

Sign language 2016

References

There are hundreds on the web, many of them repetitive. Our main resources though will be:

- * Sandler W & Lillo-Martin D 2001. Natural sign languages. In *The handbook of Linguistics*, Aronoff M & Rees-Miller J (eds), Blackwell UK, chapter 22 p553-562. see also:
- * <http://www.cal.org/resources/digest/ASL.html> American Sign Language as a Foreign Language, Sherman Wilcox (note this site for other accurate digests of information in various areas of linguistics).
- * Steinberg et al 2001/2006. *Psycholinguistics: language, mind, and world*, 2nd edition, Longman, chapter 2.
- * Baker C 2011.

Defining deafness

<http://www.actiononhearingloss.org.uk/your-hearing/about-deafness-and-hearing-loss/deafness/describing-deafness.aspx>

Your level of deafness – mild, moderate, severe or profound – is defined according to the quietest sound, that you can hear.

- Mild deafness, lowest: 25-39 decibels. Find it difficult to follow speech in noisy situations
- Moderate deafness, lowest 40-69 decibels. Hearing aids may be needed.
- Severely deaf, lowest: 70-94 decibels. Commonly rely on lip reading, and use Signing
- profoundly deaf more than 95 decibels. Sign language is likely to be your first or preferred language.

1. Introduction

- a. Sign languages are *bona fide* linguistic systems, they are full languages.
“Sign language is a fully developed, authentic language which allows the users to communicate the same, complete meaning as a spoken language. Sign language is not gesturing” (Ladd 2003 cited in Baker 2011).
- b. Sign languages are not mime – in other words, signs are conventional, often arbitrary and do not necessarily have a visual relationship to their referent, much as most spoken language is not onomatopoeic. Sign languages, like spoken languages, organize elementary, meaningless units (phonemes; once called cheremes in the case of sign languages) into meaningful semantic units.
- c. “Sign language is a fully developed, authentic language which allows its users to communicate the same, complete meaning as a spoken language. Sign language is not gesturing. Gesturing is relatively unsystematic, and is used in an ad hoc way to express a small number of basic expressions (e.g. pointing to something that is wanted). We all use non-verbal communication to add emphasis to our speech.
- d. “In contrast, signing is a very extensive, structurally complex, rule-bound, complete means of communication. Sign language can perform the same range of functions as a spoken language, and can be used to teach any aspect of the curriculum. As part of an ethnic awakening, sign language has increasingly been seen as the natural language of Deaf people. Baker (2001:288)
- e. They are also useful objects of study in linguistics because of the insight they give into wider linguistic questions such as the universals of language. Sign language studies can help in many areas, such as L1 language acquisition.
- f. There are over 200 sign languages worldwide, with varying degrees of mutual intelligibility. What makes them different from spoken languages is that while the vocabulary will vary enormously, there seems to be a great similarity in their grammars.
- g. Sign languages are natural languages, in the sense that they have not been fabricated, but have arisen spontaneously whenever and wherever deaf people have an opportunity to meet each other regularly. Of course, contrived (invented) systems based on a spoken language do exist, (such as Signed English - a version of English in signs). Most signers are in fact bilingual.
- h. Sign languages have the wider features of spoken languages. For instance, different styles are adopted in different social contexts, storytelling and poetry exist. ASL (American Sign Language) for instance changes regionally, with ethnicity, age, and gender. There are synonyms.
- i. American Sign Language (ASL) is the most studied, therefore most material is available for that language. ASL shares no grammatical similarities to English. ASL has a topic-comment syntax, and is closer to spoken Japanese than to English. ASL is totally different to British SL. Most SL's developed independently, ASL is an exception in that it was influenced by French SL (see below).
- j. In 1981 Sweden recognised Swedish Sign Language as a native language.

