A first sketch of the clause structure of Burkina Faso Sign Language

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The goal of the present paper is a brief description of the clause structure of the sign language used in Burkina Faso. Based on data from deaf signers from Burkina Faso's capital Ouagadougou it will be shown that the sign language under discussion is derived from American Sign Language (ASL) enriched with local signs and French mouthings. This observation is in line with earlier assumptions that an ASL creole is used in the French-speaking countries in West and Central Africa. However, the sign language also differs in some syntactic respects from ASL, *inter alia* in the position of negation.

1 Introduction

Besides some brief mentions in the literature nearly nothing is known about the sign language(s) used in Burkina Faso. Sometimes the names "Burkina Faso Sign Language" (BFSL) or "Langue des Signes Mossi" are found (Nyst 2010; Sands 2017).[1] Nyst (2010) lists BFSL in a table stating that it is of local origin. Kamei (2006) and Sanogo & Kamei (2019) state that a creole language called "Langue des Signes d'Afrique Francophone" (LSAF) is used in French-speaking countries in West and Central Africa, including Burkina Faso (cf. Figure 1). This language is thought of as being the result of language contact between American Sign Language (ASL) and spoken French, enriched with local signs. Kamei (2008) described LSAF as an SVO language which is thought to vary only slightly from

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[1] The name "Mossi" comes from the Mossi people, the major ethnic group native to Burkina Faso.

Figure 1: French-speaking countries in West and Central Africa where LSAF is used according to Sanogo & Kamei (2019) (the map is based on Sanogo & Kamei 2019).

country to country (see also Sanogo & Kamei 2019). LSAF is thus thought to consist of several dialects. This means that it is not clear whether BFSL is a language on its own right or a dialect. Given the assumed huge geographical spread of LSAF I will follow Nyst (2010) and treat BFSL as a language on its own until counter-evidence becomes available.

The reason Kamei (2006) and Sanogo & Kamei (2019) assume a creole status of LSAF is that the language is based on American Sign Language but (i) has integrated elements from spoken French and (ii) has integrated elements of local sign languages of the respective regions. In this paper, I briefly report the results of a fieldwork conducted in Burkina Faso's capital Ouagadougou in 2018 where I visited two deaf schools. The results of this fieldwork supports the idea that the sign language used in Burkina Faso is an SVO language based on American Sign Language that has integrated elements from spoken French as well as local elements. Besides confirming this earlier proposal, constituent order, the

expression of different sentence types (declarative, polar, and constituent inter-
rogative clauses), negation, and modal verbs will be briefly discussed. From the
available data, I will provide a first provisional sketch of the syntactic structure
of BFSL.

2 Background

Burkina Faso is a West African country with approximately 20,000,000 inhab-
itants. The Ethnologue lists 71 languages used in the country (Eberhard et al.
2021) including one sign language, namely ASL. It is neither clear how many
deaf people live in Burkina Faso nor how many sign language users there are
in the country. What is clear is that deaf education began with the foundation
of the first school for the deaf in Burkina Faso in 1980 (Granier 2020).[2] As with
other French-speaking African countries, deaf education started with the pio-
neering work of deaf African American missionary Andrew Foster (1927–1987)
who founded the Christian Mission for Deaf Africans (later known as Christian
Mission for the Deaf) in the 1950s (see Kiyaga & Moores 2003 and Runnels 2017
for brief overviews of Foster's life). According to Titus (1994), the school founded
in 1980 goes back directly to Andrew Foster, while according to Granier (2020)
the school was founded by the local clergyman Daniel Compaoré who had met
Foster in Nairobi in 1975. Today, the number of schools for the deaf in Burkina
Faso lies somewhere in-between 20 and 40 (Bourcheix 2010; Congo 2017; Granier
2020). However, typically, these schools are not pure deaf schools, but integrative
school projects where deaf and hearing pupils learn together.

