Simultaneous constructions in Adamorobe Sign Language (Ghana)

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1. Introduction

The papers in this book show that simultaneous constructions are a pervasive feature of signed languages of large Deaf[1] communities and have many similarities. This paper discusses simultaneous constructions in Adamorobe Sign Language (AdaSL). Investigating simultaneous constructions in an old signed language like AdaSL, unrelated as it is to any signed language of a large Deaf community, and having developed under unusual social circumstances, will add to our insight in the universality of these constructions. AdaSL uses simultaneous constructions consisting of a manual and an oral element. In its use of bimanual simultaneous constructions, AdaSL differs from Quebec Sign Language (LSQ) and probably most signed languages studied so far. In this first section, Miller's typology of simultaneous constructions is presented, and the village of Adamorobe and its languages are introduced. The second section presents the database. In the third section, two types of manual-oral simultaneous constructions are identified. In the fourth section, the occurrence of bimanual simultaneous constructions in AdaSL is investigated. The fifth and final section contains the conclusion.

The following transcription conventions are used. Glosses of signs are printed in capitals, e.g. ADAMOROBE. Akan words are rendered in italics. English translations are given between single quotes. Where information from the linguistic or situational context is needed for a correct interpretation, this information is added on the translation line in parenthesis, e.g. '(The child) refuses'. Mouthings and mouth gestures are represented between square brackets and superimposed

1. In this paper, I follow the convention to use a capital to refer to deafness as a cultural identity label. As the presence of a deaf cultural identity can be debated in Adamorobe, I will refer to the deaf people in Adamorobe as deaf (Nyst 2007).

on the gloss they coexist with, whereby the underlining indicates the spread of the mouth activity. Descriptions of gestured or mimed forms in a signed utterance are rendered in normal font. In the glossed utterances containing manual simultaneous constructions, the first line, preceded by a capital R, shows the signs articulated by the right hand and the second line, preceded by a capital L, shows the left hand. An interrupted line following a gloss indicates the hold of a sign.

1.1 Simultaneous constructions in signed languages

Miller (1994) defines simultaneous constructions as the simultaneous production of distinct signs in two separate channels at the syntactic level. He investigates descriptions of such constructions in the signed language literature and notes their occurrence in many signed languages, including American Sign Language (ASL), British Sign Language (BSL), Danish Sign Language, and Sign Language of the Netherlands (Nederlandse Gebarentaal, NGT). Since then, they have been attested in German Sign Language (Deutsche Gebärdensprache, DGS), Flemish Sign Language (Vlaamse Gebarentaal, VGT), Irish Sign Language (ISL), and, as becomes clear from the collection of papers in this volume, many more signed languages.

Miller (1994, 2000) distinguishes five types of simultaneous constructions in his LSQ database:

1. Locative constructions, usually by means of classifiers (including constructions with a more abstract meaning that use classifiers in an 'abstract' space);
2. Holds of verbs or predicative adjectives with one or more proposition(s) on the other hand;
3. Holds of nouns on the non-dominant hand with (a) proposition(s) on the other hand;
4. Simultaneous pronouns and determiners on the non-dominant hand, closely related grammatically to information on the dominant hand;
5. 'Oppositive/synthetic' constructions. The defining properties of this type of construction are not clearly specified.

In this paper, the occurrence and types of simultaneous constructions in Adamorobe Sign Language are investigated. The village of Adamorobe and its signed language are introduced below.

1.2 Adamorobe

Adamorobe is a village in Ghana with an unusually high incidence of deafness. Of a total population of about 1,400, more than 30 persons are deaf. This represents 2% of the village population, compared to the estimated 0,4% for Africa in general (WHO/CBM 1998). Locally, several explanations are given for the high prevalence

