

- Shelton, D.L. (2005) (ed.). *Encyclopedia of genocide and crimes against humanity*. Detroit: Thomson Gale.
- Wilcox, S. & Wilcox, P. P. (2002). *Learning to see: Teaching American Sign Language as a second language* (2nd Ed.) Washington D.C. Gallaudet university Press.

Plurality of Lexical Signs in HSL

Ibrahim Garba Gwammaja

Abstract
Plurality in Hausa sign language is marked by a variety of ways. I shall begin by briefly discussing four of these ways and then strive to discover how plurality is indicated in Hausa sign language (HSL). Universally, the common position where the morphemes are placed in many languages include the attachment of morpheme (s) at the initial position known as prefix while other morpheme (s) appear at the final position which identified as suffix position. Though some languages have morphemes that are employed to be inserted within the stem of the word, like Hausa and some chadic languages. From this statement, people believe that the morphemes apply to the initial or final positions of the word stem and differ from one language to another language because of the different modalities exist among the languages. Hausa sign language (HSL) falls within the group of the languages that are produced by using the manual and non-manual parameters. It is also encounters to the spoken languages especially Hausa language based on the different modalities occurring in these languages. Most of the morphemes of HSL are linked at the final position of parameters (location and orientation) of each lexical sign to form plural segment. The paper aims to examine and demonstrate the morphemes of HSL and their functioning for the plural signs formation. It also presents an illustration of the singular lexical signs and how the plural lexical signs are formed. The data of this study were collected from participatory observation, pictures and video coverage at various centers where some of Hausa's deaf individuals gather at different times. The artist sketched the pictures for the purpose of this study and analysis was done via the Hand Tiers (HT) model which originated by Sandler (1989). The model consists of location 'hand shape', movement and location 'space or body' and the study also added the fourth parameter (orientation 'finger selection and palm facing') which was identified by Battison (1978) for detailed explanation. However, the study discovered the three processes of plural formation in HSL, namely: repetition, dual, multiple and change of movement and orientate

1.0 Introduction

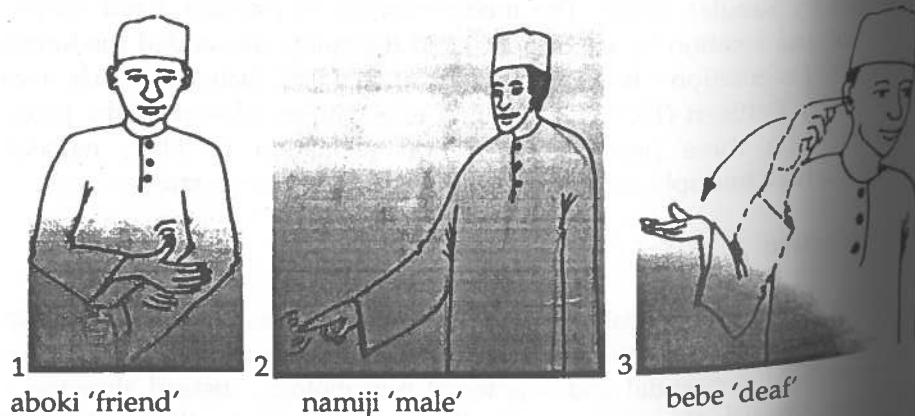
The notion of morphological processes in sign languages is a domain still in need of further investigation. Unlike spoken languages, sign languages generally avoid sequential and segmental morphology, instead showing a preference toward sign internal modification (Johnston 2006). "One of internal process is reduplication, which seems to be ubiquitous in the sign languages of the world. Similar to spoken languages, reduplication in sign languages has been shown to express variety of meanings, and an iconic

element is usually prevalent regardless of language modality. Since 'lexical' can mean so many different things, we cannot take lexical plurality to be a self-explanatory concept which could support an unequivocal definition" (Chierchia, 1998:74).

It seems much more practical to begin with the simple observation that not all plurals are alike, and that we are more willing to describe as lexicalized some of them rather than others. Previous studies on HSL are fairly restricted to just a few studies by Gwammaja (2000; 2002; 2013 and 2014) and Schmaling (2000; 2011; 2013; 2016; 2016 and 2017) states there are few studies on HSL so that there is no chance to compare the findings with other publicly available and linguistically annotated data. Therefore, this chapter will hopefully serve as an introduction to HSL plural. I chose plural aspect because there is no research conducted on this area and the chapter finds out how plural signs are produced in HSL.

