicable to any object in relation to others. These are usually lexicalised and refer, for instance, to the general notions of 'large' and 'small', as shown in Figure 6 for the lexical signs for BIG (Figure 60a), which is space-based, and SMALL (Figure 60b), which is body-based.

a.  b. 

Figure 60. Signs to refer relative sizes for (a) BIG, as space-based, and (b) SMALL, as body-based in AdaSL (Nyst 2007)

Since there was no previous analysis of size and shape depictions in LGG, I used the LGG dictionary (Martins & Morgado 2017) as a dataset of lexicalised signs to provide corresponding examples for relative sizes as found in this language. There are four signs of relative size in LGG, namely BIG (Figure 60a), SMALL (Figure 60b) and two variants for LITTLE (Figures 61c and d). The first two are space-based (Figures 61 a and b), while the other two are body-based (Figures 61c and d). The signs for BIG (Figure 61a) and LITTLE2 (Figure 61d) are similar to the corresponding AdaSL signs in Figure 60.

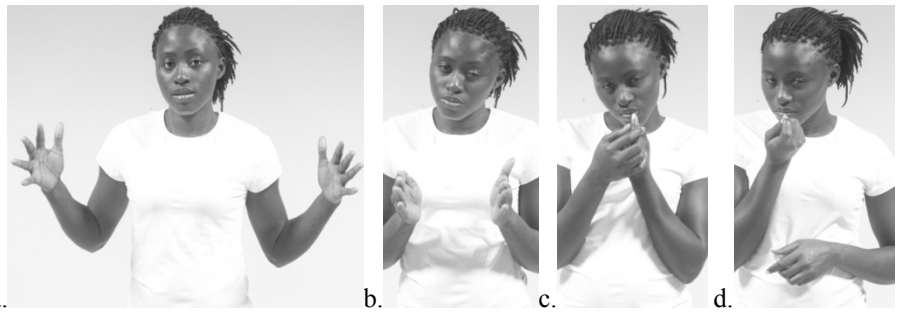


Figure 61. Signs to refer to relative sizes for BIG (a), SMALL (b), as space-based, and two variants for LITTLE (c and d), as body-based, in LGG (Martins & Morgado 2017)

Different from the above, the depiction of an **absolute size** aims at determining the actual size of objects. In AdaSL, signers can depict the size of concrete referents in the neutral space. In Figure 62a, the signer indicates the size of a turtle between the two hands in space and, in Figure 62b, he depicts the height of a short animal, between the hand and the ground. In addition, AdaSL signers use their bodies frequently to express these exact measures. For example, in Figure 62c, the signer delimits on his arm a size between the tip of the fingers and the shoulder.

a.  b.  c. 

Figure 62. Depictions of absolute sizes space-based for a turtle (a) and a short animal (b) and body-based, between the tip of the fingers and the shoulder (c) in AdaSL (Nyst 2007)

In a similar way as shown in Figure 62 for AdaSL, LaSiBo may also depict a short height between the hand and the ground (Figure 63a) and absolute sizes on the body. In Figure 63b, the signer marks the length of a snake with the whole arm, from the shoulder to the fist, and in Figure 63c, the signer delineates the width of a big fish on his leg. Such a depiction of the width on the leg was not seen in AdaSL (Tano & Nyst 2018).

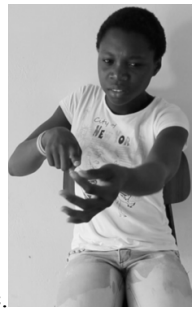
a.  b.  c. 

Figure 63. Depictions of absolute sizes space-based for a short animal (a) (Tano 2016) and body-based, between the fist and the shoulder for a snake (b), and on the upper leg for the width of a big fish in LaSiBo (Tano & Nyst 2018)

The LGG dictionary does not include signs of absolute size. For that reason, and to illustrate how it can be depicted in this sign language without resorting to the narratives analysed in this study, I show additional data filmed during fieldwork. Apart from the narratives told by deaf adults, I also filmed 17 LGG signers between

10 and 17 years old (median age of 13) telling their experience with an animal attack following the same methodology. They were not included in this study because there were no deaf signing children in the village sign languages to compare them. However, this data shows the possibilities in depicting the absolute sizes of animals in LGG, since, during fieldwork, I noticed that children and young people use them a lot.

The children produced for the animal's size both space and body-based depictions quite evenly in terms of variety. All examples in Figure 64 depict the sizes of snakes. The children delineated the size in the signing space between the hands (Figure 64a) and the index fingers (Figure 64b). The snake's length was represented, in Figure 64c, with the index finger as an entity handshape combined with a tracing movement. Finally, in Figure 64d, the width of the snake is depicted hand internally between the index fingers and the thumbs together with the length outlined by a tracing movement. However, the width of the snake was mostly delineated on the body, whether the finger (Figure 64e), the wrist (Figure 64f), the forearm (Figure 64g), the thigh (Figure 64h) or the ankle (Figure 64i).

a.  b.  c. 

d.  e.  f. 

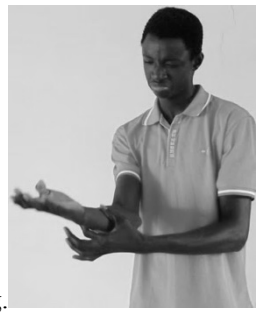
g.  h.  i. 

Figure 64. Depictions of absolute snake sizes space-based between two hands (a) and two fingers (b), for length with a tracing movement combined with an entity handshape (c) and a handling handshape (d), and body-based for width delineated on the finger (e), the wrist (f), the forearm (g), the thigh (h) and the ankle (i) in LGG signers under the age of 17

Nyst (2007; 2007b) also described in AdaSL different mouth movements combined with size and shape depictions. She observed that signers express the notions of 'large' and 'small' together with mouthings (corresponding to full or parts of spoken words), such as [abo] with puffed cheeks, meaning big in Gã (one of the local spoken languages) and [keketeke] with spread lips meaning 'small' in Akan. These were likely borrowed during the emergence of AdaSL from the hearing villagers using those mouthings while producing the corresponding gestures.

More recently, Morgado and Nyst (2022, 163-164) compared AdaSL and LaSiBo, focusing on the **mouth movements** produced with size and shape depictions, based on the data from the personal experience narratives studied here. In this work, we identified iconic mouth movements, such as **spread lips** for SMALL and LONG; **pursed lips** for very small sizes; **O-shaped mouth** for circular shapes; and **puffed cheeks** for the notion of 'swelling', used especially in AdaSL. LaSiBo signers, in contrast, did not exhibit many of these mouth movements; they mostly had a neutral mouth, except for puffed cheeks for 'large'. These are relevant for the present study because mouth movements appear to enhance the information about the size and shape depiction, and therefore may be seen as something that makes a narrative richer and more engaging.

Comparing what we know about size and shape depictions before the analysis of the personal experiences about animal encounters, we find that all three languages show a great variety of techniques. A first sight, it becomes evident that LaSiBo uses a large signing space similar to West African gesturers, by marking size and shape on the leg. Also, LaSiBo signers usually present neutral mouth patterns in size and shape depictions.

To justify such aspects distinguishing LaSiBo and further understand how LGG expresses size and shape, I turn again to the question and the hypothesis in this thesis.

7.3 Research question

In this study, I aim at checking how signers present the animals encountered – the aim of their personal experience narratives – to engage the audience. The spontaneous occurrence of such depictions is expected to demonstrate the ability to turn the story more compelling.

Here, I recall the research question for this study which has already been posed in Chapter 1, which is as follows: **To what extent do signers of the three sign languages depict the animal's size and shape to enhance their narratives?** Because narrative devices may require time and regular social interactions to develop, I hypothesize that signers using only on a few occasions their young sign language with each other, like the ones from Bouakako, may still need to be able to clarify to the audience what the animal looks like to turn the story more interesting.

In this narrative device as much as in the previous ones, the language age and the community size are likely to be important factors in eventual differences between the three sign languages. To understand how this last narrative device is used in personal experience narratives in the three sign languages, I first explain in the next section which methods were followed in the analysis of size and shape depictions.

7.4 Methods for the analysis of animal depictions

In the previous section, I provided background on what is already known about animal and size depictions in the three sign languages. Based on this, the analysis is set up to look at the various ways in which the animals encountered are presented by AdaSL, LaSiBo and LGG signers in their personal experience narratives.

All 45 narratives were annotated in ELAN for the size and shape categories: 17 narratives in AdaSL, 12 in LaSiBo and 16 in LGG (see Chapter 2 for more details about the overall methodology). In the particular case of LGG, for this study only, I added data from narratives filmed with 17 children (on the same topic: encounters with animals) to have a basis for comparison, since there are no studies yet on this particular aspect in LGG.

Before going through the annotations, I explain how I led the analysis through two levels (see Figure 65). I began by isolating all signs related to the animals encountered, whether because they identified or described them. Actions played by the animals were not included in this set because they were not aiming at the description per se.

The set of signs intentionally presenting the animal was first analysed according to (1) the **context** in which they were told, whether (1a) **within the narrative or after its conclusion**. If they were used within the narrative, I distinguished if they were told (1b) **by the narrator or the character**. Then, I looked at (1c) the **identification** of the animal, whether it was made by pointing or labelling, and at its **description** which could include physical characteristics such as colours or patterns or the depiction of its size and shape. On such (2) **depictions**, I analysed next the variety used by the signer in indicating the general size (large or small), the length (or height), the width or other aspects of the animal's body parts.

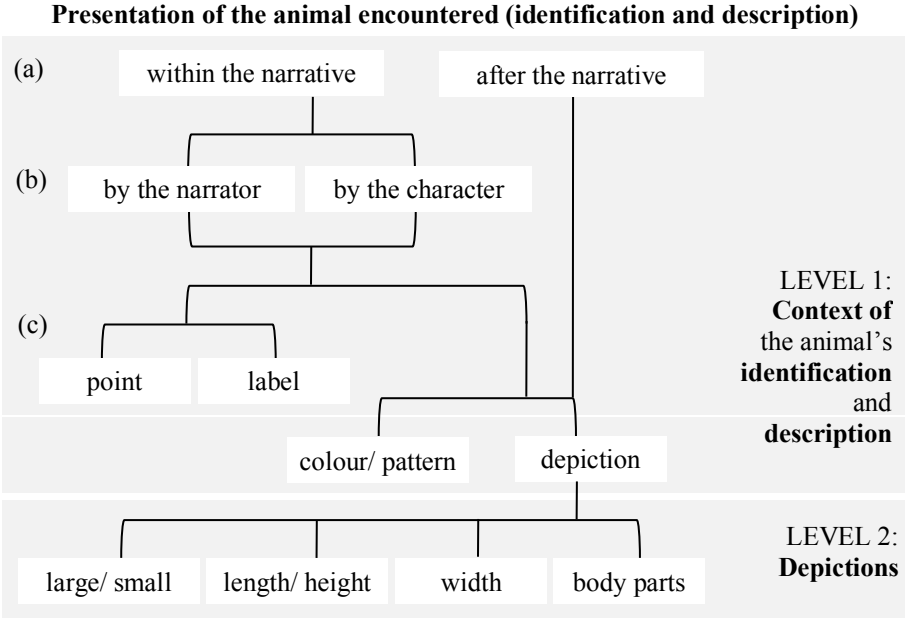


Figure 65. Levels of analysis in Study 4

The first level of analysis relied foremost on the five ELAN tiers that are shared with the previous studies (translation, glosses for both hands, eye gaze and role) and on the component tier shared with Study 1 on the narrative structure. Table 35 shows the tiers on which this analysis was based, including a short description and the type of annotation for each tier.

Table 35. Overview of ELAN tiers for the analysis of the context of the animal's identification and description in Study 4

Parent tiers	Controlled vocabulary	Brief description
Translation	text	Free translation
RH gloss	text	Narrow translation
LH gloss	S&S: 'text'	
Eye gaze	- gaze on the audience - character's gaze	Identifies the narrator's role Identifies the character's role
	- gaze at the hands	Focuses on the description
Role	- narrator - overt constructed action (CA) - partially overt CA	Specifies the signer's role type
Component	- abstract - orientation - complication - climax - resolution - coda	Identifies the structural components

In the first level of analysis, concerning the (1) **context** in which the animals were presented to the audience with an express intention of identifying or describing them, I began by identifying where the signers talked about the animal. To do this, I exported to Microsoft Excel the annotations from the abovementioned tiers, focusing especially on the component tier, to locate all mentions of the animal (1a) **within the structural components or afterwards**. I recall here that, during the data collection, some signers did not include any description of the animal within their narratives. Hence, once their narrative was concluded, I asked them what were the animals like. This was the case in two-thirds of LaSiBo and half of LGG narratives. Such an additional thread of signing material told afterwards was not part of the narrative but was annotated all the same and is used only in the present study.

When animals were identified and described within the narrative, I looked at the annotations from the eye gaze and the role tiers to distinguish mentions told (1b) **by the narrator and the character**. In the character role, all actions reproducing the animal were excluded for not aiming explicitly at its description. Thus, the animal ended up being mentioned by the character within quotations only. After determining the context of references to the animal, I calculated the types of signs used in the

animal's (1c) **identification**, distinguishing between pointing and labels, and **description** of colours, patterns, size and shape.

Finally, to determine the variety of (2) **depictions** for size and shape used in the animal's description, I categorised them into four main categories: large/small, length/height, width and body parts. The analysis of these categories was based on the annotations from the **size and shape** tiers for both hands specific to this study. These have six child tiers: handshape, iconic shape, iconic size in space, iconic size in body, iconic movement and mouth movement.

The only glosses analysed in this part of the study were the ones signalled in the **gloss** tier with the annotation value 'S&S:'. For example, 'long' would be glossed as 'S&S:LONG', and then I focused specifically on the tiers for size and shape, as shown in Table 36.

Table 36. Overview of ELAN tiers for the analysis of the animal's depiction in Study 4

Parent tiers ↳ Children tiers	**Controlled vocabulary**	**Brief description**
RH S&S | LH S&S ↳ Handshape	- 1A – V6	Specifies handshape type in size and shape
↳ Iconic shape	- entity - handling - tracing - tracing+entity - tracing+handling	Specifies iconic shape type in size and shape
↳ Iconic size in space	- 2 hands - hand internal - hand+ground - hand+body - other	Specifies iconic size in space type in size and shape
↳ Iconic size in body	- 2 hands - hand internal - inherent delimitation	Specifies iconic size in body type in size and shape
↳ Iconic movement	- extent in shape - circumference shape - movement for focus	Specifies iconic movement in size and shape

↳ Mouth movement	- neutral - mouthing - iconic o shape - iconic puffed cheeks - iconic spread lips - iconic pursed lips - other	Specifies mouth movements type in size and shape

The annotation of the size and shape was detailed in specific tiers (see §2.5.6 for more details) to identify the categories for size, namely large/small, length, height and width. These categories were primarily distinguished as being **space** or **body-based**, according to the annotations, respectively, in the iconic size in space and iconic size in body tiers. The latter was further relevant to set apart the body arts involved in the depiction. As previewed in subsection 7.2.2, the annotation for **length** would rely on possible combinations in the iconic shape tier with the extent in shape value in the iconic movement tier. Also, in this tier, the circumference shape value identifies body-based sizes for **width**. The tier for handshape was used especially for disambiguation in terms of the iconic shape (whether entity or handling). Finally, the tier for mouth movement, besides adding an extra non-manual parameter to the depiction of size and shape, helped in distinguishing relative and absolute sizes in AdaSL, as well as length and width in inherent delimitations for size in the body.

Having described the methods for this study, I present next the results from the analysis. The following section begins by showing how the signers in the three sign languages identified and described the animals (§7.5.1), namely within the narrative or afterwards. Then, it focuses on the types of depictions of size and shape of the animals (§7.5.2).

7.5 Descriptive analysis of animal depictions

This third narrative device studied in this thesis focuses on the enhancement of the animal, as the point of the story. I recall that narratives were elicited by asking the signers whether they had ever encountered a dangerous animal. Thus, telling about how threatening the animal looked would certainly increase the dramatic force of their accounts. Of course, storytellers are expected to clearly identify which animal was encountered before describing it. The description is further enhanced, the more entrenched in the emotional part of the narrative and the more detailed it is. How do, then, signers of AdaSL, LaSiBo and LGG talk about the animals encountered in their narratives? Do they describe the animals around the climax? Do they depict different features of the animals?

All 45 accounts by signers in the three sign languages identify the animal encountered, which, in their large majority consisted of a snake, as shown in Table 37. Although most narratives include an explicit label of the animal, nearly half of LaSiBo's narratives and a couple told by women in LGG identify the animal by pointing. However, not all added a description of the animal. This was the case in a very small number of narratives in AdaSL (three of 17), two-thirds in LaSiBo and half in LGG in both genders. Importantly, those who did not describe the animal – only in Bouakako and Bissau – were asked about it in the end. Table 37 distinguishes between these two moments by adding the latter in square brackets. Even so, two narratives in LaSiBo and one told by a female LGG signer include descriptions at all, neither during the account nor afterwards.

Table 37. Animals mentioned in the narratives and number of narratives that include the identification and descriptions (those added afterwards are in square brackets) of the animals in the three sign languages: AdaSL, LaSiBo and LGG per gender

		AdaSL	LaSiBo	LGG	
				men	women
Animals Narratives:		17	12	8	8
Snake:	37	13	9	8	7
Lion:	2	2			
Wasps:	2	2			
Horns:	3		3		
Dog:	1				1
Identification Narratives:		17	12	8	8
Pointing:	8	1	5	-	2
Label:	37	16	7	8	6
Description Narratives:		14	4[+6]	4[+4]	5[+2]
Surroundings:	3	-	3	-	-
Colour/pattern:	6[+3]	2	1[+1]	2[+2]	1
Depiction	27[+12]	14	4[+6]	4[+4]	5[+2]

Having seen that animals were always identified but not so often described, I looked next at the narrative component where they were presented to the audience. Table 38 refers to all occurrences of the animals whether to identify or describe them. It is sometimes the case where signers produce two or more depicting signs in a row, increasing the number of instances per narrative. In the end, it is shown that the animals were mostly introduced and depicted during the climax by AdaSL and male

LGG signers. In contrast, such presentation of the animal was rather done during the orientation in LaSiBo narratives and before and after the climax in the narratives by women in LGG. What is also worth noting, in Table 38, is that LaSiBo signers resort more to their surroundings to both identify and describe the animals than the signers in the other sign languages do.

The majority of the references to the animals in all three sign languages were made by the narrator. There are only a few mentions of the animal in the character's role and produced within constructed dialogues. These involve size depictions and are told by two signers in AdaSL (one dialogue in the climax and one monologue in the resolution) and by four signers in LGG (three dialogues in the climax, two by men and one by a woman, and another monologue by a woman in the resolution).

Table 38. Distribution of all occurrences in identifying and describing the animals within the narratives and afterwards in the three sign languages: AdaSL, LaSiBo and LGG per gender

		Narrative components									
		Orientation	Complication	Climax	Resolution	Coda	TOTAL	Narratives with descriptions	Narratives describing animals afterwards	Narratives without descriptions	Total S&S
AdaSL		1	7	**23**	7	5	36	14/17	-	4/17	
Identification	Point			1			1				
	Label	1	4	12			**17**				
Description	Colour			1			1				
	Pattern					1	1				
	Depiction		3	9	7	4	**23**				23
LaSiBo		8	5	3	-	2	18	4/12	6/12	2/12	
Identification	Point	1	2	2			5				
	Label	4	3				**7**				
Description	Surroundings	1				1	2		1		
	Colour	1					1		1		
	Depiction	1		1		1	**3**		**17**		20
LGG men		-	1	**11**	6	-	18	4/8	4/8	-	
Identification	Label		1	7			**8**				
Description	Colour			1	1		2		2		
	Depiction			3	5		**8**		**6**		14
LGG women		-	6	3	3	3	15	5/8	2/8	1/8	
Identification	Point		1	1			2				
	Label		4	1	1		**6**				
Description	Colour					1	1		-		
	Depiction		1	1	2	2	**6**		**5**		11

In the previous table, it became evident that depictions were used abundantly, especially in AdaSL and, strikingly, by LaSiBo signers after concluding their accounts when asked about what the animal looked like. I now zoom in on all the depictions of size and shape produced by the signers, in and outside their narratives, to see how varied they may be. I recall that the notions of 'large' and 'small' depend foremost on the entity being measured. This way, a large bee and a large lion or a small snake and a small cow will be depicted differently. Table 39 demonstrates that the type of depiction depends on the size dimension. Thus, large/small and long are predominantly space-based, while the width is uniquely defined on the body, especially in the two villages. Here, LaSiBo signers make the most advantage of circular body parts, such as the finger, arm and leg, to depict the snakes' width. They are also the only ones using their surroundings to depict the size of the animals. AdaSL signers distinguish themselves from their deaf peers by relying greatly on the lexical sign for 'large' and for depicting other features of the animal's body besides its size.

Table 39. Types of all occurrences of size and shape depictions of the animals in the three sign languages: AdaSL, LaSiBo and LGG per gender

				AdaSL	LaSiBo	LGG	
						men	women
Large/small (total=31)	space	2hands (lexical)	6	6			
		2hands	15	2	5	3	5
		2fingers	6			3	3
	body	finger	4	3	1		
Length (total=19)	space	entity handshape	6	5	1		
		handling handshape	4		1	3	
		pulling movement	5		1	2	2
	body	tracing movement	4		2	1	1
Height	space		1		1		
Width (total=12)	body	finger	5	2	3		
		arm	4	1	2	1	
		leg	3		3		
Other	head (entity handshape)		2	2			
	eyes (anthropomorphic)		2	1		1	
	snout (anthropomorphic)		1	1			
				23	20	14	11

As observed in the narrative devices analysed previously, AdaSL signers appear again as the ones investing the most in the emotional enhancement of their accounts. In contrast, LaSiBo signers lack that same engagement, also in describing the animal encountered. Once more, differences between men and women in LGG come to light.

For instance, male signers tend to describe the animal during the climax, while women do not.

In the sections that follow, I provide a descriptive analysis of how the animals are enhanced within the narratives. For each language, I first describe which animals were encountered in the narratives, and then the context in which they were identified and described (in §7.5.1). Next, I focus on the size and shape depictions used to represent animals in each of the three West African sign languages (in §7.5.2).

7.5.1 Depiction contexts

All narratives in the three sign languages identify the animals encountered, mostly snakes and mainly by using a corresponding sign. However, not all include a description of the animal. This is the case of one-third in AdaSL, two-thirds in LaSiBo and half in both genders in LGG. For the last two sign languages, I asked the signers, after they finished their account, to tell me what was the animal like. Hence, for almost all the remaining signers in LaSiBo and LGG, the animal was depicted after the narrative had ended. Most descriptions were told by the narrator, but few instances were observed within constructed dialogues, thus in the character's role, in AdaSL and LGG.

Results are shown next for the context of the animal's depiction within the narrative (or outside of it), distinguishing between its explicit identification and intentional description. After detailing which animals are portrayed and in which narrative component it is done, I go through the role in which signers depicted the animals in the three sign languages.

Depiction contexts in AdaSL narratives

Here, I analyse how and where the animals encountered are described by AdaSL signers. Most are snakes identified with a lexical sign and described as being large and long. This is told mainly within the narrator's role during the climax while looking at the hands.

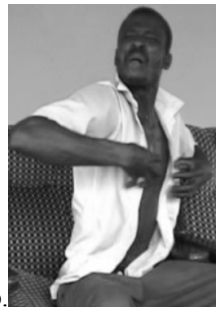
Animals. Of the 17 narratives in AdaSL, 13 are about snakes, two are about lions and two are about wasps. Of the 13 signers who told attacks involving snakes, there is only one that does not produce a label, but a pointing sign instead. Ten identified lexically snakes with an index handshape, as in (101a), and three with a flat hand, as in 101b). The two signers narrating about a LION made the corresponding sign representing an open mouth, as in (101c). This was also the case in the two narratives about WASPS, referring to a sting on the face, as in (101d). All signers, but the one who pointed, explicitly mentioned which animal they encountered.