of deafness in the village: first, breaking the taboo on certain days by taking water from the stream between Adamorobe and the town of Aburi is believed to cause deafness. A further three historical explanations exist, two of them concerning war times. For example, during the war at Katamanso in 1826, Adamorobe warriors used a special concoction that made them fierce in battle, but which, when they returned, appeared to have left them deaf. Another explanation talks about how Adamorobe was short of warriors during wartime: the deaf god Adamorobe Kiti called animals from the bush and turned them into anthropomorphic soldiers; they looked like humans but could not speak. Finally, the deafness is sometimes ascribed to a tall and hard-working deaf man, who, according to the former chief Nana Kwaakwa Asiampong II, lived among the settlers of the village around the end of the 18th century (Frishberg 1987). This last explanation comes closest to scientific explanation, which attributes the deafness in Adamorobe to the mutation of the connexin 26 gene. This mutation must have arisen at least sixty generations ago (Brobby, Müller-Myhsok & Horstmann 1998). Both local and scientific sources thus indicate the considerable longitudinal presence of deafness in the village, possibly present for as long as 1,000 years. The rate of deafness has declined significantly in recent times, with a decrease from 10% in 1971 to around 2% today (David, Edoo, Mustaffah & Hinchcliffe 1971; Amedofu, Brobby & Ocansey 1997). However, in past decades, the actual number of deaf people has remained more or less stable at about 35.

1.3 Languages in Adamorobe

A local signed language has evolved in Adamorobe, which Frishberg (1987) named 'Adamorobe Sign Language' or AdaSL. Locally, the language is called *mumu kasa*, literally 'deaf language'. It is the primary means of communication for adult deaf inhabitants. Though most hearing villagers communicate relatively easily with deaf people, proficiency in the signed language depends on the degree of contact and ties with the deaf inhabitants. Since deafness appears to have a long history in Adamorobe, it is not unreasonable to assume that AdaSL has a history of about two centuries. Thus, AdaSL is certainly not a young language. The language is used by all deaf villagers (except one deaf immigrant who continues to use Ghanaian Sign Language) and by some of the hearing villagers in their communication with the deaf villagers. AdaSL is historically unrelated to Ghanaian Sign Language (GSL), which is used in Ghana's schools for the Deaf. GSL is in fact related to ASL. It is the 'offspring' of Signed English introduced with deaf education in Ghana in 1957 by the legendary Deaf missionary, Andrew Foster, who is considered to be Africa's Gallaudet (Oteng 1988; GNAD n.d.). Most deaf people in Adamorobe know some GSL and AdaSL contains a number of GSL loan signs. Adamorobe's deaf children attend the boarding school for the deaf in Mampong-Akuapim where Ghanaian

Sign Language is used, and as a consequence, GSL seems to be their primary language. The increasing use of GSL constitutes a serious threat to the future of AdaSL. Deaf pupils are taught to read and write in English, this being the official language in Ghana. Virtually all deaf adults are illiterate in Adamorobe.

Akuapim Twi, a dialect of Akan (belonging to the Kwa group of languages, itself a branch of the Niger-Congo languages), is the primary spoken language of the community, although most hearing adults also know the neighbouring language Gã (Gã-Adangme, Kwa, Niger-Congo).

A community with a similar high incidence of deafness was found on the island of Martha's Vineyard (Groce 1985), although its signed language had disappeared before it could be described. Nowadays, the signed languages of similar communities, scattered around the globe, are starting to be studied: Kata Kolok in Bali (Branson, Miller, Gede Marsaja & Wayan Negara 1996; Zeshan 2004), Providence Island Sign Language (Washabaugh 1986) and Al-Sayyid Bedouin Sign Language in Israel (Kisch 2001; Sandler, Meir, Padden & Aronoff 2005).

2. Data

The present study is part of a large-scale study of AdaSL, aiming towards a descriptive analysis of the language. The data for this project were collected during three periods of fieldwork totalling ten months between January 2000 and May 2004. Approximately forty hours of signing material was collected on digital video-tape, featuring most of the adult deaf signers and some of the deaf children. The data consist of spontaneous signing of monologues that recount personal narratives, mythical stories and bible stories, as well as a number of church services in GSL, which are simultaneously interpreted into AdaSL. In addition to this spontaneous material, slightly more controlled data were elicited in the form of retellings of four 'Tweety and Sylvester' cartoons (Kita 1995) by three young AdaSL signers (11, 11, and 13 years old). All of these young signers have deaf parents. Their age, as well as the fact that they have had less exposure to AdaSL because of their education at a boarding school for the deaf, makes them less suitable as informants. However, collecting data through picture or video stimuli, like the 'Frog, where are you' story and the 'Tweety' cartoons, appeared to be a tedious task for adult signers, because of the non-local cultural specificity of these materials.

