

Emerging Sign Language in Uganda¹

G Pullen and JG Kyle

CDS, University of Bristol

Background

Research into spoken language development among the hearing population in isolated communities has shown that once individuals of differing linguistic backgrounds meet, attempts at communication lead to the development of a simplified morphosyntactic (grammatical) structures. Once children are born into such communities it has been found that certain linguistic forms become standardised and the pidgin develops further into a more complex language - a creole.

It can be expected that something similar would occur in a newly established deaf community. The major differences are that prior to introduction to other deaf people few of the members have had contact with or competence in sign language. Nevertheless deaf people may have some pseudo-linguistic competence if they have had previous *visual* contact with a spoken/ gestural linguistic environment but this is likely to have limited impact and lead to ineffective cognitive as well as linguistic processing (Sacks, 1989).

New linguistic environments such as the above are very rarely found and are of great potential interest to linguists in theoretical (e.g. syntax, phonology, morphology etc.) and applied fields of enquiry (e.g. psycholinguistics, sociolinguistics). In order to determine if sign language development in such communities mirrors that of newly established spoken language communities under similar circumstances a comprehensive and well-structured sample of data needs to be obtained.

Just this opportunity has arisen in Northern Uganda where there is a newly emerging deaf community, as a result of action by ADD - an organisation which works with disabled groups in developing countries. In conjunction with CDS in the University of Bristol, an initiative has been taken to set up groups of deaf people in Gulu in Northern Uganda. Initial video recordings made during

¹ This is the basis of application to ESRC and possibly to British Academy.

second visit to the region by Gloria Pullen, have revealed interesting characteristics of this new language among deaf people who have never been in contact with other deaf people. It is the aim of this project to collect more systematic data which can be subjected to linguistic analysis.

The outcomes of such a study are potentially enormous. We believe sign languages utilise features in their grammar which are more closely related to the processes which underlie languages and which may be closer to the pidgin roots of a language. When Aitchison (1986) explains how a language can develop she discounts the notion that there could be situations where people have no language, "Since all human communities engage in talk and teach their children to speak at an early age ..." (p192). She feels it is still important to examine language contact and how this leads first to pidgin and then to Creole. However, a more fundamental situation exists for deaf people where they are isolated from the spoken language of their community by their lack of hearing and are isolated from each other because of the low incidence of hearing loss. As a result, deaf people in their twenties may never have used a language. In the proposed project in Uganda, the emergence of a new language can be truly studied.

While language purists may claim that deaf people still communicate with their hearing families, this cannot be termed language anymore than primitive peoples were able to communicate desires in gesture and using tools. Deaf people in these remote communities will when brought together develop a basic form of language which can become established in the deaf children who will also be part of the development. In this sense we will be able to monitor the growth of a language. The proposed study is therefore of considerable significance in projecting a model of language origins.

Data already collected

In the second of two visits to the area by Gloria Pullen, videorecordings were made in two different locations in Northern Uganda. The different groups who appear on the video had access to different signing environments; many individuals had had no contact with other deaf people prior to coming to the meeting point at these two centres.

The first group(Gulu) consisted of approximately 40 deaf adults who had never previously met - of these approximately 2 had attended school and had developed some signing skills. The second group(Ngora) consisted of school aged children who were exposed to BSL, ASL and SSE.

Both groups had some physical contact with the hearing population and were likely to have developed some form of "gestural/sign" communication within

their own family and home environments. The recordings were made when the opportunity presented itself, after the participants had been together over a period of two weeks - prior to this there had been no visible interaction between the people.

The data is of considerable social interest but lack of additional information makes it incomplete for linguistic analysis.

The elicitation of the data in these recordings:

Town setting: a) story-telling (soldier incident) - target unknown

b) elicitation of signs by means of naming items from a poster filled with drawings. This activity appeared to reflect some kind of formal teaching by a native signer. Where signs were apparently articulated incorrectly the teacher would present the correct form and expect the participant to replicate the target.

School setting: a) elicitation of ASL² signs from picture book - this included one-sign utterances and some elicitation of morpho-syntax e.g. picture of a boy chasing a girl.

b) conversation - a very short extract of support teachers in conversation with children - very limited data.

