The People's Linguistic Survey of India

SIGN LANGUAGE

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The People's Linguistic Survey of India

The Bhasha Research and Publication Centre was established in Baroda in 1996 with a view to battling the erosion of bhashas and for conservation of oral traditions in the bhashas of marginalized communities. While the Centre's efforts have resulted in improvement of some of the Bhilli group languages, one feels pained to see how many Indian languages - the bhashas - have become extinct, and how rapidly! In the Census Reports of 1961, a total of 1652 mother tongues were mentioned. Several hundred of these are no longer traceable. During the first half of the twentieth century, India reportedly lost about one fifth of its languages, during the second half of the last century we have lost about one third of the remaining languages. If we continue to allow the dwindling of the bhashas at this rate, it is estimated that over the next fifty years, we will see the extinction of most of the bhashas spoken by the nomadic communities and adivasis, just as we will witness a large scale erosion of some of the main bhashas that have a rich history of written literature. In March 2010, Bhasha Centre held a 'Confluence of Languages' Consultation at Baroda. As decided during the concluding session of the Bharat Bhasha Confluence, Bhasha Centre initiated the work of preparing a People's Linguistic Survey of India (PLSI). The *People's Linguistic Survey of India* is the first known democratic intellectual attempt undertaken by a large collective of scholars and activists. It is carried out by volunteers and associates mobilized and trained through a series of workshops. So far nearly 85 workshops have been held in 35 States and Union Territories of India resulting into working volumes for all states as well as several general volumes. From its inception, Prof. G. N. Devy has chaired the PLSI and led the language mapping and conservation efforts.

What Is People's Linguistic Survey of India?

The People's Linguistic Survey of India is a right based movement for carrying out a nation wide survey to identify, document and understand the state of Indian languages, especially languages of fragile nomadic, coastal, island and forest communities.

The PLSI is carried out by scholars, writers and activists in partnership with members of different speech communities.

The main objectives of the PLSI are

To provide an overview of the living languages of India as 'they are' by 2011-2012.

To create an action network of members committed to sustainable development, irrespective of diverse social and cultural contexts, and of community custodians of life enhancing systems and traditions.

To build bridges among diverse language communities, and thereby to strengthen the foundations of multilingual, multicultural Indian society.

To create closer links between the government and speech communities, and to bring the universal developmental strategies of the government in harmony with ecologically and culturally diverse communities.

To develop teaching material and capability for promoting education in mother tongue.

To provide a baseline for any future survey of India's linguistic and cultural composition.

To arrest extinction of linguistic, cultural and biological diversity, nurtured by speech communities over generation, and to protect one of the few surviving bastions of linguistic diversity in the world in the interest of human security and survival.

The PLSI is not

A repeat, substitute, replacement or a sequel to Grierson's Linguistic Survey of India, a Sample Survey or a Census.

It is not an exhaustive survey of each and every language in existence in India.

It is not an exercise in standardizing or fixing the writing or the speech of Indian language communities.

The PLSI is

A quick, non-hierarchical, public consultation and appraisal, intended as an aid to cultural impact assessment of development, and as an acknowledgement of the self-respect and sense of identity of all, especially the endangered speech communities of India.The PLSI is guided by the National Editorial Collective, constituted voluntarily.

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Chief Editor's Introduction

A Nation Proud of Its Language Diversity

The Global Language Crisis:

Over the last two decades, scientists have come up with mathematical models for predicting the life of languages. These predictions have invariably indicated that the human species is moving rapidly close to extinction of a large part of its linguistic heritage. These predictions do not agree on the exact magnitude of the impending disaster; but they all agree on the fact that close to three quarters or over of all existing natural human languages are half in grave. There are, on the other hand, advocates of linguistic globalization. They would prefer the spread of one or only a few languages all over the world so that communication across national boundaries becomes the easiest ever. Obviously, the nations and communities that have learnt to live within only a single language, whose economic well-being is not dependent on knowing languages other than their own, whose knowledge systems are well-secure within their own languages, will not experience the stress of language loss, at least not immediately, though the loss of the world's total language heritage, which will weaken the global stock of human intellect and civilizations, will have numerous indirect enfeebling effects for them too. Since it is language mainly, of all things, that makes us human and distinguishes us from other species and animate Nature, and since the human consciousness can but function given the ability for linguistic expression, it becomes necessary to recognize language as the most crucial aspect of the cultural capital. It has taken us continuous work of about half a million years to accumulate this valuable capital. In our time we have come close to the point of losing most of it. Some of the predictions maintain that out of an approximately 6000 existing languages, not more than 300 will survive in the 22nd century. In absence of thorough surveys of languages, it is difficult to decide as to how many languages there really are in existence; and it is even more difficult to predict how many of these, and precisely which ones, will survive. History of every language has strange and some time completely unpredictable turns. The recent upward trend of some of the tribal languages in

India such as Bhilli can be an example. It defies all established Sociolinguistic assumptions. In history, some mighty languages, supported by mighty empires are seen to disintegrate and give rise to new languages under the influence of the ones on the power margins. But, while these amazing exceptions do exist, and will continue to emerge in future as well, it is a lived experience of people in countries like Nigeria, Mexico, Papua New Guinea, Indonesia and India that most languages are passing through the phase of a rapid depletion in domains of language transaction and word-stocks. The ability of speakers in non-global languages to express complex concepts is seen getting alarmingly reduced; and the semantic layering of words in most languages is wearing off.