The description of the simultaneous manual-oral combinations presented here is based on the spontaneous texts. The analysis of bimanual simultaneous constructions is based in part on observations made during my fieldwork and the subsequent transcription of the spontaneous texts. It also relates in part to the more detailed transcription of a subset of about one hour of AdaSL data, consisting of spontaneous data and cartoon retellings (see Section 4.1).

3. Simultaneous manual-oral combinations

While Miller (1994, 2000) does not extensively discuss simultaneous constructions consisting of a manual and a non-manual sign in his typology of simultaneous constructions in LSQ, it is this type of simultaneous construction that appears to be most common in AdaSL. Whereas the use of bimanual simultaneous constructions seems to be restricted in AdaSL, we do find extensive use of simultaneity in manual-oral constructions, especially in the semantic fields of size and shape and colour. Below, combinations of size and shape and combinations with colour mouthings are discussed.

3.1 Simultaneous combinations of a mouthing and a manual sign of size and shape

AdaSL uses several systems to indicate the size and shape of objects. One group of fixed signs present a relative judgement on the size of an object. The mouthing from these 'relative size signs' may also combine with the manual part of signs of absolute size and shape. The closed group of 'relative size signs' are BIG (Figure 1), SMALL (Figure 2), TALL, and SHORT. These come with fixed mouthings, as presented in Table 1. Mouthings are articulations of the mouth that are based on a word in a spoken language. They are distinct from mouth gestures, which are not based on a spoken word (see also Sutton-Spence, this volume).

The mouthing for BIG, [abo], comes from *agbo*, the word for 'big' in the neighbouring spoken language, Gã. This word is sometimes used by speakers of Akan as well. Semantically, these signs give a subjective, relative judgment about the size of entities. They are fixed and do not change according to the entity they modify.

Another prominent strategy to indicate size and shape is the use of 'measure stick signs'. In these signs, one hand shows the size of an entity on the other hand/arm by using it like a measuring stick. The other hand may or may not take a particular handshape to express a particular shape, e.g. a fist to express a lump. In some signs, a finger is used as a 'measuring stick' instead of an arm. Here, one of the fingers on the dominant hand acts on one of the fingers on the non-dominant

Table 1. The relative size signs in AdaSL and their mouthings

Sign	Mouthing	Spoken source
BIG	[abo + puffed cheeks]	from Gã *agbo*
SMALL	[spread lips, teeth closed + ttt]	from Akan *keteketekete*
TALL	[spread lips, teeth closed]	from Akan *tententen*
SHORT	[spread lips, teeth closed]	from Akan *tia*

Figure 1. BIG

Figure 2. SMALL

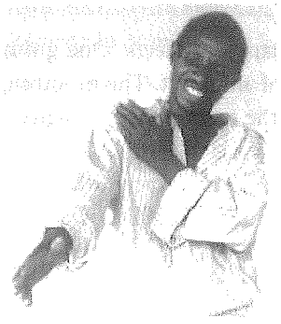

Figure 3. SIZE-OF-THUMBTIP

Figure 4. SIZE-OF-HAND

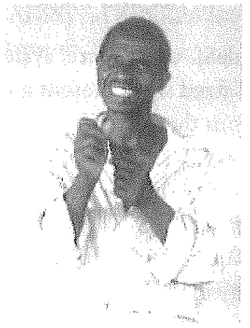

Figure 5. SIZE-OF-ARM

hand, as for example in the sign SIZE-OF-THUMB-TIP (see Figure 3). In this way, a rather objective, absolute size is indicated.

Both 'measure stick signs' and 'relative size signs' follow the noun they modify, as illustrated in examples (1) and (2). The sign SIZE-OF-HAND in example (1) is shown in Figure 4.

(1) BANANA SIZE-OF-HAND
'A banana of about the size of a hand'

(2) BANANA BIG
'A big banana'

Both types of signs are often found to modify one and the same noun, resulting in forms that give information about both the absolute and the relative size of the entity. The combination of a 'measure stick sign' and a 'relative size sign' may take a sequential structure as in example (3).

Figure 6. SIZE-OF-HAND + the mouthing of BIG [abo]

(3) [abo]
BANANA SIZE-OF-HAND BIG

It may also take the form of a simultaneous structure as in example (4). The simultaneous structure is shown in Figure 6.