In 2018, I visited two deaf schools in Burkina Faso's capital Ouagadougou,
a city with nearly 2,500,000 inhabitants. One school was founded in the late 1980s
and has approximately 1,000 pupils. According to the school officials, approxi-
mately half of the pupils as well as half of the teachers are deaf sign language
users. Teaching is in tandem with one deaf teacher using sign language and one
hearing teacher using spoken French. The other school was founded in 2012 and
has approximately 150 pupils where 83 of them are deaf. In this school, all teach-
ers are hearing and teach simultaneously in sign language and spoken French. Ac-
cording to the school officials of both schools all students acquire sign language
only with school enrollment and there are, thus, no native signers. The school
officials all reported that there once was a local sign language which, however,

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[2]Perhaps with some private schools as precursors in the late 1970s as mentioned by Congo
(2017).

vanished.

The data reported in the following comes from interviews from two deaf students and one deaf teacher (all from the first school) with the help of a local (hearing) sign language interpreter. The students as well as the teacher acquired sign language starting between six and eight years of age and use sign language as their main means of communication. All language consultants had proficient written language skills and sentences were elicited by starting out with sentences written down in French which they were asked to translate into BFSL. The resulting translation and possible paraphrases were discussed with the help of the interpreter and in many cases the consultants were explicitly asked for acceptability judgments with slightly altered examples. While such translation tasks combined with (informal) acceptability judgements have proven to be a fruitful approach in linguistic fieldwork (e.g., Matthewson 2004; Lisa 2006) this procedure surely comes not without problems. One potential problem with this kind of data elicitation is that the signers might be influenced by the grammatical structure of the written sentences. Although the role of such influences often seems to be rather small (e.g., Cecchetto et al. 2006; Bross 2020a,b) some of the data presented in this article will need further empirical back up by future studies also because of the limited number of consultants. I will discuss some potential influences of the written stimuli in the main text below.

3 Basic structure of BFSL

As with American Sign Language, the basic constituent order of Burkina Faso Sign Language is subject–object–verb in unmarked declarative clauses. An example is shown in (1a) and is additionally depicted in Figure 2a. As in virtually all sign languages, there is no tense in BFSL. Instead, temporal information is expressed via temporal adverbs occuring in a clause-initial position (1b), similar to what is found in ASL (e.g., Baker-Shenk & Cokely 1980: 191).

(1)   a.   PAUL BUY BEER
           'Paul buys beer.'

      b.   YESTERDAY PAUL BUY BEER
           'Yesterday, Paul bought beer.'