Historians of civilization tell us that probably a comparable, though obviously not exactly similar, situation had arisen in the past some seven or eight thousand years ago. This was when the human beings discovered the magic of nature that seeds are. When the shift from an entirely hunting –gathering or pastoralist economies to early agrarian economies started taking place, we are told, the language diversity of the world got severely affected. It may not be wrong to surmise that the current crisis in human languages too is triggered by the fundamental economic shift that has enveloped the entire world, north or south, west or east. This time, though, the crisis has an added theme as a lot of the human activity is dominated by man-made intelligence. The technologies aligned with artificial intelligence have all been depending heavily on modeling the activity of the human mind along the linguistic transactions. The intelligent machines modeled after neurological and psychological paths of the mind are still not commonly in use. The language based technologies are now well entrenched partners in the semantic universes that bind human communities together. Therefore, those universes (or that universe?) are being re-shaped and re-constructed. In the given situation, though all this can be conceptualized in philosophic terms or presented in sociological formula, it is the life of the communities that is getting affected. It is particularly the communities whose voice does not get heard that are at the receiving end in the phenomenal transition. Having a language of your own, not yet placed within any system of orthographic representation, has come to be seen as a liability, a developmental debacle and a sign of backwardness. The knowledge stock in these languages is being trashed as non-knowledge. The countries named above, which

have developed over centuries a large number of languages – Papua New Guinea, 900; India –700; Indonesia—600; Nigeria—400; Mexico—300 – assessed through varying kind of estimates, have started forgetting that the rich variety is their cultural capital. In our country, the Census authorities decided after the 1971 Census exercise that there was no need to disclose the statistics for languages spoken by less than 10,000 persons, in turn making those languages 'non-citizens' of the republic of languages that India has been all through its history. The Census decision during the 1970s was, of course, not an abrupt or sudden decision. The process was initiated during the colonial times, the period when about 2 percent of India's languages were committed to print. Besides, it was a culmination of the intellectual history that was in the making over the last two centuries.

I first read the Grierson *Survey* during the 1970s. As a young reader of his monumental work what struck me most was not the amazing range of his knowledge of India's language situation, nor his determination to complete the task in the face of enormous challenges. These, it is needless to say, will leave no reader cold. The most overwhelming feature of Grierson's *Survey* that I noticed was the silent spaces in them. Even at the beginning of the twentieth century, which was Grierson's time, one notices through his account the beginning of a slow death spelt for nearly a hundred and sixty five out of the hundred and seventy-nine languages that he documented and described. I am not aware of any full scale comparison between Grierson's 'linguistic discovery of India' with a similar discovery by his eminent predecessor Sir William Jones. Jones was excited about the presence of 'different' languages in India, though of course he had no way to know how many of them existed in his time. In contrast, Grierson's description had no such 'eureka' about it. When one wades through the Grierson volumes, one returns home with the impression that these are in most part rustic varieties, fit only for housing childish songs and materials good enough for folklorists subservient to Anthropology. As against the less than two hundred languages that he described, he had over five hundred dialects to describe. The arithmetic of the great work is indicative of its essential bias. Perhaps, the beginning of it was embedded in William Jones's work, despite his apparent euphoria in discovering India as an unknown continent of civilization.

The Silenced Oral

Since the times of Sir William Jones major attempts have been made to propose and formulate cognitive categories for describing the bio-cultural diversity and knowledge traditions in India. The corresponding process of de-colonization too has produced attempts at synchronization of traditional knowledge with the colonial production of knowledge within the context of western modernity. While the clash as well as collaboration between what is seen as knowledge compatible with western cognitive categories and knowledge traditions rooted in the lives of predominantly oral communities continue to occupy the imaginative transactions in India, the main-stream institutions of knowledge – such as schools, universities, hospitals, courts, etc, -- have acquired forms that often leave out the complexities involved in the 'great transition of civilization in the Indian sub-continent.' This situation poses an intellectual challenge that thinkers in the twenty-first century have to negotiate. The most important among the cognitive categories that continue to carry the stress of this 'transition in civilization' belong to the field of creative expression in language and language description. Decolonization of Indian Aesthetics and Indian Linguistics, without an obscurantist turning back entirely to the past, is the larger task at hand for the contemporary Indian intellectual. In recent times there have been moves towards opening the question of descriptive categories in relation to language and orality. This has been the most central focus of the *People's Linguistic Survey of India*. Describing languages is the method that the PLSI has adopted for serving the purpose. Therefore, the PLSI has consciously decided to stay away from the question that Historical Linguistics obsessively follows, namely the question of the origin and the family of a given language. The PLSI has adopted, instead, an apparently ahistorical method of presenting merely a snap-shot of languages as they are in the early years of the twenty-first century. Apart from the principle of determining language identity in terms of its filial relation with a given Language Family, the most ardently followed principle from Jones to Grierson, and a lot beyond them, was that of the Language and Dialect Distinction. I decided after thinking through nearly three decades and after numerous prolonged discussions with my colleagues in communities and within the PLSI Editorial Collective to