(4) [abo-*repeated*]---
BANANA SIZE-OF-HAND
'A relatively big banana of about the size of a hand'

Whereas a banana that is the size of a hand is considered big by the signer, a bottle of the same size is considered small, as becomes clear from example (5) below. The mouthing accompanying the sign SIZE-OF-HAND is the mouthing of SMALL. This simultaneous structure is illustrated in Figure 4 (above).

(5) [spread lips, teeth closed + ttt]
BOTTLE SIZE-OF-HAND- - - - - - - - -
'A relatively small bottle of about the size of a hand'

The sign SIZE-OF-THUMB-TIP may combine with the mouthing of SMALL (this combination is illustrated in Figure 3), or it may combine with the mouthing of BIG. The sign combined with the mouthing for SMALL may mean 'stock cube', when following SOUP and SWEET. The sign with the mouthing for BIG may mean 'sugar cube' when following SWEET/SUGAR, as illustrated in Figure 7.

(6) [abo-*repeated*] - - - - -
SUGAR SIZE-OF-THUMB-TIP
'A sugar cube'

The manual sign can also be located on the body, adding to the semantic weight of the combination: the SIZE-OF-THUMB-TIP sign moving and contacting a path halfway around the neck plus the mouthing of the sign BIG was used to mean

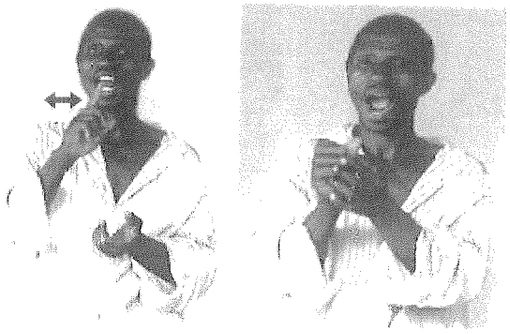

Figure 7. 'A sugar cube'

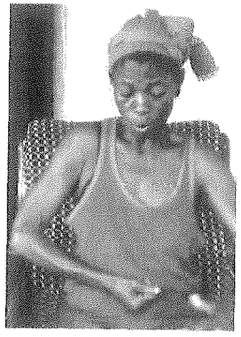

Figure 8. '(the person with the) big belly-button'

necklace. Another example is found in Figure 8, where the SIZE-OF-FIST sign is located on the belly accompanied by the mouthing of the sign BIG. This sign was used to refer to a person with a big belly button.

'Measure stick signs' and 'relative size signs' may co-occur in sequence or simultaneously. The simultaneous construction containing a mouthing of a relative size and a manual sign that expresses an absolute size may contain even more simultaneous information when the manual component is meaningfully located.

3.2 Simultaneous combinations of a colour mouthing and a manual sign

The systematic use of mouthings in combination with a manual sign is also found in the semantic field of colour terms. Three colours, 'white' (Figure 9), 'red' (Figure 10), and 'black' (Figure 11) have the same manual sign and are distinguished by mouthings.[2]

Table 2. The mouthings of WHITE, RED and BLACK

Sign	Mouthing	Spoken Akan source
WHITE	[ftftft]	*fita*
RED	[ɔ:]	*kɔkɔ*
BLACK	Pursed lips	*tuntum*

The same manual component of the sign with a wrinkled nose means 'bad smell'. Combined with a wiggling tongue, it means 'sweet', or 'sugar' (see Figure 7, first picture).

The manual sign thus seems to be a general quality sign that needs to be specified by a mouthing, a mouth gesture or a facial expression.

These 'colour mouthings' are not only used in colour signs: they are also found in combination with (1) a size and shape specifying fist and (2) a sign glossed as SURFACE. Together with a meaningful location and/or orientation, the mouthings add to or specify the meaning of these semantically light manual components of signs. Most of the examples involving colours have lexicalised meanings. Thus, a size and shape specifying fist, wiggling in front of the mouth, means 'garden egg' (a white, round aubergine species) when combined with the mouthing for 'white', but means 'tomato' when combined with the mouthing for 'red' (see Figure 12).