With declaratives, no special non-manual marking is required. Similar to most sign languages described so far, there is no change in constituent order in polar and constituent interrogatives (for interrogatives in sign language in general, see
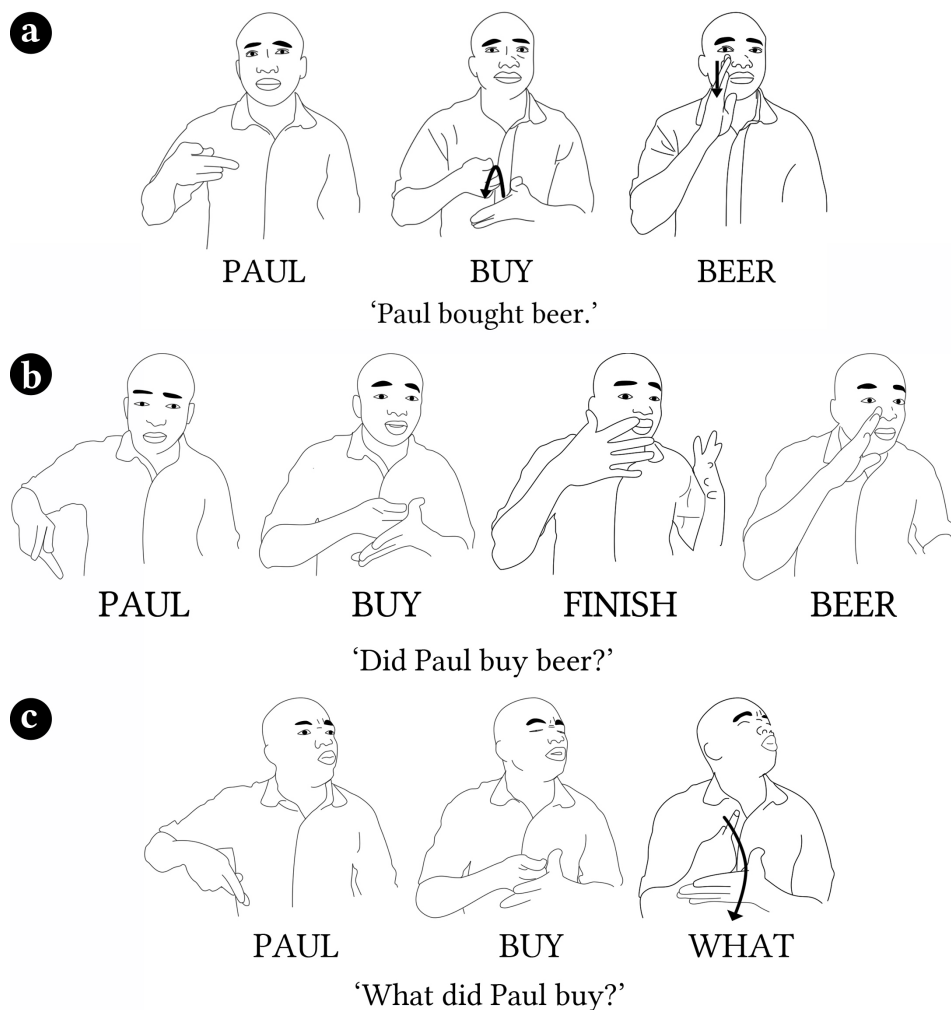
Figure 2: Examples of (a) an unmarked declarative, (b) a polar interrogative and, (c) a constituent interrogative clause.

Zeshan 2004b). Instead, polar interrogatives are formed by raising the eye-brows and constituent interrogatives by lowering the eye-brows, just as in American Sign Language (Fischer 2006). Additionally, the head is put forwards with polar interrogatives (probably to signal that the signer is expecting a response, as suggested for other sign languages; cf. Bross 2020c) and sometimes tilted backwards with constituent interrogatives. These non-manuals accompany the whole clause and have an intensity peak towards the end of the clause. Examples of a

polar and a constituent interrogative clause are shown in (2) and are additionally illustrated in Figure 2b and Figure 2c.

(2) a. $\overline{\text{PAUL BUY FINISH BEER}}^{\text{pol}}$
     'Did Paul buy beer?'

   b. $\overline{\text{PAUL BUY WHAT}}^{\text{wh}}$
     'What did Paul buy?'

As with many sign languages, *wh*-elements tend to occur in a clause-final position, although a clause-initial position is also legit, cf. (3).

(3) a. $\overline{\text{WHO HAVE BUY BEER}}^{\text{wh}}$
     'Who has bought beer?'

   b. $\overline{\text{BEER HAVE BUY WHO}}^{\text{wh}}$
     'Who has bought beer?'