avoid branding any of the languages as dialects. If a large number of people who speak a given language think that it is a language and not a dialect, then it better be accepted as a language, even if Linguistics may find the claim untenable. In any case, Linguistics, while it has made very impressive progress through the last two centuries as a field of study, has still a long way to go before it can address all and every mystery surrounding the behavior of verbal signs used by human beings for externalizing the complex and abstract transactions. The question of dialects too is one of those yet unsettled.

Language and Reality

. The process of human evolution holds many secrets. Our inadequate understanding of the process leads us to build apparently scientific hypotheses. But these hypotheses are such that even the exactly contrary hypotheses sound equally convincing.

. Language as a social institution, the nature of its exact origin, and the clear sequence in its formation are some of the mysteries in the epic text of human evolution.

. Was there an attendant sound when the universe came into existence? Did sound exist at all prior to the animal ability to perceive sound? Do the eternal sound — the *anahat dhvani* — and the sound by vocal chords belong to the same material type? Why did the human animal select regulation of breath by the vocal chords as the means for meaning-transaction, while through the eyes, or through body movement (as with honey bees) the meaning transaction might have been equally effective? Why did the human animal not cultivate those other means of expression with equal degree of obsession? All these questions can be answered at a theoretical level; but the answers do not cross the level of philosophical propositions that are true but at the same time not entirely so.

. Regulation of air by the vocal chords came to be the central mode of meaning transaction at some stage in the evolution of the intellect, subsequently numerical and letters—a higher order of signs--became surrogates for sound. Why did not then the script language entirely displace the sound language?

. While the theory of language acquisition inherent in the psychic structure of an infant has been formulated, why is that no theory as yet been postulated regarding the natural ability to perceive the *correspondence between* those geometrical shapes called letters and the human sounds called syllables?

. 'Meaning' consists of the meaning expressed through gesticulations, sound - regulation and script marks as well as through the silence and stillness outside the pale of these three. Therefore, what exactly constitutes 'meaning' has not been conclusively determined. At the most, the theories of meaning have remained at the level of philosophical speculation. Besides, it has not been possible so far to state with precision as to whether meaning is language, or if meaning exists prior to language, and if it is yet another social or metaphysical system completely independent of verbal language, capable of transcending human language. It is true that language as an experiential phenomenon is within the range of an individual's perception, but it is also true that an individual's ability to perceive the world is conditioned by verbal language. This has led us to conclude that language is a social institution.

. But is language 'meaning', or is it some material 'thing'? Is it a transcendental energy or a purely social institution? Is it a mere biological function given to the human body and mind in the process of evolution? Or is it all of these at once or in various aspects of the language phenomenon? All these questions need to be tackled fully despite Linguistics being the most developed among the human sciences.

. There is a well-established view that culture has no other expression but language, that the two are one and the same. It is maintained that cognition too would be impossible without language. A similar view on meaning too exists. In other words, 'language' has been used as a synonym for that which determines the outer boundaries of each transaction of the human intelligence.

. Even when the structure of dreams is not based on language content, it is conceptualized as being the same as language structure; the origin of dreams is in the ability to remember, in memory. In others words we are made to believe that memory cannot exist entirely in absence of language. Similarly, we have come to believe that

other psychic possibilities such as inspiration, imagination and reason cannot exist in the absence of language.

While these hypotheses seem unexceptionable, it is true that there are experiences that the human animal shares with other animals that show a marked absence of language based on sound regulation. Vertigo, or the fear of falling, and love or sensuous attraction are the main instances of such experiences.

. Phenomenology, which is one of the sciences of human understanding, maintains that language develops 'in tune' with the perpetually increasing scope of the phenomenon perceived by the human mind. As against this, it has been argued that the human grasp of the phenomenal reality increases in proportion to the ever-increasing ability of language to grasp complexities. It is indeed difficult to establish if a domain of experience exists independently and outside the domain of language. At the same time it is even more difficult to overrule the existence of such a domain of experience.

. Similarly complicated is the question whether those semi-verbal or verbal substances that scripts, grammars and cultures do not admit as language, are language or not? At best they find a place in marginal categories such as dialects and regional varieties.