The problem with the interpretation of this data as it stands is that:

a) we do not know the target forms that the participants are aiming for in the story-telling episode - we cannot therefore assess their command of the language adequately. We can identify consistency in their signing but we cannot test productivity, selectivity, contrastivity and appropriate use of signs. Moreover we could be dealing with a number of dialectal variants;

b) without more comprehensive background data we cannot say *when* these people acquired the apparently common signs e.g. past few days, always used them as part of their communication.

Therefore there is a need to collect more systematic data which can provide much more detail and offer the possibility of describing the pattern of language emergence.

² The school had imported some American Sign Language.

Aims:

1. Initially to identify the communicative³ competence of all deaf subjects involved in the study, ideally prior to their complete immersion within the newly established community.
2. To map the progressive development of individual's signing capabilities in both production and comprehension.
3. To administer a series of standard measures⁴ to detect the means by which grammatical features of sign language emerge - for example, we would predict that there will be high levels of mime, prior to the emergence of standard grammatical devices for placement, location and movement. Pictorial stimuli as well as real objects will be used to elicit sign constructions.

Informants:

Number: A population of 50+ people will be selected for individual study in 2 areas: Gulu and Ngora. Further groups will be identified in smaller townships as the main project on groupwork evolves.

Background: background information on all subjects will (wherever possible) be recorded, including socio-economic; gender; age; contact with the deaf and hearing communities prior to the study; health, social and family situation. Interpreters into spoken language will be available through the main project. No subjects will be included with apparent aphasia or mental retardation.

Age: There will be 5 samples: 5-10 years; 11-16 years; 17-25 years; 26-40 years and a more senior population of 40 years +. Ten informants will be selected within each age range, also ensuring that there is a mixture of differing socio-economic and linguistic backgrounds. Major differences in social and personal experience have occurred in these lifetimes. Older people will have experienced great instability through the time of the Civil War, and this will be taken into account.

³ Communication is defined broadly at this stage. The intended assessment will be a mixture of everyday tasks directed by intentional communication from others. Elicited communication will occur through role play and object play. Pictures are problematic.

⁴ These have to be developed and to become formalised. Work in other projects eg ESRC International Sign Project, will be helpful, although materials and procedures suitable for Developing countries have to be created.

Initial recordings indicate pre-occupation with military actions and civilian flight in the stories of the older two groups.

Methodology:

Elicitation of data: This will occur on 3 levels. It should be noted that there are severe problems in availability and usability of printed material in picture form. It is not a simple matter to use culturally appropriate pictorial material. In many cases elicitation will proceed directly through the use of concrete objects, by role play and by the direct miming of actions. Some control will be built into this process to ensure standardisation. Video stimuli would be complex in that we are unsure of the level of familiarity with the television picture.

a) Structured:

- single word level: naming items/activities/attributes and features of items depicted within a poster filled with drawings or objects;
- clausal level: story-telling - use of cartoons/picture books where possible, enabling identification of target.

b) Semi-structured: - descriptions

Predetermined subject matter, e.g. descriptions of family; work; preparation of a set meal; daily routine. All descriptions should be specified prior to filming and conversational partner/audience should be present at time of recording, as their responses are relevant to the interpretation of the data. Again we have to recognise that these conditions are ideal; there are many problems in working with deaf informants who have little experience of any language and have been deprived of much cognitive enrichment. Explaining of the scenarios to be described may be rather difficult prior to filming. The negotiation of the signed sequences will form part of the data to be analysed.

c) Unstructured:

Free conversation with a conversational partner - both being filmed. Content and context of the conversation will be analysed. The project will use ongoing conversations in relation to certain activities, e.g. group activities. This means that the researchers will need to be sensitive to the routines of the day and the opportunities for interaction.

Recording of findings:

For each informant a language sample of approximately 20-30 minutes in each of the above activities will be recorded on any one occasion. One recording will be made initially on entry to the research project (i.e. if possible prior to contact with other members of the established community) and thereafter at 3 and 6 months. Recording of data will be carried out using a camera *whenever possible*, though it has to be recognised that electricity supplies are intermittent in this area of Uganda; battery life of the camcorder may not be sufficient to allow filming of all interaction. In this case, comprehension tasks will be used where responses can be noted. Additional notes (including information on context, any interesting features or occurrences etc.) will also be made.

Structured elicitation techniques will have to be altered over time, but consistency will be maintained across all material given to all subjects throughout the entire data collection period.