Examples of colour mouthings in combination with SURFACE (a B hand making a striking motion) are found in the signs POLICE, AMA-KOKO (name sign), OLD-PERSON, and FOREIGNER/ACCRA.

Figure 9. WHITE

Figure 10. RED

Figure 11. BLACK

2. Neatly in line with the colour hierarchy of Berlin & Kay (1969), other colours are indicated by signs like LEAVES for 'green', CHICKEN FAT for 'yellow', etcetera.

Figure 12. TOMATO

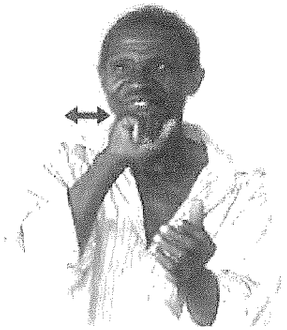

Figure 13. GARDEN EGG (white aubergine species)

Figure 14. DARK-BODY

Figure 15. FOREIGNER/ACCRA

The sign POLICE is a compound of STRIPES-ALONG-LEGS + DARK-BODY. The latter sign is a simultaneous combination of a B hand tracing the surface of the body of the signer and the mouthing for 'black' (see Figure 14). The sign refers to the black uniform of the Ghanaian police. The simultaneous combination DARK-BODY may also refer to the dark complexion of a person. Similarly, the name sign AMA-KOKO is a compound of DEAF + LIGHT-COMPLEXION. The latter sign consists of a B hand tracing the surface of the body of the signer plus the mouthing for 'red'. Similarly, in Akan, the word for 'red' is used to refer to a light complexion of the skin or hair. The sign OLD-PERSON is a simultaneous combination of an indicative sign, striking the side of the head and the mouthing for 'white'. Another sign referring to hair colour is the sign for 'foreigner' or 'Accra', the capital of Ghana. This sign consists of a B hand tracing the surface of the top of the head plus the mouthing for 'red', referring to the light hair associated with Europeans (Figure 15).

The size and shape combinations and the colour combinations show that mouthings operate in a relatively independent way and that they are thoroughly integrated in the linguistic system.

4. Bimanual simultaneous constructions

Observations from the fieldwork and the transcription of the larger body of data gave the impression of a restricted use of bimanual simultaneous constructions. As this kind of simultaneous constructions is a pervasive feature of signed languages, as illustrated by the contributions in this volume, the restricted use of simultaneous constructions in AdaSL is surprising. A sub-study was thus designed to investigate and quantify the types and occurrence of bimanual simultaneous constructions in AdaSL. The findings are compared with Miller's typology of simultaneous constructions in LSQ (1994, 2000).

4.1 Data

For the sub-study, a subset of the larger body of data was used, consisting of twenty short spontaneous AdaSL narratives, slightly more than half an hour in total. These narratives are signed by five different adults, although the majority are signed by two adult signers, KA (male) and AK (female). All are native users of AdaSL. The re-tellings of cartoon stories were also used: this includes renditions by three signers.

The selected data, consisting of the twenty spontaneous narratives and the three retellings of four cartoons, were checked for the occurrence of bimanual simultaneous constructions as described by Miller (1994, 2000). In order to collect as many potential simultaneous constructions as possible, our selection criteria were very loose: any instance of two hands active at the same time, expressing what was not known to be a lexical sign was to be collected. This probably resulted in a larger set of constructions than is usually discussed under the heading of simultaneous constructions. However, our guiding principle was that if simultaneous constructions still turned out to be rare, we could be sure we had not missed any of them because of the application of too narrow criteria regarding what constitutes a simultaneous construction.

4.2 Results

The impression of restricted use of bimanual constructions was confirmed by the semi-spontaneous data, being the retellings of the Tweety cartoons by three young signers. In fact, simultaneous constructions were entirely absent in these retellings.

All instances of two handed signing concerned lexical bimanual signs or one-handed signs that were phonetically doubled by adding an identical non-dominant hand. These 'doubled' one-handed signs did not give rise to a semantic interpretation of duality or plurality. For that reason, they can be considered 'phonetic' rather than phonological: they are not used for morphological purposes.

In the spontaneous data, examples of the independent use of two hands were only found in the signing of two signers, KA and AK. Together, they produced seven such examples in six utterances. No examples were found in the signing of the three other adult signers.