. In fact, in the vast spectrum of meaning beginning with the mysterious origin of sound, to its pervasive spread through human space and time, human languages may at best be seen as dialects of the uninterrupted *dhvani.*

Similarly, in the total range of meaning capable of being conducted through material and symbolic means, the sound-symbol based language will have to be counted as a dialect of the total range of meaning.

Moreover, the process of the perpetual enlargement and deepening of our understanding of the world indicates the possibility that, perhaps, the language-substance known to us at the present stage of our evolution is but a partial fraction of the ultimate possibilities of the meaning substance available to the human senses. Therefore, in some ways language will have to be thought of as a part, as a dialect, of the totality of experience. And the totality of the human languages stabilized through words

and scripts will have to be seen as a dialect of the totality of all experience, all meaning and all sound as a single entity. .   Therefore, to be a dialect is not being left behind but to be the *avant-garde*.

One can understand the true nature of dialect if one conceptualizes it as a necessary component, not as a decaying remnant, of language whose destiny it is to be at the turbulent interface of an ever-expanding reality, to be the 'advance party' for grasping untapped frontiers of meaning. Histories of languages show that it has been their fate to keep catching up with the dialects, not the other way round. The destiny of dialects is to persist in their exploration of new possibilities of meaning, albeit without losing their relationship with the standardized languages to which they are bound by political and historical circumstances. The destiny of a dialect is to remain in currency but, unfortunately, with the value of the counterfeit.

To use a metaphor, dialect is like the amorphous substance surrounding a newly born planet, which is yet to find its ultimate rate of revolution. The planet environment of the language is defined by its dialects. It is through them that languages keep their ceaseless contact with the universe outside them, and therefore manage to belong to it.

So far it has been maintained that the speech variety of the dominant class acquires the status of the standard language, whereas the speech varieties of the dominated are seen as dialects. This view is based on the history of the English language in England. But going by this logic the Hindi spoken by the politically dominant Indians should have by now become the standard variety of Hindi, and the Marathi of the Maratha rulers should have become its main variety. This however has not been so. The Indian experience indicates that the history of English in England does not provide enough scientific foundation for a universal dialectology.

Besides, for cultures where the politically dominant class has often happened to be speaking a non-native language, and where the culturally dominant class has not been monolingual, dialects have to be thought about all over again..

If we set aside this questionable equation and postulate that language is a means of bringing the ever-expanding universe of experience within the grasp of human understanding, then it follows that dialects (or sub-languages) have a place of primary importance in the process of internalization of meaning for a given language.

. In this process, it becomes necessary to achieve a meaningful amalgamation of new sensations with the most ancient memories. While achieving this amalgamation, dialects put to stake their existence and identity, and bring to a given language an enriched sensitivity and ability to express.

. A language without dialects will tend to become a meaningless heap of clichés. In such a situation words will become faceless and materials without personalities. Perhaps such a language might achieve out of a grammatical purity the power of perfect abstraction, as in mathematics. But the sound tokens in it will be so impersonal that they will alienate the 'animal' user, with a living consciousness, altogether.

. A language must have a personality. Human beings will carry the burden of language only so long as they feel proud of belonging to their respective languages.

. For centuries, European linguists have made attempts at tracing the one original language, the mother of all languages. At the back of these attempts was the myth of the Tower of Babel, the one original dispersed into innumerable imitations. The 'fallen' dialects have come to be viewed as the backyard of the pure language. These backyards are really the sources of their being and growth. The dialects, sub-languages, language varieties and the backyard tongues are the energy that has kept the stream of Indian languages flowing. To continue the metaphor of the stream, the so-called main languages are its banks; the dialects are the flow of the stream. To keep the streams going is the minimum that we should do..

Marginal Voices

In the pre-colonial epistemologies of language, hierarchy in terms of a 'standard' and a 'dialect' was not common. Language diversity was an accepted fact of life. Literary artists could use several languages within a single composition, and their audience accepted the

practice as normal. Great works like the epic *Mahabharata* continued to exist in several versions handed down through a number of different languages almost till the beginning of the twentieth century. When literary critics theorized, they took into account literature in numerous languages. Matanga's medieval compendium of styles, *Brihad-deshi*, is an outstanding example of criticism arising out of the principle that language diversity is normal. During the colonial times, many of India's languages were brought into the print medium. Previously, writing was known and numerous scripts were already used for writing. Paper too was used as a means for reproducing written texts. However, despite being 'written', texts had been circulating mainly through the oral means. The print technology diminished the existing oral traditions. New norms of literature were introduced, privileging the written over the oral, and brought in the idea that a literary text needs be essentially mono-lingual. These ideas, and the power relation prevailing in the colonial context, started affecting the stock of languages in India. The languages that had not been placed within the print technology came to be seen as 'inferior' languages. After Independence, the Indian states were created on the basis of languages and are known as 'linguistic states'. If a language had a script, and if the language had *printed* literature in it, it was given a geographical zone as a separate state within the Union of India. Languages that did not have printed literature, even though they had rich tradition of oral literature were not given such states. Further, the State official language was used as a medium of primary and high-school education within a given state. Similarly, a special Schedule of Languages (The 8th Schedule) was created within the Indian Constitution. In the beginning it had a list of fourteen languages. At present the list has twenty-two languages in it. It became obligatory for the government to commit all education related expenditure on these languages alone. The 1961 Census of India had a list of 1652 'Mother Tongues'. In the findings of the next Census (1971), the figure was substantially reduced, and only 108 languages spoken by more than 10,000 were officially acknowledged. Thus, nearly 1500 'Mother Tongues' were silenced. Most of these languages are spoken by nomadic communities and the indigenous communities. Most of these languages are on way to a rapid extinction, if they are not already gone. The 'Margins' of the Indian language spectrum, constituted