(101) Signs identifying the animals: SNAKE1 (a), SNAKE2 (b), LION (c) and WASP (d) in AdaSL

a.  b.  c.  d. 

Most of the 17 AdaSL narratives (14 narratives, 82%) included a description of the animal, while three did not (18%). These descriptions were all about the size and shape of the animal, especially to indicate how large and how long the snake was (these are seen in detail in the next subsection). Additionally, there is one mention of the colour, in (102a) and one of the skin pattern of the snake. In the latter, the signer embodies the snake and depicts spots on his chest, in (102b) and then he marks the spots on his arm as if it was representing the snake, in (102c).

(102) Signs describing the snake as being black (a) and with spots on the body (b) and on the arm (c) in AdaSL

a.  b.  c. 

Context. In terms of their context of use, when do the descriptions occur in AdaSL narratives? I found that eight of the 14 descriptions occur during the story's climax (one of these proceeds with the description into the resolution, two were also described in the complication and one other is again depicted in the coda). One occurs

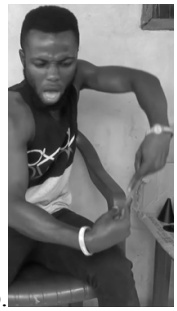
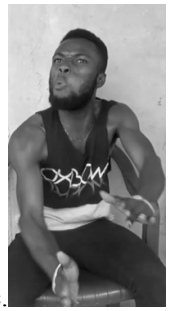
in the complication and then in the coda. Four are told only in the resolution, and one only in the coda (see Study 1).

The ones made in the resolution are justified by the fact that they did not see the animal during the climax, as in AdaSL narratives eight and 17 where the animal is shot. Only after the animal's death do they look at it and, surprised, describe it. In the other narrative, the snake was inside a hole, and the signer's father chops the snake's head off. In the resolution component, the snake is pulled out of the hole, and he can see the whole snake. It is only then that he gives its description. The narrative that includes it only in the coda component (the last component where the signer ends the narrative and turns to the audience for comments or additional information) is not so tied to the emotional content of the story. I take the overall preference to include the animal's description in the middle part of the story as an indication that such depictions are helpful to signers when communicating about the most exciting part of a personal experience narrative, and are therefore part of the evaluation component.

Signer's role. Another question is which role AdaSL signers adopt when they produce size and shape depictions: as the narrator or the character? I found that, of the 20 instances of size and shape depictions, only four are expressed by looking directly at the audience as the narrator at the moment of the encounter. There are 14 other occurrences that do not seem to be included in the constructed action but in which the signer does not look at the audience either. These cases were interpreted in the present analysis as an evaluation by suspension of the action, which is when the narrator interrupts the storyline to emphasise what the animal looks like.

Narrative 7, in (103), has two depicting signs produced in the resolution, where the signer first looks at his hands, in (103b), and then at the audience, in (103c), in both cases as the narrator. In this example, the signer enacts his father pulling the snake out of a hole, in (103a), and, looking at the hands, he emphasises how 'long' it is, in (103b). Then, he signs BIG, by looking at the audience as the narrator, in (103c), and immediately returns to the character role by looking at the snake while pulling it, in (103d). When he looks at the audience, he is probably confirming that his interlocutor becomes aware of how big the snake was.

(103) Depictions of size in the narrator's role with gaze at the hands for LONG (b) and gaze on the audience for BIG (c) in AdaSL

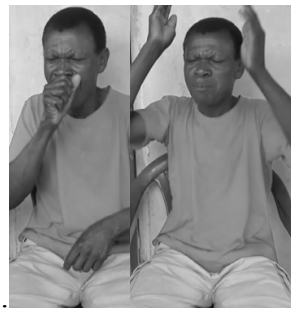
a.  b.  c.  d. 

gloss	SNAKE-PULL	**S&S**:LONG	**S&S**:BIG	SNAKE-GRAB
eye gaze	character's gaze	gaze at the hands	gaze on the audience	character's gaze
role	overt CA	narrator		overt CA

'(My father) pulled the snake out of the hole. It was a big and very long snake. He grabbed it…'

Finally, two signers describe the animal while embodying the character within quotations, one as a monologue and the other as first-person-only dialogue. Narrative 8, exemplified in (104) refers to the monologue. In this example, the signer tells that he was bitten by a snake and asked for help. Then someone appears with a gun and shoots the snake that falls. He is startled and, remaining in the character role, he thinks to himself how big it is. Next, he picks up the snake and buries it, always maintaining his gaze on the snake.

(104) Depictions of size in the character's role in AdaSL

a.  b.  c. 

gloss	SHOOT	FALL(snake)	'AH'	**S&S**:'BIG'	SNAKE-HOLD
eye gaze	character's gaze				
constructed dialogue			**Monologue**: "Ah! It was big."		

'(He walked quietly), shot it and the snake died. "Ah! It was big"'

Most AdaSL signers suspended the emotional part of the narrative, the encounter with the animal, to depict how dangerous it looked. In this way, they invited the audience to experience the fear they had felt during the narrated event. Once again, this study indicates that the group of deaf people in Adamorobe has the habit of watching and telling stories to each other. How would this skill reflect in a much smaller deaf group in its first generation of signers, such as the one from Bouakako?

Depiction contexts in LaSiBo narratives

After describing the context in which the animals were identified and described in the AdaSL narratives, I now turn to the corresponding findings in LaSiBo. As above, I first describe which animals appeared in the 12 personal experience narratives and the strategy for naming and describing them before moving on to the description of size and shape depiction types that are used by signers in Bouakako. As in AdaSL, most narratives in LaSiBo are about snakes but, differently from AdaSL, they rely more on their surroundings to both identify and describe the animal. Also, there were very few descriptions within the narratives, the majority occurring only after the signers were asked about it.

Animals. Of the 12 LaSiBo narratives, nine are about attacks by snakes and three are about horned animals. A little more than half of the narratives (7 of 12) assigned a label to the animal. Snakes were identified with three different signs. Similar to AdaSL, they were produced both with an index finger, as in (105a), and a flat hand,

as in (105b). Concerning the type of snake, four signers identified it explicitly as a python by patching spots on the arm, as in (105c). Such a sign was well recognised by the hearing people in the village, indicating that it is conventionalised in that community. It is difficult to know if it is part of a larger local gestural repertoire or if deaf LaSiBo signers created it and used it often around the hearing. The fact is that it is used uniformly by four out of seven signers and that the hearing people watching the filming, even not knowing LaSiBo, reacted to the sign as if knowing what it meant. About the horned animals, it is unclear which animals were the three signers referring to. I could only ascertain that they were not wild. Here again, they produced two different signs, one with the index fingers, as in (49d), and the other with the fists on the head, as in (105e).

(105) Signs identifying the animals: SNAKE1 (a), SNAKE2 (b), PYTHON (c), HORNS1 (d) and HORNS2 (e) in LaSiBo.

a.  b.  c. 

d. 

e. 

In the remaining narratives (five of 12), animals are referred to by being pointed at with the index finger, as in (106a), or the hand, as in (106b), instead of being explicitly identified with lexical labels. In these cases, the audience perceives the animal in question through other cues such as depictions of size and shape or constructed actions involving the animal.

(106) Identification of the animal only by pointing with the index finger (a) and with the hand (b) in LaSiBo

a.  b. 

Another noteworthy practice used by LaSiBo signers is that they also rely on their surrounding references to describe the animals. This was not observed in the other sign languages. For instance, one LaSiBo signer points at the tree trunk behind him to indicate the width of the snake, as in (107a), while two others trace the snake's length on the ground, as in (107b).

(107) Description of the snake by pointing at a tree for width (a) and tracing on the ground for length (b) in LaSiBo.

a.  b. 

Concerning animal descriptions, only four of the 12 LaSiBo narratives (33%) include them. This is a much smaller proportion than the 82% of narratives by AdaSL signers (14 out of 17 narratives). In the remaining eight LaSiBo narratives, signers did not spontaneously include animal descriptions. Due to the original research project goal to capture size and shape depictions (see §1.3), signers who did not produce such depictions during their narrative received an immediate follow-up question from me about what the animal looked like. In that case, six of them did then produce several types of depictions of the animals, all snakes, as reported in the next subsection. The other two did not respond to this request. In the end, signers depicted how large, how long and how wide the snake was. Besides these depictions, two signers also indicated the colour of the snake they had encountered and again by pointing at their pants, as in (108).

(108) Description of the snake's colour by pointing at the pants in LaSiBo



Context. The four narratives that include descriptions of the animals within their structural components present it differently. Two of them told by the same signer but about different animals are in the orientation, another one depicts the snake in a very short climax and the fourth one is in the coda.

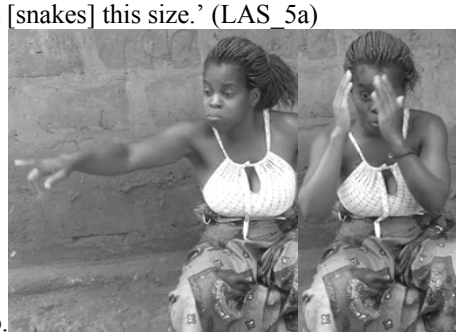
Signer's role. All these instances were told within the narrator's role. In the one told during the coda, the signer describes in detail what to do with dead snakes. When he specifies the snake's size by delineating its width on the lower leg he looks at his hands, in (109a). In the narrative where the description occurs during the climax, the signer points at a location where the snake was supposed to be and then addresses the audience as the narrator to say it was big, in (109b).

(109) Depiction of size in the narrator's role with gaze at the hands for width on the lower leg (a) and gaze at the audience for BIG (b) in LaSiBo

a. 

gloss	ME	EAT	NO	**S&S**:WIDTH
eye gaze	character's gaze			gaze at the hands

'I don't eat [snakes] this size.' (LAS_5a)

b. 

gloss	THERE	**S&S**:BIG
eye gaze	character's gaze	gaze on the audience

'a big [snake] was there.'

In sum, very few LaSiBo narratives include the animal's description. Also, LaSiBo signers often relied on pointing to identify and describe the animal. The few who did depict the animals within the narratives did so as narrators and only once did it occur in the middle of the story. Importantly, such a generalised lack of motivation in sharing what the animal looked like with the audience seems to show that LaSiBo signers have not developed this particular descriptive device as their multigenerational deaf peers from the village of Adamorobe. I next look at how signers of an even younger sign language, LGG, have referred to the animals encountered.

Depiction contexts in LGG narratives

AdaSL and LaSiBo narratives have presented distinct ways of talking about the animals, the first one much more enhanced than the second. How would LGG signers from both genders compare with those of the two other sign languages? Almost everyone tells about their experience with a snake, but only half describes it and mostly in the middle part of the story as the narrator.

Animals. All 16 LGG narratives were about snakes except for one told by a woman about a dog attack. In 14 narratives, the animal was identified lexically as a snake. The snake was produced with a flat hand, as in (110), corresponding to the sign registered in the dictionary (see Figure 57b), except for one woman who did not explicitly mention the animal, but instead pointed ahead and traced the path of the snake approaching. This sign for SNAKE was also observed in AdaSL and LaSiBo. The female signer telling about her experience with a dog did not explicitly label it either but said instead that it barked.

(110) Sign identifying a snake in LGG



Similar to LaSiBo, which had only 33% of narratives with descriptions of the animals, half of the LGG signers, in both gender groups, did not include such depictions either. For that reason, and like LaSiBo, they were asked afterwards what the animal looked like. All answered except for one woman. Most descriptions concerned how big and long the snake was, which is further detailed in the next subsection. In addition, five signers (four men and one woman) told what colour the snake was. Three mentioned it was black, as in (111a), one that it was green, in (111b) and the woman said that it was blue, in (111c).

(111) Signs describing the snake as being black (a), green (b) or blue (c) in LGG

a  b. 

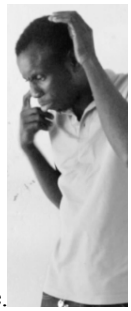
c. 

Context. Signers including the descriptions of the snakes, and especially the men, describe them in the middle part of their narratives, between the complication and the resolution, unlike LaSiBo. Two men did so in the climax, another in the climax and the resolution and one of the women described the snake in the complication and the climax. Three other signers (one man and two women) described the snake only in the resolution, and two women in the coda.

Signer's role. Within the sequence of events, they told what they had done to the snake and then suspend the action to describe it within the narrator's role, both by looking at the audience or the hands. For instance, one signer told he was holding a

bowl on his head when he looked down and saw a snake, in (112a). He signed SNAKE while holding the bowl on his head, in (112b). He then suspends the storyline to address the audience by adding that the snake was black, in (112c), and indicating how long and wide the snake was while looking at his hands, in (112d). After this suspension, he goes back to embodying the character looking at the snake, in (112e).

(112) Description of the snake in the narrator's role with gaze on the audience (b) and gaze at the hands (c) in LGG.

a.  b.  c.  d.  e. 

RH gloss	HOLD-ON-HEAD	SNAKE	BLACK	**S&S**:LONG	SEE
LH gloss	HOLD-ON-HEAD				HOLD-ON-HEAD
eye gaze	character's gaze		at the audience	at the hands	character's gaze
role	character		narrator		character

'I was holding the bowl on my head. A big black snake was on the ground. I was holding my bowl on my head when I saw the snake.' (LGG_08 narrative)

Besides describing the snakes within the narrator's role, four signers do it also as characters in reported speech, as was observed in AdaSL. In LGG, two men and two women say how big the snake was within a reported speech. Three constructed dialogues occur in the climax, as in (113), while the other, a monologue by a woman, is produced in the resolution (see §6.5.2 and §6.5.3 for more details). In one of the dialogues by a male signer (LGG_05 narrative), he is enacting himself in the past warning the hearing people about the whereabouts of a big snake, in (113a). In another dialogue by a woman, she is enacting a hearing person asking her if she eats small snakes, in (113b).

(113) Depiction of size in the character's role as themselves (a) and as somebody else (b) in LGG

a.



gloss	SNAKE	**S&S**:BIG	THERE
eye gaze	character's gaze		
constructed dialogue	**Dialogue**: "There's a big snake there!"		

b.



gloss	CALL	EAT	S&S:SMALL	THERE
eye gaze	character's gaze			
constructed dialogue	**Dialogue**: "Do you eat that small snake?"			

In sum, although only half of the signers describe the snakes within their narratives, they tend to do it in the middle part of the story, where the emotion is supposed to be enhanced, as AdaSL signers did. Moreover, besides describing them within the narrator's roles, they also embed the depictions within the character's quotations. This indicates that even if still in the making the skill to convey dramatic force to the high point of the story seems to be emerging in LGG.

In the following subsection, I focus on the variety of depicting signs used to describe the animals in the three sign languages, both within and after the narratives.

Considering there would have been a follow-up question by someone in the audience in a naturalistic setting, what would have been the potential diversity of size and shape depictions?

7.5.2 Depictions of size

Most AdaSL narratives (14 of 17) included a description of the animals within the middle components. In contrast, only one-third of LaSiBo narratives and half of LGG's presented it. For that reason, in these two sign languages, when signers missed such a description, they were asked about what the animal looked like after they had finished their stories. All were then able to add the description of the animals, except in two LaSiBo narratives and one told by a female LGG signer.

Looking at the whole set of depicting signs, produced within and after the narratives, LaSiBo ended up showing a higher quantity – produced mainly afterwards – compared to the other two sign languages, especially in what concerns the delineation of the snake's width on the signer's body parts. All three sign languages presented space-based demarcation of size between the hands and of length. In addition, AdaSL showed a higher variety of strategies in depicting the animal's body parts.

Results are shown next for the three sign languages, first for relative size, only in AdaSL, followed by absolute size in the space and on the body. Afterwards, I present depictions of length, again as space and body-based, of height (only in LaSiBo), and of width, which were all delineated on the body. In the end, shape depictions of the animal's body parts are shown for AdaSL and LGG.

Depictions of size in AdaSL narratives

In the 14 AdaSL narratives that included descriptions of the animals, signers depicted the notions of 'large' – mostly as a lexical sign – and long mainly in space and width on the body. About a third of these (five of 14) presented more than two depicting signs. In addition, three signers described the shape of the animal's body parts. In comparison with the other two sign languages studied here, AdaSL narratives included the most depictions within the narratives, especially in the climax.

In total, 23 depicting signs were observed in those 14 AdaSL narratives that included the animal's description. Of these, six are lexical, referring to the **relative size** of BIG, as in (114). Five of them were used to depict snakes, and the other was a lion. Of course, an encounter with a dangerous animal is scarier if the animal is big rather than small, which may account for the difference in the number of signs for each concept.

(114) Lexical sign for the relative size of the animal, BIG in AdaSL



BIG

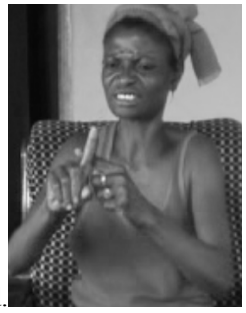
In the AdaSL narratives, there were also signs depicting the **absolute size** of the animals. In two descriptions of the kind, the signers begin with BIG and then specify the absolute size of a lion, in (115a) and of a snake, in (115b). For smaller sizes, signers relied on the fingers. In two different narratives, the same signer marks the absolute size of the animal on the finger with the other hand to refer to the size of a wasp, in (115c) and of a lion's tooth, in (115d). Another signer delimits in the same hand the size of a snake's tooth on the tip of the finger while simultaneously producing pursed lips, in (115e). Here, the thumb marks the size of the tooth on the index finger.

(115) Space-based depictions of the absolute size of a lion (a) and of a snake (b) and body-based depictions of a wasp (c), a lion's tooth (d) and a snake's tooth combined with pursed lips (e) in AdaSL

a. 

b. 

c. 

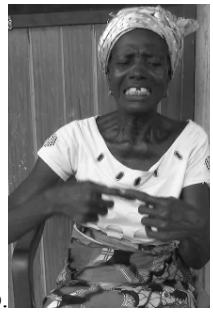
d. 

e. 

The **length** of snakes involved, in all five instances, an entity handshape – the index fingers representing the snake's body – and a tracing movement extending the snake's length in space, as in (116a). Three of these depictions were combined with spread lips, as in (116b). One of them was produced differently: the signer grabs the index finger representing a snake and then pulls it back to extend its length together with sucked cheeks in (116c). Unfortunately, the image was cut off because the signer did it a bit off-camera.

(116) Space-based depictions of the snake's length with an entity handshape and a movement for extension (a), combined with spread lips (b) and by pulling the index finger combined with pursed lips (c) in AdaSL

a. 

b. 

There are three instances where the **width** of the snake is depicted in the AdaSL narratives, on the signers' body parts. Two are produced on the finger, as in (117a) and one on the forearm, in (117b), to describe the diameter size. These signs are found to usually combine with the O-shaped mouth, a size and shape mouth movement previously undescribed for AdaSL.

(117) Body-based depictions of the snake's width on the finger (a) and on the arm (b) combined with an O-shaped mouth movement in AdaSL

a.  b. 

Finally, besides depictions of relative and absolute size, length and width, three other signers depict the **shape of the animal's body parts**. Two of them use the arm and the hand to represent a snake, by moving the fist in a circle to depict it as being coiled on the ground, as in (118a). The other signer depicts the shape of the lion's eyes and snout by 'pulling' her own eyes with puffed cheeks for 'big eyes', in (118b), and by 'pulling' her cheeks with pursed lips for a 'long snout', in (118c).

(118) Depictions of a 'coiled snake' with an entity handshape (a), of 'big eyes' (b) and 'big snout' (c) of a lion by 'pulling' the eyes and the cheeks in AdaSL

a.  b. 

c. 

In conclusion, most AdaSL signers produce the animal's description in a variety of ways, showing the naturalness and richness of such productions in AdaSL. Signers grab the audience's attention by highlighting how big and scary the animals are. For that purpose, they use lexical signs for relative size and depictions for absolute size, both space and body-based, length in the space and width in the body. I next look at the corresponding dimensions of size in the animal depictions in LaSiBo.

Depictions of size in LaSiBo narratives

Unlike AdaSL, most LaSiBo narratives (8 of 12) did not include the animal's description within the narrative, but when asked about it in the end, the six signers who responded depicted the animals with a variety of signs. There were three animal depictions produced within the narratives and 17 afterwards. To look at their variety, all instances are analysed together here, regardless of having been produced within or after the narratives. In general, and as AdaSL, they referred to the absolute size of the animals, their length and width and one of them also depicted the height.

The **absolute size** of snakes is delimited on five occasions as space-based, between the two hands for different sizes, as in (119a, b and c). Moreover, the signer in (119c) combines the expression of a big size with puffed cheeks. This was the only mouth movement observed in LaSiBo. In addition, one signer expressed a very small size as body-based. In this case, the signer delimited the size of a snake's tooth on the tip of the finger with the other hand, in (119d).

(119) Space-based depictions of the absolute size of snakes (a, b), combined with puffed cheeks (c) and body-based depiction of a snake's tooth (d) in LaSiBo

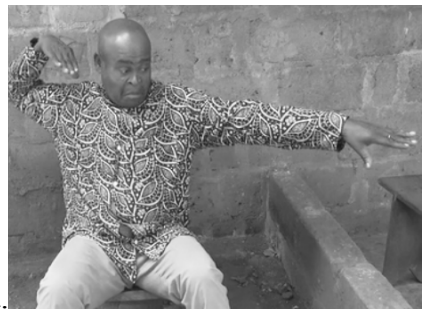
a. 

b. 

c. 
d. 

The depiction of the snake's **length** was quite diverse in LaSiBo. Three of such depictions were space-based and two were delineated on the body. The ones extending the length of the snake in space were articulated differently: one was produced with an entity handshape, the flat hand representing the snake, in (120a), another with a handling handshape, in (120b), and the third one in pulling the index finger, in (120c). In the two body-based depictions, one is delimited between the hand and the shoulder, in (120d), and, in the other, the signer traces the length of the snake on the forearm, in (120e). Such body-based depictions of length were not seen in AdaSL.

(120) Space-based depictions of the snake's length with an entity handshape (a), a handling handshape (b), and by pulling the index finger (c), and body-based depictions by delimitating the length between the hand and the shoulder (d) and by tracing the length on the forearm (e) in LaSiBo

a.  b. 

c.  d. 

e. 

Within the data collected for this study, there is only one mention of the animal's **height**, which is in LaSiBo concerning a horned animal. Interestingly, this signer determines height on two occasions in her narrative, during the orientation. The first one refers to the height of a person in the audience, in (121a) to indicate age, and, for that reason, it was not included in this set of depicting signs for the animals. Nonetheless, it is shown in the example below as a basis for comparison with the height of the horned animal. The signer begins by explaining that when she was younger – she signs an approximate height and then points at someone in the audience

to confirm the age's height – there was a baby horned animal of a short height, in (121b).

(121) Space-based depiction of the height of a person (a) and of a horned animal (b) in LaSiBo

a. 
[ ]
HEIGHT [POINT (AT SOMEONE) HORNS BORN]

b. 
HEIGHT

'I was this tall, like that person, when an animal with horns just born this size (...)' (LAS_06b narrative)

Similar to AdaSL, the depiction of **width** is also body-based in LaSiBo. Here, the snake's diameter is delineated on the fingers on three occasions, as in (122a), on the arm, in two instances, as in (122b), and on the thigh, in (122c) and the lower leg, in (122d). Here we can see how LaSiBo deaf people use the signing space larger than many other sign languages.

(122) Body-based depictions of the snake's width on the finger (a), the arm (b), the thigh (c) and the lower leg (d) in LaSiBo

a.  b.  c.  d. 

