

# From Conventional Gestures to Sign Language: The Case of Yoruba Sign Language

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## 1. Introduction

Socially-constituted gestures embody form-meaning mappings that have been conventionalized within a linguistic community (Müller and Posner 2004, Kendon 2004). Many signs in sign languages are derived from such socially constituted gestures (Newport and Supalla 2000). For example, the Nicaraguan Sign Language (NSL), an indigenous sign language that has emerged from the Nicaraguan Deaf community, has many lexical items that are very similar to common gesture forms used by hearing Nicaraguans (Senghas 1994, Senghas, Özyürek, and Kita. 2002, etc.).

This paper contributes to the typology of sign languages by describing the properties of a less-known and less-studied African sign language—Yoruba Sign Language (YSL) as used in a small Yoruba signing community in Akure an urban city in southwestern Nigeria. I show that conventionalized Yoruba gestures used in the hearing environment constitutes the foundation on which YSL is built. Consequently, YSL, like NSL, has many lexical items that are very similar to gesture forms used by hearing Yoruba speakers. In spite of the strong connection between Yoruba gestures and sign language, YSL is distinctive in exhibiting a more complex and rule-governed structure.<sup>1</sup> Furthermore, mouthing (speech), another feature of YSL is discussed, leading to the conclusion that this sign language illustrates the convergence of mouthing, gesture and sign. While YSL is related to conventional gestures used by Yoruba speakers, it is independent from American Sign Language, the sign language used in Nigerian Deaf schools.

The remaining discussion proceeds as follows. In section 2, I provide a description of the hearing environment of the Yoruba deaf, and show that the multimodal nature of Yoruba language provides a nurturing setting for a sign language to develop. I show in section 3 that although the Yoruba sign language has a strong connection to the conventionalized Yoruba gesture system, it has taken its own course of development as an autonomous sign language due to interaction among members of a small deaf community. I conclude in section 4 by summarizing the findings of this study.

## 2. The hearing environment of Yoruba Sign Language

Although the specific statistics of the Yoruba deaf is unknown, the deaf have always been a part of the Yoruba nation (Oriẹ 2012). For example, there are Yoruba words for deaf and mute, namely, *adití* and *odi* respectively.<sup>2</sup> Further, the fact that deafness is believed to be a sporadic non-hereditary condition is found in the common belief that a deaf person is expected to have hearing children. This

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<sup>1</sup>Analytical issues involving phonology (handedness, hand shape, location, movement, etc.), morphology and syntax are addressed elsewhere in Oriẹ (2012).

<sup>2</sup>The examples in this paper are given in Standard Yoruba orthography. In Yoruba orthography,  $\epsilon$  = [ɛ],  $\phi$  = [ɔ], *Vn* = nasalised vowel,  $\varsigma$  = [ʃ],  $p$  = [kp], an acute accent [´] = H(igh) tone, a grave accent [̀] = L(ow) tone, unmarked for tone = M(id) tone, a tone-marked nasal = syllabic nasal.

belief is evident in the Yoruba saying *ki adití ba là lè gbó la fe n sórólójú omó rẹ̀* ‘that the deaf can hear a matter, that is why one speaks in the presence of his or her child,’ which means a deaf person’s matter is discussed in the presence of his or her hearing child who conveys the message to the deaf parent. A significant implication of this belief is that deaf people have a signed communication system within their home environment.

YSL, like other African sign languages, evolved outside a context of deaf education (see Nyst, this volume; Hausa Sign Language, Schmalin 2000, 2011; Dogon Sign Language, Pinsonneault 1999, Nyst 2010). Traditionally, deaf people live in hearing families and work and interact with others within the hearing community. Consequently, they do not form a distinct deaf community, but are interestingly able to communicate with the hearing community. What makes this possible?

The Yoruba linguistic environment, especially its multimodal nature, is conducive to non-verbal communication and the emergence of a sign language. Yoruba language employs three linguistic modalities. They are (i) the mouth, which is used in mouth talk or spoken language, (ii) the hand, used in hand talk or manual gestured language, and (iii) the face, used in eye/face talk or non-manual gestured language (Orie 2009). Competency in all three modalities is expected of speakers. A child who is slow in acquiring gestured language is reprimanded and labeled as *omó tí kó moju, tí kò mọra*, ‘a child who does not understand face and body language,’ which means a gesture-incompetent child who brings shame. Adults, too, may be labeled as gesture-incompetent if they are unable to accurately decode gestured Yoruba. As a result, a competent speaker of Yoruba is one who uses a gesture-rich form of the language. Conventionalized gestures are ubiquitous. Some examples are pointing gestures (such as hand points, finger points, lip points, eye points), number gestures, and verbal-motion gestures. The use of these gestures is regulated by socio-cultural factors including age, social status, context of language use, and so on (Orie 2009). The multimodal nature of Yoruba makes it possible for the hearing and deaf to communicate. Multimodal Yoruba—spoken language, manual gestures, and non-manual gestures—forms the core of home signs and signs used outside the home setting.