Signer KA shows a strong preference for one-handed signing with the right hand. In the examples where the left hand becomes active, this generally concerns lexical signs, both symmetric and asymmetric. Only two instances showed the left hand acting independently of the right hand. These are represented in (7) and in (10) below.

Signer AK uses her non-dominant hand much more than does KA, but this still mostly concerns bimanual signs or one-handed signs which are doubled, i.e. where the non-dominant hand is added, mirroring the dominant hand. In AK's signing, five examples were found in which the non-dominant hand is used independently of, but simultaneously with the dominant hand. Three of the five utterances are rendered in (8), (9) and (11). The totalling seven examples of relatively independent usage of the two hands in the signing of AK and KA, are grouped in three subtypes that are discussed in the Sections 4.3, 4.4, and 4.5 respectively.

4.3 Ground incorporation

Two examples of simultaneous and independent use of the two hands concerned signs that are normally one-handed or symmetric two-handed. In these examples an asymmetric non-dominant hand was added which had little meaning in itself other than providing the Ground[3] for the activity performed by the dominant hand.

The first of these cases was produced by KA in his rendering of the bible story of Abraham and Sarah (see example (7) below). A non-dominant B hand is added to the normally one-handed sign ENTER (see Figure 16). The same non-dominant hand is used in the homophonous sign BAG. The addition of the B hand seems to add an extra sense of 'insideness'.

3. I use the term Ground as in Talmy (1985) to mean the reference point with respect to which an entities motion or location is specified.

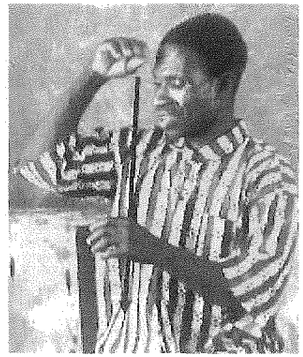

Figure 16. The simultaneous construction in (7): ENTER + GROUND

(7) R: LONG-TIME GOD ENTER IND-Sarah PREGNANT BIRTH
L: LONG-TIME ENTER-ground BIRTH
'After a long time, God put (something) inside Sarah and she got pregnant and gave birth.'

The second example of this type (not illustrated) is produced by AK. In this example the right bent B hand performs a scraping action on the left B hand representing 'taking out fufu (pounded yam or cassava) from the mortar'. This structure is not known to be a lexical sign and was therefore included in this study.

In the two examples above, the timing of both hands is exactly the same. The combinations look very much like asymmetric two-handed signs. They were included, however, as they were one of the few cases of two-handed signing that were not readily identified as two-handed lexical signs, but it is possible, however, that these two examples are merely free variants of lexical signs. No corresponding type was found in Miller's typology. Productive combinations of this type may be so common in other signed languages that they have not been counted as simultaneous constructions. In AdaSL however, such productive combinations appear to be so rare that we felt they needed to be included in order to be complete. Irrespective of their status as simultaneous constructions, the marginality in AdaSL of productive and synchronous combinations of one hand representing an action and another hand representing the Ground remains striking.

4.4 A manual sign with a whole body sign expressing simultaneous events

In three examples, all signed by AK, the non-dominant hand of the signer represents the hand of a referent. The action of this hand is in fact part of a larger role shift, showing the behaviour and emotion of the referent. These cases are thus

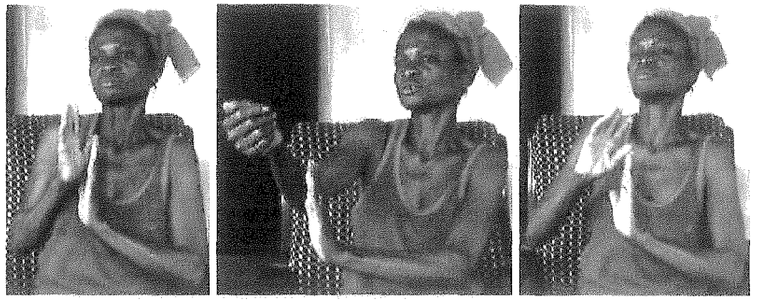

Figure 17. The simultaneous construction in (8): NO INSULT + NO-2 NO

examples of the simultaneous use of a whole body sign and a manual sign, rather than of two manual signs. In (8) the agreeing verb INSULT on the right hand coincides with a pacifying gesture directed to a projected interlocutor on the left hand (see Figure 17).