In one of those cases where the signer was asked for a description of the animal after the story had ended, she started looking for a corresponding size in her surroundings, but, as she could not find it, she used her arm to depict it, in (123). This may indicate that indeed, LaSiBo signers rely on their surroundings to convey certain, in particular those related to size and shape, as has been already hinted in the previous subsection.

(123) Signer looking for a corresponding size on her surroundings (a) and then depicting it on the arm (b) in LaSiBo

a.  b. 

(LAS_01a narrative)

Although most LaSiBo narratives of encounters with animals do not include a description of the animal during the narrative, contrasting with AdaSL, they did so at the end when prompted with a question about what the animal looked like. In my analysis, this shows that they dispose of a range of size and shape depictions – probably shared with the hearing – that they do not use in their narratives for lack of

practice in telling stories that are captivating to an audience. The following section turns to the analysis of the animal's description in LGG narratives.

Depictions of size in LGG narratives

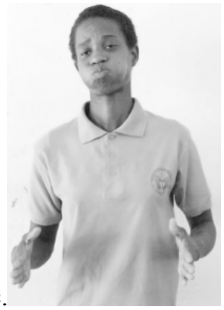
Half of the 16 LGG signers (four men and five women) included the animal's description within their narratives. The other half was asked about it in the end, as were LaSiBo signers. All except one of the women responded and added the description at that moment. In the end, there were 25 depicting signs (14 by men and 11 by women) mostly referring to space-based depictions of large/small and long.

The **absolute size** of animals was depicted in space between two index fingers (in six instances), as in (124a,f,g), or two hands (in eight instances), as in (124b–e). the notions of 'large' and 'small' were distinguished mainly by facial expression. When combined with puffed cheeks they meant 'large', as in (124b,c), and when combined with spread lips, as in (124d), or pursed lips, as in (124e–g) they meant 'small'. All the examples below refer to snakes, except for (124d) which depicts the size of a dog.

(124) Space-based depictions of the absolute size of animals with two fingers (a,f,g) and two hands (b–d) combined with puffed cheeks for 'large' (b,c), spread lips (d) and pursed lips (e–g) for 'small' in LGG

a. 

b. 

c. 

d. 

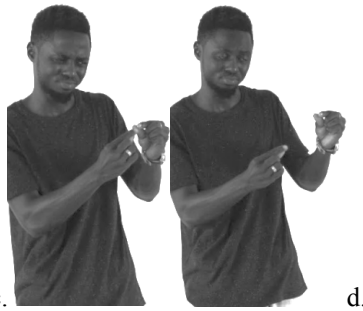
e. 

f.  g. 

Similar to LaSiBo, LGG signers also expressed the snake's **length** by extending in space handling handshapes (in three instances by men) and by pulling the entity handshape of one of the hands (in two instances by men and two by women). When they extend the length in space with handling handshapes, these depict not only how long the snake is with the movement but also its width with the internal space within the hand. Hence, signers in (125a,b,c) depict snakes of different diameters. This is also the case with the pulling strategy, where the handshape also indicates the snake's width, thicker if represented with the flat hand, as in (125d), and thinner if with the index finger, as in (125e). Such pulling movements, especially if related to thinner snakes were combined with sucked cheeks, as in (125e).

(125) Space-based depictions of the snake's length with different handling handshapes (a,b,c), and by pulling the hand (d) and the index finger (e) in LGG

a.  b. 

c.  d. 

e. 

In LGG, the length of the snake was also depicted on the body. One woman used her whole body as if stretching it, in (126a). additionally, as was observed in LaSiBo, one male signer traced the snake's length on the forearm, in (126b).

(126) Body-based depictions of the snake's length with the whole body (a) and by tracing the snake's length on the forearm (b) in LGG

a.  b. 

Unlike the other two sign languages, where this type of depiction was used a few, especially in LaSiBo, only one body-based depiction of **width** was observed in LGG. Here, the signer delineated how wide the snake was on his forearm, in (127).

(127) Body-based depiction of the snake's width on the forearm in LGG



Finally, as occurred in AdaSL, one LGG signer also depicted the **shape of a body part** of the snake, in this case, of its eyes. He enhanced the width of the snake's eyes by tracing their shape around his own eyes, in (128a), and then by adding a tridimensionality of their large size with the C handshape, in (128b).

(128) Depictions of the 'big eyes' of a snake by tracing their shape (a) and with the C handshapes (b) on the signer's face in LGG

a.  b. 

From this analysis, no differences appear between deaf men and women. Out of the 16 narratives, nine described the animals within the narrative and six others depicted them afterwards. Most instances concerned the space-based depiction of the absolute size of the animals between two hands and two fingers. The latter was not observed in the other two sign languages. LGG depictions of length also differed from AdaSL for relying on handling handshapes extended in space as well as on pulling movements, as did a couple of LaSiBo signers. In LGG, there was only one body-

based depiction of width, contrasting with the two village sign languages. Nonetheless, similar to AdaSL, one LGG signer also described the shape of the snake's eyes on his face. Finally, LGG signers consistently produced mouth movements depending on the depiction type.

In the following section, I synthesise the results of the analyses of the animal references in the narratives of the three sign languages. For an overall view of the findings, the languages are compared in what concerns the contexts of use and the types of depictions.

7.6 Synthesis of the results

The study of animal depictions in narratives that are precisely about animal attacks focused on the enhancement of the main 'antagonist'. The dramatic force of such enhancements was measured according to whether they occurred within the middle part of the story and how varied the depictions were.

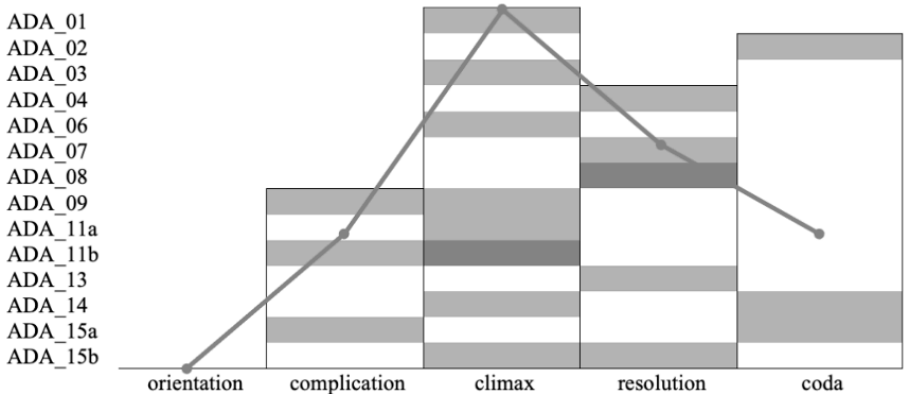
Of the 45 accounts by signers in the three sign languages, 37 are about snakes. In AdaSL there are two more about lions and two about wasps. In LaSiBo, three others are about horned animals and in LGG one is about a dog. The animal was explicitly identified in 37 narratives. In the remaining accounts, they were pointed. This was the case in narratives by one AdaSL signer, two female LGG signers and in five of 12 LaSiBo narratives.

The most striking difference between the three sign languages was the inclusion of the animal's description in the narrative. AdaSL had the higher number of narratives with animal depictions (14 of 17) and mainly in the climax (eight of 14) and neighbouring components, as shown in Figure 66a. In contrast, only four of 12 LaSiBo narratives and nine of 16 LGG narratives contained descriptions of the animals. In these, only the ones produced by male LGG signers were more concentrated in the most exciting part of the story, as shown in Figure 66c. Both LaSiBo narratives, in Figure 66b, and those by female LGG signers, in Figure 66d, presented more scattered descriptions.

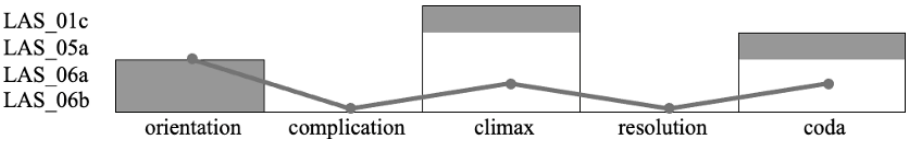
Figure 66 displays the distribution of the animal's descriptions within the internal components per narrative in each language group. Only the narratives that included such depictions are shown in Figure 66. What is more, the graphic line overlapping with the distribution of depictions per narrative aims at illustrating the general pattern in enhancing the animal during the story within the language. Such a graphic line makes clear that both AdaSL and LGG narratives by men highlight the animals, especially during the climax and the resolution, contrasting with the other two language groups. Finally, Figure 66 also shows that descriptions embedded in reported

speech, in AdaSL and LGG (see darker shadings in Figure 66a,c,d), are again concentrated in the climax and the resolution.

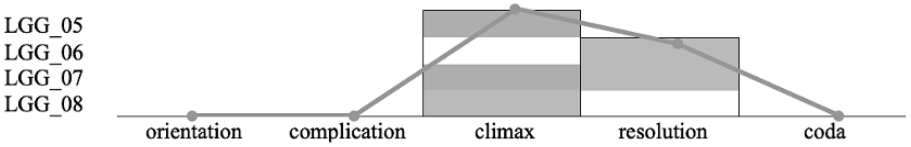
a. AdaSL



b. LaSiBo



c. LGG men



d. LGG women

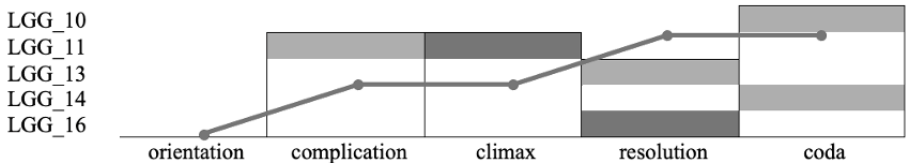


Figure 66. Distribution of the animal depictions within the narrative components per signer: shades correspond to the depictions; darker shades correspond to depictions in constructed dialogues; and graphic lines indicate the number of occurrences per component, in each language group: AdaSL (a), LaSiBo (b), LGG by men (c) and by women (d)

Those who did not describe the animal in LaSiBo and LGG were asked about it at the end of their accounts. All responded but two signers in LaSiBo and one woman in LGG. This resulted in high production of depicting signs afterwards, especially in LaSiBo, probably to make sure that they were being understood. Figure 67 presents the actual number of signs describing the animals in each narrative component and afterwards per language. Some of the signers produced two or more depicting signs in a row, increasing the number of instances per narrative.

A few signers indicated the colour (one in AdaSL, two in LaSiBo and five in LGG, four are by men) and only one in AdaSL depicted the pattern of the snake. Three AdaSL signers and one male LGG signer also described the shape of the animal's body parts. Importantly, only AdaSL employed lexical signs of relative size for 'big', indicating a higher degree of conventionalisation in an older sign language. By opposition, LaSiBo signers rely on references in their surroundings. They used more pointing signs than the other language groups to identify the animals. The colours were also expressed by pointing at their clothes. Moreover, one signer pointed at a tree to indicate size and two others traced the length of the snake on the ground. Hence, such a higher use of pointing demonstrates that the young age of LaSiBo and the reduced size of its community have yet to conventionalise certain concepts. Finally, the large majority of the depicting signs concerned the expression of absolute size for 'large', length and width – this last one especially in the two villages. Besides showing the number of occurrences of size and shape depictions (subtitled as 'S&S'), points, and the indication of the pattern and colour of the animal per language, Figure 67 shows the distribution of the animal's description within the narrative components and afterwards. This makes it evident that AdaSL signers described the animals copiously within their accounts, while the other languages had to be prompted by a question at the end to do so.

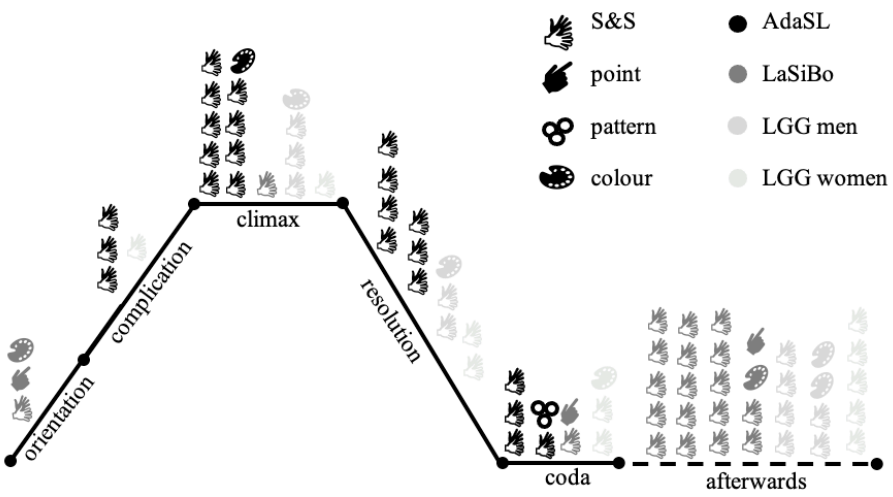


Figure 67. Distribution of the animal depictions of size and shape (S&S), the use of point, the indication of pattern and colour in each narrative component and after the narrative per language group: AdaSL, LaSiBo, LGG by men and by women

To look more closely at how varied the animal depictions were in the three sign languages, both in and outside the narratives, Figure 68 demonstrates the number of occurrences in the different types of size depictions. There was only one reference to height in the animal's descriptions in LaSiBo that is not included in Figure 68. Here, only the most used size dimensions are displayed, namely concerning the depictions of large/small and long as predominantly space-based, and of width, as uniquely defined on the body, especially in the two villages. Body-based depictions for a relative size measured on the finger occurs only in AdaSL and LaSiBo. Moreover, body-based delineations of length occur in LGG and again in LaSiBo. Overall, what is strikingly different between the size depictions in the three sign languages, is that LaSiBo relies much on body affordances mainly to delineate width, while LGG seems to prefer space-based depictions. Importantly, as seen with the use of their surroundings to convey certain concepts, LaSiBo also expresses width within a larger signing space, such as in the leg.

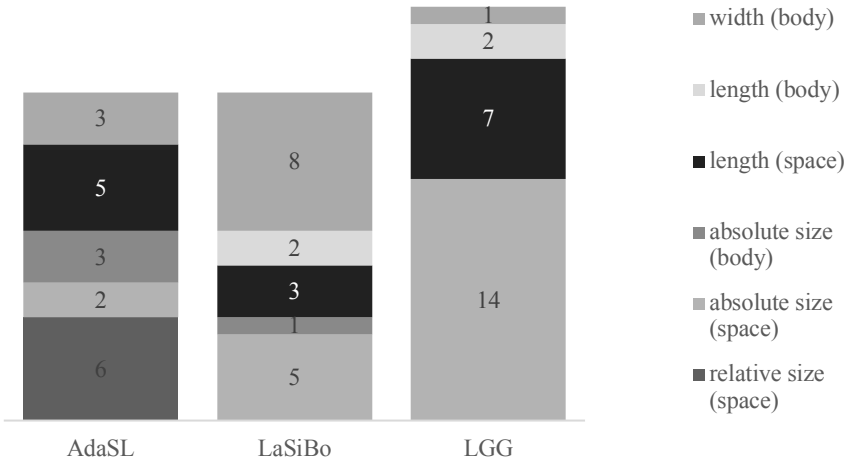


Figure 68. Number of occurrences in the most used depiction types: relative size (in space), absolute size (in space and on the body), length (in space and on the body) and width (on the body) in AdaSL, LaSiBo and LGG

All in all, AdaSL signers enhance the animals the most in their narratives, demonstrating that they are experienced storytellers. On the other end, LaSiBo signers seem to lack the ability to turn their accounts more compelling. Between these two opposing sides, men and women in LGG get closer to different ends. In this particular study, the main distinction between male and female LGG signers concerned the distribution of depictions with the narrative, which was much more concentrated on the middle part of the narratives told by men, similar to AdaSL. Next, I relate the findings of this study with previous descriptions in the three sign languages.

7.7 Discussion

The findings obtained in this study are compared only to previous descriptions of the three West African sign languages analysed here, namely in what concerns the labels used to identify and the signs used to depict the size and shape of animals.

The signs used to represent a thin snake with the index finger, in (100a) for AdaSL and (104a) for LaSiBo, and a wider one with the flat hand, as observed in all three sign languages, in (100b), (104b) and (109), had been described for LGG, namely for WORM, in Figure 56a, SNAKE, in Figure 56b, and even BOA, in Figure 56c. Similarly,

the representation of the horned animal in LaSiBo, in (104d,e), had also been registered in the LGG dictionary for OX, in Figure 57a, and in AdaSL for COW, in Figure 57c (see §7.2.1). The anthropomorphic strategy was observed not only in the representation of 'lion' by depicting an open mouth, but also in the depiction of the snake's spots on the signer's body. In addition, the depiction of 'big eyes' and 'big snout' of a lion on the signer's face, by using the pulling strategy resembles the signs previously observed in AdaSL and LGG, in Figure 59.

The depictions of size seem to be based on gestures, as Nyst (2007, 2016a, 2018) and Tano and Nyst (2018) demonstrate. The data about LaSiBo signers further supports this hypothesis. LaSiBo signers point at real things in their descriptions, just like hearing gesturers of Anyi, in Ivory Coast, tend to do, as observed by Tano and Nyst (2018). This was not found in AdaSL or LGG. Another similarity with gestures in addition to pointing is that LaSiBo signers use a more expansive signing space, as was also seen by those authors in the gestures of hearing people in the village. This signing space is also larger than the signing space by AdaSL and LGG signers. LaSiBo signers were observed to rely much on pointing for surrounding references and seem to use gestures still. It is hypothesised that this is because they are very few deaf signers in this village, and that they interact more with hearing people than with each other. The practice of pointing at references in the environment to enhance descriptions has been observed in signers of very small languages (e.g., Haviland 2013) and in homesigners (e.g., Coppola 2020, 359). If LaSiBo signers have not fully conventionalized size and shape depictions, then perhaps they share some similarities with signers in those situations.

Signs of **relative size** were only observed for 'large' in AdaSL combined with **mouthing**, in (113), as previewed in the literature (see Figure 60a). This was the only mouthing (mouth movement reproducing full or part of spoken words) found in the data of the three sign languages collected for this thesis.

The depiction of the **absolute size**, for both 'large' and 'small' was, in contrast, produced frequently, especially **in space**, between the two hands, as in (114a,b), (118a–c) and (123b,c,e,f), similar to the LGG signs in Figure 61a,b. LGG signers were the only ones measuring size in space with two fingers as well, in (123a,d), which had not been described yet, but was previewed by the data collected from children in Bissau, producing also space-based depictions between the hands, in Figure 64a, and the fingers, in Figure 64b.

Similar to the relative size registered in the literature of small entities **on the body**, as in Figure 60b for AdaSL and Figure 61c,d for LGG, the **absolute size** was also depicted in AdaSL and LaSiBo on the finger, respectively in (114c,d,e) and (118d). No such depictions were observed in the LGG narratives.

LGG signers did, however, distinguish 'large' and 'small' with their facial expressions. **Puffed cheeks** were used for BIG, as in (123b,c), and previewed in the lexical sign for BOA, in Figure 56c. In AdaSL, puffed cheeks were also observed for the notion of 'large' in the depiction of 'big eyes' in (117b). This coincides with previous descriptions in Morgado and Nyst (2022) based on this same data. Here, puffed cheeks were combined with the depiction of 'swelling' in AdaSL and 'large' in LaSiBo, as shown in (118c). This was the only mouth movement seen in LaSiBo. In general, deaf signers of the village of Bouakako maintained a neutral mouth.

Additionally, **spread lips** (123d,e) and **pursed lips** (123f) were combined with the depiction of 'small' in LGG. This was described in that work as well, where spread lips and pursed lips were produced together with depictions of 'very small', as in (114e) for the latter in AdaSL.

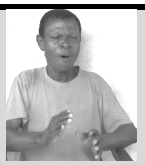
The depictions of **length** were only described for AdaSL, in that same work (ibid., 158), in terms of its combination with **spread lips**, as in (115b). Here, the only occurrences refer to the index fingers, representing the snake, as **entity handshapes**, combined with a tracing movement delineating its length. Besides, such a depiction of LONG, but produced with the palms, LaSiBo used three other strategies which were also observed in LGG. Both LaSiBo, in (119b), and LGG signers depicted the length of a snake with **handling handshapes**. The difference was that, in LGG, besides the C handshape, signers depicted thinner snakes by reducing the distance between the index and the thumb, as in (124b,c). This was observed in the children as well, in Figure 64d. LaSiBo, in (119c), and LGG, in (124e) produced equally a **pulling** of the index to depict the snake's length, as observed again in the children, in Figure 64c. Then again, apart from the index finger, one LGG signer combined the pulling movement with the whole hand, in (124d). Moreover, the pulling movement for length was combined in LGG with **sucked cheeks**, which had not been described yet.

In addition, length was depicted on the **body**, by being **traced on the forearm**, in (119e) for LaSiBo, and (125b) for LGG. This strategy had not been described previously either. What is more, one female LGG signer depicted the snake's length with her **whole body**, in (125a), which was not observed either. However, making use of the physical distance **between the hand and the shoulder** of the other arm, as in (119d) for LaSiBo, had been observed as a Kenyan gesture for 'big fish' (Claessen 1982, 173). As a measure within the same arm, it was registered for LaSiBo, in Figure 63b, and for AdaSL, in Figure 62c.

The depiction of **height** occurred only in LaSiBo probably concerning a calf, in (120b), similar to what had been described for the height of a short animal also in LaSiBo, in Figure 63a, and in AdaSL, in Figure 62b.

Finally, the depiction of the snake's **width** was always **body-based**. It was delineated on the **finger**, in AdaSL, in (116a), and LaSiBo, in (121a), on the **arm** in the three sign languages, in (116b) for AdaSL, (121b) for LaSiBo, and (126) for LGG. Importantly, and as observed previously (c.f., Morgado & Nyst 2022), the width was combined with an **O-shaped mouth** in AdaSL. In LGG the depiction of width occurred this one time, although children did delineate it on the finger, arm and leg, as shown in Figure 64e–i. In contrast, in LaSiBo data, it was further delineated on the thigh, in (121c) and the lower **leg**, in (121d). Such a larger use of the signing space, namely by using the leg, had been described before for LaSiBo, in Figure 63c. In gestures, such use of body affordances for circular shapes with different diameters was described in Central Africa (Hochegger 1979, 64), Ghana (Hadjah, forthcoming) and the Ivory Coast (Tano & Nyst 2018, 8).

Table 40. Types of all occurrences of size and shape depictions of the animals in the three sign languages: AdaSL, LaSiBo and LGG per gender. Types shaded were described in the literature

			AdaSL	LaSiBo	LGG	
					men	women
Large/small	space	relative size	 BIG (+mouthing)	-	-	-
		absolute size (2hands)	 BIG	 BIG (+puffed cheeks)	 BIG (+puffed cheeks)	 SMALL (+spread lips)
		absolute size (2fingers)	-	-	 SMALL (+pursed lips)	 SMALL (+pursed lips)

	body	finger	 BIG (+spread lips)  SMALL (+pursed lips)		-	-
Length	space	entity handshape	 LONG (+spread lips)	 LONG	-	-
		handling handshape	-	 LONG	 LONG	-
		pulling movement	-	 LONG	 LONG	 LONG (+sucked cheeks)
	body	tracing movement	-	 LONG	 LONG	-
			-	 LONG	-	 LONG
Height	space		-	 SHORT	-	-

Width	body	finger	 THIN (+O-shaped mouth)	 THIN	-	-
		arm	 THICK (+O-shaped mouth)	 THICK	 THICK	-
		leg	-	 THICK	-	-
Other	entity handshape		 COILED-SNAKE	-	-	-
	anthropomorphic		 BIG-EYES BIG-SNOUT	-	 BIG-EYES	-

In terms of the relative amounts of each type, LGG adult narratives had few body-based depictions of size and shape when compared with the other two sign languages and with those produced by child LGG signers. The LGG children are more similar to LaSiBo and AdaSL in using more body-based depictions, especially for width. Why should this be the case? I hypothesise that AdaSL, LaSiBo, and LGG children – who live predominantly in hearing families – are all immersed in a communicative environment with a lot of hearing gesturers, while the interlocutors of LGG adults are mainly other LGG adults.