In sum, although the Yoruba deaf is unable to understand and speak the purely spoken form of the language, the rich gesture system that accompanies speech opens the door for communication between the deaf and their hearing environment.<sup>3</sup>

### 3. Yoruba Sign Language: from conventionalized gesture to sign language

A survey of deaf people in Akure demonstrates that there are (a) home signers, (b) micro gender-based deaf communities, and (c) educated bilinguals who are fluent in both YSL and the American Sign Language (ASL) introduced into the Nigerian deaf education system by Rev. Foster, the deaf African American preacher (Carroll and Mather 1997). Many educated bilingual deaf people live and work in Akure because the city has one of the ASL-based elementary schools in southwestern Nigeria. The sign language of home signers and micro-gendered deaf communities,<sup>4</sup> commonly referred to as Local Sign by bilinguals, is considered inferior to ASL by these educated bilinguals.

Whereas home signers basically use conventionalized Yoruba gestures in communicating, gender-based micro communities use a more advanced system. One gender-based community observed during my fieldwork is composed of thirty-two deaf women who are married and have hearing children. A descriptive account of their sign language shows that Yoruba conventionalized gestural system, like NSL, has taken its own course of development as an autonomous sign language due to interaction among members of this small deaf community (Orie 2012).

Numerals present evidence for the emergence of YSL as a distinctive system. For example, in gestured counting used by hearing speakers and home signers, the two hands are used to count.<sup>5</sup> The

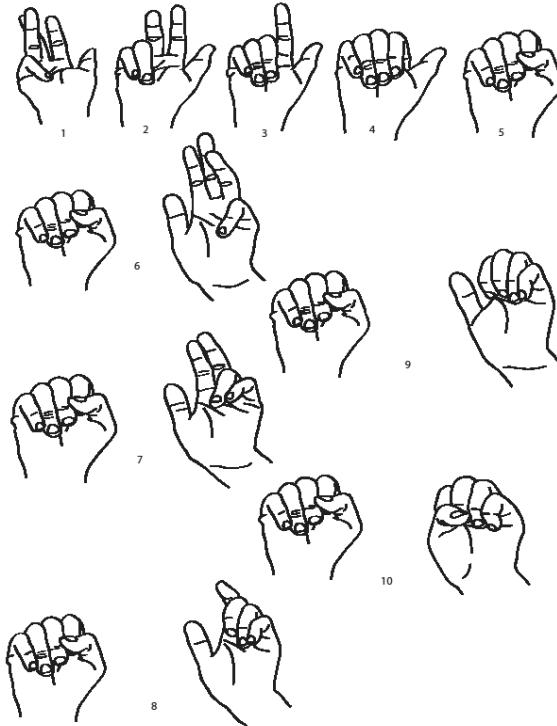
<sup>3</sup> Unfortunately, deafness is still stigmatized among the Yoruba especially in rural areas. The deaf are called *eni òrìṣà*, “one marked by the Gods; belonging to the Gods;” the mute are referred to as animals who put leaves in their mouths instead of using their mouths to talk—*jáwé sẹ́nubí odi*.

<sup>4</sup> Two gendered groups were found—a female- and a male-based group. Some of the women in the female group are married to the men in the male group; hence, there is interaction between the two groups.

<sup>5</sup> Although counting numbers (1,2,3, etc.) begin with the pinky, variations are attested, for example, the thumb may be used as a counting stick to count the pinky (1), ring finger (2), middle finger (3), index finger (4), and in order to count the thumb, which represents the number 5, the index serves as the counting stick; 6-10 are counted in the same way using the other hand (for details, see Orie 2012).