(8) y/n
R: INSULT INDEX-1 pacify INSULT NO INSULT-2 NO
L: pacify - - - - - NO pacify - - - NO
'Are you insulting me?' 'No, I did not insult you'

In this utterance, two separate aspects of one event are thus expressed: the pacifying gesture of a referent and the quoted speech of the same referent. Another example of two separate aspects of one event expressed by two independent hands is represented in (9).

(9) R: LIFT-shirt STRETCH-ACROSS-table BEAT-back
L: IND-table LIFT-shirt STRETCH-ACROSS-table - - - - - - -
'You lay down on a table and you are beaten'

This example contains a role shift. The sign LIFT-shirt and STRETCH-ACCROS-table both refer to the person that is beaten, the sign BEAT-back, articulated by the right hand, represents (the stick of) the beater. The simultaneous construction thus represents an action of the beater and the beaten. The last example of this type, which is not illustrated, was found in the same piece of discourse as the examples in (8) and (9). In this example, the right hand, index selected, beats the palm of the left B hand. As in (9), both the hand of the beater and the beaten are represented in one simultaneous construction. The three examples in this section can all be considered as instance of Miller's type two: 'Holds of verbs or predicative adjectives with one or more proposition(s) on the other hand'. Interestingly, the verbs that are held are all whole body signs.

4.5 Discourse marking hold

In two cases, the non-dominant hand is held while the dominant hand produces one or more other signs. The hold can be interpreted as having a discourse function, indicating the topic of the utterance. In (10), KA is talking about his two daughter's name signs; he signs that he and his daughter KW have the same name sign – a K hand touching the non-dominant palm:

(10) R: ELDER KW(name) PERSON-short KW(name) IND-1
L: ELDER KW (name) -
R: SAME(GSL), IND-1 KW-school KW-here(rep) INDEX-1
L: -
R: KA(old name) IND-school
L: KA
R: KW CHANGE(GSL) KW SAME(GSL) SAME
L: KW CHANGE(GSL) KW SAME(GSL)
'The eldest is called TW, the youngest KW. Her name sign is the same as mine, she is KW there (at school) and I'm KW too (here). My (old) name sign is KA and so was hers. Then our names were changed to KW, so we have the same name.'

During a considerable part of the fragment, the non-dominant B hand of the name sign KW is held in place. This name sign is articulated several times here, with at most three signs intervening between two articulations. It is not clear whether the hold of the B hand is a case of perseverance for ease of production or whether it actually serves a discourse function, indicating that the names of KA and his daughter are the topic.

In (11), the sign EIGHT is held on the non-dominant hand, indicating that the eight children are the topic of the utterance (see Figure 18). In the latter part of this utterance, the signer seems to try to produce a simultaneous construction, but fails to.

(11) R: IND-1 WOMAN BIRTH EIGHT EIGHT BIRTH EIGHT
L: EIGHT EIGHT - - - - - - - - - -
R: EIGHT FOUR DEAD(GSL)
L: EIGHT DEAD(GSL)
'My mother gave birth to eight (children), three of whom died.'

The holds of the non-dominant hand as a discourse marker as in (10) and (11) fall under Miller's type three: 'holds of nouns on the non-dominant hand with proposition(s) on the other hand'.

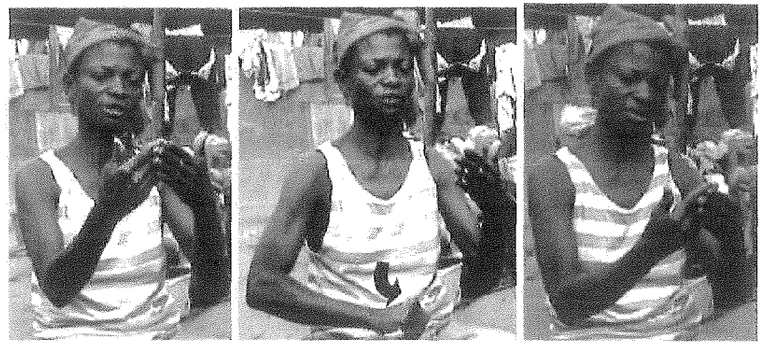

Figure 18. The simultaneous construction in (11):
EIGHT BIRTH + hold_EIGHT EIGHT

4.6 Discussion

Finding only seven cases in more than half an hour of dense signing indicates an infrequent occurrence of simultaneous constructions. Moreover, the cases of ground incorporation as discussed in Section 4.3, may be free variants of a lexical sign, rather than full simultaneous constructions. Simultaneous constructions seem to occur much less frequently in AdaSL than in the signed languages studied so far on this topic.