The animals' description, especially of snakes, relies on a large variety of depicting types, even if only after being asked about it. In addition, mouth movements combine with particular notions of size and shape. This had been described for AdaSL and

LaSiBo depictions (Morgado & Nyst 2022) and was confirmed here for LGG. Again, LaSiBo contrasts with the other two sign languages by using a larger signing space and surrounding references to convey certain concepts. LaSiBo signers also show much fewer facial expressions in depictions of size and shape when compared with the other two sign languages. LaSiBo signers have not developed the use of mouth movements probably due to the fact of being few deaf people that do not usually seek each other to socialise. In contrast, even though LGG is younger than LaSiBo, it differs from the Ivorian sign language in systematically presenting such mouth movements. These results for LGG show that intense communication habits within a growing deaf community may stimulate the use of certain facial expressions.

To return to the theme of how certain narrative devices enhance storytelling, recall that Labov highlights the importance of capturing the audience's attention through the evaluation component. This is when storytellers rely on narrative devices to enrich the story. In this chapter, I propose that describing what the animal is like can be part of this enrichment. I found that animals are most entrenched in the middle part of narratives produced by AdaSL and male LGG signers. Nonetheless, signers in the three sign languages demonstrated to have at their disposal a variety of depicting types that they can use if asked about it.

Considering that AdaSL is an old sign language with lots of accumulated interactions over time and LaSiBo is young and is used by a small group, LGG can be used to help disambiguate the importance of the age of a language on the growth of linguistic structures. It has a large deaf community, and many of the signers (but especially male signers) experience a high density of regular daily interactions with other signers. In this study, I found that half of LGG signers described the animal during their narratives through various means, such as interrupting the narrative to add information or describing it during constructed dialogues; this was similar to AdaSL signers. However, the other half, in both genders, did not provide animal descriptions within the narratives. This may indicate that LGG as a whole language is still developing such narrative structures. These results confirm the hypothesis that even though language age matters, interaction habits are also crucial. AdaSL signers have been interacting daily over past generations. Deaf people in Bissau interact intensively and with a great diversity of deaf interlocutors, even if they are still in their first generation. In contrast, LaSiBo signers constitute a very small group that does not seem to seek interaction with each other daily.

In previous chapters, I showed that, in general, AdaSL and male LGG signers show similar patterns, and that female LGG signers resemble LaSiBo's the most. I can now integrate the findings from the study on the animals' depictions into the overall picture of how differences in the use of narrative devices may reflect social, cultural, and historical aspects of different language communities. Yet, the results in this chapter

also open the door to other factors, such as the accumulated language experience of individuals in ontogenetic time, which has been described in Nicaraguan Sign Language signers (Senghas 2003). That is, even though LGG is growing incredibly quickly and developing linguistic structures in a short amount of time, there are still types of linguistic devices, such as descriptive elaboration in narratives involving size and shape depictions, which need time for individual signers to acquire and use. Next, I wrap up this study with a conclusion.

7.8 Conclusion

This chapter focused on the last type of narrative device studied in this thesis as part of the evaluation component in narratives: the depiction of the animal as the point of the story. I presented an overview of previous descriptions of AdaSL, LaSiBo and LGG, the methods, and a descriptive analysis, followed by a synthesis of the results and a discussion comparing the three sign languages to answer the research question and evaluate the hypothesis.

The three African sign languages presented various depictive strategies to describe the animals, but only AdaSL and male LGG signers included them in the climax and the resolution. It was also seen that deaf people mirror common body-based depictions widely used in West Africa by hearing people. The difference between the three sign languages is that LaSiBo seems more gesture-like in the use of a larger signing space, of real references in the surroundings and the body to depict size dimensions, especially width. AdaSL signers also use body-based depictions but always within the signing space, nor do they point to their surroundings.

One new idea from this study that is particularly compelling for follow-up research is to pursue the hypothesis that LGG-signing children in Bissau still use gestures brought from home that have yet to be adjusted to the current sign language used by adults due to insufficient daily interaction, especially outside of school. I now turn to the last chapter which brings together the four studies presented in this thesis.

PART IV

CONCLUSION

Chapter 8 – Discussion and conclusion

8.1 Discussion

In this last chapter, I discuss the results of the four studies as a whole. The present thesis focuses on three West African sign languages of different ages used by deaf communities of distinct sizes and with diverse patterns of social interaction. Adamorobe Sign Language (AdaSL) would be a very old sign language; Langue des Signes de Bouakako (LaSiBo) would be around 50 years; and Língua Gestual Guineense (LGG) about 20. AdaSL is used by 33 deaf people in the village of Adamorobe, in Ghana; LaSiBo by six deaf people, related by family ties, in the village of Bouakako in Ivory Coast; and LGG by about 500 deaf people brought together in a school setting in the city of Bissau, Guinea-Bissau. At an early point in the research, it was decided that female and male LGG signers would be evaluated as distinct groups, due to their different socialisation practices (see §1.2.4) and initial impressions about differences in their storytelling. Thus, comparisons were made across three languages, but four different groups.

This project grew out of observations made during fieldwork in West Africa to discover within the context of Nyst's project how signers produce size and shape in the two village languages. In the process of collecting stories, I became curious about the differences in storytelling I observed between various language communities. I wanted to understand exactly how the stories differed and what factors might account for those differences.

Research questions and hypotheses. The comparison of personal experience narratives about animal attacks in the three sign languages, in particular of their structure and use of enhancing devices, seeks to elucidate the main question: **To what extent do community size, language age and frequency of social interactions impact the structure and narrative devices in storytelling?** To do so, 45 personal experience narratives told by deaf signers were analysed in four different studies. My overall prediction is that more interaction with other signers in general would result in more elaborated stories and richer linguistic devices – whether over a longer time depth, as in AdaSL, or due to a high density of deaf signers and frequent interactions, as in LGG.

Study 1 analyses the structure of the narratives, following the model of Labov & Waletzky (1967). This study is ground-breaking in at least a couple of ways. It is the largest one for sign languages that use the L&W methodology of prompting personal

stories about a dangerous situation to elicit vivid and compelling language use. It is also the first study on the structure of narratives in emerging and micro-community sign languages. Still, other analyses have focused on non-life-threatening personal experience narratives. Existing studies in American Sign Language, Romanian Sign Language, Brazilian Sign Language and Australian Sign Language have also shown fully ordered structural components. However, the story's climax was not very developed in those studies because the narratives were not as emotional as they are in the case of animal attacks. In general, the three sign languages in this thesis showed that narratives follow a universal structure with a beginning, middle and end, which is evidenced by time-aligned pyramid shapes. In addition, signers start a story by addressing the audience in their role as a narrator in the first component (orientation) and then enter the second component (complication) as characters, finally returning, in the end, to the narrator role in the last component (coda). This is also another feature of the universality of stories.

The first research question concerns how the signers of the three sign languages structure their narratives. Here, the prediction that interactions might be a crucial factor in narrative development is supported by the finding that LaSiBo signers and female LGG signers produce simpler structures than AdaSL and male LGG signers. The second research question regards the use of dramatic effects in the climax. Again, I found that LaSiBo and most female LGG signers did not seek to make their climaxes compelling, as AdaSL and male LGG signers do.

In what concerns the internal structure, AdaSL and male LGG signers present balanced components according to Labov & Waletzky's model, including Freytag's climax. In fact, AdaSL narratives exhibit longer climaxes than LGG, the most emotional part of the narrative. This is likely due to a longer time depth of AdaSL, enabling current signers to have gained experience in perfecting storytelling through older deaf role models in social interactions, while LGG is still in its first generation.

Studies 2, 3 and 4 look at enhancing devices in the narratives, as part of Labov's (1972) evaluation component occurring mainly throughout the middle structural components. These devices refer to the moments where storytellers give dramatic force to the narratives whether by embodying characters, through constructed actions, dialogues, and role shifts, or by interrupting the narrative to add crucial information to the audience. This component aims at capturing the audience's attention. The findings concerning such devices were able to be analysed crosslinguistically since they have been studied in other sign languages as well.

Study 2 focuses on signing perspectives in the three sign languages: real scale, reduced scale, simultaneous perspectives and multiple perspectives. This has been

studied in AdaSL (Nyst 2007; Edward 2021) but not yet in LaSiBo and LGG. The research question for this study is about which perspectives the signers use during their personal experience narratives. The hypothesis that signers prefer using the real scale, as the most basic of the four signing perspectives is confirmed here as well. However, besides LaSiBo as expected, AdaSL and female LGG signers do not produce the reduced scale perspective either. In fact, narratives produced by LGG male signers are the only ones presenting the other three perspectives in some significant way.

Nyst suggests that a whole entity classifier system should not be considered a universal feature of sign languages because it seems to be lacking in AdaSL (2007, 197), despite a very active social interaction between signers. Although model-sized classifiers would be expected to not occur at an early stage of development of emerging sign languages, their absence could hardly be justified in the old AdaSL (ibid.). Also, it contrasts with Kata Kolok used by a community of a similar size for several generations which does present the reduced scale perspective with model-sized classifiers (de Vos 2012). And is not in short supply.

Edward (2021, 345-347) states having found model-sized classifiers in AdaSL, especially to depict motion events seen from a distance. She suggests that the emergence of such a grammatical structure may be a consequence of language contact with GSL, though the younger signers in her data did not use them. Moreover, she acknowledges that the type of stimuli – short videos showing human actions in zoom out from the Pear Story – may have influenced the production of those entity classifiers in reduced scale. However, of the 17 AdaSL narratives analysed in this thesis, no instances of signing on a reduced scale were found (again, not even in young deaf bilinguals). I recall here that narratives were elicited only with a question, without any material, which likely results in more naturalistic data. Hence, I confirm Nyst's suggestion that such an absence is a characteristic of AdaSL. The underdevelopment of model-sized classifiers would also be expected in young sign languages such as LaSiBo and LGG. However, unlike the female signers, male LGG signers do use them. Thus, the distinction between genders in LGG does not seem to be determined by language age or community size, since signers are all using the same language, but rather with a different frequency of socialisation.

Study 3 looks at constructed dialogues and role shifts in the three sign languages, which is the first such analysis in each language. The research question concerns to what extent do signers of the three sign languages produce role shifts and constructed dialogues to enhance their narratives. The hypothesis is that LaSiBo signers may not use these narrative devices, which is indeed what was found. Instead, only one signer

in LaSiBo made a character change involving herself and a horned animal. No other shifts were found and no dialogues or monologues were produced by the signers. Also, female LGG signers used very little of these two narrative devices, confirming the effect of socialisation on the development of narrative devices.

Both AdaSL and male LGG signers use role shifting within constructed dialogues frequently. While both of those groups of signers change their eye gazes in role shifting, as occurs in other sign languages (e.g., Padden 1986), I found that the AdaSL signers do not usually turn their heads or move their bodies when shifting between characters, while the male LGG do. Of course, body changes in LGG signers were certainly motivated by the habitual location of the snakes, on the trees, implicating a top-down communication. Such a distinction between the two groups, which otherwise tend to pattern together, is hardly justifiable whether by the circumstances narrated or as a particular characteristic of AdaSL. Anyway, this would certainly be worth more research.

Study 4 analyses the depictions of animals in the stories, specifically expressions of their size and shape that can be represented in many different ways on the hands and body. This linguistic feature has already been analysed in AdaSL and LaSiBo, but not yet in LGG. The research question is about how signers depict the animals in their narratives. The hypothesis is that emerging sign languages may take time to incorporate such descriptions into their narratives to make stories more compelling. This hypothesis is supported by the fact that LaSiBo signers hardly add depictions of animals during the story; sometimes they do not even name them, but just point to a location. Similarly, only half of LGG signers, both men and women, describe the size and shape of the snakes during their narratives. Still, those who did not do so, depicted the animals after the story had been told making use of different size and shape categories. In contrast, most AdaSL signers describe the size and shape of the animals during the stories, mainly in the climax, as a dramatic effect. This suggests that the enhancement of the antagonist to convey emotional intensity takes time to emerge among a community of signers, regardless of the frequency of interactions.

Unlike the two other sign languages, LaSiBo's depictions use a wider signing space and resort to pointing within the immediate environment. These kinds of descriptions are also found in gestures by hearing people (Tano & Nyst 2018). Tano (2016) states that deaf people in Bouakako prefer hearing interlocutors, which may account for this pattern. Contrasting with both village sign languages, there were very few occurrences of body-based size and shape depictions in LGG. However, body-based depictions have been observed in depictions produced by LGG-signing deaf children, who nearly all live in hearing families. Although such data are not described in depth in this thesis, this preliminary work suggests that deaf signers who socialise more often with the

hearing than with the deaf, are more likely to use more gesture-like depictions, including both the children in Bissau and in the small community of signers in Bouakako. This needs to be explored further in the future.

Finally, mouth movements combined with signs of size and shape seldom occurred in LaSiBo, except for the very iconic puffed cheeks to express a big size. In contrast, both LGG and AdaSL exhibit various mouth movements combined with size and shape signs. In this way,

Gender differences. A surprising finding in this thesis concerns the striking difference between male and female LGG signers. Even though I have been following LGG development since its beginning, I only realised that there were differences between deaf men and women in these analyses, especially in the three first studies. Based on the participants' questionnaire and clarifications given by the deaf assistants in Bissau, few women socialise daily with groups of deaf people. This difference confirms the importance of social interaction. Thus, male LGG signers present more similarities to AdaSL signers, while narratives by female LGG signers show more correspondence to LaSiBo narratives. This is especially clear in Studies 1 and 3.

The few deaf women who did match the narrative skills of male signers are those who participate more frequently in social interactions with deaf peers. More ethnographic research on deaf socialisation patterns would be needed to understand what enables certain deaf women to interact more than others in Bissau. In addition, considering that LGG is used by a macro community, the sample collected for this study is certainly not representative enough. Thus, more deaf people from Bissau should be included to reconfirm the hypotheses. All in all, such a gender difference confirms the frequency of social interaction as the most crucial factor in developing storytelling skills.

Social interaction. Since deaf people in Bouakako are very few and they do not constitute a tight group, their signed interactions can hardly be active. Of course, they interact with each other but it is not clear to what extent, as their preferred interlocutors are hearing people. In addition, one of them, the older deaf person in the village, spends most of his time alone. Hence, it is not that they do not interact, but that they do not socialise as much as, for instance, deaf people in Adamorobe, because they have fewer interaction partners and the language has only existed in their lifetime. In sum, the frequency of social interactions seems to be a determining factor in developing storytelling skills. Gender differences in LGG signers are decisive in confirming social interaction as the most crucial factor. Both deaf men and women in Bissau belong to the same macro-community using the emerging LGG. In this case,

the distinct patterns of social interactions between men and women may provide the necessary evidence to justify the differences between narrative structures and devices. Undeniably, community size and language age are fundamental to developing language features and, consequently, storytelling abilities. Proof of this is the sign language used by the micro-community of Adamorobe for several generations.

As a consequence, AdaSL narratives present all the structural components, they have intense climaxes and enhancing devices. In contrast, LaSiBo and most female LGG signers produce very short middle components (complication and climax). In terms of narrative devices, role shifts occurred very little and constructed dialogues only did so in narratives by the few female LGG signers who attend deaf socialisations daily. Again, even though AdaSL and LGG have different time depths and community sizes, they have a daily frequency of social interaction in common.

Language contact. Also, in Adamorobe, deaf people have a lot of exposure to Ghanaian Sign Language (GSL), whether in the Sunday mass, at religious and professional courses attended mostly by the older deaf men. Younger deaf signers spent most of their youth in the boarding school, where GSL was the daily means of communication. Hence, it is safe to say that they are fully bilingual in GSL and AdaSL. Apart from the younger generation (in both genders) and older deaf men who had full access to GSL environments, the older women accessed it only partially through the Sunday mass and eventual visits from outsiders communicating with them in GSL (see Chapter 1 for more details). I recall here that most of the deaf participants in Adamorobe were women (both young and old), reflecting a similar proportion of the total of the deaf group. Due to such a background of language contact, I was conscious that GSL may have influenced this study, has Edward (2021, 347) suggested to have occurred in her own study. However, I found no differences between the narratives told by men and women, or even by younger schooled deaf people throughout the four studies. I noticed that the older deaf women occasionally used a few GSL signs, such as FATHER, MOTHER, MORE and BAD. These signs are not borrowed, because there are semantically equivalent – and totally distinct in form – signs in AdaSL. Also, one of the girls was excluded from the study because she told her narrative almost entirely in GSL (see Chapter 2 for more details). This girl schooled in GSL uses it to communicate with the younger group on a daily basis and rarely interacts with the deaf elders.

All those who participated in the study said that AdaSL was the language they used the most except for that girl who identified herself more with GSL. Having AdaSL as their strongest language implies regular interactions with the various deaf people in the village over time. Having had greater exposure to GSL may have given deaf youngsters and older deaf men the ability to separate the two languages according to

the corresponding contexts of use. In contrast, older deaf women accessed GSL in contexts where AdaSL was also present. This probably made it harder for them to clearly distinguish where and when it would be suitable to use GSL. Such an interference in older people, especially women, but not in the younger ones who are fully bilingual, was also observed by Edward (2021, 346). In the end, proficiency in GSL did not seem to interfere with narratives told in AdaSL by native signers.

Other factors. I am aware of the possibility of other factors influencing the results, even if I cannot give conclusive evidence on them in this study. For one, to better understand social interaction in Bouakako, more research would be needed to establish the extent to which LaSiBo signers socialise with each other. When Tano (2016) was on fieldwork, deaf people would go to the house where he was staying at the end of the day. Since I was not staying in the village, but in Hiré (the nearest town), hearing people would surround me every time I was in Bouakako. So, if I was visiting the house of a deaf person, they would follow me. In their eyes, I was an outsider with evident 'exotic' features (being white, deaf, female 'in charge', speaking a different language, with white hair). Having outsiders researching the sign language used by deaf people was definitely a disruptive factor in the daily routine of village life. This made it harder to understand exactly what are the communicative practices of the deaf people in Bouakako. The fact that I spent less time in Bouakako than in Adamorobe or Bissau was also not helpful in turning my presence a little less visible.

I am also aware that some AdaSL and LGG signers have had access to other sign languages such as GSL and LGP, respectively, and that this may have influenced the structure of their sign languages. It is possible that such an influence may have played some role in it, even if indirectly, which deserves to be looked into further. An analysis with LGP personal experience narratives is planned in the near future.

Methodological biases. The methodological process was identical in all three sign languages. However, the fact that I was an outsider may have influenced some of the signers' behaviour, especially the ones in Bouakako. My relationship with the deaf people in each of the research sites was built differently, as all relationships are. In Bissau, I have known most of the deaf signers for many years. In Adamorobe, I was preceded by Nyst and Kusters, white female researchers like me which eased my integration with the deaf people. In Bouakako, on the other hand, I was preceded by Tano, a local male researcher with whom they were very familiar. Yet, the LaSiBo data in all the studies show no differences between the six narratives collected by me and the additional six narratives collected later by Tano. Therefore, it does not appear that a bias against me as the interlocutor was significant.

8.2 Contributions of the thesis

I believe that this thesis demonstrates the importance of social interaction between deaf people to the development of storytelling skills. It has also shown that, regardless of community size, socialisation habits are fundamental to that development. The fact that deaf women in Bissau do not get to socialise as much as men jeopardising their language skills must bring awareness to promoting women's social participation. Such cultural differences between genders, leading men to interact more independently have been observed elsewhere, such as in Mali (Nyst et al. 2012, 254; Nyst 2015a, 134, 137), Senegal (Jirou, 2008, 151), Benin (Mildner 2021, 68) and Nigeria (Schmaling 2000, 15; Orie 2013, 245).

Looking more widely at the implications of deaf socialisation patterns, this thesis questions the educational policies towards mainstreaming deaf children. Such directives result in increasingly smaller groups of deaf students, without proper access to sign language models. To add to this, less and less social interaction between deaf people happens outside schools, at least in Europe. To what extent are sign languages in the global north being affected by this decrease in the socialisation habits of deaf people?

8.3 Future directions

The study of personal experience narratives involving dangerous situations is still little explored in sign languages. However, I believe that this thesis can open up new possibilities. By including other sign languages of both macro and micro deaf communities with different time depths, the hypotheses may or may not be supported. Also, by analysing the construction of narratives within interaction exchanges, the role of the audience could be better understood.

While working on the narratives in the three West African sign languages, I collected some preliminary data on narratives about animal attacks in an old macro-community sign language, my own Língua Gestual Portuguesa (LGP). Adding LGP as a school-based sign language used by a macro deaf community for 200 years could have contributed to the crosslinguistic analysis of this thesis. I even came to collect narratives of encounters with dangerous animals told by Portuguese deaf people during the pandemic. However, since I could not collect the narratives face-to-face due to the COVID restrictions, the method of filming ended up being different and, unfortunately, I had to leave them out of the study. I had asked the Portuguese signers to send me videos of their personal experiences with dangerous animals. The fact that they filmed themselves alone was a determining factor in how they modified the

telling of their experiences; for example, staring at the camera throughout almost all of the narrative meant that the use of constructed dialogue with shifting of eye gaze was not used to enrich the narrative.

Finally, during my last months of writing the thesis, my partner Mariana Martins went back to Bissau and filmed stories of animal attacks being told by one deaf signer to one or two deaf interlocutors. At that point, it was no longer possible to add this data to the thesis. Still, just by watching these videos, it became evident that storytellers adapt their accounts to their audience's feedback and that the story told gives rise to new stories in the audience in a continuous exchange of personal experiences. I later had the opportunity to also ask deaf Portuguese people to tell their stories within a group, which they did in a very similar way by building the stories based on the interlocutors' reactions and inspiring the telling of new stories by the addressees. This is definitely an exciting topic to dig into since language develops in everyday communicative practices and socialisation feeds on stories that are shared by one another.

APPENDICES

Appendix 1: Personal experience narratives in AdaSL

Fieldwork 2018

Narrative ADA_01 (short narrative)

In the forest, I was looking for snails in the forest. The slim snake came to me and I cut it.

orientation	1.	In the forest,
complication	2.	I was looking for snails in the forest.
climax	3.	The slim snake come to me
resolution	4.	and cut it.
coda		

Narrative ADA_02 (short narrative)

I was looking and walking. The snake crawled by me, I wanted to refuse, but I cut it. The father dug a hole, buried the long, thick snake and covered it.

orientation		
complication	1.	I was looking and walking.
climax	2.	The snake crawled by me
resolution	3.	I wanted to refuse, but I cut it.
coda	4.	The father dug a hole,
	5.	buried the long, thick snake
	6.	and covered it.

Narrative ADA_03 (short narrative)

In the forest, I was farming. A big and long snake bit my leg. My leg was bleeding. I saw it, they held me and we ran away. I ate onions to clean the wound on my leg and that was it.

orientation	1.	In the forest,
complication	2.	I was farming.
climax	3.	A big and long snake bit my leg.
	4.	My leg was bleeding.
resolution	5.	I saw it,
	6.	they held me
	7.	and we ran away.
	8.	I ate onions to clean the wound on my leg
coda	9.	and that was it.