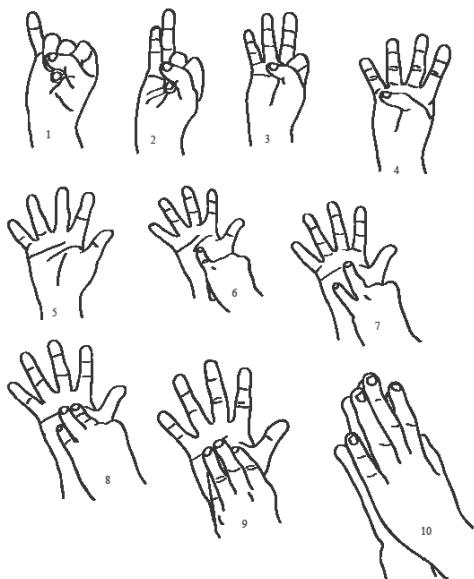
numbers 1-5 are counted with one hand, and 6-10 are counted using the second hand. Furthermore, counting begins with the pinky, then the ring finger, then the middle, index, and thumb. Each finger (pinky, ring, middle, index, and thumb) is bent toward the palm of the right hand. Then the numbers 6-10 are derived by holding the already gestured number 5 and adding the numbers 1-5 to it by bending the fingers of the other hand toward the palm, again beginning with the pinky, and moving left to right to the thumb. Thus, 6 is  $5 + 1$  (pinky), 7 is  $5 + 2$  (pinky and ring), 8 is  $5 + 3$  (pinky, ring and middle), 9 is  $5 + 4$  (pinky, ring, middle and index), and 10 is  $5 + 5$  (the two hands held apart as fists). This pattern is illustrated in Figure 1:

(1) Gestured Numerals: counting numbers 1-10



Like gestured counting, YSL counting begins with the pinky of the right hand (1) and runs through the ring (2), middle (3), index (4) and the thumb (5). However, contrary to the practice in gestured counting where the finger is bent toward the palm, in YSL the finger is held up in the space in front of the signer so that the hearer can see the sign. Further, in counting 6-10, the palm of the left hand is held up in the signing space in front of the signer, and 6 is formed by placing the pinky of the left hand on the right palm ( $5 + 1$ ); the pinky and ring fingers of the left hand are placed in the same position for 7 ( $5 + 2$ ), and so on. Crucially, the two hands interact in YSL counting: the right hand is the articulator of 1-5, and serves as the place of articulation for the left hand, which is the articulator of the numbers 6-10. On the other hand, as shown for gestured Yoruba, the two hands do not interact in counting 1-10. 1-5 is gestured using the right hand, and 6-10 is formed using the left hand. YSL counting numbers are shown in Figure 2.

## (2) Signed Numerals: counting numbers 1-10

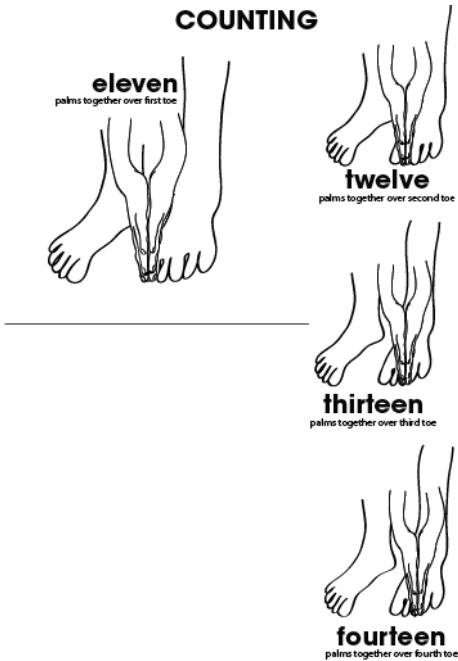


Comparing gestured and signed Yoruba, we see that the two have a pinky-led counting system in common unlike index-finger-led counting systems such as ASL, German Sign Language, and Korean Sign Language (Dohmas et al. 2011). This fact provides evidence for the connection between gestured Yoruba and YSL and demonstrates that YSL is independent from ASL, the sign language used in Nigerian Deaf schools.<sup>6</sup> Turning to the structural differences seen in the articulation space of YSL and gestured counting, we see that gestured counting is articulated on the palm of the speaker, while YSL numbers are articulated in the space directly in front of the speaker. Palm orientation is also strikingly different. In gestured counting, the hand faces the speaker whereas the hand faces the hearer in YSL. The orientation of the palm is toward the speaker when a speaker is engaging in self-talk, for example, when a speaker is thinking aloud. A final difference can be seen in hand interaction in counting 6-10. As shown, 6-10 gestured counting is two-handed but the two hands do not interact. The dominant hand counts 1-5 and the non-dominant hand counts 6-10. In contrast, although signed counting also uses the two hands, but the two hands interact directly in the articulation of these numbers. As shown, the non-dominant hand is the articulator while the dominant hand is the place of articulation in YSL. In general, YSL counting number system exhibits more structural features than gestured counting.