Analysis:

Although the extent and variety of analysis has far-reaching implications and will certainly be attractive to linguists from varying disciplines, initially a thorough, phonological syntactic, semantic and pragmatic analysis can be implemented. Phonological analysis will consider the order of features acquisitions including location, movement, handshape and orientation, Morphosyntactic analysis will investigate the status of the signs used ie pre-lexical, lexical, functional within the context in which they arise.

Such analysis will have implications for those in the applied field, including child language researchers, sociolinguists and psycholinguists.

Outcomes:

A number of predictions can be tested directly, but it is the qualitative and direct linguistic enterprise which offers the greatest possible outcomes in charting the emergence and formalisation of sign language. We can see from our work with deaf children that early sign language is characterised by gross mime which gradually over time and through contact with others, becomes restricted to use of literal and then conceptual space. The development of devices for conceptual space are relatively late and it is predicted that adults within this community in Uganda may not develop them at all. At the same time, we can make a different prediction for deaf children: language development in the emerging deaf community will have a similar pattern, once initiated, to that of spoken language development in a comparable hearing community.

The study has implications for all areas of linguistic enquiry.

Appendix: Some Background on Uganda

Uganda is a republic in eastern Africa, bounded on the north by Sudan, on the east by Kenya, on the south by Tanzania and Rwanda, and on the west by Zaire. Uganda has an area of 236,036 sq km (91,134 sq mi). Much of the south is forested, and most of the north is covered with savanna.



Climate

Despite being located along the equator, Uganda has a mild, equable climate, mainly because of its relatively high altitude. The temperature ranges from about 15.6° to 29.4° C (about 60° to 85° F).

Natural Resources

Uganda's most important natural resource is its rich soil, which provides the basis for the diverse agricultural economy of the country. In addition, Uganda has exploitable deposits

of gold, copper, tin, and tungsten and ample waterpower resources for producing

hydroelectricity.

Plants and Animals

Uganda has a wide variety of plant life, from the mvuli tree and elephant grass of the Uganda plateau to the dry thorn scrub, acacia, and euphorbia of the southwest. The country also provides a habitat for many animals, some of which are protected in national parks. The chimpanzee inhabits the rain forests, and the elephant, rhinoceros,

eland, and hartebeest, as well as the lion and leopard, are found in the grasslands.

Population

Almost all the inhabitants of Uganda are black Africans. About two-thirds of the people speak a Bantu language; they live in the southern half of the country and include the Ganda, Soga, Nyoro, Nkole, and Toro ethnic groups. Most of the remaining people speak a Nilotic language; they live in the north and include the Acholi, Lango, and Karamojong ethnic groups.

Population Characteristics

The population of Uganda (1980) was 12,630,000; the estimate for 1993 was 19,344,181, giving the country an overall population density of about 81 persons per sq km (about 212 per sq mi).

Principal Cities

Uganda's capital and largest city is Kampala (population, 1980, 478,895), which is located near Lake Victoria. Other cities include Jinja (1980 preliminary, 45,060), Mbale (28,039), Entebbe (20,472), and Gulu (14,958).

Religion and Language

About three-quarters of Uganda's inhabitants are Christian, and approximately 16% are Muslim. The rest follow traditional religions. English, the official language, and Swahili, a

language of commerce, are widely spoken. Numerous indigenous languages are also used.

Education

The British educational system has been influential in Uganda, and missionary schools have played an important role in educating the people. In the late 1980s about 2.6 million pupils attended some 7900 primary schools in Uganda, and some

260,000 students were enrolled in more than 900 secondary, technical, and teacher-training schools. Uganda's leading institutions of higher education are Makerere University (1922) and Uganda Technical College (1954), both located in Kampala.

Economy

The Ugandan economy is largely dependent on agriculture. A good deal of the farming is at the subsistence level. The principal cash crops, cotton and coffee, are dependent on a

fluctuating world market. Uganda lacks access to a seaport and has few mineral resources. In addition, political considerations have sharply curtailed economic cooperation with its East African neighbors, Kenya and Tanzania. Unsettled internal political affairs in the 1970s and '80s hurt Uganda's economy as well, as did drought conditions in the north beginning in the late 1970s. The gross national product in the late 1980s was estimated at \$4.1 billion, or about \$260 per capita.