A less intensive use of simultaneous constructions in AdaSL as compared to other signed languages also becomes evident in the number of signs that are produced during a hold. Most of the examples Miller (1994, 2000) gives contain holds of one of the hands that spread across several signs on the other hand. In our AdaSL cases, a sign was held during maximally three other signs as in (10).

Not only are fewer instances found, also the types of simultaneous constructions used in AdaSL appear to be limited. Miller (2000) considers the locative type of simultaneous construction involving classifiers to be the traditionally most widely recognised type of simultaneous construction. Looking at the AdaSL data however, we find no instances of this prototypical type of simultaneous construction. No examples of a locative construction using classifiers are found in the data. This absence is striking, but it can be explained on the basis of language internal properties. AdaSL differs from most signed languages in its use of space. Many signed languages use two major projection scales, real size signing as in character perspective and signing on a highly reduced projection scale on a limited plane in front of the signer making use of object classifiers. AdaSL uses only one projection scale, that of real-size signing. This restriction explains the absence of object or entity classifier predicates expressing motion or location in space, as these typically use spatial projection on a reduced scale. Instead of using an entity classifier

construction, AdaSL uses a series consisting of a manner verb and a generic directional verb or a spatially modified whole body manner sign (Nyst 2007; Nyst & Perniss 2004).[4] As object classifiers in verbs of motion and location do not occur in simplex or isolated constructions, their absence in simultaneous constructions is no longer surprising.

In the data, no examples were found of simultaneous constructions of Miller's type 4 that is, no pointing signs were found simultaneously with other signs. From free observation, it seems that pointing signs behave differently in AdaSL as compared to other signed languages; this needs to be investigated in future research. Specifically, projecting referents on individual fingers in enumeration, *aka* the use of 'list buoys' (Liddell 2003), and consequently point at a specific enumerated finger for reference, is a strategy not attested for AdaSL (cf. Frishberg 1987). It was witnessed only once during a simultaneous interpretation of a church service from GSL into AdaSL, where it was a direct transfer from the GSL signing.

In summary, in the AdaSL data, only simultaneous construction of type two – 'holds of verbs or predicative adjectives with one or more proposition(s) on the other hand' – and of type three – 'holds of nouns on the non-dominant hand with (a) proposition(s) on the other hand' – are found. Interestingly, all the examples of holds of type two concern whole body signs. Debatably, a third type of simultaneous construction, not described by Miller, is found in the form of 'ground incorporation'. All in all, bimanual simultaneous constructions appear to be restricted in AdaSL in three respects: frequency, duration of holds, and types.

5. Conclusion

AdaSL uses simultaneous manual-mouthing constructions in the semantic domains of size and shape and colour, showing the integration of mouthings in the language system. Whereas these simultaneous manual-mouthing constructions are common in AdaSL, the use of bimanual simultaneous constructions is highly restricted in AdaSL in type, frequency and duration as compared to Quebec Sign Language. In the present study, AdaSL appears to use only two out of the five simultaneous constructions which Miller identified for LSQ. Contrary to LSQ, AdaSL uses neither simultaneous constructions involving classifiers predicates expressing motion or location in space, nor simultaneous constructions involving pointing. Simultaneous constructions contrasting two concepts are not reported either.

4. As such, the expression of motion in AdaSL uses less simultaneous packaging than other signed languages of large Deaf communities. Relatively little simultaneous packaging is also attested in tracing signs (Nyst 2007).

The modality of signed languages creates the possibility of using simultaneous constructions. Yet, patterning differently from LSQ (and many of the signed languages discussed in this volume) with respect to simultaneous constructions, AdaSL shows that extensive exploitation of this possibility is indeed a possible, but not inevitable option for signed languages.

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