When counting beyond ten, home signers who use gestured Yoruba count fingers and toes, as shown in Figure 3:

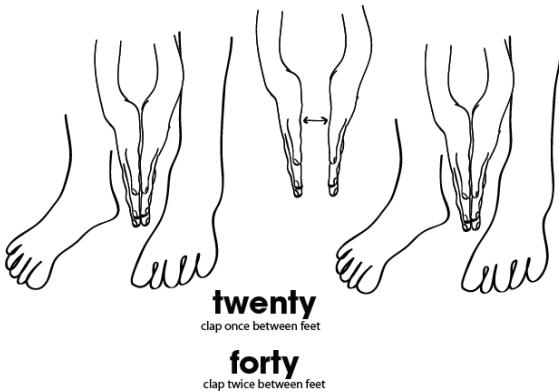
<sup>6</sup> The index finger leads in counting YSL and gestured Yoruba ordinal numbers. Therefore, Yoruba gesture and sign language use the pinky and index finger contrastively (Orie 2012).

(3) Gestured Counting Beyond Ten in Home signs: hands and toes



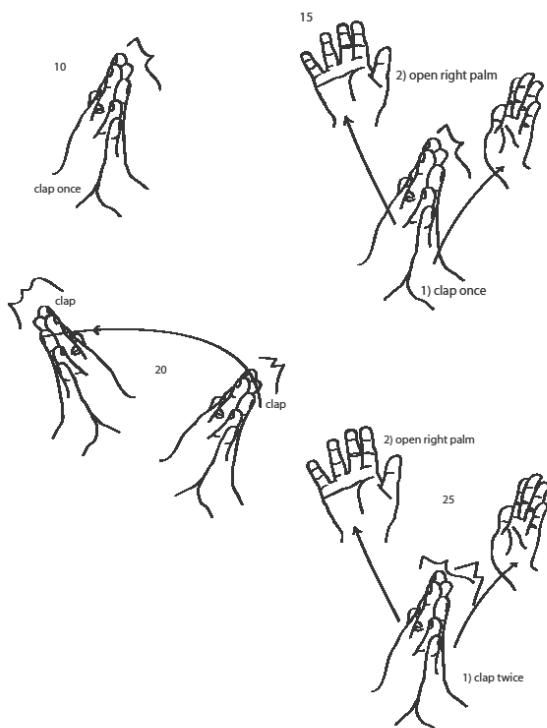
The numbers twenty (20) and forty (40) are hand and toe signs. Twenty is signed by clapping the two hands between the signer's feet, and forty is derived by clapping the hands twice between the feet, as follows:

(4) Counting 20 and 40 in home signs



However, only hand counting is attested in the micro deaf community. Numbers higher than 10 are derived using the principles of addition and multiplication. For example, 15 is formed by signing 10 first and then adding 5 ( $10 + 5$ ); 20 is derived by repeating 10 ( $10 \times 2$ ); 25 is formed by repeating the sign for 10 and adding 5 with either the right or left hand ( $10 \times 2 + 5$ ), as shown below:

## (5) Counting beyond ten in YSL: Hand counting



Contrasting home sign numerals above ten with the forms attested in the micro deaf community, we again see a general structural trend emerge. Gestured home signs are shown to use a proliferation of sign locations, in this case, hands and feet, for counting. On the other hand, counting is restricted to the hands in the small deaf community.

Research on sign languages has convincingly shown that the mouth can be active in two ways. First, it can be used as the articulator of sign words that are not based on spoken words (Boyes-Braem and Sutton-Spence, 2001, Schmalig 2000, Nyst 2007), as in these YSL words, SURPRISE and GOSSIP. As shown in below, SURPRISE is formed with a wide-open mouth, and GOSSIP is derived by using the right hand to partially cover a flapping mouth, that is, a mouth that is moving fast as if articulating sounds rapidly.

