THE PHONOLOGY OF NAME SIGNS: A COMPARISON BETWEEN THE SIGN LANGUAGES OF UGANDA, MALI, ADAMOROBE AND THE NETHERLANDS

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Abstract

Proper names are often different from the rest of the lexicon in languages, spoken or signed. Several sign languages are compared (Sign Language of the Netherlands, Ugandan Sign Language, Mali Sign Language and Adamorobe Sign Language) with each other and the name signs compared to the general lexicon. These languages are not related to one another so that a comparison of name signs makes it possible to see what the status of name signs is in their phonology. The comparisons show that name signs are different from the rest of the lexicon in their phonology in terms of the frequency of use of specific features. There are in all these languages more one handed signs and more signs located at the head in the name signs than in the general lexicon. The explanation for these differences cannot be found entirely in the motivation for name signs.

1. Introduction

Proper names have a distinct status in the lexicon of any language. They often do not show morphological inflection and often obey different syntactic rules. For example in English proper names cannot take determiners such as *the Jane. There are few reports of proper names having distinct phonological properties.

Studies of proper names or name signs in different sign languages have concentrated mainly on explaining the origin of the names, in particular person names (Yau & He 1989 (Chinese SL); Supalla 1990 (ASL); Dubuisson & Desrosiers 1994 (LSQ); Hedberg (1994); Sutton-Spence & Woll 1999 (BSL); Kegl et al 1999 (Nicaraguan SL); Rainò 2000 (FinSL). These studies show that there are similar motivations for name signs across sign languages; they are often derived from personal characteristics, they use a handspelled form of the name in the spoken language, or they are a loan translation of that name. In Ugandan Sign Language (USL) for example the name of an informant was in the form of a fist hand shape with a knocking movement against the chin referring to the informant's habit as a child of sitting with his head supported in his hand. In Mali Sign Language (LSM) the name YACOUBA is made with a Y-hand, palm towards the signer and two contacts on the chest. In Sign Language of the Netherlands (NGT) we see the same pattern. The name sign INGE (see Fig. 1) is based on the physical characteristic of the person who wears glasses; the name sign MARIJKE is translated in two parts: MA meaning 'mother' and RIJK meaning 'rich'. The name INGEBORG is a combination of a fingerspelled 'I' and the translated sign BRUG 'bridge' although this is actually not the meaning of the part BORG 'castle'.

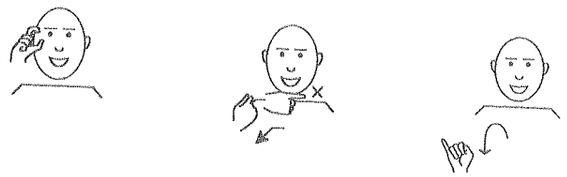

Figure 1: Examples of name signs in NGT

The studies mentioned above have also shown that there is a move in time within one sign language from mimicry, which does not make use of conventionalised lexical signs, towards conventionalised name signs. If a sign language mainly has name signs originally based on mimicry of a personal characteristic, then it might well be expected that the name signs have a different phonological structure from the lexical signs of that language. It could also be expected that the phonology of name signs across sign languages will be similar due to similarity of motivations. No other studies to our knowledge have explored the phonological structure of name signs and compared this to that of lexical nouns. In this study the aim is to look at the phonology of name signs in several unrelated languages and to explore possible differences with the phonological structure of the rest of the lexicon. Any differences found will be explored in relation to the motivation of the name sign.