2. Some history

(from http://faculty.valenciac.edu/aramussen/General_info/glossing_module_writ-unwritten.htm)

- a. In 1545, a Spanish monk, Frey Ponce de Leon, developed a system for teaching the deaf to speak. This was a major step forwards in that until then, inability to speak had been thought of as due to inability to reason.
- b. Around 1750, Abbe de l'Eppe established the first free school for the deaf in France. The abbot recognised that the Deaf tend to congregate together, and that they used their hands to communicate with. He did not though recognise French Deaf co-culture as a legitimate sociolinguistic community with their own unique language, Langue des Signes Française (LSF). L'Eppe took the signs used by the local deaf community and matched them to French words. For French words without a sign, he invented a sign, which led to signed French.
- c. In 1817, the first school for the deaf in America was established and world leaders, in this case from France were invited to help. One teacher, Laurent Clerc, was deaf himself and a product of the French deaf education system. Clerc and Gallaudet began to develop a system of signed English in the hopes of educating the American deaf community, which already had its own viable sign language. The local language prevailed. [Remember, America became independent in 1765].
- d. In the mid and late 1800s, the pendulum swung away from Sign, towards teaching the deaf to read write and speak INSTEAD OF Sign. Even in the deaf schools, Signing was forbidden. Sign was viewed as a hindrance to language; if Sign were to be allowed, it would stop the learning of real language.

Dickens lived 1812-1870. Turn to him, and similar writers, for conditions in schools etc.

Pendulum shift. A pendulum is a body suspended from a fixed support so that it swings freely back and forth under the influence of gravity. By extension, it is something that swings back and forth from one course, opinion, or condition to another. A pendulum shift or pendulum swing refers to when there are two extremes, a continuum between them, and the mood or fashion moves from one extreme to the other.

- e. In the late 1950s, William Stokoe started work as an English teacher at Gallaudet University. He began to suspect that the communication system used by deaf students was more than just “bad English” and started studying it systematically. He soon discovered he was working with a real language, completely different in nature to English. Even deaf people thought he was crazy - everyone knew that sign language was nothing more than “bad English”.. In 1965 he published his findings - *The American Sign Language Dictionary on Linguistic Principles*. This was the first time someone had ever seriously, with evidence systematically presented, viewed Sign as a full language. In the next sections we will consider what Stokoe found out, and what lead him to this conclusion.
- f. There is no international or universal SL. There is a sign form called Gestuno, developed by a committee of the World Federation of the Deaf. It is not really a language - it is more a vocabulary of signs that all agree to use at an international meeting. No one signs Gestuno as a native language.
In Europe there is a creole sign language developing, that some have started calling International Sign Language.[International = European!!] [A creole is a pidgin which has become the native language of a new generation].
- g. ASL is the fourth most common first language in the USA, so it is big and significant.
- h. ASL is now widely recognised in America as a foreign language, and it is taught in Universities, for credits.
- i. In 1988 there were 500,000 profoundly deaf people in the European Community (12 states), and it will be much larger now with the recent expansion. For these people, their local Sign is their first language.
- j. Foreign language study also involves learning the world, the culture and values of the people who share this language. Deaf culture is a sub-culture in its own right, and is now well studied by sociologists, anthropologists etc.
- k. Remember there are several dimensions. Deaf – Deaf, and Deaf – NonDeaf. Some totally deaf people learn to speak the local language such as English, and many of them learn to lipread. A few non-deaf people learn to sign their spoken language.

3. Iconicity

- a. Naive, early views were that signs are holistic gestures, each one representing a unitary concept. The signs were thought of as purely iconic, with a one-to-one relationship between the form of a sign and its meaning. Signs often function as morphemes. see iconicity, 7e below.
- b. An icon is a symbol or a picture that represents reality. Some signs are iconically based, and some aspects of grammar can be thought of as iconic in origin. Therefore, it would be a reasonable expectation that this iconicity would aid the acquisition of a sign language. A clear example would be the non-arbitrary signs for 'me' and 'you'. In spoken languages some children confuse these words, and some deaf children also confuse the signs. It seems that children are not attuned to certain aspects of signs such as iconicity - an aspect that an adult learner of sign might use to advantage. Children may view signs as abstract, but they are not aware of signs as icons. Here is a clear L1-L2 difference.

