The Significance of African Sign Languages for African Linguistics and Sign Language Studies

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1. Introduction

Sign languages are the natural languages of deaf people and deaf communities. In the past 50 years, an impressive number of sign languages have come to be studied from a modern linguistic perspective, generating ground-breaking insights into the influence of the communicative channel on language structure. However, only a handful of these studies concern sign languages on the African continent. This is striking, particularly in view of the rich diversity of sign languages and signing communities found in Africa. Despite being limited in number, the studies available on African sign languages reveal unique structural features, not attested in non-African sign languages so far. Thus, research on African sign languages is important for the typology of sign languages, as well as for the general typology of African languages. The diversity in signing communities in sociolinguistic terms offer valuable opportunities for studying the impact of social setting on sign language structure; an issue of current debate in the sign language literature. Studies on African sign languages are relevant for a number of domains in general linguistics as well, including language contact, change, shift, acquisition, creation, and emergence. Last but not least, the scientific examination of African sign languages is of major importance for the emancipation and participation of deaf African in society.

2. Sign languages outside the context of deaf education

A striking feature of many African sign languages is that they have evolved outside a context of deaf education. Some of these communities emerged in urban settings, e.g. in the deaf communities in Kano, Northern Nigeria (Schmaling, 2011; Schmaling, 2000) and in Bamako, Mali (Nyst 2010; Pinsonneault 1999). An extensive corpus of the latter sign language can be found in the ELAR archives in London.

Whereas urban deaf communities typically have over 50 signing members, signing communities in rural areas are typically much smaller – but see Jirou (2000), for an account of a minute signing community in the city of Mbour, in Senegal, and Olanike Orie's account (this volume) of a small Yoruba signing community in an urban setting in Nigeria.

Many –if not most– deaf people in rural areas can be qualified as home signers, i.e. as not having regular access to a community of deaf signers. What seems to be typical of rural home signers is that they do have signed communication with their hearing environment, though to highly differing degrees. A recent survey of deaf people in a rural area in Mali, the Dogon area shows that the sociolinguistic situation of rural home signers there differs in many ways from the home signers raised in an oralist[1] tradition in the US and other countries and, as a consequence of a more pragmatic attitude towards the use of gesture, may lead to fluently signing home signers (Nyst, Magassouba & Sylla, 2012).

In addition to home signers, the same survey encountered various microcommunities of signing deaf people. One of them consisted of a family with hereditary deafness and three generations of deaf members. A high incidence of deafness may start off in one family and gradually spread across the community, as in the case of the Ivorian village of Bouakako, currently being studied by Tano Angoua. The sign language of Adamorobe, an Akan village in Ghana, probably followed the same scenario, as it has had a high incidence of hereditary deafness for as long as anyone can remember.

[1] The term 'oralist' refers to the ideology of interacting with deaf people avoiding signing, in favor of speech.

A descriptive analysis of this sign language revealed a number of striking features that set this sign language apart from most sign languages studied so far (Nyst 2007). One of these differences is found in the expression of intransitive motion, which seems to be almost universally expressed by a system of entity classifier predicates (Schembri 2003). These predicates consist of a handshape that typically represents a size and shape of the moving entity, e.g. an upright extended index for a person or a flat hand for a car in NGT (Zwitserlood 2003). The motion event is virtually mapped on the signing space in front of the signer, which thus becomes like a miniature representation of the event space.

Apparently contrary to all sign languages of large Deaf communities studied so far, Adamorobe Sign Language (AdaSL) does not use a system of so-called 'entity classifiers' to express motion or location in space. Instead, it uses generic directional signs, optionally in a series with one or more manipulation or manner verbs. The class of generic directionals seems to be closed, consisting of FROM, TOWARDS, PATH, ENTER, and ABRUPT-MOTION. Directionals are neutral with respect to transitivity or control, as illustrated by the example in (1), where the first instance of the directional FROM indicates intransitive motion and the second instance has a transitive reading, i.e. giving.[2]

(1) TOMORROW **FROM** CASSAVA **FROM_2**[3]
'Tomorrow I will leave (for my farm and then) give you cassava'

The cause of the motion expressed by a generic directional is often interpreted in context. It can also be disambiguated by a preceding manner or manipulation verb. A preceding manner verb generates a reading of the motion as intransitive or internally caused, as illustrated by the glosses in bold in (2). A manipulation verb generates an interpretation of the motion as transitive or internally caused, as in the example in (3).

(2) **RUN ENTER-room** LOCK
'I ran into the room and locked the door.'
(3) SCHOOL SMALL FINISH INDEX_1 **TAKE ABRUPT**-Accra
'She will finish her school soon and then I will send her to Accra.'

Interestingly, AdaSL has a motion verb and a manipulation verb that seem to mark just internally caused motion and manipulation, respectively. The sign MOVE is frequently found to precede generic directionals, referring to a wide variety of internally caused motion events, including fleeing, flying, crawling, etcetera, as illustrated in examples (4-6).