2. Method

This study will examine the phonological properties of name signs using data from one European sign language, Sign Language of the Netherlands or NGT, and from three African sign languages, Ugandan Sign Language (USL), Mali Sign Language (LSM) and Adamorobe Sign Language (AdaSL). These languages are quite distinct from one another. NGT is used in the Netherlands and is assumed to be historically related to Langue des Signes Française. USL is used in Uganda; it is mutually comprehensible with Kenyan SL, was influenced by BSL and, on the basis of reports from USL signers, is considered to be currently heavily influenced by ASL. LSM is the indigenous sign language of Mali, West-Africa. Adamorobe Sign Language (AdaSL) is used in the village of Adamorobe, Ghana. It is quite distinct from Ghanaian Sign Language, which is related to ASL. Data on name signs was collected from these languages from native informants. Approximately 100 name signs were collected for each language with the exception of AdaSL for which only 17 name signs could be recorded. The comparison of the other 3 languages with AdaSL remains therefore limited. The comparison of the phonological structure between name signs and the rest of the lexicon will be done using NGT and USL since these languages have a reasonable database with phonological coding that could be used for this purpose. About 3000 signs of the general lexicon of NGT have been coded in the SignPhon database (Crasborn et al 2001) and about 900 signs of the general lexicon of USL.

The phonological aspects to be studied are the number of compounds, hand shape change, the number of hands involved, location and contact. We will consider firstly whether NGT, USL, LSM (and AdaSL) names differ in these five aspects from each other. Secondly we will consider whether any differences found relate to differences between signs in the general lexicons of the languages in USL and NGT. Thirdly the relationship between the motivation of names and their form will be explored.

3. The Comparison of Phonological Properties

The phonological properties of name signs in the four languages are presented in Table 1. Firstly the number of compounds were analysed and expressed as a percentage of the total number of name signs using the SignPhon definition (Crasborn et al 2001). Since the compounds necessarily consist of more than one sign unit, the number of sign units is greater than the number of name signs. Secondly the other four aspects – hand shape change, the number of hands involved, location and contact - were considered in relationship to the number of sign units. The hand shapes used will be considered later.

		NGT	USL	LSM	AdaSL
N =		*101*	*93*	*100*	*17*
Compounds %		19	3	6	12
*number of sign units**		*121*	*102*	*106*	*19*
hand shape change %		15	8	12	21
contact %		40	76	82	47
number of hands %	one	74	70	77	63
	two moving	17	26	18	32
	weak = location	9	3	3	5
	zero (non-manual)	0	2	1	0
location %	head	39	72**	66	47
	body	7	5	15	0
	weak hand	9	3	3	5
	space	45	22	14	47
	zero (non-manual)	0	2	1	0

* A compound with two parts is counted as two units
** The percentages do not add up to 100% here, since some sign units have more than one location

Table 1: Comparison of phonological properties between USL, LSM, NGT and AdaSL names

We see firstly that there are more compounds in NGT names than in USL and LSM (or AdaSL) names. There is little difference in the amount of hand shape change or in the

number of hands used; the majority of names are articulated with one-hand in all four languages. None of the four languages use non-manual names to any extent. The main area of difference between the languages lies in the number of sign units articulated with contact with the body and the percentage of sign units articulated in space. NGT has fewer signs with contact than USL or LSM, fewer signs articulated on or next to the head and more in neutral space. These last differences are clearly related to one another. NGT seems therefore to look different to USL and LSM, and possibly AdaSL in its phonology of name signs. USL and LSM seem to look quite similar to one another.

Is it the case that these differences can be explained by differences between NGT and the other languages in phonology in general or are these differences restricted to the name lexicon? In Table 2 the phonology of the lexicons of NGT and of USL are compared to each other and again compared to the phonology of their name signs.

		NGT lexicon	USL lexicon	NGT names	USL names
N =		*3084*	*964*	*101*	*93*
Compounds %		9	9	19	3
Number of sign parts		3815	1052	121	102
Hand shape change %		14	18	15	8
Contact %		34	X	40	76
Number of hands %	One	55	38	74	70
	two moving	35	39	17	26
	weak = loc.	10	23	9	3
	Zero	0	0	0	2
Location % *	Head	21	22	39	72
	Body	15	11	7	5
	Weak hand	10	23	9	3
	Space	55	45	45	22
	Zero	0	0	0	2

X= No data available on 'contact' for USL general lexicon.
* The percentages do not add up to 100% here, since some sign units have more than one location

Table 2: Comparison of the phonology of NGT and USL names and signs in the general lexicon

Comparing the phonology of the general lexicons of NGT and USL we can see that there are few differences. NGT has more one-handed signs and, related to that finding, fewer signs on the weak hand than USL. This is again related to the finding that NGT also has a higher frequency of signs in space. The phonological differences found between the name

signs in the two languages cannot be readily explained by differences in the general lexicons of the two languages.