Agriculture

Crop farming and livestock raising are the primary occupations in Uganda. Cotton and coffee are the main commercial crops and constitute more than 90% of the yearly value of exports. Annual farm production in the late 1980s included some 184,000 metric tons of coffee, 18,000 tons of seed cotton, 414,000 tons of millet, 289,000 tons of sorghum, 331,000 tons of corn, 1.7 million tons of sweet potatoes, 2.5 million tons of cassava, 99,000 tons of peanuts, and 460,000 tons of bananas.

Manufacturing

Much of the manufacturing industry of Uganda is centered in the Jinja-Kampala-Tororo area and is related to the processing of the country's agricultural output. In the 1960s such basic goods as textiles, shirts, footwear, processed food, beer, soft drinks,

and matches began to be manufactured on a larger scale.

Energy

In the late 1980s Uganda annually produced about 655 million kwh of electricity. Almost all of the power was generated in hydroelectric facilities, especially the large Owen Falls project on the Victoria Nile near Jinja. Other hydroelectric plants are on the Kagera and Kiruruma rivers.

Foreign Trade

The cost of Uganda's imports generally exceeds the value of its exports. Major trade partners include Kenya, the United States, Great Britain, Italy, and Germany. Because of Uganda's lovely scenery, tourism was an important industry before the political turmoil of the 1970s and the '80s curtailed visits by foreigners. Uganda, with Kenya and Tanzania, was a member of the East African Community, an organization designed to foster economic cooperation and development, until it was dissolved in 1977 after much conflict among its three members.

Transportation

Uganda has about 6230 km (about 3870 mi) of paved roads, as well as some 22,100 km

(some 13,730 mi) of other roads. The country is served by about 1300 km (about 810 mi) of operated railroad track and is linked by rail with the Indian Ocean via Kenya. Ships on Lake Victoria link Uganda with Kenyan and Tanzanian ports. The national air carrier is Uganda Airlines; the main international airport is at Entebbe.

Communications

The government operates Radio Uganda, which broadcasts in English, French, Arabic, and several African languages, and a national television system that serves an estimated 90,000 receivers. About 55,000

telephones are in use. The official government daily newspaper is New Vision, published in Kampala.

Labour

The Uganda work force was estimated at about 4.5 million persons in the mid-1980s. More than 80% of the workers were engaged in farming, largely on a subsistence basis.

Local Government

Uganda is divided into 10 provinces, which are subdivided into 34 districts and 152 counties.

History

A composite of four kingdoms and many tribes, Uganda was a focal point of European rivalry before being ceded to Britain in 1890.

Recent History of Independent Uganda

After much experimenting, a federal constitution was promulgated in April 1962. The Uganda People's Congress won the elections, and Milton Obote became prime minister.

Independence was granted in October 1962. Dissension continued, however, and in May

1966 Obote sent the army into Buganda and drove the kabaka into exile. He then proclaimed a new republican constitution, which formally abolished the kingships, and became Uganda's first president of a unitary government. Bugandan recalcitrance, a falloff in the economy, and charges of corruption led to an army coup in January 1971. Power devolved upon the army commander, Idi Amin, who began eight years of misrule. He increased the size of the army, eliminated his political opponents, and began a reign of terror directed at the people of Buganda, Obote's Lango tribe, and their neighbors the Acholi. He also expelled 60,000 Asians from the country. By 1978

Uganda was bankrupt, and the government was dependent on massive loans from Arab states friendly to Amin. Uganda went to war with neighboring Tanzania in late 1978, and Tanzanian forces allied with Ugandan rebels drove Amin from the country early the following year. Three provisional presidents served before elections under a new constitution were held in December 1980. Obote's party was successful, and he became president once again of a changed Uganda. Once thriving, the nation had become an economic disaster, with an inflation rate of more than 200 percent, no consumer goods, few jobs, thievery rampant, famine in the north, and no effective government in the countryside. In 1982, after Tanzanian troops had been withdrawn, antigovernment guerrillas became active, and thousands of

young men were arrested, suspected of being guerrillas. Thereafter,

more than 100,000 Ugandans were killed or starved to death. A July 1985 coup overthrew the constitutional government; Obote fled the country and settled in Zambia. He was succeeded by National Resistance Army leader Yoweri Museveni after four days of fighting in Kampala in January 1986. By 1990, acquired immune deficiency syndrome (AIDS) had reached epidemic proportions: about 10,000 cases of AIDS, nearly 1 million people infected with the virus.

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