(4) CAT MOVE FROM
'The cat fled.'
(5) INDEX_laptop MOVE CLIMB_up
'He climbed up (inside the drainpipe).'
(6) SEE MOVE FLY_left
'(The bird) saw (the cat) and flew (inside the house).'

The sign TAKE is even more frequent and refers to an equally wide variety of externally caused motion events. These two signs, MOVE and TAKE, seem to have grammaticalized into markers of internally and externally caused motion.

[2] The glosses of the relevant signs are in bold print.
[3] Markings preceding or following an underscore in front or after a gloss respectively signal a spatial inflection.

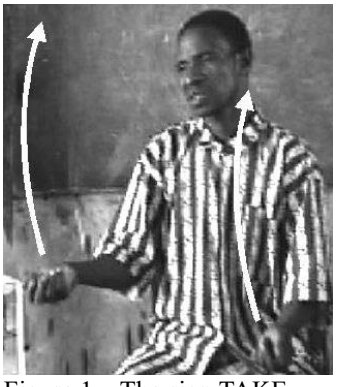


Figure 1 – The sign TAKE

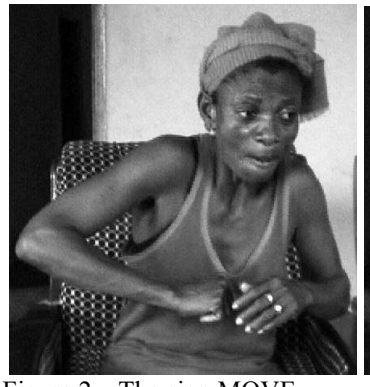


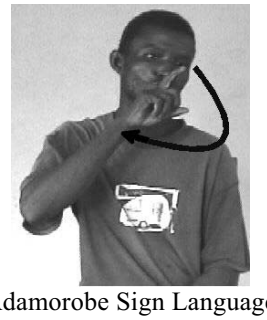
Figure 2 – The sign MOVE

The sequential nature of its expressions of motion set apart AdaSL from all sign languages of large deaf communities studied so far, which are renowned for using highly simultaneous classifier constructions to express motion and location (Schembri 2003). It is likely that the high proportion of hearing AdaSL signers with Akan as their dominant language is in part accountable for this, as the verb series used in AdaSL bear convincing resemblance to a subset of the serial verb constructions found in Akan. For details of this analysis, see Nyst (2007).

This may not be the whole story, as the patterns found in the expression of motion in AdaSL are to a large extent shaped by two strong tendencies in iconic mapping, i.e. a preference for entity depiction and a preference for life-size mappings. After a short introduction of iconicity in sign languages, I will discuss the implications of these iconic tendencies for the systematic use of entity classifier to express motion.

Iconicity, i.e. perceived resemblance between the form of a sign and its meaning, is a powerful structuring force in many, if not all, sign languages. However, how iconicity takes shape may differ from one (sign) language to another. For example, where the Sign Language of Guinea -Bissau (SLGB) sign for 'elephant' refers to the ears of the animal, the AdaSL sign represents it trunk (see figure 3). Variation in the choice of the image used to represent a concept is often driven by extra-linguistic factors. For example, the Dutch sign for 'sheep' represents the wool on the body of the sheep; the AdaSL sign represents its slaughtering. Cross-linguistic variation in iconic signs may also result from more language-internal factors. Thus, both the AdaSL and the Dutch signs for 'elephant' represent the trunk of the elephant. However, whereas in the AdaSL sign a curved index hand moves away from the nose, in the Dutch sign the hand takes the shape of the letter C and virtually traces the outline of the trunk.

Guinea-Bissau Sign Language[4]



Adamorobe Sign Language

Figure 3- The sign for 'elephant'

Whereas variation in the choice of the represented image is clearly determined by cultural, environmental or other extra linguistic factors, little is known as to what governs the variation of the latter type, i.e. the selection of formal elements of the language to represent a particular image.

[4] From (Martini and Morgado 2008), printed with permission of the author.

Research on ideophones in spoken languages shows that these iconic forms (despite displaying unusual phonotactic patterns) roughly conform to the phoneme inventory of the language they are part of (Dingemanse 2011) . Logically, the same could hold for iconic forms in sign languages too, i.e. that iconic signs are represented by formal elements that are drawn from the set of phonemic building blocks of sign languages, i.e. the set of distinctive handshapes and orientations, location, movements and optionally non-manual elements (Taub 2001). However, in view of the considerable overlap that seems to characterize the phoneme inventories of sign languages studied so far, one would expect less variation in signed than in spoken languages at the level of the matching of formal elements on mental images (cf. Engberg-Pedersen, 2004).