Narrative ADA_04

A long time ago, I was born, not here, in Naswana. A long time ago, my sibling and I went to the farm. We were walking back. We were back and then I was thinking. I was looking for it [snails] and there were none. I came back here I looked around. I was thinking that I want to pee. I went to pee and there was none. I was thinking. I was looking for snails. A snake crawled and I didn't see it. When I saw it, I don´t want to cut it. I saw it and I refused. The long snake was in the water and I ran away. I fell in the water and screamed. My father was there, saw me, held me and took me away. I ate and put a mixture of leaves on my eyes. I got back here in. That´s all.

orientation	1.	A long time ago,
	2.	I was born, not here, in Naswana.
	3.	A long time ago, my sibling and I went to the farm.
complication	4.	We were walking back
	5.	and then I was thinking.
	6.	I was looking for it [snails]
	7.	and there was none.
	8.	I came back here
	9.	I looked around.
	10.	I was thinking that I want to pee
	11.	I went to pee
	12.	and there was none.
	13.	I was thinking.
	14.	I was looking for snails.
climax	15.	A snake crawled
	16.	and I didn't see it.
	17.	When I saw it
	18.	I don´t want to cut it.
	19.	I saw it
	20.	and I refused.
	21.	The long snake was in the water
resolution	22.	and I ran away.
	23.	I fell in the water
	24.	and screamed.
	25.	My father was there,
	26.	saw me,
	27.	held me
	28.	and took me away.
	29.	I ate

	30.	and put a mixture of leaves on my eyes.
	31.	I got back here
coda	32.	That´s all.

Narrative ADA_05

I went farming and it was raining. I was walking around looking for snails but there was none. I sat down to rest and drank water. I looked for snails again. In my bag, there was a cutlass. I was looking for it in my bag. A bee stung me on the face. I rubbed my face. I scared the bees off. I shook them off my face and off my body. I washed my face and body with water. My face was hurting, it had a big swelling. I took a medicine. It calmed me. I lit a fire to burn it [the hive]. The fire decreased. That was it.

orientation	1.	I went farming
	2.	and it was raining.
complication	3.	I was walking around looking for snails
	4.	but there was none.
	5.	I sat down to rest
	6.	and drank water.
	7.	I looked for snails again.
	8.	In my bag, there was a cutlass.
	9.	was looking for it in my bag.
climax	10.	A wasp stung me on the face.
resolution	11.	I rubbed my face.
	12.	I scared the bees off.
	13.	I shook them off my face
	14.	and off my body.
	15.	I washed my face and body with water.
	16.	My face was hurting,
	17.	it had a big swelling.
	18.	I took a medicine.
	19.	It calmed me.
	20.	I lit a fire to burn it [the hive].
	21.	The fire drecreased.
coda	22.	That was it.

Narrative ADA_06

I stayed to pick up snails with my father. I was looking for snails. Amongst the leaves, there was something big curled up with its head moving. I pointed at it. “What is it? Is it a rat?” Ah! The snake´s head raised, I saw it and I was scared. I ran away. I ran and I arrived, I was tired and my heart was beating fast. I was very tired.

orientation	17.	I stayed to pick up snails with father.
complication	18.	I was looking for snails.
	19.	Amongst the leaves,
	20.	there was something big curled up
	21.	with its head moving.
climax	22.	I pointed at it.
	23.	“What is it? Is it a rat?” Ah!
	24.	The snake´s head raised
	25.	And I saw it
	26.	and I was scared
resolution	27.	I ran away.
	28.	I ran
	29.	and I arrived,
	30.	I was tired
	31.	and my heart was beating fast.
	32.	I was very tired.
coda		

Narrative ADA_07

A long time ago, when I was a small boy, there, on the farm, I went with my father. I walked there and stayed there. My father went farming until he finished his work. I sat there waiting, thinking and I saw a hole. Something moved. I thought: “What could that be?”. I put my hand in the hole. I was very small and I didn't know. I put my arm in the hole. “What is it?”, I thought. With the cutlass, I dug the hole to make it bigger, my hand, I put it in the hole. I didn't hear anything, but my father heard and came to me. I had my arm in the hole and my father said, “Get out of there!”. My father cut off the snake's head with the cutlass. The snake's head opened. The mouth was broken. I was scared and frightened. My father pulled the snake out of the hole. It was a big and very long snake. He pulled it out and put it on the branch of a tree. I calmed down and my father said with gestures, “Don't put your arm in the hole! Do you hear? No, you don't hear. I said “ok”. “So you can't put your arm in the hole. You have to see, don’t touch. If the snake bites you, you die”. I was troubled, I should not have put my arm in the hole. I began to tremble with fear. My father kept asking me, “Do you understand?”. My father lit a fire, grabbed the snake from the branch and put it in the fire. He buried it and covered it. The fire is over. I relaxed and that was it!

orientation	1.	A long time ago,
	2.	when I was a small boy,
	3.	there, on the farm,
	4.	I went with my father.
	5.	I walked there
	6.	and stayed there.
	7.	My father went farming
	8.	until he finished his work.
complication	9.	I sat there waiting,
	10.	thinking
	11.	and I saw a hole.
	12.	Something moved.
	13.	I thought: “What could that be?”.
	14.	I put my hand in the hole.
	15.	I was very small
	16.	and I didn't know.
	17.	I put my arm in the hole.
	18.	“What is it?”, I thought.
	19.	With the cutlass,
	20.	I dug the hole to make it bigger,

	21.	my hand, I put it in the hole.
climax	22.	I didn't hear anything,
	23.	but my father heard
	24.	and came to me.
	25.	I had my arm in the hole
	26.	and my father said, “Get out of there!”.
resolution	27.	My father cut off the snake's head with the cutlass.
	28.	The snake's head opened.
	29.	The mouth was broken.
	30.	I was scared and frightened.
	31.	My father pulled the snake out of the hole.
	32.	It was a big and very long snake. He pulled it out
	33.	and put it on a branch of a tree.
	34.	I calmed down
	35.	and my father said with gestures, “Don't put your arm in the hole!”
	36.	Do you hear?
	37.	No, you don't hear
	38.	I said “ok?!”.
	39.	so you can't put your arm in the hole.
	40.	You have to see,
	41.	don’t touch.
	42.	If the snake bites you,
	43.	you die.”.
	44.	I was troubled,
	45.	I should not have put my arm in the hole.
	46.	I began to tremble with fear.
	47.	My father kept asking me, “Do you understand?”.
	48.	My father lit a fire,
	49.	grabbed the snake from the branch
	50.	and put it in the fire.
	51.	He buried it and covered it.
	52.	The fire is over.
coda	53.	I was relaxed
	54.	and that was it!

Narrative ADA_08

I didn´t see the snake. I put the cutlass under my arm. When I was walking, the snake bit my leg. I looked for the snake but I didn´t find it. When I found it, I ran with my leg hurting. I called the man and showed him my leg. The man insisted in looking for it. He found it and said: "Ah!". He walked quietly, shot it and the snake died. "Ah! It was big". We dug a hole, we put the snake inside and we covered it. "Ah!" My leg was hurting. He took me on his back, we walked and finally arrived. "Ah!" My leg was hurting. The woman waited for a long time. It hurt. The woman said "How?" "Did you kill it?" "God bless you" … I rested, it was buried. And that was it.

orientation	1.	I didn´t see the snake.
	2.	I put the cutlass under my arm.
complication	3.	When I was walking,
climax	4.	the snake bit my leg
	5.	I looked for the snake
	6.	but I didn´t find it.
	7.	When I found it,
	8.	I ran with my leg hurting.
resolution	9.	I called the man
	10.	and showed him my leg.
	11.	The man insisted in looking for it.
	12.	He found it
	13.	And said "Ah!".
	14.	He walked quietly,
	15.	shot it
	16.	and the snake died.
	17.	"Ah! It was big".
	18.	We dug a hole,
	19.	we put the snake inside
	20.	and we covered it.
	21.	"Ah!" My leg was hurting.
	22.	He took me on his back,
	23.	we walked and finally arrived.
	24.	"Ah!" My leg was hurting.
	25.	The woman waited for a long time.
	26.	It hurt.
	27.	Woman said "How?"

	28.	“Did you kill it?”
	29.	“God bless you”
	30.	I rested, it was buried.
coda	31.	Finished…

Narrative ADA_09

I went farming there. I saw a small snake and I got scared. I threw it away and ran off. I ran and walked a long way. I saw a big snake [a phyton]. It was moving the head. I saw it and refused. I called a man and showed it to him. The man shot the snake and it died. I went back to the farm.

orientation	1.	I went to farm there
complication	2.	I saw a small snake
	3.	and I got scared.
	4.	I threw it and ran away.
	5.	I ran
	6.	and walked a long way.
climax	7.	I saw a big snake.
	8.	It moved the head.
	9.	I saw it
	10.	and refused [to kill it].
	11.	I called the man
	12.	and showed it to him.
resolution	13.	The man shot the snake
	14.	and it died.
coda	15.	I went back to the farm.

Narrative ADA_10

I went farming in the morning. I drank water and rested. I was walking and the snake bit my leg. I saw the bite and I got scared. I was there. I was bitten by the snake and got scared. The man saw me and I was scared. My son took me on his back. I was scared. The leg was swelling. They took a long time to come over. I was really tired. A man came. The leg had swollen. He took me on his back. I was tired. I waited for help. "Where are you? Where are you? Where are you?" My son took me on his back. People came to watch. The snake was small. The leg was swollen. I cut, cooked and ate plantain, cassava, cocoyam and maize. When they arrived, I laid down, I was tired. They saw that I was tired and brought me to the hospital, but it was expensive.

orientation	1.	I went to farming in the morning.
complication	2.	I was farming
	3.	and I drank water
	4.	and rested.
	5.	I was walking
	6.	and the snake bit my leg.
climax	7.	I saw the bite
	8.	and I got scared.
	9.	I was there (farm).
	10.	I was biten by the snake
	11.	and got scared.
resolution	12.	The man saw me
	13.	and I was scared.
	14.	My son took me on his back.
	15.	I was scared.
	16.	The leg was swelling.
	17.	They took a long time to come over.
	18.	I was really tired.
	19.	A man came.
	20.	The leg had swollen.
	21.	He took me on his back.
	22.	I was tired.
	23.	I waited for help.
	24.	"Where are you?
	25.	Where are you?
	26.	Where are you"
	27.	My son took me on his back.

	28.	People came to watch.
	29.	The snake was small.
	30.	The leg was swollen.
	31.	I cut,
	32.	cooked
	33.	and ate plantain, cassava, cocoyam and maize.
	34.	When they arrived,
coda	35.	I laid down,
	36.	I was tired.
	37.	They saw that I was tired
	38.	and brought me to the hospital,
	39.	but it was expensive.

Narrative ADA_11a

Father went farming. He tied the branches and put them on his head. He was walking when a long big green snake bit his leg. He screamed in pain, He fell and kept screaming. A man ran to him, picked him up, and ran there. He washed the leg with water. He rubbed nut palm on the leg and cleaned it with water. He rubbed it with palm nut, the bite wound was getting bigger. He put medicine on his forehead, shoulder and mouth. He was limping and holding me. He mixed the medicine with the food for three days. “You don't get the injection, you wait 3 days and then go to hospital”.. He waited and three days later, he went to the hospital and took an injection and waited to get better. He paid them and asked to make a phone call. He called me and them I pick him up. He was feeling fine and we came back home by car.

orientation	1.	Father went farming.
	2.	He tied the branches
	3.	and put them on his head.
complication	4.	He was walking
climax	5.	when a long black snake bit his leg.
	6.	He screamed in pain,
	7.	He fell
	8.	and kept screaming.
	9.	A man ran to him
	10.	picked him up,
	11.	and ran there.
resolution	12.	He washed the leg with water.
	13.	He rubbed nut palm on the leg
	14.	and cleaned it with water.
	15.	He rubbed it with palm nut,
	16.	the bite wound was getting bigger.
	17.	He put medicine on his forehead,
	18.	shoulder
	19.	and mouth.
	20.	He was limping
	21.	And holding me
	22.	He mixed the medicine with the food for three days.
	23.	“You don't get the injection, you wait 3 days and then go to hospital”.
	24.	He waited
	25.	and for three days later,
	26.	he went to the hospital

	27.	and took an injection
	28.	and waited to get better.
	29.	He paid them
	30.	and asked to make a phone call.
	31.	He called me and them I pick him up.
	32.	He was feeling fine
coda	33.	and we came back home by car.

Narrative ADA_11b

A long time ago, my mother had a baby and I went farming. I was looking for food to make fufu. I saw a lion and got scared. I was walking and saw a lion with his tongue out. “What a big lion there. She turns to right and said to mother: ”The lion is there and you have to leave. When it sees you, it can eat you and pulls out the meat and that's it.” “Go away, stay there!” I was walking and said “Stay there!”. "No, go back!" I ran away. The lion ate the man's head. Many people came, they beat it and shot it and it died. Many men came, held it and cut it. Part of the meat was for them. Part of the meat was for them, part was for Aburi. Part was for Oyibi, part was for them and that was it. There were no more lions… That was it… The lion turned into a person and asked to be given a baby. "No, you give me the baby and I put it on my back and you go”. It turned again into a lion, it ran to a hole and ate it. It was over. Everyone was afraid, they went by car to look for the lion, but he never showed up again.

orientation	1.	A long time ago,
	2.	my mother had a baby
	3.	and I went farming.
complication	4.	I was looking for food to make fufu.
	5.	I saw a lion
	6.	got scared.
	7.	I was walking
	8.	saw a lion
	9.	with his tongue out.
	10.	“What a big lion there.”
climax	11.	She turns to right
	12.	and said to mother:
	13.	“The lion is there and you have to leave. When it sees you, it can eat you and pulls out the meat and that's it.” “Go away, stay there!”
	14.	I was walking
	15.	and said “Stay there”
	16.	I ran away.
	17.	The lion ate the man's head.
resolution	18.	Many people came,
	19.	they beat it
	20.	and shot it
	21.	and it died.
	22.	Many men came,

	23.	held it
	24.	and cut it.
	25.	Part of the meat was for them.
	26.	Part of the meat was for them,
	27.	part was for Aburi.
	28.	Part was for Oyibi,
	29.	part was for them
	30.	That was it.
coda	31.	There were no more lions…
	32.	finished… yes… [pause]
	33.	The lion turned into a person
	34.	and asked to be given a baby.
	35.	"No, you give me the baby
	36.	and I put it on my back
	37.	and you go".
	38.	It turned again into a lion,
	39.	it ran to a hole
	40.	and ate it.
	41.	It was over.
	42.	Everyone was afraid,
	43.	they went by car
	44.	to look for the lion,
	45.	but he never showed up again…
	46.	yes, it´s true…

Narrative ADA_12

A long time ago, I was coming back from the farm. I was tired and I needed to rest. I had no water. I was walking and didn't see the snake. I had a water bin on my head and the snake bit me. I ran and the snake left. My leg was hurting. I asked a hearing boy to look at the bite on my leg. The bite had the snake's teeth, we cleaned it with water. I cleaned the bite and saw that the wound got too big. I went to the hospital and I got better.

orientation	1.	A long time ago,
	2.	I was coming back from the farm.
complication	3.	I was tired
	4.	and I needed to rest.
	5.	I had no water
	6.	I was walking
	7.	and didn't see the snake.
climax	8.	I had a water bin on my head
	9.	and the snake bit me.
	10.	I ran
	11.	and the snake left.
resolution	12.	My leg was hurting.
	13.	I asked a hearing boy to look at the bite on my leg.
	14.	The bite had the snake's teeth,
	15.	we cleaned it with water.
	16.	I cleaned the bite
	17.	and saw that the wound got too big.
	18.	I went to the hospital
coda	19.	and I got better.

Narrative ADA_13

My father was old but not dead yet, he was here. Far away on the farm, something there was coming to here. A snake bit his leg. Someone ran and bring him. He prepared the red palm and tied his leg. I cut the onion in small bits. I put on some water and went to get leaves and brought them. I made the mix and rubbed it on the leg. And that was it. The snake's tooth was this size. I rubbed his leg. We waited a day and the swelling got smaller. That was it. Blessing on the head, tongue, shoulder, eyebrows, both arms, the other shoulder. Three days later it was over. That was it…

orientation	1.	My father was old
	2.	but not dead yet,
	3.	he was here.
	4.	Far away on the farm.
complication	5.	something there was coming to here
climax	6.	a snake bit his leg.
resolution	7.	Someone ran
	8.	and bring him.
	9.	He prepared the red palm and
	10.	"They" tied his leg.
	11.	I cut the onion in small bits.
	12.	I put on some water
	13.	and went to get leaves
	14.	and brought them.
	15.	I made the mix
	16.	and rubbed his leg.
	17.	And that was it.
	18.	The snake's tooth was this size.
	19.	I rubbed my leg,
	20.	We waited one day
	21.	and the swelling got smaller.
	22.	That was it.
	23.	Blessing on the head, tongue, shoulder, eyebrows, both arms, the other shoulder.
	24.	Three days later
	25.	it was over.
coda	26.	That was it

Narrative ADA_14 (Corpus, 2000)

I was in the forest, near the water and there were lots of fish. There were also many snails. I was catching them and putting them in the bag. I was surprised. There were really many snails and I was surprised. I, alone, caught a lot of snails up to this size. Snails were crawling. I was catching snails by myself everywhere. That's when I saw a snake and I was afraid. It was a big snake with spots on its body. The snake's head stood up and poked its tongue out, moving sideways. The snake was big, it had spots on its body, and curled up. The head rose, I was afraid and I screamed. The snake was strong. I was blessing myself and praying to God. I said, "I pray to you to bless me with life, Jesus Christ.". "I pray to God and Jesus Christ". "Please bless me with life". "Thank you, God, and I will pray, Jesus Christ". I prepared myself by grabbing the cutlass and killed it. I was looking at the dead snake. I took one part of the snake and threw it away. The other part I buried and covered it. The snake was too big, strong and long. I cut it. I cut the head´s snake… yeah… it was in the forest and it had spots on the body. It can bite and eat you. I was looking for the 'animal', It was hunting for prey, to eat and swallow me completely… I screamed… its belly filled up a lot… ahh… rats, pigs, dogs, chickens, turkeys… do you know what a turkey is?

orientation	1.	I was in the forest, near the water
	2.	and there were lots of fish.
	3.	There were also many snails.
complication	4.	I was catching them
	5.	and putting them in the bag.
	6.	I was surprised.
	7.	There were really many snails
	8.	and I was surprised.
	9.	I, alone, caught a lot of snails up to this size
	10.	Snails were crawling.
	11.	I was catching snails by myself everywhere.
climax	12.	That's when I saw a snake
	13.	and I was afraid.
	14.	It was a big snake
	15.	with spots on its body.
	16.	The snake's head stood up
	17.	and poked its tongue out, moving sideways.
	18.	The snake was big,
	19.	it had spots on its body,
	20.	and curled up.

	21.	The head rose,
	22.	I was afraid
	23.	and I screamed.
	24.	The snake was strong.
	25.	I was blessing myself
	26.	and praying to God.
	27.	I said, “I pray to you to bless me with life, Jesus Christ.”.
	28.	"I pray to God and Jesus Christ". "Please bless me with life". "Thank you, god, and I will pray, Jesus Christ".
	29.	I prepared myself by grabbing the cutlass
resolution	30.	and killed it.
	31.	I was looking at the dead snake.
	32.	I took one part of the snake
	33.	and threw it away.
	34.	The other part I buried
	35.	and covered it.
coda	36.	The snake was too big,
	37.	Strong
	38.	and long.
	39.	I cut it.
	40.	I cut the head´s snake… yeah…
	41.	it was in the forest
	42.	and it had spots on the body.
	43.	It can bite and eat you.
	44.	I was looking for the ‘animal’,
	45.	It was hunting for prey,
	46.	to eat
	47.	and swallow me completely…
	48.	I screamed…
	49.	its belly filled up a lot… ahh [rats, pigs, dogs, chickens, turkeys…
	50.	do you know what a turkey is?

Corpus 2000

Narrative ADA_15a

We were looking for snails, Kaya was cutting plants, she looked and was surprised. She called me out and said look there. She was surprised. We were walking in silence, we got out of there, we picked up stones. We threw them at the hive and ran. The bees that were in the hive all ran away, and we ran and went away. There were a lot of them. We were looking for snails, the two of us, we were walking. Kaya went one way alone, and I went the other way by myself. We were cutting and we saw snails, we picked them up and put them in the bag. There were many snails, we caught 15. We were cutting and we saw bees. I called her and said "look there!" .... Ahhh... with a stone, I threw it, took one and another and we ran, our hearts were beating fast. If the bee stings you in the eye you die... you cry... we stopped... we were looking but there was no hive. It almost stung Kaya's eye... almost... and she might not see anymore. God saw it. It was this size We grabbed the stones and threw them, the bees fled and we ran... yes... it was scary....

(…)

orientation	1. We were looking for snails,
complication	2. Kaya was cutting plants, 3. she looked 4. and was surprised. 5. She called me out to “her” 6. and said “look there!”. 7. She was surprised.
climax	8. We were walking in silence, 9. we got out of there, 10. we picked up a stone. 11. We threw them at the hive 12. and ran.
resolution	13. The bees that were in the hive all ran away, 14. and we ran 15. and went away.
coda	16. There were a lot of them. 17. We were looking for snails, 18. the two of us,

	19. we were walking. 20. Kaya went that way alone, 21. and I went that way alone. 22. We were cutting 23. and we saw snails, 24. we picked them up 25. and put them in the bag. 26. There were many snails, 27. we caught 15.
	We were looking for snails, the two of us, we were walking. Kaya went that way alone, and I went that way alone. We were cutting and we saw snails, we picked them up and put them in the bag. There were many snails, we caught. We were cutting and we saw bees. I called her and said "look there" .... Ahhh... with a stone, I threw it, took one and another and we ran, our hearts were beating fast. If the bee stings you in the eye, you die... you cry... we stopped... we were looking but there was no hive. It almost stung Kaya's eye... almost... and she might not see anymore. God saw it. It was this size. We grabbed the stones and threw them, the bees fled and we ran... yes... it was scary.... (…)

Narrative ADA_15b

A long time ago, there in Mampong, when school was finished… the lion was bad, when we saw it, we were afraid. My grandmother brought me to school… the big lion was bad… the lion was bad, the big lion attacked, it wanted to bit so we ran. The soldiers silently walked on it and shot it and the lion died. We saw that the lion was very big… ahh... its body was strong, its claws were dirty, it was big, it could attack us. Ahh… Its teeth were the size of the index finger. Too many teeth.,The eyes were big, the mouth was wide and the jaws were huge. It was bad. My grandmother took me to school. It was there, in that space, in the building. There it was at school.

orientation	1.	A long time ago,
	2.	there in Mampong,
	3.	when school was finished
	4.	the lion was bad,
complication	5.	when we saw it,
	6.	we are afraid.
	7.	My grandmother brought me to school…
climax	8.	the big lion was bad…
	9.	the lion was bad,
	10.	the big lion attacked,
resolution	11.	it wanted to bit so we ran.
	12.	The soldiers silently walked on it
	13.	and shot it
	14.	and the lion died.
	15.	we saw that the lion was very big… ahh...
	16.	it's body was strong,
	17.	it's claws were dirty, it was big,
	18.	it could attack us… ahh…
	19.	It's teeth were the size of the index finger.
	20.	Too many teeth.
	21.	The eyes were big,
	22.	the mouth was wide
	23.	and the jaws were huge.
	24.	It was bad.
coda	25.	My grandmother took me there to school
	26.	It was there, in that space, in the building.
	27.	there it was at school.

Appendix 2: Personal experience narratives in LaSiBo

Fieldwork 2019

Narrative LAS_01a

Well… I went… I went to the farm. I carry it on my head. I went to the farm with things on my head. And I was walking, it (snake) passed by me, I stepped back, I ran away… The snake bit me and I was hurt. Someone took me on their back. We walked. The leg was fine a few days later. Finished

(She stopped and I asked what was the size of the snake)
It's this size… more or less… it's the pinky's size…
(She looked around for some to show the exact size but couldn't find it).