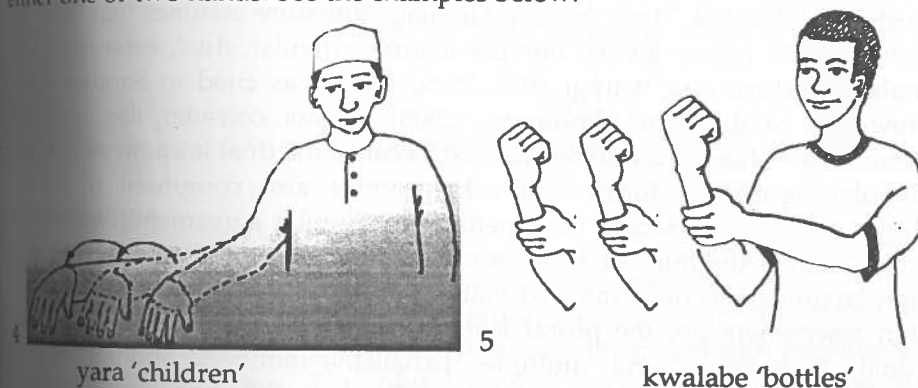
1.1 Singular Signs

Singular signs are referred to the sign of a single person or item. Singular signs in HSL are produced via the four parameters (hand, single movement 'straight, arc and rotation', location 'space or body' and orientation 'finger selection and palm facing') which are employed in any lexical sign production. Signs under this class are formed in the various grammatical categories such as *nouns, pronouns, verbs, adjectives, adverbs and demonstrative* etc. Some lexical signs are produced by single hand (active hand), while some signs are produced with two hands (active and non-active), which are followed with movement, location and orientation. Below we can observe some HSL examples:



1.2 Plural Signs

Plural signs deal with the sign of numbers from two and above, like two persons or items. Plural signs in HSL are produced with the four parameters (hand, double movement 'straight, arc and rotation', location 'space or body' and change of the initial orientation 'finger selection and palm facing' which are employed in any lexical sign production. Signs under this class are formed in the various grammatical categories such as *nouns, pronouns, verbs, adjectives, adverbs and demonstrative* etc. Signs in this class are formed with either one or two hands. See the examples below:



2.1 Methodology of Data Collection

Therefore, the population for this study are ethnically male deaf, due to the fact that lots of meeting places for the deaf are male-dominant. Male deaf are more visible and therefore more observable and easier to access. Many meeting places of deaf people are on the streets and women are infrequent to these places except on rare occasions. Two meeting places of deaf people are selected in each local government of the eight local governments within Kano metropolis. Five subjects (deaf) were selected from each of the meeting places of the eight local governments which resulted in the total number of eight (80) deaf. The subjects are congenital deaf individuals that using Hausa sign language as their primary language. Their ages range from 25 to 45.

However, this study examines daily conversation among Hausa deaf at Tudun Maliki Special School and some centers where Hausa deaf gather respectively. Also substantial information was collected via participant observation as well as taking part in casual conversation in the following deaf centers: - Tukuntawa, Kwanarjaba, Fagge, Gwammaja and Qoqi and I also converse with my deaf friends every day during this experiment.

In addition, lexical signs used by Hausa deaf people were systematically selected. However, some words in spoken Hausa were presented and the deaf were asked to produce the corresponding sign in

their native language (Hausa sign language), On the other hand, signs were presented to them in context and they were asked to demonstrate their meanings in their language. Photographs were taken and sketched by artists for detailed and easier analysis. Written documents on sign languages were also used. The research is qualitative in nature.

3.1 Plural Markers in HSL

Generally, number comprises singular and plural. Plural, however, can be further subdivided. Thus, the sign language literature assumes that there are four possible values for the number feature: singular, dual, exhaustive and multiple (Klima and Bellugi 1979, Padden 1983 as cited in Sandler 2006). However, Mathur and Rathmann (2005) do not consider the dual and exhaustive values as a number feature, because the dual is composed of two singular agreement forms and exhaustive is also composed of several singular agreement forms, i.e. repetition of singular agreement. Hence, they conclude that the number features can be restricted to singular or plural in sign languages. If one wants to maintain various kinds of plural, as many sign researchers do, the plural feature may be further differentiated into "dual", "exhaustive" and "multiple". Exhaustive number is applied when an event is distributed over persons. Hausa Sign Language has some markers in producing plural agreement. The markers comprise of repetition sign (agreement), dual sign and sign of multiple 'many'.