4. Phonology

- a. We can no longer say that signs are simply iconic gestures with no substructure. Sign possesses duality of patterning between:
 - 1) meaningful level - morphemes, words, phrases, sentences
 - 2) meaningless level - handshapes, locations, movements (in spoken languages, the sounds themselves)Signs, like words, are mostly conventions, **mostly arbitrary**.
- b. Remember: the characteristics of language. One feature was Duality of patterning. The sounds themselves have no intrinsic meaning, but they combine in different ways to form elements such as words that do convey meaning.
- c. Just as for vowels there are major features (jaw height, tongue position, lips rounding, nasalisation), words in Sign are based on
 - 1) handshapes
 - 2) locations
 - 3) movementsThis leads to something similar to minimal pairs in spoken languages, but with greater flexibility, and more scope for variation.

Remember. In phonology, minimal pairs are pairs of words or phrases in a particular language that differ in only one phonological element, such as a phoneme, and have distinct meanings

- d. Sign languages have constraints on the combination of elements in a level of language, just as spoken languages have constraints on the co-occurrence of sounds in syllables and words.
- e. Sign languages have assimilation, just as in spoken languages sounds borrow some or all of the aspects of neighbouring sounds. (eg beanbag said as bee-bag). Also spoken languages have assimilation and linkup. But signs flow together. It is NOT like semaphore [the traditional way of communication between two people in sight of each other using two flags and arm positions, each position representing one letter or number].
- e. An important difference between spoken and sign is that while in speech the phonemes are sequential, in sign the phonemes can happen simultaneously.

5. Morphology

- a. Sign languages have a great deal of morphological complexity. Verb agreement, and verbs of motion and location, have been studied in detail. Other features exist, and all sign languages studied have morphological complexity. Sign languages have a complex structure of morphemes.

6. Syntax

- a. Languages are highly productive. At the syntax level, this is partly due to recursion in relative clauses eg embedded subordinate clauses. ASL does have relative clauses, formed by a rule of subordination that allows recursion. This was only definitively established in 1980, by Liddell. [As the saying goes, “there are none so blind as those who do not want to see”.]
- b. Some early researchers argued that there were no syntactic rules governing word order in ASL. It is now widely accepted that ASL has an underlying structure and word order which can be modified by the words of grammar.
- c. Concerning the Universal Grammar Hypothesis, Sandler & Lillo-Martin (2001) conclude that in several domains of syntax, the constraints proposed to be universal (including the Coordinate Structure Constraint) can be demonstrated to apply to ASL as well as to spoken languages, and it is expected this will be true in other signed languages.
- d. Sandler & Lillo-Martin (2001 p547) conclude, that the examples presented, for syntax, phonology, and morphology, provide strong evidence that certain basic characteristics of language are universal, since they exist in two distinct modes.

7. Poetry (Advanced Sign)

- a. Sign languages have the the equivalent of prosody. They employ facial expressions, body postures, and rhythmic devices. Facial expression in speech is used as an optional and non-systematic addition and often communicates emotion. Facial expression in sign languages conveys things like the difference between a declarative sentence or a question.
- b. Poetry arises in established deaf communities. Sound is not necessary for poetry. Sign languages are flexible enough, and have their own devices, just as spoken poetry has devices like meter, rhyme, and alliteration.