by the Indigenous peoples and the nomadic communities are thus marginalized mainly due to the 'aphasia' being systemically imposed on them. The PLSI is a collective effort by the people of India to register their 'voices'. It is not a repeat, or a replacement or a substitute for the Grierson like *Survey*. The parameters for the accomplishments of those surveys are different. The PLSI is more of an informal attempt to bring to the world's notice the phenomenal language diversity in India, and by extension in the rest of the world, in the interest of keeping the biosphere alive, and preserving the democracy that India has acquired through a long and pitched struggle.

It is a daunting task to determine as to which languages have come closest to the condition of aphasia, which ones are decidedly moving in that direction and which ones are merely going through the natural linguistic process of transmigration. It may not be inappropriate to say that the linguistic data available with us is not fully adequate for the purpose.

In India, Sir George Grierson's Linguistic Survey of India (1903-1923) – material for which was collected in the last decade of the 19ᵗʰ century– had identified 179 languages and 544 dialects. The 1921 census reports showed 188 languages and 49 dialects 1921 census.

In 1971, the linguistic data offered in the census was distributed in two categories, the officially listed languages of the 8ᵗʰ Schedule of the Constitution, and the other languages with a minimum of 10,000 speakers each. All other languages spoken by less than 10,000 speakers were lumped together in a single entry 'Others'.

Considering how complicated the census operations are in countries that have large migratory populations, and particularly how much the accuracy in census operations is dependent on literacy levels, it is not surprising that the data collected remains insufficiently definitive. What is surprising, however, is that as many as 310 languages, including all those 263 claimed by less than 5 speakers, and 47 others claimed by less than a 1000 speakers, should have reached endangerment. These 310 'endangered' languages count in the 1652 'mother tongues' listed in the census of 1961, however debatable the

methodology followed in that particular census may have been. In other words, a fifth part of India's linguistic heritage has reached the stage of extinction over the last half-century. Moreover, the method of survey adopted over the last three census enumerations allows scope for overlooking any further depletion in the numbers.

One fears that this may not be the situation in any one country alone, that this may be so practically all over the world, since the contextual factors responsible for language decline in one country also form the context of modernity in other nation states in the world.

Language loss is experienced in India not just by the 'minor' languages and 'unclassified dialects', but also by 'major' languages that have long literary traditions and a rich heritage of imaginative and philosophical writings. In speech communities that claim major literary languages such as Marathi, Gujarati, Kannada and Oriya as their 'mother tongues', the younger generations have little or no contact with the written heritage of those languages, while they are able to 'speak' the languages as 'native speakers'. This linguistic condition may be described as the condition of 'partial language acquisition' in which a fully literate person, with a relatively high degree of education, is able to read, write and speak a language other than her/his mother tongue, but is able to only speak but not write the language she/he claims as the mother tongue.

Language loss, linguistic shifts and decline in the linguistic heritage cannot be blamed on the structural factors alone. There is, for instance, at least as a theoretical constitutional provision the Article 347, which reads:

> On a demand made in that behalf, the President may, if he is satisfied that a substantial proportion of the population of the State desire the use of any language spoken by them to be recognized by that State, direct that such language shall also be officially recognized throughout that State, or any part thereof, for such purposes as he may specify.

There appears to be another and more overwhelming factors at work, and that is the development discourse in a rapidly globalizing world. One notices now in India, and in other Asian and African countries, an overpowering desire among parents to educate their children through the medium of English or French or Spanish in the hope that these languages will provide a certain visibility to the children when they grow up in the international market of productive labour. This desire has affected the schooling pattern in favour of education through an international language not witnessed in any previous era.

During the early years of the nineteenth century, an interesting debate occupied the centre-stage in the social reform movement in India, in which the Bengali intellectuals kept asking for education through the English language medium, while an English officer like MountStuart Elphinstone held that the schools in Indian languages would be desirable. The argument came to an end when in 1835, Lord Macaulay's *Minutes on Education* held that English be the medium of all serious education in India, a view endorsed soon after in Wood's *Dispatch*. Quite remarkably, it was since then that literatures in modern Indian languages showed a significant creativity. These arguments are not intended to take away any substance from the view that mother tongue education is the most suitable for young learners. I am only pointing to the fact that a lack of access to the mother tongue education is not enough of a cultural condition to destroy human creativity. The more significant condition is of having no hope of survival of a community.