3.1.1 Repetition

In class repetition of a sign is made rather than adding a suffix to some element. It is a common process in producing plural signs of Hausa Sign Language. HSL makes use of different inflections within the plurality of nouns.

3.1.2 Dual

This dual aspect deals with two items, it occurs immediately after head of the following grammatical classes; noun, pronoun and demonstrative etc. The plural sign agreement has occurred when a singular sign attaches with dual aspect. See the dual sign marker in example (6) below.



6 - Dual marker 'biyu 'two''

3.1.3 Multiple

The multiple sign marker refers to a lexical sign (indicated plural marker) that stand as bound morpheme in plural formation. In this formation, singular sign links with a multiple sign to form the plural sign agreement in a Hausa sign language. This plural marker appears after the head sign agreement. Observe the marker of multiple items in example (7) below:



7 - Multiple marker 'da yawa 'many''

3.1.4 Change of Movement and Orientation

This is the fourth category of plural formation in HSL. Changing of movement and orientation in HSL can form the plural sign. Plural signs are formed by two movements (primary and secondary) and change of orientation whereas singular signs are formed with single movement and orientation.

3.2 Plurality in Hausa Sign Language

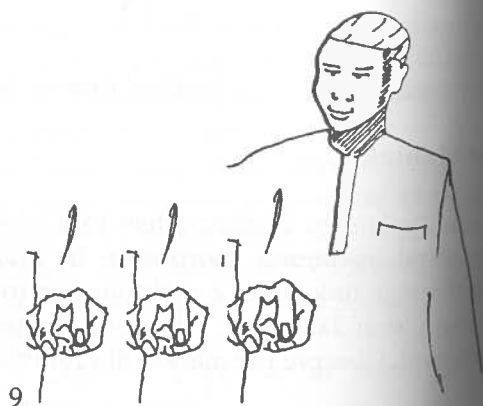
There is plurality in Hausa sign language grammar. Plural aspects occur in various grammatical classes which include nouns, pronouns, demonstratives and adjectives.

3.2.1 Plurality within Noun Signs

In Hausa sign language, plurality within noun signs occurs by repetition, dual and marker of multiple items. The examples of plural signs that are formed with the repetition marker are represented in examples (8-11) below:



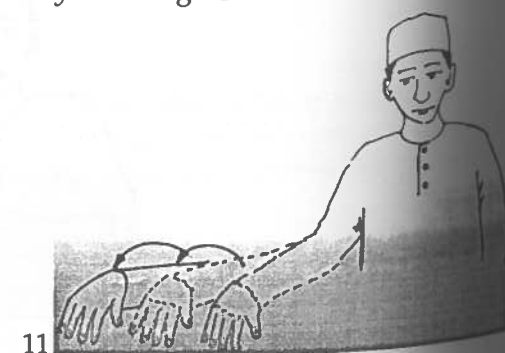
8 *yarinya* 'girl'



9 *yaramata* 'girls'



10 *yaro* 'boy'



11 *yaramaza* 'boys'

Plural formation via dual marker can be seen from the above figures. The lexical sign in figure (10) represents singular sign of *yaro* (boy) and when it is connected with a dual marker sign, and then the plural sign of *yara* (boys) is produced.



10 *yarinya* 'girl'



11 *biyu* 'two'



12 *yarinya* 'girl'



13 *da yawa* 'many'

As we can see in figure 10, the sign of *yarinya* 'girl' is formed and figure 11, shows the sign of *biyu* 'two'. When the two signs join together then the sign of *yarinyabiyu* 'girl two' (under function) or *yarabiyumatal* *yaramatabiyu* 'two small girl' (surface function) is produced. The same as in figures 12 and 13. If the sign of *da yawa* 'many' links with figure 12 sign then the sign of *yarinya da yawa* 'girl many' (under function) and the surface function of this should be *yaramata da yawa* 'girls'.