It's the arm's size… with spots… more or less…I saw the snake, I got scared and I stepped back. The snake passed by me, I called people, showed it to them and ran away with 'things' on my head. I walked. I got scared and stepped back. I looked for the snake, I ran away breathing fast. Finished.

orientation	1.	Well… I went… I went to the farm
	2.	I carry it on my head
	3.	I went to the farm with things on my head
complication	4.	And I was walking
climax	5.	It (snake) passed by me
	6.	I stepped back
resolution	7.	I ran away…
	8.	The snake bit me
	9.	and I was hurt
	10.	Someone took me on their back
	11.	We walked
coda	12.	The leg was fine a few days later.
	13.	Finished.

Fieldwork 2021

Narrative LAS_01b

I was walking on the road. An animal was walking there and passed by me. I was walking ‘So’, I didn´t see it.” I was afraid to look at the animal. I stepped back a bit. ‘So’. I was walking, I ran away, I took a stone and I threw the stone at it. I was scared and I ran away. ‘So’, I hid, fell and hit my head on the ground. my face hurt and ‘so’ I came here. I was running away and I fell and hit my head on the ground. And that was it. My face hurt and I walked back here. My face was still hurting and that was it. The animal was big, it had long horns and large, strong paws. I was walking. It came near me, I saw it and ran away and I fell and hit my head on the ground. It came and passed by me [?]. I came back here with pain in my face. And that was that [same sign to ‘so’].

orientation	1.	I was walking on the road.
	2.	An animal was walking there
	3.	and passed by me.
complication	4.	I was walking
	5.	“So, I didn´t see it.”
climax	6.	I was afraid to look at the animal.
	7.	I stepped back a bit.
resolution	8.	I was walking,
	9.	I ran away
	10.	and I took a stone
	11.	and I threw the stone at it.
	12.	I was scared and I ran away.
	13.	I hid, fell and hit my head on the ground. my face hurt.
coda	14.	I came here.
	15.	I was running away
	16.	and I fell
	17.	and hit my head on the ground.
	18.	And that was it.
	19.	My face hurt
	20.	and I walked back here.
	21.	My face was still hurting
	22.	And that was it.

Narrative LAS_01c

At that time, I was not pregnant. Her father (pointing to her daughter) let me go alone to the field. I ate and waited until it was afternoon, I was walking until there were two paths, I went to the one on the right. I was walking, I didn´t see it [a snake], I was walking and a big (snake) was there. I ran away. I fell down and hit my head... I fell and hit my shoulder on the ground and that was it. I took a stone and I threw it. It ran away and I didn´t see it anymore. I walked away and went very far with things on my head. It didn´t bit me, I ran away and the snake went away. I was wondering if it was not going to come back so I threw a stone again. I walked away and left, and that was it. I went alone to the farm. Her father spent his time wandering around [pointing to her daughter]. I was looking for him and I didn´t find him. I was alone, someone could kill me, then he didn't want to walk with me anymore and that was it.

orientation	1.	At that time, I was not pregnant.
	2.	father (pointing to her daughter) let me go alone to the field. [pause]
	3.	I ate
	4.	waited until it was afternoon,
	5.	I was walking until there were two paths,
	6.	I went to the one on the right
	7.	I was walking,
	8.	I didn´t see it [a snake],
complication	9.	I was walking
climax	10.	and a big (snake) was there,
resolution	11.	I ran away.
	12.	I fell down
	13.	and hit my head...
	14.	I fell and hit my shoulder on the ground
	15.	and that was it.
	16.	I took a stone and I threw it.
	17.	It ran away and
	18.	didn´t see it anymore.
	19.	I walked away
	20.	and went very far with things on my head.
	21.	It didn´t bit me,
	22.	I ran away
	23.	and the snake went away.
	24.	I was wondering if it was not going to come back

	25.	so, I threw a stone again.
	26.	I walked away and left, and that was it.
coda	27.	I went alone to the farm.
	28.	Her father spent his time wandering around [pointing to her daughter].
	29.	I was looking for him
	30.	and I didn´t find him.
	31.	I was alone, someone could kill me,
	32.	then he didn't want to walk with me anymore
	33.	and that was it.

Fieldwork 2019

Narrative LAS_02a

The snake with this color (pointing to his brown pants), with its head up. It was there (pointing to the floor beside him). I was walking and the snake crawled up my leg and bit me. I got scared, I held my leg. I saw it and ran away. I held my leg in pain. I called people. I tied my leg up. I walked, I ran away.

(He stopped and I asked what was the size of the snake)

I ran away. The snake had its head up and it is the pinky's size. It bit my leg and I ran away. I took the medicine and I got stronger. I was finished and walked. I was stronger.

orientation	1.	The snake with this color (pointing to his brown pants)
	2.	It was there (pointing to the floor beside him)
complication	3.	I was walking
climax	4.	and the snake crawled up my leg
resolution	5.	and bit me.
	6.	I got scared, I held my leg.
	7.	I saw it and ran away.
	8.	I held my leg in pain.
	9.	I called people.
	10.	I tied my leg up.
coda	11.	I walked,
	12.	I ran away.

Fieldwork 2021

Narrative LAS_02b

One day, after my bath in the night, a snake passed by, I was walking and the snake bit my foot. The snake was next to my foot, I took a stone and beat it. I went to prepare the medicine, I took it and put it on the bite wound. When it was finished, I went to sleep. When I finished it, I was strong. The snake was long and slim... long and slim and [with his index finger on the ground he draws the size], the snake was slim.

orientation	1.	One day,
	2.	after my bath in the night,
	3.	snake passed by
complication	4.	I was walking
climax	5.	the snake bit my foot.
	6.	The snake was next to my foot.
resolution	7.	I took a stone
	8.	beat it.
	9.	went to prepare the medicine,
	10.	I took it
	11.	and put it on the bite wound.
	12.	When it was finished,
	13.	I went to sleep.
	14.	When I finished it,
	15.	I was strong.
coda		

Fieldwork 2019

Narrative LAS_03

I put it in the bottle, I mixed it, tasted it and drank it. The snakes will not bite me. The snakes would go away. I cut it and it was ready. There were five snakes there in the house. I was sleeping and listening (?) to the footsteps (?). I ate, I saw the snakes there and I killed them. And it was finished. After killing the five of them, it was finished. I left the snake. The snakes don't bite me. First, I mixed it, I tasted it and I ate it. I got stronger. No bites. I got stronger.

(He stopped and I asked what was the size of the snake).

No, I'm strong. I'm strong. They don't bite me. I'm strong. I tasted it with my finger. I tasted it with my finger and swallowed it. I got stronger. … I gave it to him to taste it. There were four pythons, I put it there (?) and cut the snake, ate it and went away. I didn't eat the snake, it went away. They cut it and gave it to me but I gave it to somebody else to eat it… It's this size. They ate it.

orientation	1.	I put it in the bottle,
	2.	I mixed it,
	3.	tasted it
	4.	and drank it.
	5.	The snakes will not bite me.
	6.	The snakes would go away.
	7.	I cut it and it was ready.
	8.	There were five snakes there in the house.
complication	9.	I was sleeping
	10.	and listening (?) to the footsteps (?).
	11.	I ate,
climax	12.	I saw the snakes there
resolution	13.	and I killed them.
	14.	And it was finished.
	15.	After killing the five of them,
	16.	it was finished.
	17.	I left the snake.
coda	18.	The snakes don't bite me.
	19.	First, I mixed it,

20. I tasted it
21. and I ate it.
22. I got stronger.
23. No bites. I got stronger.

Narrative LAS_04

I went… farming. When I finished farming, I ate. At midday I was farming. In the afternoon I picked the ‘bag’ up and put it on my back. I was walking and it (snake) bit me leg. I looked for it but I didn’t find it. The snake was gone. I was looking for it and I didn’t find it. One day later. Two days later, I saw that the leg had swollen. The man came and prepared a mixture (medicine). I drank it. It wasn’t bad. I drank it. It wasn’t bad. I cut the tree, I tied my leg, I was limping. The man came and talked to me (?) … two days later, the leg had swollen. If I didn't tie my leg up I could die. To tie it was good. And it was finished…

(He stopped and I asked what was the size of the snake).

The snake was more or less big. Some are small and some are large, some are long… All the big ones, if they are of this color (pointing to his brown pants), they are not big... The big ones aren’t the arm’s size (diameter). Pythons are very big and long. The big snake’s head pushed on my belly and I fell… yes… I saw some pythons crawling. The big snake’s mouth opened. The big snake’s head pushed on my belly and I fell. The snake ate / attacked me. The snake swallowed it. The dark snake does not eat it and swallows it but it bites. I was looking for it and couldn’t find it. I was farming and dumped it (the bowl). After dumping it, the snake passed over my head. I was scared, I was there, after dumping it, the snake passed by, I was scared. The snake went over my shoulder. I cut the snake’s body in half. I cut it and separated the snake’s body. I left.

orientation	1.	I went… farming.
	2.	When I finished farming
	3.	I ate.
	4.	At midday I was farming.
	5.	In the afternoon I picked the ‘bag’ up
	6.	and put it on my back.
complication	7.	I was walking
climax	8.	and it (snake) bit me leg.
resolution	9.	I looked for it
	10.	but didn’t find it.
	11.	The snake was gone.
	12.	I was looking for it
	13.	and I didn’t find it.
coda	14.	One day later. Two days later, the leg had swollen.
	15.	The man came

16. and prepared a mixture (medicine).
17. I drank it.
18. It was bad.
19. If snake bit the leg, need to drink it
20. But it wasn´t good.
21. I cut the branch´s tree,
22. I tied my leg,
23. I was limping.
24. The man came and talked to me (?) …
25. two days later, the leg was deflated.
26. If I didn't tie my leg up I could die.
27. To tie it was good.
28. Ad it was finished…

Narrative LAS_05a

I was walking and saw it (pantomime). I took a step back. It was there. I cut it. All the snake's meat was to give away. It was big. The snake was this size (pointing to the tree trunk). It was very long, very big. I cut it into slices for eating/ they eat snakes. People share it, I gave ten pieces. I don't eat it. Eating it makes us stronger. I washed my hands… I washed my hands and ate pieces of the snake. I ate it and spit it, I cleaned my mouth. I picked up the snake's pieces and gave them away. I stayed with them. I didn't touch it, I didn't want to eat it. That one ate it, this one ate it, another one ate it… I don't eat it. This leg size and other lower leg size… yes… I was looking at the ground. Those two (point to people) ate it. I don't eat it, that one ate it, I didn't eat it, I didn't want to, I don't eat it. The snake was very big, I don't eat big snakes. I don't want to. This kind of snake… to eat yes… If I give this one, you eat it, taste it, ingest it and relieve it. That one is sick, it is in pain and is weak. You digest it, relieve it and it's finished.

orientation		
complication	1.	I was walking
climax	2.	and saw it (pantomime)
	3.	I took a step back.
	4.	It was there
resolution	5.	I cut it.
coda	6.	All the snake's meat was to give away.
	7.	It was big.
	8.	8.The snake was this size (pointing to the tree trunk).
	9.	It was very long, very big.
	10.	I cut it into slices for eating/
	11.	they eat snakes.
	12.	People share it,
	13.	I gave ten pieces.
	14.	I don't eat it.
	15.	Eating it makes us stronger.
	16.	I washed my hands…
	17.	I washed my hands
	18.	and ate pieces of the snake.
	19.	I ate it and spit it,
	20.	I cleaned my mouth.
	21.	I picked up the snake's pieces

22. and gave them away.
23. I stayed with them.
24. I didn't touch it,
25. I didn't want to eat it.
26. That one ate it,
27. this one ate it, a
28. another one ate it…
29. I don't eat it.
30. This leg size and other lower leg size… yes…
31. I was looking at the ground.
32. Those two (point to people) ate it.
33. I don't eat it,
34. that one ate it,
35. I didn't eat it,
36. I didn't want to,
37. I don't eat it.
38. The snake was very big,
39. I don't eat big snakes.
40. I don't want to.
41. This kind of snake… to eat yes…
42. If I give this one,
43. you eat it,
44. taste it,
45. ingest it
46. and relieve it.
47. That one is sick,
48. it is in pain and is weak.
49. You digest it,
50. relieve it

Fieldwork 2021

Narrative LAS_05b

The gazelle passed by running that way [to the opposite side]. Later, it came back and Ahh [surprise gesture]. I killed it. Then, I relaxed and stayed. I cut it and sliced it. It was heavy. I could take it and put it on my head with some effort, but my neck could get weak. No, I didn't want to. I cut it into slices and everyone took a piece. I was relaxed. I sliced it, I shared it around with nine people. Then I had no more. It isn´t good to hide it, just give it. It is good to share. No need to pay for it right away. It was an ox with a long horn. It tried to hit me and I avoided it, it went away. It wanted to fight with me but I avoided it and it ran away. Later, a long time after that, I went farming in the field. There, I didn´t see it, it was dark and I didn´t see it. It was dark at the night, the animal passed by and I didn´t see it. I looked at it and I called someone [?]. I was surprised [gesture]. We handled the animal and I pulled it up. I tied it. It went for sale and that was it.

orientation		
complication	1.	The gazelle passed by running that way [to the opposite side].
climax	2.	Later, it came back
	3.	and Ahh.
resolution	4.	I killed it.
	5.	Then, I relaxed
	6.	and stayed.
	7.	I cut it and sliced it.
coda	8.	It was heavy.
	9.	I could take it
	10.	and put it on my head with some effort,
	11.	but my neck could get weak.
	12.	No, I didn't want to.
	13.	I cut it into slices
	14.	and everyone took a piece.
	15.	I was relaxed.
	16.	I sliced it,
	17.	I shared it around with nine people.
	18.	Then I had no more.
	19.	It isn´t good to hide it,
	20.	just give it.
	21.	It is good to share.

22. No need to pay for it right away.
23. It was an ox with a long horn.
24. It tried to hit me
25. and I avoided it,
26. it went away.
27. It wanted to fight with me
28. but I avoided it
29. and it ran away.
30. Later, a long time after that,
31. I went farming in the field.
32. There, I didn´t see it,
33. it was dark
34. and I didn´t see it.
35. It was dark at the night,
36. the animal passed by
37. and I didn´t see it.
38. I looked at it
39. and I called someone [?].
40. I was surprised.
41. We handled the animal
42. and I pulled it up.
43. I tied it.
44. It went for sale
45. and that was it.

Narrative LAS_05c

The snake rose and opened its mouth. This can bite. The snake rose [different handshape], I cut it and throw it away. The snake was on a three. I could shoot it with a gun. It fell and I threw it away. The big snake with the size of an arm and long. It was a python, it was long. I cut the snake's neck and cut its body into small parts. I gave it around [points to different directions] to ten people. I don't like to eat snake. I give it away. I don't take any money for it. They refused to pay, and ran away. They spent all the money. They went away with the money and spent it all. They went away and ate and stayed strong.

Fieldwork 2019

Narrative LAS_06a

On the farm, I carry it on my head, the snake was on the ground in front of me, I didn´t see it and stepped on it. The snake bit my leg, The snake bit with the teeth. I cut a rope and tied it to my leg, I walked away. At the hospital, they removed the teeth and I covered it with my clothes. The leg was hurting, the pain on my leg moved to the belly and I threw up.

(I asked how the size was.)

The teeth were very small but were removed.

(I asked "And about snake´s size?)

The size of the snake was like this.

orientation	1.	On the farm, I carry it on my hear,
	2.	The snake was on the ground in front of me,
	3.	I didn´t see on it
complication	4.	and stepped it.
climax	5.	the snake bit my leg,
	6.	The teeth´s snake bit my leg.
resolution	7.	I cut a rope and tied it to my leg,
	8.	I walked away.
	9.	At the hospital, they removed the teeth
	10.	And I covered it with my clothes.
	11.	The leg was hurting,
	12.	the pain on my leg moved to the belly
	13.	and I threw up.
coda		

Fieldwork 2021

Narrative LAS_06b

I was this size [looked around and pointed to a person], like that person. I was this size. An animal with horns gave birth to a baby this size. It was strong. It was there, not here at my father´s place. The animal gave birth to a baby. It was in a hidden place and I didn´t see it. I was walking and I passed by that road. The small animal ran and passed also by that same road. I was walking with things on my head. It came behind me. It was running and hit me on the back with its horns and I fell down. a man [shepherd?] begged me and that was it, he gave me money and I went away. I went to the hospital, I ate something for my back and that was it. I grew up and that was it. The animal with horns never attacked me again. It was only that one time and that was it, [pause] only that time and that was it.

(Few moments later)

There was a strong animal with a tail [a cow], it hit me with its head [pause] on my back, I was walking, and it hit me on my back. I was holding things on my head and fell down, the shepherd begged me and that was it, he gave me money and I went away. I went to the hospital, I ate something for my back and that was it. I grew up and that was it. The animal with horns never attacked me again.

orientation	1. I was this size [looked around and pointed to a person], like that person. 2. I was this size. 3. An animal with horns gave birth to a baby this size. 4. It was strong. 5. It was there, 6. not here at my father´s place. 7. The animal gave birth to a baby. 8. It was in a hidden place 9. and I didn´t see it.
complication	10. I was walking 11. and I passed by that road. 12. The small animal ran 13. and passed also by that same road. 14. I was walking with things on my head.

climax	15. It came behind me. 16. It was running 17. and hit me on the back with its horns 18. and I fell.
resolution	19. The shepherd came begging. 20. I refused, 21. he gave me money 22. and there I went to the hospital 23. and I recovered. 24. I grew up and the animal never attacked me again. 25. It was only that one time 26. and that was it,
coda	27. only that time and that was it.

Appendix 3: Personal experience narratives in LGG

Fieldwork 2018

Narrative LGG_01 (deaf man)

Me, Elmer (sign name), I didn't know. I was walking to the trees. I was walking and I looked but I didn't know. There were no hearing people. I was walking and saw (nonmanual) the snake crawling, the snake was almost coming. I was walking and I saw it and I was surprised. I ran away, climbed a tree and hid, I looked at it. I was looking at it and I was afraid. I screamed and the hearing people came: "The snake is there, look at it". They hit it. It died, finished.

orientation	1. Me, Elmer (sign name), I didn´t know 2. I was walking to the trees
complication	3. I was walking and I looked but I didn´t know 4. there were no hearing people 5. I was walking
climax	6. and saw (nonmanual) the snake crawling 7. and I saw it 8. and I was surprised (nonmanual)
resolution	9. I ran away 10. Climbed a tree 11. And hid 12. I looked at it 13. I was looking at it 14. and I was afraid 15. I screamed 16. and the hearing people came 17. “The snake is there, look at it” 18. they hit it
coda	19. it died. 20. finished

Narrative LGG_02 (deaf man)

A long time ago, there in Bubaque, I was thinking of going to the cow flock. I was walking, the snake was crawling around and I didn´t see it. I was walking, I saw the snake there, The snake was crawling and I got scared. I ran away. I didn't go to the front (where the snake was), I went back. I went back and there. I called the man and said: “I saw a snake there”. I took him back there. I looked for it, but it was already gone.

orientation	1.	A long time ago, there in Bubaque,
	2.	I was thinking of going to the cow flock
complication	3.	I was walking
	4.	the snake was crawling around
	5.	and I didn´t see it
	6.	I was walking,
climax	7.	I saw (nonmanual) the snake there
	8.	The snake was crawling
	9.	and I got scare
resolution	10.	I ran away
	11.	I didn't go to the front (where the snake was)
	12.	I went back.
	13.	I went back and there.
	14.	I called the man and said:
	15.	“I saw a snake there”
	16.	I took him back there
	17.	I looked for it
coda	18.	it was already gone

Narrative LGG_03 (deaf man)

I was a child and I was at the cashew trees. I was climbing the tree. The snake moved in the tree, I looked and stayed quiet. I was looking and I turned away. The snake fell to the ground. I was holding on to the tree and looked at the ground. I called the hearing people. The hearing looked up and asked: "What?". I said: “There's a snake over there”. The hearing people looked at the snake and said “It´s there!”. The hearing people came running. We threw stones at it. The snake felt the beatings and slowly died. I held it. I lit a fire with firewood, with the stick, I held it and put it in the fire. He died in the fire. It’s finished.

orientation	1.	I was a child
	2.	and I was at the cashew trees
complication	3.	I was climbing the tree
climax	4.	the snake moved in the tree,
	5.	I looked and stayed quiet
	6.	I was looking and I turned away.
	7.	the snake fell on the ground
	8.	I was holding on to the tree
	9.	and looked at the ground
	10.	I called the hearing people
	11.	the hearing looked up
	12.	and asked: "What?"
	13.	I said: “There's a snake over there”
	14.	the hearing people looked at the snake
	15.	and said “It´s there!”.
resolution	16.	the hearing people came running
	17.	we threw stones at it
	18.	the snake felt the beatings
	19.	and slowly died
	20.	I held it
	21.	I lit a fire with firewood
	22.	with the stick, I held it
	23.	and put it in the fire
	24.	he actually died in the fire
coda	25.	It´s finished

Narrative LGG_04 (deaf man)

A long time ago, I was a child. I was under a tree, I was sleeping. The snake that was in the tree fell on me, I saw it and it scared me. I ran away. I was scared but then I calmed down. That was it.

orientation	1.	A long time ago, I was a child.
	2.	I was under a tree
complication	3.	I was sleeping
climax	4.	The snake that was in the tree
	5.	fell on me,
	6.	I saw it
	7.	and it scared me.
resolution	8.	I ran away.
	9.	I was scared but then I calmed down.
coda	10.	That was it.

Narrative LGG_05 (deaf man)

I changed the t-shirt to a sleeveless one. I changed the t-shirt for a sleeveless one and shorts. I dressed and I was ready. I was adjusting a bag and I put it on my back. I was holding the bag on my back and I was walking. I said to mother "Goodbye, mother! I am going to work.", "I'm going to work, okay?", "Ok, goodbye.", "Kiss you, goodbye.". I was walking, there were many trees. I was walking and I arrived there. I was doing something. I was looking down. I looked at it and I took a step back. “Is it a snake?” and I was surprised. I ran fast. I told everyone “There is a big snake there!". I ran there and everybody came to see it. I caught the snake with a stick. We hit it. The snake stopped moving. We looked at it and picked it up with a stick and it was like this.

orientation	1. I changed the t-shirt to a sleeveless one. 2. I changed the t-shirt for a sleeveless one and shorts. 3. I dressed 4. and I was ready.
complication	5. I was adjusting a bag 6. and I put it on my back. 7. I was holding the bag on my back 8. and I was walking. 9. I said to mother 10. "I'm going to work, goodbye!" 11. "I'm going to work, okay?" 12. "Ok, goodbye." 13. "Kiss you, goodbye.". 14. I was walking, 15. there were many trees. 16. I was walking 17. and I arrived there.
climax	18. I was doing something. 19. I was looking down. 20. I looked at it 21. and I took a step back. 22. “Is it a snake?” 23. and I was surprised. 24. I ran fast. 25. I told everyone 26. “There is a big snake there!"