8. How is Sign Language acquired by children?

- a. Children acquire languages automatically and systematically, including a sign language.
- b. Studies have been done on families where both parents are deaf, and both use Sign. The deaf children learn Sign in a similar process to normal children learning a spoken language.
- c. On average, in Spoken languages, the first words are learned around 11 months of age. Some early studies claimed an earlier date, 6-8 months, for signs. Why the difference?
 - 1) Meaningful gestures are mistaken for true signs
 - 2) The difference is real, but physiologically, a child can make the movements for signs before they can control their voice. This would imply that children are cognitively ready for words before the coordination of speech organs permits them to.
- d. The use of two word combinations seems to be attained at around 18 months for both signing and speaking children. Other grammatical developments such verb agreement also follow in parallel. (Sandler & Lillo-Martin 2001 p551)
- e. *Age of exposure to Sign.* Study of deaf children provides an ideal setting for investigating the critical age hypothesis for learning a first language. Even in caring home environments, the age at which deaf children are exposed to sign language varies, and can be as late as the age of five or later. When there is this late exposure, “home sign” tends to develop, but this is very limited. Newport (1990) found that the age at which exposure to language began is critical for the eventual acquisition of a complete grammar (Sandler & Lillo-Martin 2001 p553). Even after 50 years of signing, late learners differed from early learners. This is a major argument for beginning early, with Nursery schools and primary schools for the deaf.
- f. *New Sign languages.* In Nicaragua, a deaf school was established in 1979, and for the first time in the country, deaf people were brought together. A communication system of signs began to develop spontaneously, and was pidgin like. Older children as they grew kept the pidgin like version. Over time, among the very youngest deaf people, a more systematic and conventionalised language began to emerge.

For an interesting summary, and also reference to a bedouin sign language, see

[http://www.cell.com/current-biology/pdf/S0960-9822\(05\)00613-5.pdf](http://www.cell.com/current-biology/pdf/S0960-9822(05)00613-5.pdf)

If unavailable, there are other versions of this paper by Ann Senghas. 2005. Language emergence: clues from a new Bedouin Sign language. Current Biology vol 15 issue 12 pR463-R465.

9. Sign languages may be classified by how they arise

- a. Home sign is not a full language, but closer to a pidgin. Home sign is amorphous and generally idiosyncratic to a particular family, where a deaf child does not have contact with other deaf children and is not educated in sign. Such systems are not generally passed on from one generation to the next. Where they are passed on, creolization would be expected to occur, resulting in a full language.
- b. A village sign language is a local indigenous language that typically arises over several generations in a relatively insular community with a high incidence of deafness, and is used both by the deaf and by a significant portion of the hearing community, who have deaf family and friends. The most famous of these is probably Martha's Vineyard Sign Language of the US, but there are also numerous village languages scattered throughout Africa, Asia, and America.
- c. Deaf-community sign languages, on the other hand, arise where deaf people come together to form their own communities. These include school sign, such as Nicaraguan Sign Language, which develop in the student bodies of deaf schools which do not use sign as a language of instruction, as well as community languages such as Bamako Sign Language, which arise where generally uneducated deaf people congregate in urban centers for employment. At first, Deaf-community sign languages are not generally known by the hearing population, in many cases not even by close family members. However, they may grow, in some cases becoming a language of instruction and receiving official recognition, as in the case of ASL.

10. Other varieties

- a. Words signed using English grammar and word order is called SEE (Signed Exact English), MCE (Manually Coded English) or simply Signed English.
- b. When hearing people, interpreters, and Deaf people sign to a hearing person, they use a simplified version commonly called PSE (Pidgin Sign English). This is a range from very English like - (sign supported English) to very ASL-like, using mostly ASL grammar and words, but not using the finer points of grammar. Code switching can and does take place.