When a speech community comes to believe that education in some other language alone is the way ahead for it for its very survival, the given community decides to adapt to the new language situation. It would be pertinent therefore to consider if there is something inherent in the dominant development discourse in the contemporary world that requires diminishing of world's language heritage, or demands a kind of a *phonocide*. And, if that is the case, the future for the human languages is frightening. The communities that are already marginalized within their local or national context,

the ones that are already in minority within their cultural contexts, the ones that have already been dispossessed of their ability to voice their concerns, are obviously placed at the frontline of the *phonocide*.

In India, universal education is the obligation of parents and the right of the child. State sponsored schooling is almost free and clearly affordable for the most deprived. There is provision of mid-day meals for children so that food insecurity does not drive children away from the classrooms. The federal government and the state governments treat school education as one of their primary responsibilities. Child labour is officially made illegal, and even higher education is made free for women in many states. There are provisions for educationa l reservations for the children beonging to schedule castes and scheduled tribes as also for children from other backward communities. The Indian State operates primary schools in nearly fifty Indian languages and several foreign languages. Adult literacy and non-formal schooling are continuously promoted. There are constitutional guarantees built in the educational programmes aimed at promoting all listed languages.

In spite of such efforts, many marginalised languages and indeed some of the 'major' languages seem to display an inscrutable indifference towards their upkeep. An unimaginably large number of children seem to join schools that charge exorbitant fees and use the English language as the medium of instruction. When a child joins a school giving instruction in an Indian language, it is seen as the beginning of a social disadvantage. Under these circumstances, the preservation of languages, particularly the ones that need really very special efforts aimed at their preservation, is quite a daunting task, and not the one that can be accomplished merely by initiating structural changes

Conservation or preservation of languages needs to be seen as being significantly different from the preservation of monuments. If language as a social system has an objective existence in the sense that dictionaries and grammars of languages can be prepared, and languages can be transcribed, orthographed, mimeographed, recorded on a tape by way of

documents and objects; but, essentially Language does not have an existence entirely free of the human consciousness. Therefore, a given language cannot be as completely dissociated from the community that uses it. Quite logically, therefore, preservation of a language entails the preservation of the community that puts that language in circulation.

Between the collective consciousness of a given community, and the language it uses to articulate the consciousness, is situated what is described as the "world view" of that community. Preservation of a language involves, therefore, respecting the world-view of the given speech-community. If such a community believes that the human destiny is to belong to the earth and not to offend the earth by claiming that it belongs to us, the language of that community cannot be preserved when we invite the community to share a political imagination that believes in vandalizing the earth's resources in the name of development. In such a situation, the community will have only two options: it can either reject the *Utopia* that asserts the human right to exploit the natural resources and turn them into exclusively commercial commodities, or it can reject its own world view and step out of the language system that binds it with the world view.

Indeed, the situation of the languages in the world, more particularly the languages of the indigenous peoples, marginalized and minority communities and of the cultures that have experienced or continue to experience alien cultural domination, has become precarious. The alarm to be raised will not be even a day too soon. Yet, it would be ambitious to hope that this task can be achieved even in a small degree by merely placing the onus and the responsibility on the State parties. The mission will have to be carried out, through the agency of the nation-states, and independent of it, through a large number of civil society actors –universities, literary and linguistic academies, good-will societies and associations, non-governmental organizations, individual scholars, researchers and activists. Creation of texts, dictionaries, glossaries and grammars in the declining languages will be of use; documentation, museumization and archiving too will be of some use; but if the languages are expected to survive, the speech communities need to be given the dignity and respect

that they deserve, not as anthropological others, not as the last and under-developed traces of the self, but in their own right as deserving of respect because of what they are.

It takes centuries for a community to create a language. All languages created by human communities are our collective cultural heritage. Therefore, it is our collective responsibility to ensure that they do not face the global phonocide let loose in our time.

The *People's Linguistic Survey of India* conceptualized during the early years of Bhasha Research Centre, an idea that found a clear articulation in the *Bhasha Sangam*, 2010, held at Baroda under the title *Language Confluence at Ground* Zero, has at its heart the concerns stated in my comments. I was fortunate to be asked by the large assembly, in which representatives of 320 Indian languages were present, to lead the PLSI. The first workshop in that direction was held at Kyelang in Himachal Pradesh, in freezing cold when the rest of India suffered the summer heat. I am not able to say how many such workshops were held since then, for rarely do I remember a day when I have not been in the middle of the survey. This required my traveling through all states and union territories of India. Though, in the past, I had traveled to many states for other work, and to many other countries, the PLSI sojourn brought to me an India that I had never before seen and had only vaguely imagined. People responded enthusiastically to my call for sitting down to write about their languages. These included vice-chancellors of universities as also bus-drivers, scholars as also street singers, law keepers as well as criminals, men as well as women, young as well as old. They sat together, listened to me, spent their time and wrote down what they knew of their languages. Most of them do not know what grammar is. They are not aware of the International Phonetic Apparatus. They have never heard of Panini and Bhartrihari, or of Saussure, Sapir and Chomsky. Most of them were not aware of a great colonial scholar called George Abraham Grierson. To my mind, the modest value of the PLSI volumes is precisely in the fact that this is not a work by Linguists, or at least Linguists alone, though some of the finest Linguists of India have participated in the exercise and have guided its path. As the General Editor of the volumes, I hope, India will receive the 'snap shot of languages as they existed in the years 2011-12' posted here with