When we compare the phonology of the general lexicon with that of the names in both languages, we see some clear differences. USL names show a slightly less use of changes than the signs in the USL general lexicon. NGT names include slightly more compounds than the signs in the NGT general lexicon. Both USL and NGT names have a greater use of the head as a location compared to the signs in their general lexicons. However, USL names show a greater use of the head location than NGT names. Both USL and NGT names have a clear tendency towards one-handed signs. Summarizing: names in USL and NGT show a stronger tendency to be one-handed and to be formed on the head.

The high level of one-handedness found in NGT and USL name signs seems therefore to be peculiar to this part of the lexicon. Probably this is also true of LSM although we could not examine the general lexicon for that language. Rainò (2000) also states that one-handed signs dominate the name signs of FinSL, whereas the main lexicon has a majority of two-handed signs. Far more name signs are articulated on the head than in the general lexicon. LSM also had a high percentage of signs on the head, so this finding is probably true for LSM as well. NGT did however have fewer name signs on the head than USL or LSM. NGT also had fewer name signs with contact than LSM and USL. The phonological differences we have found between the name signs of the languages and the general lexicon and between each other could be based in the motivation of the signs. This will be explored in the following section.

4. A comparison of the motivation of names

In order to be able to compare the motivation of the name signs across the languages studied, four different motivation types were identified:

1. *Descriptive Name Signs* or DNS (see Supalla 1990): these names, as discussed at the beginning of this paper, refer to a characteristic feature of a person, e.g. a person's appearance (BIG-EAR, LSM), their character (FUNNY, USL), or their job (ORANGE-SELLER, LSM). The NGT name sign INGE (see Figure 1) is an example of this category being based on the characteristic of wearing glasses. These name signs are not necessarily identical in every aspect to the equivalent lexical signs from the general lexicon.
2. *Initialised name sign*: the hand shape of the names refers to a letter in the spoken name of a person. This motivation is often found in combination with a loan translation or descriptive motivation. The NGT name sign INGEBORG (see Figure 1) is an example of an initialised name sign in combination with a translation. An example of the second type of combination is the NGT name WIM – the letter W replaces the V hand shape in the sign DANCE for someone who is a ballet dancer.
3. *Loan translations*: the name is a translation of (part of) the name (surname or family name) from the spoken language or a word that is associated with it. The NGT name sign MARIJKE is an example (see Figure 1); another is the surname Ros, meaning 'horse' in Dutch, which is signed HORSE.
4. Other

All the sign units identified (see Table 1) were analysed but those sign units for which a clear motivation could not be determined were excluded from analysis. This results in smaller numbers than in Table 1.

	Descriptive	Initialised	Loan transl.	Other	
	%	%	%	%	n
NGT	41	21	44	1	121*
USL	86	14	0	0	74
LSM	98	2	0	0	97
AdaSL	100	0	0	0	15

* Some NGT names have two motivations, e.g. descriptive + initialised.

Table 3: Categorization of motivation of names in the four languages studied

In Table 3 we can see easily that the motivation of NGT names differs clearly in diversity from USL and LSM names. The USL and LSM names are mostly descriptive whereas NGT names can be motivated using all three types. USL also has more initialised names than LSM. NGT has a relatively large group of loan translation names.

The large number of loan translations in NGT names cannot of course explain the phonological differences found between the general lexicon and name signs since these names are taken from the general lexicon. They could contribute to explaining why more name signs are articulated in space in NGT than USL since the general lexicon was also articulated more in space. It cannot be a total explanation however.