11. Notes from Baker 2011.

- a. About 1 in 1000 babies are born with some degree of hearing loss. This compares with the top genetic disease in Britain, which is Cystic Fibrosis, with a prevalence of 1 in 2500 (patient.co.uk). Also, compare the top chromosomal condition, Down Syndrome which varies with the maternal age. Age 20 is 1:1400. Age 30 is 1: 900. Age 40 is 1:100. The average incidence in America is around 1:700.
- b. Additive bilingualism. The modern way is to see deaf people as bilinguals, and this is helped by encouraging them to learn to sign first of all, followed by literacy in the local language of the non-deaf. In this way their abilities are recognised.
- c. *The Total Communication approach*. Learning a variety of languages and language skills, eg sign, signed, written etc. Compare the concept of plurilingualism in the Common European Framework of Reference (see www.scientificlanguage.com/provocative) for an explanation and extension to diglossic situations). They use different languages for different purposes. But, as Baker notes, this approach is often assimilationist, aiming to integrate the deaf with hearing people.
- d. Deaf people form a disadvantaged language minority, and often have their own community.
- e. The medical view of deafness sees deafness as a problem. Therefore the priority in education is to help the deaf to master the spoken and written language, leading to assimilation of deaf people with hearing people.
- f. A linguistic view is to see the situation as a form of bilingualism. The starting point is the assertion that deaf people can do everything except hear. They also possess their own sign languages which equal spoken languages, and, crucially, are the most natural languages for those born deaf.
- g. Deafness is difference, and has many advantages.
- h. Early signing enables a focus on the content of the curriculum, instead of continually battling with language. It enables subject matter such as maths, science etc to be taught through signing.
- i. It is very important to avoid language delay in deaf children.
- j. Among the deaf are differences of opinion about the first language, education and integration. Baker (2001:287) presents nine groupings.
- k. See Baker, for the nine subpopulations among the deaf.

12. The education of deaf students

- a. Depends on local approach and circumstances. Mostly tends to be assimilationist.
- b. In the best case scenario there are special schools classes and units, where the deaf are taught signing first, then go on to learn the local spoken languages.
- c. The idea that children should learn to speak, and hear with aids, is the traditional approach.
 - Deaf children should integrate into mainstream society;
 - the curriculum could not be taught through sign language but required majority language proficiency;
 - signing as a language was insufficient for full intellectual development;
 - sign language was only a temporary crutch for those for whom the majority spoken language was essential;
 - achievement in the curriculum requires oracy and literacy in the majority language (e.g. English).
- d. Total communication approach, see above
- e. Sign language as L1, and used to teach other subjects and languages.
 - children who learn Sign early develop better literacy skills in L2
 - Sign as L1 should begin as early as possible.

Steinberg et al 2001/2006

- a. p56ff. Signers of all systems need to learn finger spelling, not least to spell out unfamiliar place names.
- b. Signed languages are based on a sign for each morpheme of a spoken language. They follow the Morpheme by Morpheme system, MnM.
- c. MnM advantages:
 - 1) A learner simultaneously acquires the morphology and syntax of both the sign and related speech-based language. It can be used to communicate with the deaf, and helps in learning the local language. They learn for instance the morphology and syntax of English, which is completely different to the syntax structures of sign languages.
 - 2) It is easier for a hearing adult to learn MnM than an Independent Sign Language.
- d. Serious disadvantages:
 - 1) Children do not learn MnM easily, therefore it tends to be classroom based, like TEFL!!
 - 2) MnM is NOT preferred by the deaf community. It is regarded as cumbersome and tiring.
- e. In a speech-based language, individual words are structured together into sentences according to syntactic rules, the heart of the grammar of a language. ASL, too, has rules that govern the relationship between individual signs in a sentence. While the words and morphemes of sentences in languages such as Signing Exact English are signed in the air on a sort of imaginary two-dimensional blackboard and in a word-by-word linear sequence, ASL sentences are radically different. **They are not linear sequences but three-dimensional creations** (see Figure 2.3 for examples).

A signing space allows for combinations of meanings and the simultaneous blending of a number of meaning elements that cannot be produced linearly. As a result, signed sentences can be produced quickly and with a minimum of effort. Violation of the rules that govern the relationship between signs will lead to confusion, with the resulting occurrence of poorly formed and ambiguous sentences; very similar to what happens in speech when rules of grammar are broken.

In recent years it has therefore begun to be more common practice to encourage hearing parents of deaf children to learn to sign, and to expose deaf children to sign language as early in life as possible.