affection, and write back to the team of hundreds who joined hands to make taking the snap shot possible a warm 'Thank You... yours sincerely.' I look forward to conveying that appreciation to the large team of advisors, members of the National Editorial Collective and my colleagues in every state who participated in making the PLSI, who are too large in numbers to be named individually.

G. N. DEVY
Chairman, *Bharatiya Bhasha Lok-sarvekshan*

NATIONAL EDITORIAL COLLECTIVE CONVENER'S FOREWORD

While thinking about the People's Linguistic Survey of India, it suddenly struck me that the Indian Constitution opens with the words, "We the people of India". In the context of the debate about the supremacy of the Parliament and the Supreme Court, we have forgotten the people of India. Although people have the supremacy, they are not contestants of the parliament or the supreme Court. Similarly PLSI is neither a contestant of the Grierson's survey or the survey conducted by the RGI. It is an independent, autonomous people oriented and people motivated program trying to capture the perception of the people about the language they speak. The PLSI aims at restoring the self confidence of the people that their languages are good for education administration and mass communication. They are good for development and for intimate communication. Once their self confidence is restored, they would know that the mother tongue is the best foundation for learning more

languages and subjects. Mother tongue helps in sharing as well as caring.

The Indian intellectuals have contributed a word, mainstreaming, to the English dictionary. Main streaming is excluding, marginalizing and demolishing smaller languages and cultures. It is another name for genocide. The tribals in particular, who are displaced from their habitat in the forests and mountains, are wrenched from their languages and cultures are forced to adopt the dominant regional language as their mother tongue. Hindi is considered the mainstream for many Indian Languages and English is the mainstream for all Indian languages including Hindi. All bianaries such as primitive-civilised, simple- advanced, low-high ,concrete-abstract, pre-logical--analytical, utterance-text, are manipulated to defend dominance and subjugation. They are "socialization into main stream way's of using language in speech and print, main stream ways of making meaning, of making sense of experience" (Maybin, 1994, *From the Savage mind to Ways with Words*). From the main-steam point of view orality is an evil which needs determined eradication" (Rampal) Indian society is a relation based society, clearly different from the binary and contract based society of the West. This is what explains the extended family, the extended society and the Language and Culture Area. Thousands of years ago it has been said that *ayam nija parobetti gaNana laghu cetasam.*

udara caritanantu basudheiba kutumbakam

 The self and the other distinction is made by the narrow / light minded ones. The broad minded ones bind the whole universe in a network of relations. At the societal level it is seen in the intensity of retailers in India. India is the most intense retailer based society in the world, with one retailer for eight Indians. This is the best realization of the relation based society at the socio-economic level. The language, religion caste and community, unity in variation, is another example. India, with three thousand mother tongues, four thousand castes and communities, four thousand faiths and beliefs presents a variation not found anywhere in the world. And yet bound by a network of relations, their unity of relation is incomparable. In spite of languages belonging to six language families, India is recognized, by scholars of the world as a single language, linguistic and semantic Area. Ever since Pundits named languages and designated some as languages and others as dialects, hierarchical organization of languages began to take shape. It was forgotten that each language is a dialect. There is no language without a dialect and no dialect without a language. Pundits' languages were distanced from the peoples' perception of languages. Pundit's languages are dominant, monolingual and exclusive. Peoples' languages are multiple, variant repertoires with language complementation, They are inclusive, with ideolect to universal language bound by a single thread. By refusing the people to recognize the right to name we deny their existence and once they die we museumize them. All surveys are for selection. Failure to share is failure to care. Extinction of language is not merely extinction of orality, it is extinction of bio-cultural knowledge. PLSI reinforced the conclusion that to look for a monolingual in a multilingual setting is a fiction. In the developed countries of the West, Bilingualism was considered an extension of monolingualism and multi-lingualism an aberration. Bilingualism at one time was considered negative subtractive and a burden, and multilingualism as no language. It was forgotten that mono-lingualism and bilingualism had isolating, either or role where multilingualism has an inclusive identity, both and role, Here an individual or community has multiple identities and roles.