## (6) Mouth-based signs



Secondly, as shown for Adamorobe Sign Language (Nyst 2007) and Hausa Sign Language (Schmaling 2000), the mouth can be used to produce sign words based on words in a spoken language. Examples of YSL mouth signs that are based on spoken words are given below:

## (7) Mouthing of spoken words in YSL

Spoken word	Sign	Mouth Gesture	
kpò		closing and opening of lips	MANY
‘many’		for production of [p] and [o]	
fūfū		production of [f] and [u] +	WHITE
‘white’		SHOW OF UPPER TEETH	
dúdú		mouthing of dúdú +	BLACK
‘black’		index POINT TO THE SKIN	
kpukpa		mouthing of [p] [u] +	RED
		THUMB FIRMLY PRESSED	
		AGAINST THE INDEX TO SHOW	
		RED BLOOD UNDER THUMB NAIL	
baba		mouthing of [ba] [ba]	FATHER
‘father’			
mu		production of [p] and [u]	DRINK
‘drink’		with repeated gestured	DRINK

## 4. Conclusion

To sum up, the development of YSL from conventionalized Yoruba gesture confirms the view presented in work like Senghas (1994), Newport and Supalla (2000), Senghas, Özyürek, and Kita (2002), and Kendon (2004) that many signs in sign languages are derived from socially constituted gestures. YSL, like the Nicaraguan Sign Language, clearly illustrates how a gesture system can evolve into an indigenous sign language when used actively within a deaf community. This study also confirms the claim that African sign languages, evolved outside the context of deaf education (Nyst, this volume, Schmaling 2000, 2011). As mentioned, YSL developed outside the context of education. It is in fact not welcomed in deaf education circles. It is despised, rejected, and classified as inferior. However, it is resilient because it is rooted in the gesture system used by both hearing and deaf people (Orie 2012). Finally, this work confirms work like Schmaling (2000) and Nyst (2007) that the combination of oral (mouthing of spoken words) and manual features are unique typological attributes of West African sign languages.

## References

- Carroll, Cathryn and Susan Mather. 1997. *Movers & shakers: deaf people who changed the world*. San Diego: Dawn Sign Press.
- Domahs, Frank, Elise Klein, Korbinian Moeller, Hans-Christoph Nuerk, Byung-Chen Yoon and Klaus Willmes. 2011. "Multimodal semantic quantity representations: further evidence from Korean sign language," *Frontiers in Psychology* 2: 389.
- Kendon, Adam. 2004. *Gesture: visible action as utterance*. Cambridge: Cambridge University Press.
- Müller, Cornelia and Roland Posner (eds.). 2004. *The semantics and pragmatics of everyday gestures*. Berlin: Weidler.
- Newport, Elissa and Supalla Ted. 2000. Sign language research at the millennium. In K. Emmorey and H. Lane (eds.) *The signs of language revisited: an anthology in honor of Ursula Bellugi and Edward Klima*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Nyst, Victoria. 2007. *A descriptive analysis of Adamorobe Sign Language*, Ph.D. Dissertation University of Amsterdam. Utrecht: LOT.
- Nyst, Victoria. 2010. "Sign languages in west Africa," *Sign Languages: a Cambridge language survey*, Diane Brentari (ed.), p. 405-432. Cambridge: Cambridge University Press.
- Nyst, Victoria. This volume. "The significance of African sign languages for African linguistics and sign language studies," *Linguistic Interfaces in African Languages*. Orié, Olanike Ola. and Karen W. Sanders (eds.). Somerville MA: Cascadilla Press.
- Orié, Olanike Ola. 2012. *Acquisition Reversal: The Effects of Postlingual Deafness in Yoruba*, Berlin/Boston: Mouton de Gruyter De Gruyter Series: Studies on Language Acquisition 47
- Orié, Olanike Ola. 2009. "Pointing the Yoruba way," *Gesture* 9 (2), pp 237-261.
- Pinsonneault, D. 1999. *Lexique des signes utilisés par les sourds du Mali: Mali mEnnikEbaliw ka taamasiyEnw daNEgafe*. Mali: Centre Internationale d'Étude et de Coopération Internationale.
- Schmaling, Constanze. 2000. *Maganar Hannu: Language of the hands. A descriptive analysis of Hausa Sign Language*. Hamburg: Signum.
- Schmaling, Constanze. 2011. "Dictionaries of African Sign Languages: an overview," *Sign Language Studies* 12 (2), pp 236-278.
- Senghas, Ann. 1994. "The Development of Nicaraguan Sign Language via the Language Acquisition Process." In D. MacLaughlin and S. McEwen (eds.) *Proceedings of the Boston University Conference on Language Development* 19, pp 543-552. Boston: Cascadilla Press.
- Senghas, Ann, Asli Özyürek, and Sotaro Kita. 2002. "Encoding motion events in an emerging sign language: From Nicaraguan gestures to Nicaraguan signs." In A. Baker, B. van den Bogaerde and O. Crasborn (eds.) *Cross-linguistic perspectives in sign language research. Selected papers from TISLR 2000*, Pp. 119-130. Hamburg: Signum Press.

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