3.2.2 Plurality within Adjective Signs

Adjective refers to the signs that concern size, colour and quantification etc. HSL has plurality of dual and multiple markers within adjective. The plural signs by link of adjective sign with either dual or multiple markers signs. Below we can observe the plural formation. Examples:

14 *dogo* 'tall'15 *biyu* 'two'16 *da yawa* 'many'17 *gajere* 'short'18 *biyu* 'two'19 *da yawa* 'many'

As in figure 14, it shows the sign of *dogo* 'tall'. When the sign in figure 14 linkages with the sign in figure 15 then, the plural sign by employs of dual morpheme is formed as *dogobiyu* 'tall two' (under function) but the surface function of this is *dogayebiyu* 'two tall persons'. Figures 14 and 16 are formed the plural sign in HSL through the use of the multiple morpheme sign, if these figures connect together sign of *dogo da yawa* 'tall many' (under function) is formed. And the surface function of this plural formation should be as *dogaye* 'tall persons'. The same format applies to the plural sign formation as figures 17, 18 and 19.

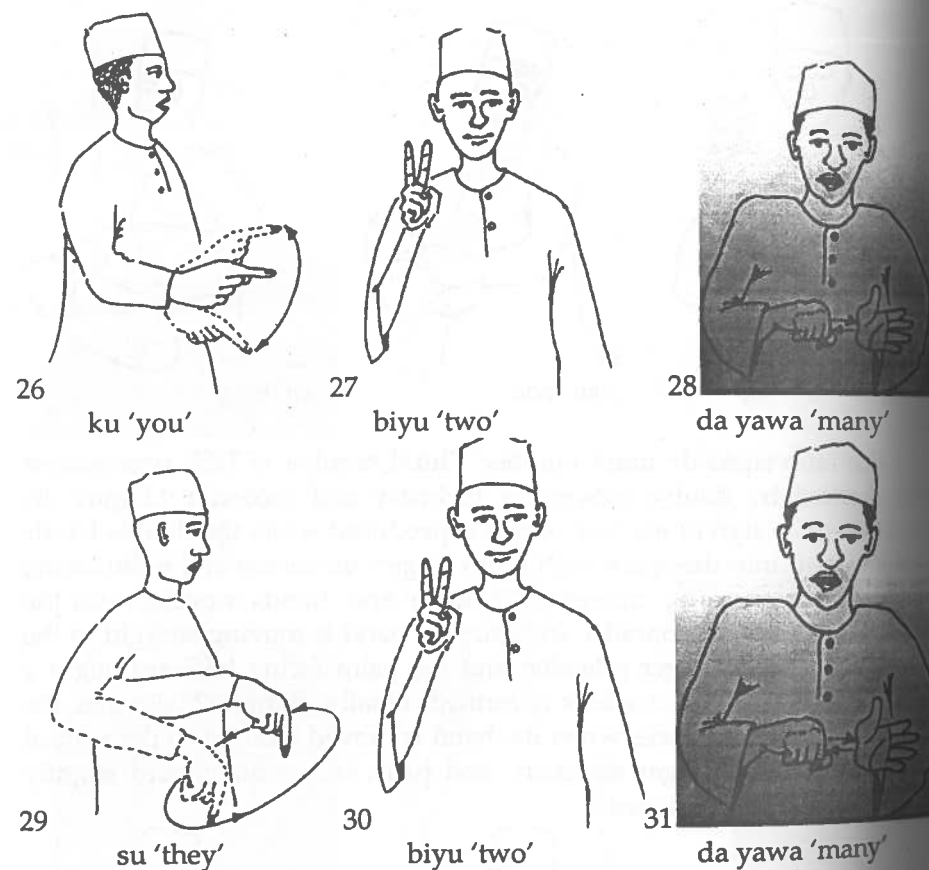
3.2.3 Plurality within Pronoun Sign

In pronouns, singular signs are formed with a single movement (primary 'straight, arc and rotate') and orientation (selection of finger and palm facing) whereas plural signs are formed with two movements (primary 'straight, arc and round' and secondary 'sweep, circular and turn') and changing of orientation. There is Plurality within pronoun in Hausa sign language. Observe the plurality in pronoun category:

20 *mu* 'we'21 *ku* 'you'22 *su* 'they'

Pronoun signs do mark number. Plural number in HSL pronouns is mostly marked by double movement (primary and secondary). Figure 20, demonstrates the sign of *mu* 'we' which is produced when the double hands moved straight into the space with index fingers extension and palm facing opposite slightly, turning movement is made and hands move toward the signer with palm facing parallel. In figure 21, hand is moving straight to the space with an index finger selection and the palm facing leftward slight a sweeping form right to leftwards is formed. Finally, figure 22, signifies the sign of *su* 'they', it produces when the hand is moved straight to the neutral space with an index finger selection and palm facing downward slightly round movement is produced.