NGT also has a larger category of initialised names than the other languages; this means that hand shapes that are used in the hand alphabet related to that sign language occur. These hand alphabet signs are one-handed and articulated in space being taken from the hand alphabet used in NGT. This can explain to some extent the greater number of name signs articulated with one hand in NGT compared to the general lexicon. This cannot be the explanation of the greater number of one-handed name signs in USL however. USL use to use the two-handed hand alphabet of BSL and now uses the predominantly one-handed alphabet of ASL but it also has relatively few initialised name signs. The greater amount of initialised name signs might also explain why NGT has more name signs in space than USL or LSM, although initialised name signs are often combined with a personal characteristic and articulated on the body. Since initialisation uses hand shapes from the hand alphabet, a greater use of initialisation in name signs should also have an influence on the hand shapes occurring most frequently in name signs. This appears to be the case. An analysis of the most frequent hand shapes in the general lexicons of NGT and USL show these to be the B-hand (flat hand), Fist, Index, and 5-hand. The names in USL and LSM also use these hand shapes most frequently. NGT shows different frequencies in the hand shapes used in names. The four most frequent hand shapes in NGT names are: B-, Y-, C- and H-hand. This is a reflection of the greater amount of initialisation in NGT names.

The Descriptive Name Signs form a large category in all the sign languages studied here but were highly dominant in USL and LSM. We were curious to know to what extent the phonological differences found between name signs and the rest of the lexicon could

be explained by the phonological properties of this particular category. Those name signs for which a motivation could be established were therefore divided into two groups: DNS or non-DNS and re-examined on those properties that had shown differences in the earlier analyses: location on the head, one-handedness and contact. The results are presented in Table 4.

	Head %	1-hand %	Contact %	n
NGT general lexicon	21	55	34	2815
NGT DNS	64	82	59	50
NGT non-DNS	23	70	26	69
USL general lexicon	22	37	X	1052
USL DNS	78	76	82	92
USL non-DNS	10	90	30	10

Table 4: A comparison of some phonological properties between DNS, non-DNS and the general lexicons of NGT and USL

The larger amount of one-handed signs in name signs in both USL and NGT does not appear to be related to the properties of the DNS signs in particular. Both the DNS and non-DNS have a higher percentage of one-handed signs than in the general lexicon. The larger amount of signs with contact and with a head location is related to the descriptive motivation however. These are particularly evident in those descriptions that draw on physical characteristics of the person.

5. Conclusion

We have seen from the analysis of some aspects of the phonology of name signs that they are different from the phonology of the rest of the lexicon. This does not mean that forms are used that are not permitted in the rest of the lexicon but the frequency of use of particular features is different. We saw across the unrelated languages studied that there were more one-handed signs, and more signs located at the head in the name sign lexicon than in the general lexicon. Looking at the relationship between the motivation of the name signs and the phonology, the greater use of head location could be explained as a result of the sign motivation. Those name signs that are based on description have in particular more head location. They also have more contact. NGT has a considerable number of name signs based on initialisation and this in turn affects the frequency of hand shapes used; this is not clearly the case for USL since initialisation is less. The greater occurrence of one handed signs in name signs in both NGT and USL cannot be explained so readily. For NGT this might possibly be a result of the greater occurrence of initialisation but since this was a far less frequent motivation in USL, the greater occurrence of one handed name signs in that language must have a different explanation. This greater occurrence of one handedness has also been found in Finnish Sign Language and may possibly be a general finding but its total explanation has still to be found. This study shows that the name sign lexicon is distinct from the main lexicon in its phonology in quite unrelated languages.

The explanation can be sought in the motivation of the name signs but not totally. Sign languages are in this respect distinct from spoken languages where there is a far weaker relationship between meaning and form.

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Acknowledgments

Thanks go to the Deaf of Uganda, Ingrid Jansen (NGT), the Deaf of Bamako, Mali, especially Mohamadou Mankanguile and Kofi Adin from Adamorobe for helping with the collection and recording of the names.