	27. I ran there 28. and everybody came to see it.
resolution	29. I caught the snake with a stick. 30. We hit it. 31. The snake stopped moving. 32. We looked at it 33. and picked it up with a stick 34. and it was like this.
coda	

Narrative LGG_06 (deaf man)

A long time ago, I was a child. By car, there in the trees (of cashew). I was here with my father. We were talking and time passed by. I arrived on Monday and I went to work. I and my hearing friends, 1, 2, 3, 4 and 5 together walked inside. We were walking and arrived. We stopped and stayed here. Each one went to a different tree. I went in this direction. I was picking up the cashews in the bag. I had stomach pains. I stayed and I was thinking. I saw the cashew tree. I climbed and I stayed there. There were cashews there and I picked them one by one. The snake was over me. Father was below and looked up at it surprised: He threw (something). The snake was by my side and I saw it, I got scared and moved away. I came down from the tree. The hearing hit the snake. The snake fell from the tree. They hit it. the snake was this size. We hit it and it died. It´s finished.

orientation	1. a long time ago, 2. I was a child 3. by car, there in the trees (of cashew) 4. I was here with my father 5. we were talking 6. and time passed by 7. I arrived on Monday 8. and I went to work. 9. I and my hearing friends, 1, 2, 3, 4 and 5 together walked inside 10. we were walking 11. and arrived. 12. We stopped 13. and stayed here 14. each one went to a different tree 15. I went in this direction
complication	16. I was picking up the cashews in the bag 17. I had stomach pains 18. I stayed and I was thinking 19. I saw the cashew tree 20. I climbed and I stayed there 21. there were cashews there and I picked them one by one
climax	22. the snake was over me 23. Father was below

	24. and looked up at it surprised: Oh 25. I threw (something) 26. the snake was by my side 27. and I saw it, 28. I got scared 29. and moved away 30. I came down from the tree
resolution	31. the hearing hit the snake 32. The snake fell from the tree 33. They hit it
coda	34. the snake was this size 35. we hit it and it died 36. It´s finish

Narrative LGG_07 (deaf man)

A long time ago, I was a child. There in the trees (of cashew). I was going up there to pick cashews. I was climbing the tree. The snake was in the tree and I didn't know it. I was taking the cashew and putting it in the bag. The snake was above me and I saw it. I got scared, I climbed down from the tree and fell. I told to the hearing people. "There's a big snake on the tree", "It's there" (pointing). They said “Really?”. Everyone came, they threw stones at the snake and it fell. The snake this size was dead. The snake was narrow and very long. The snake was brown, it was this colour and it was very long. We hit it, it died and that was it. It´s finished.

orientation	1.	a long time ago, I was a child
	2.	there in the trees (of cashew)
	3.	I was going up there to pick cashews
complication	4.	I was climbing the tree
	5.	the snake was in the tree
	6.	and I didn't know it
	7.	I was taking the cashew
	8.	and putting it in the bag
climax	9.	the snake was above me and I saw it
	10.	I got scared,
	11.	I climbed down from the tree
	12.	and fell
	13.	I told to the hearing people
	14.	"There's a big snake on the tree"
	15.	"It's there" (pointing).
	16.	They said “Really?”
	17.	Everyone came
resolution	18.	they threw stones at the snake
	19.	and it fell
	20.	the snake this size was dead
	21.	the snake was narrow and very long
	22.	the snake was brown
	23.	it was this colour and it was very long
	24.	we hit it, it died and that was it
coda	26.	finish

Narrative LGG_08 (deaf man)

A long time ago, I was a child. Then I grew up and became a boy, about this size. Father was there amongst the trees cutting trees. I had my food in a bowl and I carried it on my head, holding it with my hands. I was walking and was holding food on my head until there. Mother was farming I was here passing by a tree. I was holding the bowl on my head. A big black snake was on the ground. I was holding my bowl on my head when I saw the snake. I hadn´t seen it. It had big eyes and we made eye contact. I was holding the bowl and quietly looked at it (facial expression). I ran away. I left the bowl on the floor. I told my mother: "There is a snake". She went there to look for it but didn't see it.. I didn't know and the snake was deep in the hole. I didn´t see it

orientation	1.	A long time ago, I was a child
	2.	Then I grew up
	3.	and became a boy, about this size.
	4.	Father was there amongst the trees cutting trees.
	5.	I had my food in a bowl
	6.	and I carried it on my head,
	7.	holding it with my hands
complication	8.	I was walking and was holding food on my head until there.
	9.	mother was farming.
	10.	I was here passing by a tree.
	11.	I was holding the bowl o my head.
climax	12.	A big black snake was on the ground,
	13.	I was holding my bowl on my head when I saw the snake.
	14.	I hadn´t seen it.
	15.	It had big eyes
	16.	and we made eye contact.
	17.	I was holding the bowl and quietly,
	18.	looked at it (facial expression).
	19.	I ran away.
	20.	I left the bowl on the floor
	21.	I told my mother
	22.	"There is a snake"
resolution	23.	She went there to look for it

	24.	but didn't see it.
	25.	I didn't know and the snake was deep in the hole.
coda	26.	I didn´t see it.

Narrative LGG_09 (deaf woman)

I was walking. I saw it. What is it? It was a dog barking. I ran away! Yes, I ran away. It´s finished

orientation	
complication	1. I was walking.
climax	2. I saw it 3. What is it? 4. It was a dog barking
resolution	5. I ran away
coda	6. Yes, I ran away. 7. It's finished

Narrative LGG_10 (deaf woman)

I was walking, and I was afraid. I grabbed the snake and the snake was long.

orientation	
complication	1. I was walking,
climax	2. and I was afraid.
resolution	3. I grabbed the snake
coda	4. and the snake was long.

Narrative LGG_11 (deaf woman)

A long time ago, I was a child. At the hearing's home, I didn't know, there were three hearing friends. I was walking. I was picking cashew. I put it in my head and I was walking, there were six hearing men, there were many hearing men. They were walking and holding a big knife, they saw it, they opened their eyes, ran and cut it down. The snake was big. I didn't know anything, I was holding things on my head and walking. The hearing people called me and told me: "There is a big snake". I didn't know, I opened my eyes. I left the things from my head things on the floor, I went running and saw it. “It´s big!”. They were beating it and it died. Six hearing people picked up the snake. They took it to the house. Me and the hearing hanged the head of the snake. We cut the skin from top to bottom. We remove the skin from top to bottom. We removed the head and the head was broken. We cut it into slices and put it on the fire. I lit the fire and cooked it. Time passed and it was ready. The hearing people came and sat down. I served the food to them. I didn't eat it. I have not eaten it because I am afraid. Thank you

orientation	1.	A long time ago
	2.	I was a child.
	3.	At the hearing's home,
	4.	I didn't know,
	5.	there were three hearing friends.
complication	6.	I was walking.
	7.	I was picking cashew.
	8.	I put it in my head
	9.	and I was walking,
	10.	there were six hearing men,
	11.	there were many hearing men.
	12.	They were walking
	13.	and holding a big knife,
climax	14.	they saw it,
	15.	they opened their eyes,
	16.	ran
	17.	and cut it down.
	18.	The snake was big.
	19.	I didn't know anything,
	20.	I was holding things on my head
	21.	and walking.
	22.	The hearing people called me

	23.	and told me: "There is a big snake"
	24.	I didn't know,
	25.	I opened my eyes
	26.	I left the things from my head things on the floor,
	27.	I went running
	28.	and saw it (surprised)
	29.	“It´s big!”
resolution	30.	They were beating it
	31.	and it died.
	32.	Six hearing people picked up the snake.
	33.	They took it to the house.
	34.	Me and the hearing hanged the head of the snake.
	35.	We cut the skin from top to bottom.
	36.	We remove the skin from top to bottom.
	37.	We removed the head and the head was broken.
	38.	We cut it into slices
	39.	and put it on the fire.
	40.	I lit the fire
	41.	and cooked it.
	42.	Time passed
	43.	and it was ready.
	44.	The hearing people came
	45.	and sat down.
	46.	I served the food to them.
coda	47.	I didn't eat it.
	48.	I have not eaten it
	49.	because I am afraid.
	50.	Thank you

Narrative LGG_12 (deaf woman)

I was walking and the snake lifted its head and I got scared. I walked and the snake bit me and I died. That's it

orientation	
complication	1. I was walking
climax	2. and the snake lifted its head
	3. and I got scared
resolution	4. I walked
	5. and the snake bit me
	6. and I died.
coda	7. That´s it

Narrative LGG_13 (deaf woman)

About the snake... I and the hearing were walking. Me and the hearing together at school we were talking. We looked at the mango tree. We were afraid of the snake. Together we ran. The hearing hit the snake. The snake was this size. They hit it. They held it down with the stick. We saw it and we were scared. Two hearing were afraid and walked. They hit it and it was this size. That was it.

orientation	1.	About the snake...
	2.	I and the hearing were walking.
complication	3.	Me and the hearing together at school we were talking.
	4.	We looked at the mango tree.
climax	5.	We were afraid of the snake.
resolution	6.	Together we ran
	7.	The hearing hit the snake.
	8.	The snake was this size.
	9.	They hit it.
	10.	They held it down with the stick.
	11.	We saw it and we were scared.
	12.	Two hearing were afraid
	13.	and walked. They hit it
	14.	and it was this size.
coda	15.	That was it.

Narrative LGG_14 (deaf woman)

Last year, in my house. I saw a snake and I was afraid. I saw the snake and I ran away. Hearing adults came to hit it. They killed it and went away. I saw it and I was scared. The snake was green. The snake was green. I didn´t touch it. I ran away.

orientation	1. Last year, in my house.
complication	2. I saw a snake
climax	3. and I was afraid. 4. I saw the snake
resolution	5. and I ran away. 6. Hearing adults came to hit it. 7. They killed it 8. and went away. 9. I saw it 10. and I was scared. 11. The snake was green. 12. The snake was green. 13. I didn´t touch it.
coda	14. I ran away

Narrative LGG_15 (deaf woman)

In Bafatá, a hearing had a deaf baby (me), I was born and then I grew up and then I don't know. I saw the snake and then I didn't mind it. I was taking cashew. I saw the snake and I didn´t mind it. I was taking cashew. The snake crawled. I was taking cashew. I didn't know it. The snake crawled here (near the feet). I didn't see it. I was here and I was taking cashew. My father saw it. My father ran and picked me up and took me. The snake flew (?). My father cut off the snake's tail. It was this size. He cut it, tied it and kept it up there (something on a shelf). It died.

orientation	1. In Bafatá, 2. a hearing had a deaf baby (me), 3. I was born 4. and then I grew up 5. and then I don't know.
complication	6. I saw the snake 7. and then I didn't mind it. 8. I was taking cashew. 9. The snake crawled. 10. I was taking cashew. 11. I didn't know it. 12. The snake crawled here (near the feet). 13. I didn't see it. 14. I was here 15. and I was taking cashew.
climax	16. My father saw it. 17. My father ran
resolution	18. and picked me up 19. and took me. 20. The snake flew (?). 21. My father cut off the snake's tail. 22. It was this size. 23. He cut it, 24. tied it 25. and kept it up there (something on a shelf).
coda	26. It died.

Narrative LGG_16 (deaf woman)

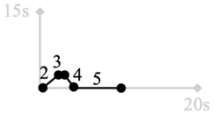
A long time ago at school. It was sometime after I was born, I don´t know, I was a child. I was 4 years old, I don't remember, it was a long time ago. Me and my hearing friend, together we went to the cashew trees. We were picking up cashew from the ground and putting them in the bag. I didn't see it and I didn't know, we were picking up cashew. The snake was very nearby. It was not big, it was small. The snake came. I looked at it, I took a step back and I was afraid. The snake kept crawling and went away. I said to the hearing: I don't want to touch it because I'm afraid. I walked to the hearing. The hearing came and I pointed at where the snake was. He knew and hit it. I asked him: "Do you eat it? It's small and it isn't big, it's small!", I took the snake and threw it on the floor. It was there and it was sent away.

orientation	1.	A long time ago at school.
	2.	It was sometime after I was born,
	3.	I don´t know,
	4.	I was a child.
	5.	I was 4 years old,
	6.	I don't remember,
	7.	it was a long time ago.
	8.	Me and my hearing friend, together we went to the cashew trees.
complication	9.	We were picking up cashew from the ground
	10.	and putting them in the bag.
	11.	I didn't see it
	12.	and I didn't know,
	13.	we were picking up cashew.
climax	14.	The snake was very nearby.
	15.	It was not big, it was small.
	16.	The snake came.
	17.	I looked at it,
	18.	I took a step back
	19.	and I was afraid.
	20.	The snake kept crawling
	21.	and went away
	22.	I said to the hearing:
	23.	I don't want to touch it because I'm afraid.
	24.	I walked to the hearing.
	25.	The hearing came

	26.	and I pointed at where the snake was.
resolution	27.	He knew
	28.	and hit it.
	29.	I asked him:
	30.	"Do you eat it?"
	31.	It's small and it isn't big, it's small!”
	32.	I took the snake and threw it on the floor.
	33.	It was there and it was sent away.
coda		

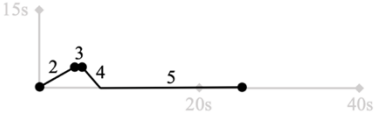
Appendix 4: Dramatic pyramids of AdaSL personal experience narratives

ADA_01



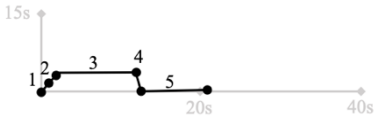
Component	Begin	End
orientation		
complication	00:00.000	00:02.723
climax	00:02.723	00:03.624
resolution	00:03.624	00:04.772
coda	00:04.772	00:10.896

ADA_02



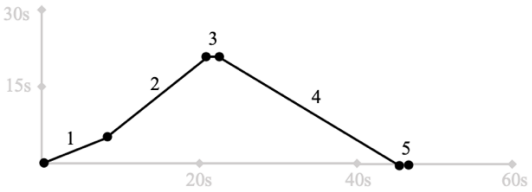
Component	Begin	End
orientation		
complication	00:00.000	00:04.518
climax	00:04.518	00:05.833
resolution	00:05.833	00:06.888
coda	00:06.888	00:24.195

ADA_03



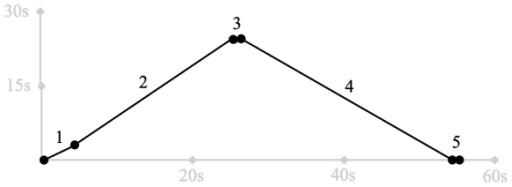
Component	Begin	End
orientation	00:00.000	00:02.638
complication	00:02.638	00:03.670
climax	00:03.670	00:12.010
resolution	00:12.010	00:13.956
coda	00:13.956	00:21.084

ADA_04



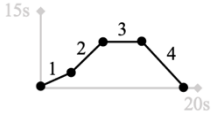
Component	Begin	End
orientation	00:00.000	00:09.456
complication	00:09.456	00:22.481
climax	00:22.481	00:23.921
resolution	00:23.921	00:45.483
coda	00:45.483	00:46.726

ADA_05



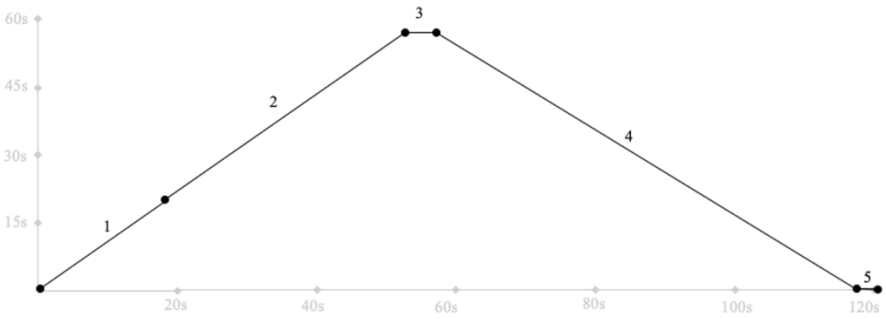
Component	Begin	End
orientation	00:00.000	00:04.177
complication	00:04.177	00:25.080
climax	00:25.080	00:25.880
resolution	00:25.880	00:54.260
coda	00:54.260	00:55.500

ADA_06



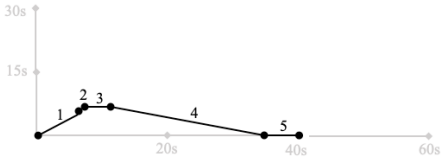
Component	Begin	End
orientation	00:00.000	00:03.266
complication	00:03.266	00:09.813
climax	00:09.813	00:13.720
resolution	00:13.720	00:18.545
coda		

ADA_07



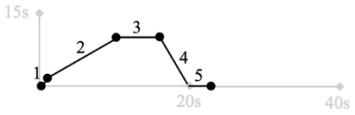
Component	Begin	End
orientation	00:00.000	00:18.554
complication	00:18.554	00:52.482
climax	00:52.482	00:57.830
resolution	00:57.830	01:58.935
coda	01:58.935	02:01.691

ADA_08



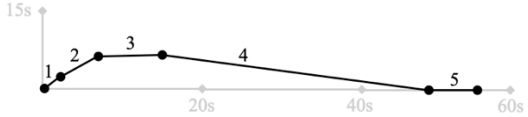
Component	Begin	End
orientation	00:00.000	00:05.128
complication	00:05.128	00:06.102
climax	00:06.102	00:12.260
resolution	00:12.260	00:35.252
coda	00:35.252	00:40.188

ADA_09



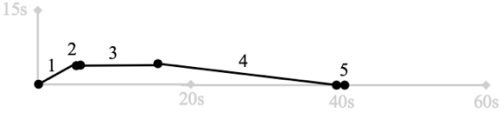
Component	Begin	End
orientation	00:00.000	00:00.830
complication	00:00.830	00:10.174
climax	00:10.174	00:14.605
resolution	00:14.605	00:19.880
coda	00:19.880	00:22.162

ADA_10



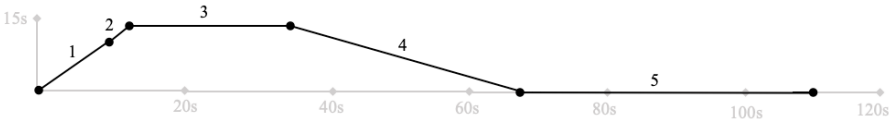
Component	Begin	End
orientation	00:00.000	00:02.546
complication	00:02.546	00:07.547
climax	00:07.547	00:16.577
resolution	00:16.577	00:48.812
coda	00:48.812	00:56.398

ADA_11a



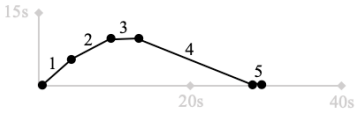
Component	Begin	End
orientation	00:00.000	00:04.348
complication	00:04.348	00:04.837
climax	00:04.837	00:16.173
resolution	00:16.173	00:41.020
coda	00:41.020	00:42.786

ADA_11b



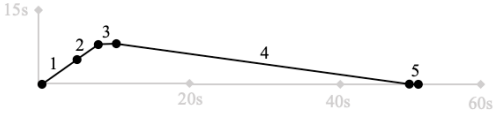
Component	Begin	End
orientation	00:00.000	00:09.514
complication	00:09.514	00:12.712
climax	00:12.712	00:34.321
resolution	00:34.321	01:08.904
coda	01:08.904	01:49.028

ADA_12



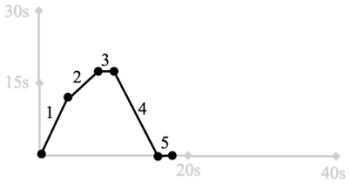
Component	Begin	End
orientation	00:00.000	00:04.185
complication	00:04.185	00:09.554
climax	00:09.554	00:13.440
resolution	00:13.440	00:28.349
coda	00:28.349	00:29.775

ADA_13



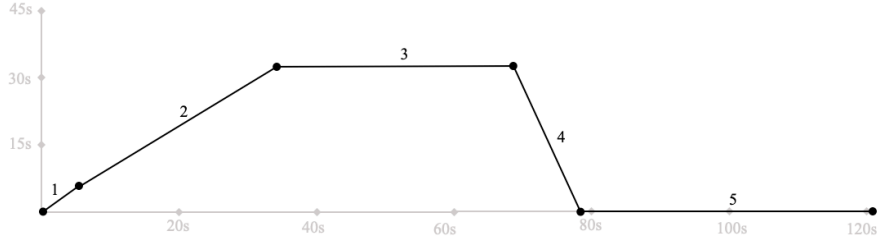
Component	Begin	End
orientation	00:00.000	00:05.562
complication	00:05.562	00:08.144
climax	00:08.144	00:10.311
resolution	00:10.311	00:50.528
coda	00:50.528	00:51.755

ADA_14



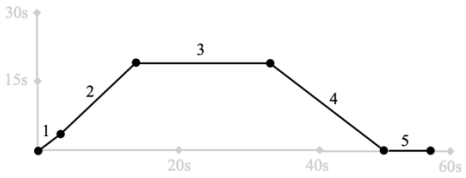
Component	Begin	End
orientation	00:00.000	00:04,854
complication	00:04,854	00:09.027
climax	00:09.027	00:12.027
resolution	00:12.027	00:16.096
coda	00:16.096	00:18.774

ADA_15a



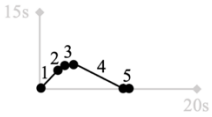
Component	Begin	End
orientation	00:00,000	00:05,230
complication	00:05,230	00:34.225
climax	00:34.225	01:09.490
resolution	01:09.490	01:19.874
coda	01:19.874	02:01.092

ADA_15b



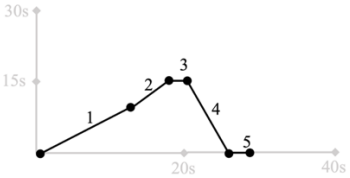
Component	Begin	End
orientation	00:00,000	00:04,106
complication	00:04,106	00:17.089
climax	00:17.089	00:32.089
resolution	00:32.089	00:49.756
coda	00:49.756	00:58.090

Appendix 5: Dramatic pyramids of LaSiBo personal experience narratives



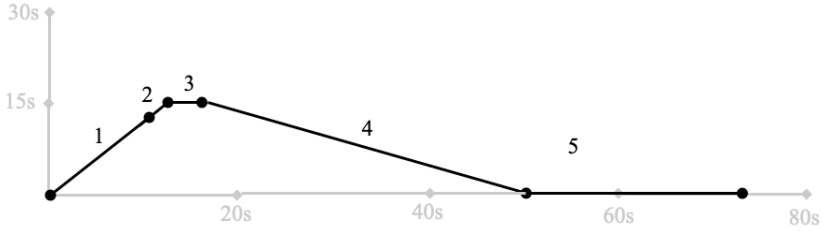
Component	Begin	End
orientation	00:00.000	00:04.382
complication	00:04.382	00:05.499
climax	00:05.499	00:06.685
resolution	00:06.685	00:12.594
coda	00:12.594	00:12.599

LAS_01b



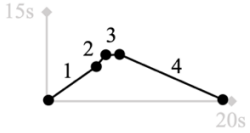
Component	Begin	End
orientation	00:00.000	00:13.640
complication	00:13.680	00:17.510
climax	00:17.510	00:20.611
resolution	00:20.611	00:25.897
coda	00:25.897	00:28.877

LAS_01c



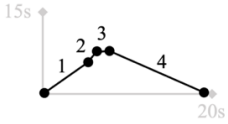
Component	Begin	End
orientation	00:00.000	00:13.640
complication	00:13.680	00:17.510
climax	00:17.510	00:20.611
resolution	00:20.611	00:25.897
coda	00:25.897	00:28.877

LAS_02a



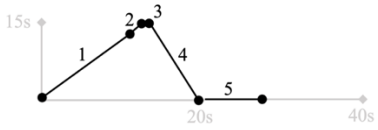
Component	Begin	End
orientation	00:00.000	00:05.160
complication	00:05.160	00:07.020
climax	00:07.020	00:09.540
resolution	00:09.540	00:19.940
coda		

LAS_02b



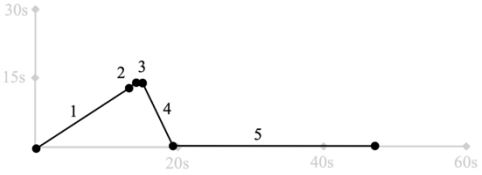
Component	Begin	End
orientation	00:00.000	00:05.160
complication	00:05.160	00:07.020
climax	00:07.020	00:09.540
resolution	00:09.540	00:19.940
coda		