Several notes with respect to the examples presented so far are in order. The example in (2a) included the sign FINISH which is also found as a marker for event completion in ASL (Baker-Shenk & Cokely 1980: 192). In ASL, however, FINISH occurs in a pre-verbal or clause-final position (Rathmann 2005). In BFSL, in contrast, FINISH appears in a post-verbal position just before the object (cf. (2a)). Another sign to be discussed is the sign HAVE (cf. the examples in (3)). The sign itself is borrowed from ASL, but the use of the sign is different from ASL. The use of HAVE in (3) seems to be to mark the perfect and is most probably an influence from spoken French. It is, however, unclear how systematic this use of HAVE is in BKSL and it may well turn out that HAVE in the examples is an artifact created through eliciting examples via written French sentences. This point, thus, requires more attention in the future. A final note relates to the *wh*-sign WHAT in (2b) depicted in Figure 2c. The manual signs are mainly borrowed from American Sign Language, but are accompanied by French mouthings (in this case *quoi* 'what'), as described by Kamei (2006; 2008) and Sanogo & Kamei (2019) for the French-speaking countries in West and Central Africa in general. The sign WHAT, in contrast, is, to the best of my knowledge, not borrowed from ASL, but might be of local origin. Other signs not borrowed from ASL seem to mainly involve concepts not known in the US, like the local millet beer dolo (see Figure 3), or local city names. While it is easy to explain that local concepts are

DOLO

Figure 3: Example of a local sign. Dolo is a local millet beer popular in many West African countries.

expressed using local signs, it is an interesting lexicographic question why it exactly a *wh*-expression which was not borrowed. The investigation of the BFSL lexicon and a comparison to the ASL lexicon, in general, might be an interesting field of future studies.

The basic negator is the manual sign NOT which is clearly borrowed from American Sign Language and BFSL probably can be classified as a manually dominant sign language as the manual sign NOT is sufficient to express sentential negation (see Zeshan 2004a for this classification). Head-shakes sometimes occurred (on the sign NOT), but do not seem to be obligatory. While the manual negator is the same as in ASL, its position in the clause differs. In ASL, NOT appears pre-verbally (Fischer 2006), while in BFSL it appears post-verbally, as illustrated in (4) and additionally in Figure 4.

(4) PAUL BUY NOT BEER
     'Paul didn't buy beer.'

Although I only have very limited data on modal verbs, the available data from the modal WANT suggests that they occur in the same position as in ASL, namely pre-verbally (for modal verbs in ASL see, for example Wilcox & Shaffer 2008). However, a clause-final position also seems to be possible, as illustrated for the modal WANT in (5).
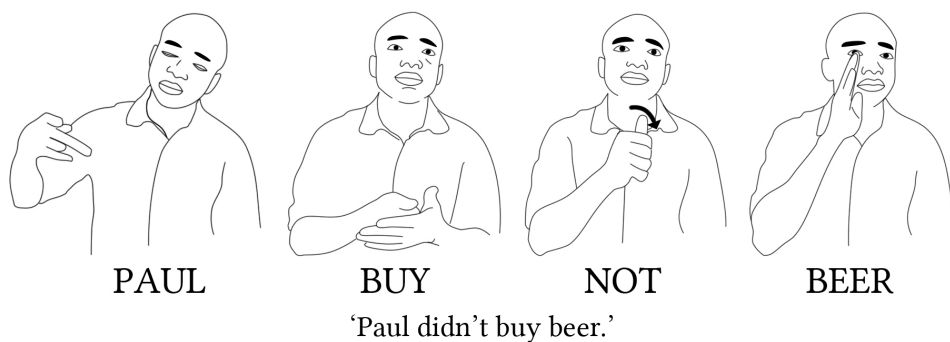
PAUL   BUY   NOT   BEER

'Paul didn't buy beer.'

Figure 4: Example of a negated clause.

(5) a. PAUL WANT BUY BEER
         'Paul wants to buy beer.'

     b. PAUL BUY BEER WANT
   'Paul wants to buy beer.'

When negated, the negator follows the modal as in (6). This is interesting because modals in ASL are not negated by combining a modal verb and the negator NOT, but a suppletive form is used instead (Shaffer & Janzen 2016). Modal and especially negated modals are thus an interesting topic for future research into BFSL.

(6) PAUL WANT NOT BUY BEER
     'Paul doesn't want to buy beer.'