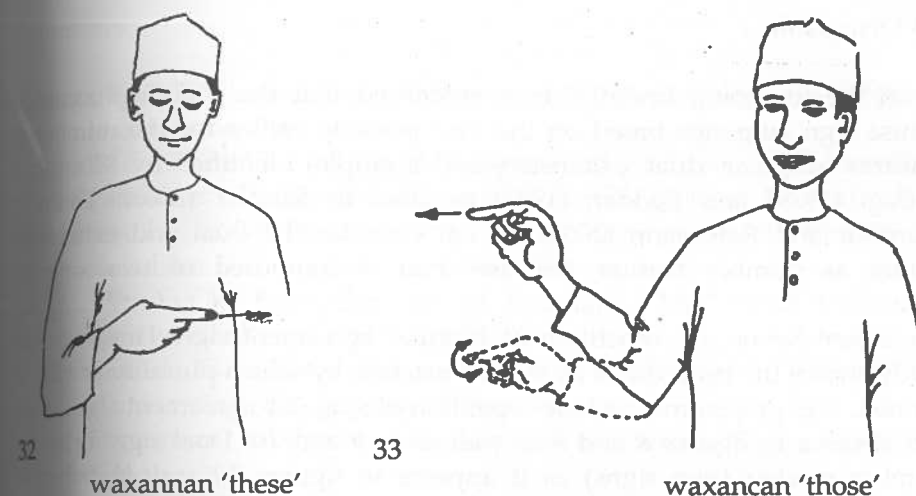
23 *mu* 'we'24 *biyu* 'two'25 *da yawa* 'many'



Therefore, the plurality in HSL pronoun should also be formed by the dual and multiple signs. When figures 23 and 24 are connected, the sign of *mu biyu* 'we two' (under function) is formed and the surface function of the *mu biyu* 'we two' simply means *two of us*. Figures 23 and 25 are formed together but the surface function of signs *mu da yawa* 'we many' (under function) when they are linked together but the surface function of signs *mu da yawa* simply means *mu* 'we'. In addition, the remaining figures 26 and 27, 26 and 28 as well as figures 29 and 30, and 29 and 31 are applied in the same format as it occurred in figure 23 and 24 as well as 23 and 25.

3.2.4 Plurality within Demonstrative Signs

Plurality occurs in the demonstrative signs. Plurality within demonstrative has to do with pointing to item or items at particular location (s). Below are the examples:



From the above figure, we can understand how the plural signs are formed in demonstrative class. Figure 32, demonstrates the plural sign (items) that point items at the location closer to the signer. The pointing would be repeatedly. And figure 33, illustrates the sign that pointed items at the location far away from the signer. This plural sign indicates the location of items which are far away from the signer. This form of plural is formed by double movement (primary and secondary). Figures 34 and 35 show how the singular signs agreement of demonstratives is in Hausa sign language (HSL).



34 Wannan 'this'



35 Wancan 'that'

3.3 Discussion

From the foregoing findings, it is evidenced that the plurality occurs in Hausa sign language based on the four possible values for the number of features (singular, dual, exhaustive and multiple) identified by Klima and Bellugi (1979) and Padden (1983) as cited in Sandler (2006). Thought, Manthur and Rathmann (2005) do not consider the dual and exhaustive values as number feature, because dual is composed of two singular agreement forms and exhaustive is also composed of several singular agreement forms, i.e. repetition of singular agreement sign. However, the study shows the procedures as well as markers by which plurality of HSL is formed. The procedures include repetition of singular agreement sign as we can observe in figures 8 and 9 as well as in 9 and 10. Dual sign forms by number marker (two signs) as it appears in figures 10 and 11, whereas multiple sign forms as result of merging multiple markers with any one of the open grammatical class like nouns and adjectives. In addition, pronouns plurality is formed in HSL, as we illustrate in figures 23 and 24, 23 and 25. The same as in figures 26, 27 and 28 as well as 29, 30 and 31. Still, the demonstratives plurality is also formed in HSL, as exists in figures 32 and 33. These results proven with four possible values for the number of features (singular, dual, exhaustive and multiple) identified by Klima and Bellugi (1979). The Hausa sign language have these four procedures only in forming plurality in HSL as for now because, this study was the first that focused on Plurality in HSL which employs the Hand Tier (HT) model propounded by Sandler (1989).