LAS_03



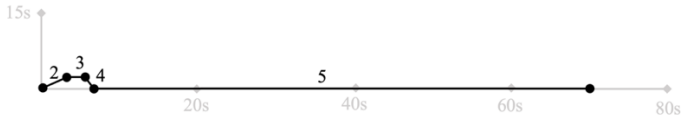
Component	Begin	End
orientation	00:00.000	00:13.081
complication	00:13.081	00:17.108
climax	00:17.108	00:17.539
resolution	00:17.539	00:20.728
coda	00:20.728	00:28.270

LAS_04



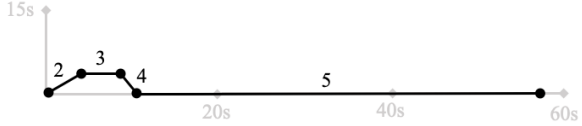
Component	Begin	End
orientation	00:00.000	00:14.066
complication	00:14.066	00:15.458
climax	00:15.458	00:16.541
resolution	00:16.541	00:19.025
coda	00:19.025	00:48.760

LAS_05a



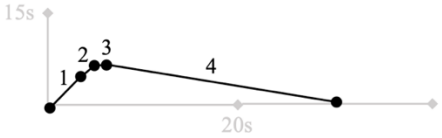
Component	Begin	End
orientation		
complication	00:00.000	00:03.939
climax	00:03.939	00:05.848
resolution	00:05.848	00:06.898
coda	00:06.898	01:11.535

LAS_05b



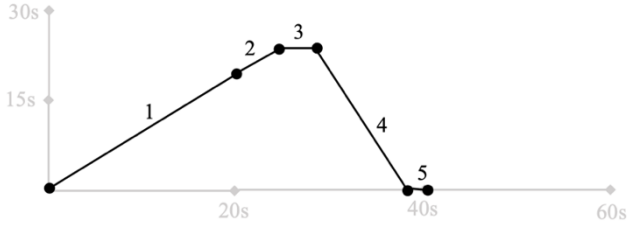
Component	Begin	End
orientation		
complication	00:00.000	00:06.621
climax	00:06.621	00:08.552
resolution	00:08.552	00:10.806
coda	00:10.806	00:58.875

LAS_06a



Component	Begin	End
orientation	00:00.000	00:04.603
complication	00:05.888	00:06.751
climax	00:06.751	00:08.155
resolution	00:08.155	00:29.949
coda		

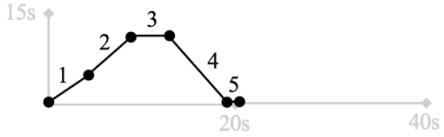
LAS_06b



Component	Begin	End
orientation	00:00.000	00:20.714
complication	00:20.714	00:24.419
climax	00:24.419	00:27.610
resolution	00:27.610	00:38.086
coda	00:38.086	00:42.991

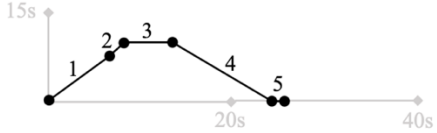
Appendix 6: Dramatic pyramids of LGG personal experience narratives

LGG_01



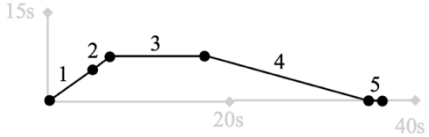
Component	Begin	End
orientation	00:00.000	00:04.638
complication	00:04.638	00:09.521
climax	00:09.521	00:13.151
resolution	00:13.151	00:20.060
coda	00:20.060	00:21.086

LGG_02



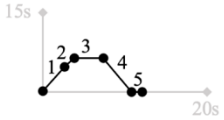
Component	Begin	End
orientation	00:00.000	00:07.665
complication	00:07.665	00:08.897
climax	00:08.897	00:13.202
resolution	00:13.202	00:23.041
coda	00:23.041	00:24.110

LGG_03



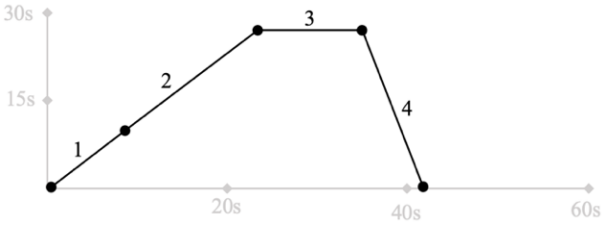
Component	Begin	End
orientation	00:00.000	00:05.171
complication	00:05.171	00:06.947
climax	00:06.947	00:17.796
resolution	00:17.796	00:35.394
coda	00:35.394	00:37.209

LGG_04



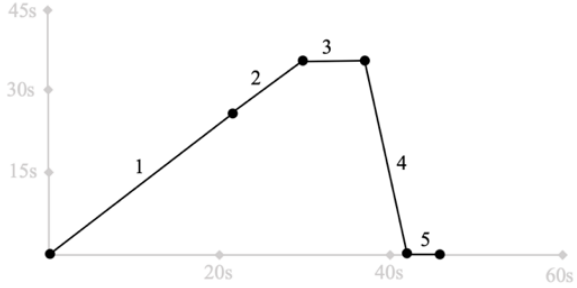
Component	Begin	End
orientation	00:00.000	00:03.255
complication	00:03.255	00:06.003
climax	00:06.003	00:09.146
resolution	00:09.146	00:12.786
coda	00:12.786	00:13.839

LGG_05



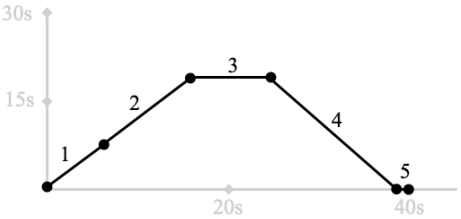
Component	Begin	End
orientation	00:00.000	00:09.244
complication	00:09.244	00:25.488
climax	00:25.488	00:37.377
resolution	00:37.377	00:42.910
coda		

LGG_06



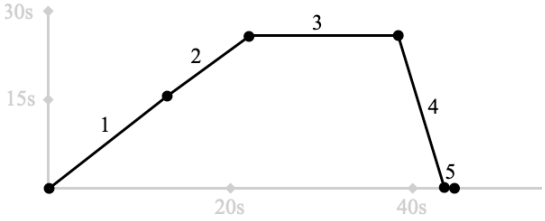
Component	Begin	End
orientation	00:00.000	00:21.417
complication	00:21.417	00:29.734
climax	00:29.734	00:36.172
resolution	00:36.172	00:41.956
coda	00.41.956	00:45.386

LGG_07



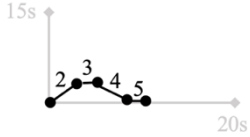
Component	Begin	End
orientation	00:00.000	00:07.151
complication	00:07.151	00:16.383
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resolution	00:24.242	00:38.953
coda	00:38.953	00:40.392

LGG_08



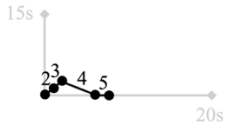
Component	Begin	End
orientation	00:00.000	00:17.660
complication	00:17.660	00:22.885
climax	00:22.885	00:39.415
resolution	00:39.415	00:44.273
coda	00:44.273	00:45.273

LGG_09



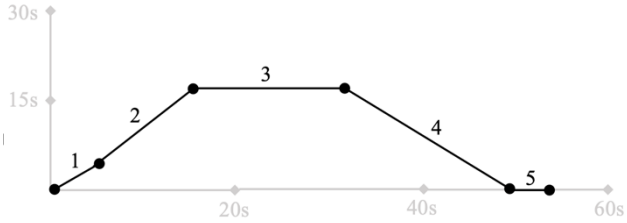
Component	Begin	End
orientation		
complication	00:00.000	00:05.755
climax	00:05.755	00:07.581
resolution	00:07.581	00:09.214
coda	00:09.214	00:12.108

LGG_10



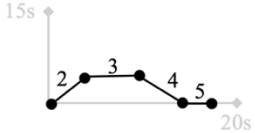
Component	Begin	End
orientation		
complication	00:00.000	00:01.559
climax	00:01.559	00:03.581
resolution	00:03.581	00:06.214
coda	00:06.214	00:08.108

LGG_11



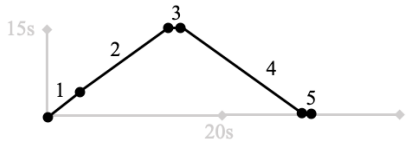
Component	Begin	End
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complication	00:08.290	00:17.399
climax	00:17.399	00:32.766
resolution	00:32.766	00:49.310
coda	00:49.310	00:55.232

LGG_12



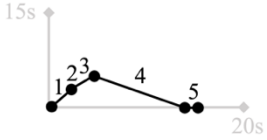
Component	Begin	End
orientation		
complication	00:00.000	00:04.403
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resolution	00:11.307	00:15.903
coda	00:15.903	00:18.095

LGG_13



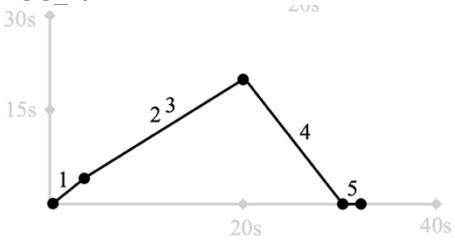
Component	Begin	End
orientation	00:00.000	00:04.832
complication	00:04.832	00:16.676
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resolution	00:17.176	00:24.528
coda	00:24.528	00:25.806

LGG_14



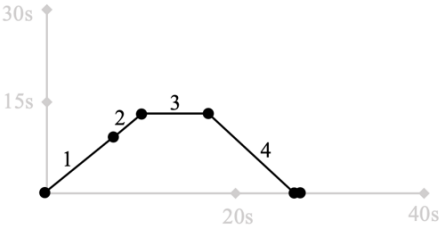
Component	Begin	End
orientation	00:00.000	00:02.340
complication	00:04.832	
climax		00:06.106
resolution	00:14.676	00:15.382
coda	00:15.382	00:16.707

LGG_15



Component	Begin	End
orientation	00:00.000	00:04.852
complication	00:04.852	
climax		00:19.738
resolution	00:19.738	00:31.688
coda	00:31.688	00:33.002

LGG_16



Component	Begin	End
orientation	00:00.000	00:08.755
complication	00:08.755	00:10.629
climax	00:10.629	00:18.897
resolution	00:18.897	00:25.603
coda	00:25.603	00:27.103

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Summary

This thesis is focused on three West African sign languages of different ages used by deaf communities of distinct sizes and with diverse patterns of social interaction. Adamorobe Sign Language (AdaSL) is a multi-generational sign language currently used by 33 deaf people in the village of Adamorobe, in Ghana. Langue des Signes de Bouakako (LaSiBo) is a young sign language used by six deaf people in the village of Bouakako, in Ivory Coast. Língua Gestual Guineense (LGG) is a very young sign language used by about 500 deaf people who were initially brought together in a school setting in the city of Bissau, in Guinea-Bissau.

To better understand how the sign language's age, community size and frequency of socialisation have influenced the three sign languages, I focus on personal experience narratives. The 45 stories collected were prompted by the question "Have you ever encountered a dangerous animal like a snake?" and are the object of four different descriptive analyses. Study 1 analyse the structure of the narratives, following the model of Labov & Waletzky (1967) and Freytag's dramatic pyramid (1894). I found that all three sign languages contain a universal structure in their narratives with a beginning, middle and end. Most signers start and end in the narrator's role, and then explain the sequence of events as a character. I found that the full range of narrative components in L&W's structural model is observed in narratives by both AdaSL and male LGG signers. However, those by LaSiBo and female LGG signers present a simpler structure. Studies 2, 3 and 4 focus on specific narrative devices that make narratives more compelling, as part of Labov's (1972) "evaluation" component. These devices refer to the moments when storytellers give dramatic prominence to the narratives by embodying characters, such as using different signing perspectives (Study 2), role shifts between characters and constructed dialogues (Study 3) and diversified types of descriptions of the animal (Study 4).

In line with the findings in Study 1 on narrative structure, the studies on the narrative devices in these stories show that AdaSL and male LGG signers use devices in a way that reflects greater skill in capturing the audience's attention, while LaSiBo and female LGG signers tend to pattern similarly in their use of simpler or reduced devices. The gender differences found in LGG storytelling structures align with the observation that women do not interact as much as men; this helps to support the hypothesis that the frequency of social interactions is a particularly crucial factor in developing storytelling skills.

Samenvatting

Dit proefschrift richt zich op drie West-Afrikaanse gebarentalen van verschillende leeftijden die gebruikt worden door dovengemeenschappen van verschillende grootte en met verschillende patronen van sociale interactie. Adamorobe Sign Language (AdaSL) is een oude gebarentaal en wordt momenteel gebruikt door 33 dove mensen in het dorp Adamorobe, in Ghana. Langue des Signes de Bouakako (LaSiBo) is een jonge gebarentaal en wordt gebruikt door zes dove mensen in het dorp Bouakako, in Ivoorkust. Língua Gestual Guineense (LGG) is een zeer jonge gebarentaal en wordt gebruikt door een gemeenschap van ongeveer 500 dove mensen die ontstond rond een school in de stad Bissau, in Guinee-Bissau.

Om beter te begrijpen hoe tijdsdiepte, gemeenschapsgrootte en socialisatiefrequentie de drie gebarentalen hebben beïnvloed, richt ik me op persoonlijke ervaringsverhalen. De 45 verhalen werden verzameld met behulp van de vraag: "Ben je ooit een gevaarlijk dier zoals een slang tegengekomen?", en waren het onderwerp van vier verschillende beschrijvende analyses. Studie 1 analyseerde het verhaalstructuur volgens het model van Labov & Waletzky (1967) en Freytag's dramatische piramide (1894). Ik ontdekte dat alle drie de gebarentalen een universele verhaalstructuur bevatten, met een begin, midden en einde. De meeste verhalen beginnen en eindigen in de rol van de verteller, en de verteller legt als personage de opeenvolging van gebeurtenissen uit. Het volledige scala van narratieve componenten in Labov &Waletzky's model zijn waargenomen in verhalen van zowel AdaSL gebaarders als van mannelijke LGG gebaarders. LaSiBo gebaarders en vrouwelijke LGG gebaarders presenteren echter een eenvoudigere structuur. Studies 2, 3 en 4 richten zich op specifieke narratieve middelen die verhalen boeiender maken, als onderdeel van Labov's (1972) "evaluatie" component. Deze hulpmiddelen verwijzen naar de momenten waarop vertellers dramatisch effect geven aan de verhalen door personages te belichamen. Dit betreft het gebruik van verschillende perspectieven (onderzoek 2), rolnemen en geconstrueerde dialogen (onderzoek 3), en verschillende manieren om het dier te beschrijven (onderzoek 4). In lijn met de bevindingen in studie 1 over de narratieve structuur, tonen de narratieve middelen die gebruikt zijn in de verhalen dat AdaSL gebaarders en mannelijke LGG gebaarders een grotere vaardigheid hebben in het trekken van de aandacht van het publiek, terwijl LaSiBo en vrouwelijke LGG gebaarders een vergelijkbaar patroon hebben in hun gebruik van eenvoudigere of minder uitgebreide middelen. De sekseverschillen die gevonden zijn in de LGG vertelstructuren komen overeen met de observatie dat vrouwen niet zoveel interactie hebben als mannen; dit ondersteunt de hypothese dat de frequentie van sociale interacties een bijzonder cruciale factor is in het ontwikkelen van vertelvaardigheden.

Résumé

Cette thèse porte sur trois langues des signes d'Afrique de l'Ouest d'âges différents, utilisées par des communautés de sourds de tailles distinctes et ayant des modes d'interaction sociale variés. La Adamorobe Sign Language (AdaSL) est une langue des signes multigénérationnelle actuellement utilisée par 33 personnes sourdes dans le village d'Adamorobe, au Ghana. La Langue des Signes de Bouakako (LaSiBo) est une jeune langue des signes utilisée par six personnes sourdes dans le village de Bouakako, en Côte d'Ivoire. La Língua Gestual Guineense (LGG) est une très jeune langue des signes utilisée par environ 500 personnes sourdes qui ont été initialement réunies dans une école de la ville de Bissau, en Guinée-Bissau.

Pour mieux comprendre comment l'âge de la langue des signes, la taille de la communauté et la fréquence de la socialisation ont influencé les trois langues des signes, je me focalise sur les récits d'expériences personnelles. Les 45 récits recueillis ont été suscités par la question "Avez-vous déjà rencontré un animal dangereux comme un serpent ?" et ont fait l'objet de quatre analyses descriptives différentes. L'Étude 1 a analysé la structure des récits, en suivant le modèle de Labov & Waletzky (1967) et la pyramide dramatique de Freytag (1894). J'ai constaté que les trois langues des signes contiennent une structure universelle dans leurs récits avec un début, un milieu et une fin. La plupart des signeurs commencent et finissent dans le rôle du narrateur, puis expliquent la suite des événements en tant que personnage. J'ai constaté que l'ensemble des composantes narratives du modèle structurel de L&W est observé dans les récits des signeurs de la AdaSL et de la LGG masculins. Cependant, ceux de la LaSiBo et de la LGG féminins ont une structure plus simple. Les Études 2, 3 et 4 se centralisent sur des dispositifs narratifs spécifiques qui rendent les récits plus captivants, dans le cadre de la composante "évaluation" de Labov (1972). Ces dispositifs font référence aux moments où les conteurs donnent une importance dramatique aux récits en y incorporant des personnages, comme en utilisant de différentes perspectives dans l'espace de signation (Étude 2), des changements de rôles entre les personnages et des dialogues construits (Étude 3) et des types diversifiés de descriptions de l'animal (Étude 4).

En accord avec les résultats de l'Étude 1 sur la structure narrative, les études sur les dispositifs narratifs dans ces histoires montrent que les signeurs de la AdaSL et la LGG masculins utilisent des dispositifs qui reflètent une plus grande habileté à capter l'attention du public, tandis que les signeurs de la LaSiBo et de la LGG féminins ont tendance à suvre un modèle similaire dans leur utilisation de dispositifs plus simples ou réduits. Les différences entre les genres constatées dans les structures de narration en la LGG correspondent à l'observation selon laquelle les femmes n'interagissent pas autant que les hommes, ce qui contribue à étayer l'hypothèse selon laquelle la

fréquence des interactions sociales est un facteur particulièrement crucial dans le développement des compétences en matière de narration.

Resumo

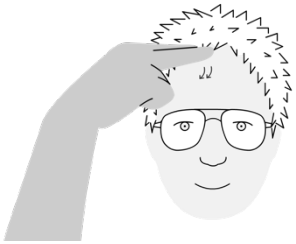
Esta tese centra-se em três línguas gestuais da África Ocidental de diferentes idades, utilizadas por comunidades surdas de dimensões distintas e com diversos padrões de interação social. A Adamorobe Sign Language (AdaSL) é uma língua gestual multigeracional atualmente utilizada por 33 pessoas surdas na aldeia de Adamorobe, no Gana. A Langue des Signes de Bouakako (LaSiBo) é uma língua gestual nova utilizada por seis pessoas surdas na aldeia de Bouakako, na Costa do Marfim. A Língua Gestual Guineense (LGG) é uma língua gestual gestual muito nova utilizada por cerca de 500 surdos que foram inicialmente reunidos numa escola na cidade de Bissau, na Guiné-Bissau.

Para compreender melhor como a idade da língua gestual, a dimensão da comunidade e a frequência da socialização influenciaram as três línguas gestuais, foco-me nas narrativas de experiências pessoais. As 45 histórias recolhidas foram motivadas pela pergunta "Já alguma vez encontrou um animal perigoso como uma cobra?" e foram objeto de quatro análises descritivas diferentes. O Estudo 1 analisou a estrutura das narrativas, seguindo o modelo de Labov & Waletzky (1967) e a pirâmide dramática de Freytag (1894). Verifiquei que as três línguas gestuais contêm uma estrutura universal nas suas narrativas com um princípio, meio e fim. A maior parte dos gestuantes começa e termina no papel do narrador e depois explica a sequência dos acontecimentos como uma personagem. Verifiquei que toda a gama de componentes narrativos do modelo estrutural de L&W é observada nas narrativas dos gestuantes tanto da AdaSL como da LGG do sexo masculino. No entanto, as da LaSiBo e os da LGG produzidos por mulheres apresentam uma estrutura mais simples. Os Estudos 2, 3 e 4 centram-se em dispositivos narrativos específicos que tornam as narrativas mais cativantes, como parte da componente "avaliação" de Labov (1972). Estes dispositivos referem-se aos momentos em que os contadores de histórias dão proeminência dramática às narrativas através da incorporação de personagens, tais como a utilização de diferentes perspetivas no espaço gestual (Estudo 2), de mudanças de papéis entre personagens e de diálogos construídos (Estudo 3) e de tipos diversificados de descrições do animal (Estudo 4).

Em consonância com os resultados do Estudo 1 sobre a estrutura narrativa, os estudos sobre os dispositivos narrativos nestas histórias mostram que os gestuantes de LGG do género masculino e os da AdaSL utilizam dispositivos que refletem uma maior capacidade de captar a atenção da audiência, enquanto os gestuantes de LGG do género feminino e os da LaSiBo tendem a apresentar padrões semelhantes na utilização de dispositivos mais simples ou reduzidos. As diferenças de género encontradas nas estruturas de narração de histórias em LGG alinham-se com a observação de que as mulheres não interagem tanto como os homens; isto ajuda a

apoiar a hipótese de que a frequência das interações sociais é um fator particularmente crucial no desenvolvimento de competências de narração de histórias.

Curriculum Vitae



Marta Morgado was born in 1977 in Lisbon, Portugal, and grew up thinking about pursuing art studies until her final year of secondary school. She was invited to take part in a sign language research project at the University of Lisbon in 1995 and since then the arts have become her hobby and deaf studies a growing focus of interest.

She has bachelor's and master's degrees in deaf education. She was a teacher of the deaf for 21 years and was also the coordinator of the Portuguese Sign Language department at the Jacob Rodrigues Pereira School for the Deaf in Lisbon from 1997 to 2018. Many of the deaf students were from different African countries. Aside from her teaching occupation, she has collaborated with the Portuguese Deaf Association on many occasions, including partnerships with the deaf communities of Guinea-Bissau and Cape Verde.

Since 2005, she has witnessed the emergence of sign language in Guinea-Bissau, where she collaborated on training courses, and produced educational materials and dictionaries of the Guinea-Bissau Sign Language.

At the same time, in trying to fill the gap in children's books addressed specifically to deaf children, she became interested in deaf literature, writing children's books for deaf children and a book about sign language literature, as well as papers on the subject. She was part of the team that developed the Portuguese Sign Language curriculum as a first language for deaf students from nursery to high school level, at the Ministry of Education. She was part of the Research Unit department at the Jacob Rodrigues Pereira School for the Deaf, producing bilingual materials on how to teach and learn written Portuguese through Portuguese Sign Language.

She was a lecturer at different universities in Portugal, such as the Portuguese Catholic University and the Setúbal School of Education, teaching, for example, Sign Language Literature and Orientation and Internship for Kindergarten Educators in schools for the deaf.

She was interested in the area of language acquisition by deaf children and was part of the research project: Longitudinal corpus of Portuguese Sign Language acquisition, at the Portuguese Catholic University.

Her particular interest in personal experience narratives arose when she started her PhD in 2018 at Leiden University as part of the larger research Vidi project "From Gesture to Language", coordinated by Victoria Nyst and funded by the NWO. In her

PhD project, she focused on the influence of language age, community size, and social interaction in three West African sign languages.

Marta is currently a post-doctoral researcher at the University of Birmingham, as part of the ERC SignMorph project coordinated by Adam Schembri.