Compared to the sign languages of large Deaf communities studied so far, AdaSL seems to have a relatively small set of phonemic handshapes. Using the same criteria for determining distinctivity, AdaSL was found to have 7 distinctive handshapes against 31 distinctive handshapes for Sign Language of the Netherlands (Kooij, 2002; Nyst, 2007). This difference in handshape inventory offers the possibility to see whether and how handshape inventories influence the shape of iconic signs. More in particular, whether and how the phonemic handshape inventory of a language affects the selection of formal elements for the iconic representation of mental images.

The main difference in iconicity between the NGT and AdaSL signs for 'elephant' mentioned before is that the C shaped hand in the NGT sign virtually traces the outline of the trunk, whereas the curved index finger in the AdaSL sign virtually becomes or embodies the trunk. An examination of over 400 AdaSL signs for the type of motivation used -including outlining and embodiment-revealed that the difference between the signs for 'elephant' actually represents a pattern. The AdaSL signs that were examined most frequently used the strategy of embodiment to depict a mental image. Unfortunately, there are no comparable frequency studies of depiction types available for other sign languages. However, there seems to be a consistent difference between AdaSL and NGT in the depiction of round objects, whereby NGT typically opts for tracing or showing the outline with an open, round handshape, and AdaSL typically choses to depict through embodiment by a round handshape (a fist or the - inherently cylinder shaped - index or forearm), e.g. in the signs for 'bottle', 'egg', 'cup', 'moon', and 'cord', or the aforementioned signs for 'elephant'. Where depiction through embodiment is not felicitous, AdaSL typically resorts to using a different motivation altogether.

At first sight, there seems to be a straightforward relation between the preference for embodiment in the depiction of round shapes and the set of phonemic handshapes in AdaSL. This set contains no open handshapes in which the thumb is opposed, without touching the opposed fingers, such as the so-called C hand (for an illustration see the handshape in the NGT sign for 'elephant' in figure 3). It is precisely this type of handshape that seem to be commonly used for tracing the outline of a virtual entity. Thus, lacking this type of handshape, AdaSL is forced to look for alternative ways of depicting mental images, one may conclude. An alternative reading of the relation between the handshape inventory and iconic strategies or devices in AdaSL is that this language – for one reason or the other- disfavors the use of outline depiction, and as a result, the typical outlining handshapes did not become part of the handshape inventory. Indeed, this latter analysis seems to be the more correct one for at least two reasons. Firstly, AdaSL has one distinctive handshape that seems to be commonly used in outlining signs in other sign languages, i.e. the /O/ hand. However, in AdaSL, this handshape is used to depict manipulation of a small object, whereby the focus is on the contact between the fingers and the thumb, and not on the resulting round shape of the hand.

Given the virtually universal use of a system of entity classifier in sign languages and AdaSL's preference for entity depiction in lexical signs, one would naturally expect AdaSL to also use a system of entity classifiers in its expression of motion. Instead, AdaSL uses a series of action and directional signs. Contrary to entity classifier verbs, the directional sign has a fixed handshape, irrespective of the type of moving entity. The absence of a system of entity classifier constructions for the expression of motion is however explained by another major tendency in iconic mapping in AdaSL; its restriction to life-size projections. The system of entity classifier predicates expressing motion in other sign languages typically operates in observer perspective, which in turn is characterized by the mapping of a conceptual space on a reduced part of the signing space in front of the signer, resulting in a small scale representation of the mental event (Perniss 2007). With a strong preference for life-size iconic mappings, the option of using observer perspective is disfavored, together with the use of entity classifier predicates.

3. Conclusion

AdaSL is one of the first African sign languages to be studied in depth. This sign language, which evolved locally in the setting of an unusually long history of an unusually high incidence of deafness, displays a striking divergence from the linguistic patterning found in the sign languages of large Deaf communities. One of these striking patterns is found in the expression of intransitive motion, where AdaSL does not make us of the virtually universal system of entity classifier, using a series of verbal signs instead. The serial verb structure is indirectly shaped by various characteristic features of the sociolinguistic setting. Firstly, the surrounding dominant spoken language Akan, itself using a variety of serial verb constructions expressing motion, is likely to have provided the serial verb blueprint for AdaSL. Secondly, despite a preference for entity depiction in lexical signs, the restriction to life-size iconic mappings in AdaSL, rules out the option of using observer perspective and hence the extensive system of entity classifier predicates that are found in most sign languages.

AdaSL was the first full-fledged sign language found to not make use of a system of entity classifier predicates to express intransitive motion. In addition, the restrictions on iconicity in AdaSL shed new light on the interaction of iconicity and sublexical structure in sign languages. It is beyond doubt that the African continent, with its rich diversity in signing communities in rural and urban setting, using sign languages of local and foreign origin, has many more insights to contribute to the typology of sign languages, as well as to Africanistics.

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