4.0 Conclusion

Hausa Sign Language (HSL) produces plural signs through manual and non-manual parameters as well as to perceive visually. The chapter discusses how the plural signs in HSL are formed within some grammatical categories like nouns, pronouns, adjectives and demonstratives. These grammatical classes are operating within the morpho-syntactic pattern. This chapter also illustrates pictures of how various plural signs are formed in Hausa Sign Language. However, this chapter discusses how HSL forms plurality by the following morphemes or markers, to mention them are repetition, dual, multiple and change of movement and orientation. These plural markers are formed via hand shape location, hand movement and space or body locations as well as finger (s) selection and where the palm is facing. In addition, the processes of plural markers found in other sign languages but they differ in term of formation. Finally, the chapter shows how the types of markers are employed in plural formation in Hausa Sign Language.

References

- Battison, R. (1978). *Lexical Borrowing in American Sign Language*. Silver Spring, MD: Linstok Press.
- Ciierchia, G. (1998). 'Plurality of Mass Nouns and the Notion of "Semantic Parameter"'. In *'Events and Grammar'*, 53-103. Springer Netherlands.
- Gwammaja, I.G. (2009). *Hanyar Sadarwar Bebaye Hausawa*. Kundin bincike na Babbar Difiolomar Hausa. Jami'ar Bayero, Kano.
- Gwammaja, I. G. (2013) "Hausa Sign Language Classifiers". In *Harsunan Nigeriya CSNL*. Vol XX111, pp 54-64.
- Gwammaja, I. G. (2014). *Dangantakar Harshe da Ishara: Nazarin Kan HanyoyinTasarifin Harshen Bebaye Hausawa A Kano*. M.A Thesis, Department of Nigerian Language and Linguistics. Bayero University Kano.
- Gwammaja, I. G. (2015). "Orientation as an Ultimate Parameter for the Lexical Sign in Hausa Sign Language" *Language Endangerment: Globalisation and Fate of Minority Languages in Nigeria*. A festschrift for Appolonia. Uzoaku Okwudishu Ndimele, O. (ed), pp. 347-354. M &J GrandOrbit Communication, Port Harcourt.
- Mathur, G. and Rathmann, C. (2005). "Unexpressed Features of Verb Agreement in Signed Languages". In Scalise, S. et al. (eds.), *Proceedings of Fourth Mediterranean Morphology Meeting*. University of Bologna, Bologna, Italy.
- Sandler, W. (1989). *Phonological Representation of the Sign: Linearity and Nonlinearity in A S L Phonology*. Foris, Dordrecht.
- Sandler, W & Lillo-Martin, D. (2006). *Sign Languages and Linguistic Universals*. Cambridge: Cambridge University Press.
- Schmaling, C. (2000). *Maganar Hannu: The Analysis of Hausa Sign Language*. Germany: University of Hamburg.
- Schmaling, C. (2011). *Maganar Hannu: Harshen Bebayena Qasar Hausa*. Littafina Farko. Kano: Good Image Printing Ltd.
- Schmaling, C. (2013). *Maganar Hannu: Harshen Bebayena Qasar Hausa*. Littafina Biyu. Germany: Helmut Buske Verlag Hamburg.
- Schmaling, C. (2016). *Maganar Hannu: Harshen Bebayena Qasar Hausa*. Littafina Uku. Germany: Helmut Buske Verlag Hamburg.
- Schmaling, C. (2016). *Maganar Hannu: Harshen Bebayena Qasar Hausa*. Littafina Huxu. Germany: Helmut Buske Verlag Hamburg.
- Schmaling, C. (2017). *Maganar Hannu: Harshen Bebayena Qasar Hausa*. Littafina Biyar. Germany: Helmut Buske Verlag Hamburg.