Taken together, BFSL is clearly an ASL derivative with most of the vocabulary being borrowed from ASL enriched with signs of local origin. Mouthings, in contrast, are not English, but are borrowed from spoken French. This is in line with previous descriptions of the sign languages used in francophone West and Central Africa (cf. Kamei 2006 and Sanogo & Kamei 2019). In addition, there are also some structural differences between ASL and the sign language under discussion which therefore can be classified as a, probably emerging, language on its own right.

A sketch of the clause structure of BFSL could look as in (7) below, although this tree surely comes with several uncertainties: If one follows rightward-movement analysis of *wh*-phrases (e.g., Aarons 1994; Neidle et al. 1998), SpecCP in BFSL is on the right, as depicted in the tree. Following the assumption that

the non-manuals in non-declarative clauses are triggered by a C-head (or by Spec-Head agreement, see the Non-Manuals as Syntactic Markers Hypothesis described in Bross 2020c), this head is also to the right as the intensity peak of these non-manuals is clause final as described. Of course, there are also other modeling options and surely more research on the language is required. Under the assumption that subjects generally move to SpecTP, the TP is left-branching, as illustrated. Following the traditional idea that modal verbs are auxiliaries hosted in T°, this position is also to the left. However, one might also assume that modal verbs are hosted in a ModP, but I will follow the idea that modals are auxilaries here. Given that the negator follows modals, but precedes full verbs, one idea is that NegP is sandwiched in-between the TP and the VP, as illustrated in the tree. I modeled this projection to be left-branching and left-headed, although it is not clear yet whether NOT is a head or phrasal. Finally, by assumption, the VP is also left-branching and left-headed which probably is a justified assumption for a SVO language.

(7)

CP
  C̄
    TP C°
      T̄
        T° NegP
              N̄eg
                NegP° VP
                         V̄
                           V°
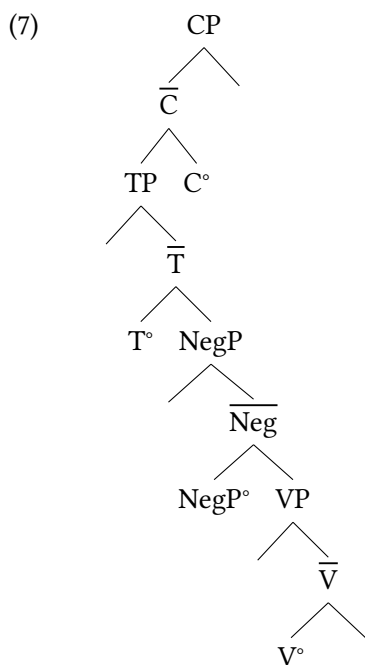
4 Conclusion

This article was concerned with the basic structure of the sign language used in Burkina Faso, labeled Burkina Faso Sign Language (BFSL) here. It was argued that BFSL is a language on its own right, although the language is clearly related to American Sign Language (ASL). BFLS resembles ASL in many respects *inter alia* in word order and question formation. However, BFSL also differs from ASL in some respects when it comes to the syntactic structure, such as the position of the completion marker FINISH or the position of negation. Based on the data obtained by three local signers, I proposed a first sketch of the clause structure of BFSL.

Previous work on sign languages in the French-speaking countries in West and Central Africa (Kamei 2006 and Sanogo & Kamei 2019) has suggested the existence of an ASL creole language called Langue des Signes Franco-Africaine (LSAF). In these works, it has been proposed that LSAF emerged by language contact of ASL and local sign languages. LSAF mainly makes use of the ASL vocabulary, enriched with local signs and French mouthings. These characterizations are in complete agreement with the data presented in this article. It is not clear whether what was labeled BKFS here should be considered to be a dialect of LSAF or a(n) (emerging) sign language on its own right. An answer to this question would require a huge amount of research on the sign languages in Africa. A starting point to answer this question can be the comparison of the syntactic structures of the respective sign languages.

Abbreviations

ASL	American Sign Language
BFSL	Burkina Faso Sign Language
LSAF	Langue des Signes d'Afrique Francophone

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