   The PLSI gives important clues about language acquisition and language instruction. A multilingual child does not learn one language after another and one skill after another. A multilingual child learns many languages together. A language acquired without formal tuition till the age of four is the mother tongue of the child. A language taught in the

class room, where the language is spoken in the immediate environment is a second language. a language confined to the class room is a foreign language. The implication of such understanding is that a child has more than one mother tongue, more than one second language

and an Indian language may be taught as a foreign language within the country. Learning is neither hierarchical nor linear.   In a rural society where people learn many languages from the environment without schooling, where they require literacy for communicating with the world beyond their immediate environment, International, formally educated, multilingual post modern elite nomad who disclaim specific mother tongues, where languages and literacy are required for socio-economic mobility within the country (nationally) or outside (internationally) where mother tongue itself is multilingual, the 1st language second language distinction in serial order is meaningless.

In language learning as opposed to language acquisition the monolingual hierarchy still persists. Whether it is First language second language or foreign language, or the four skills, listening, speaking, reading, writing, these are hierarchically organized. Bereft of pedagogical implications, the same language is taught as 1st, 2nd or 3rd language depending on the order of introduction in the school.

It is evident that there is no meaningful research about multilingualism in general and multilingual child in particular. If the findings of the PLSI create awareness and acceptance of multilingualism as the foundation of education and results in serious research, then the project will be justified. If it helps in building bridges between Academic language and culture on the one hand and popular, cultural and developmental on the other, then the project will have been successful.

Dr. D.P. Pattanayak
Convener, National Editorial Collective (Samyojak, Rashtriya Sampandak Mandal)
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Report on the Process

Bhasha's effort in documenting all the languages of India naturally led to the thinking that Sign Languages should also find a place in the series. This vision of the Chief Editor culminated into the first meeting with several consultants, including all the three editors for the present volume, in Vadodara at Bhasha offices on August 16, 2012. Prior to this meeting, the consultants and other researchers, organisations presented their thinking and current work on aspects of Indian Sign Language (ISL) which helped in drawing the outline of the proposed volume.

Initially there were 14 sections on different aspects of ISL were conceived, which was re-conceived in the second meeting of experts and authors on January 17, 2013 in New Delhi with an eye to both expand the purview of the volume as a whole and to reassign some of the articles to new authors. In the last meeting held on March 30th, 2013 in Vadodara, most of the articles, which had been submitted by then, were reviewed briefly and the contents of the proposed volume was drawn up so that it reflects the theme-wise presentation of 14 main entries in the volume. The four themes that are presented in the volume are: Features of ISL, Education and Policy, The Present Situation, and Sign Language and Other Knowledge Systems. It is hoped that most of the issues to do with ISL will have been addressed through these four themes.

At this meeting, importantly, it was also decided that the "voices" of the Deaf with respect their views on ISL must also be represented in the volume in some form and it was suggested that a short questionnaire-based survey will be conducted to reflect the current thinking on this particular issue. In particular, the following six questions were posed to draw out a consolidated representation of the "voices":

(i)   What do you think is the future of ISL?
(ii)   How has ISL changed your life?
(iii) How has the use of ICT for ISL improved your life?
(iv) Do you think Sign Languages are more complete in conveying a thought?
(v)   What are the elements or factors that will lead to further development of ISL?
(vi) Is there any other issue related to ISL that you wish to talk about?

It is quite clear that a volume such as the present one is needed, it also quite clear that due to various restrictions that a collective work faces, there will be shortcomings; however, what you have in your hands now is perhaps the optimum outcome of these two forces.

Tanmoy Bhattacharya
July, 2013, New Delhi.

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An additional List of Acknowledgements contributed for Volume

(to be added by the state co-ordinator)

An open appeal to the readers to draw their attention to any Sign Language in India not included in the volume

Like any other collection, this volume is also not complete, and as in any other colleted works, due to a variety of reasons, this volume also had to restrict its ambit in terms of its coverage from the point of view of regions, varieties, organisations and personalities.

We are well aware of the fact that there exist several varieties of Sign Languages in India that may stake a claim for being a language distinct from – what we have identified here as the standard variety, namely, Indian Sign Language (ISL), also known as Indo-Pakistani Sign Language (IPSL). However, given the high degree of intelligibility across the different varieties within India and the process of standardisation that ISL is undergoing for the past two decades, encourage us to consider the representation of ISL here as not compromising on coverage in terms of varieties or regions to any great extent.

Standardisation itself is not an overtly democratic process, yet it is unavoidable. Various factors outside of purely linguistic issues impact upon the crystallisation of a standard variety. For example, the very first step in the process of standardisation, namely, selection, can be considered as a highly contentious and politicised process, which then carries along the inherent bias in the latter steps as well, namely, codification, elaboration of functions and acceptance of a variety.

Given the somewhat biased yet unavoidable nature of the process, the very first survey of the field, as this volume is representative of, cannot ignore the variety which is most likely to crystallise as the standard variety. However, we hope that future work on ISL,

whether prepared as amendment to the present volume or undertaken independently of it, will examine the different varieties more carefully than we could afford to.

Within this context, we would like the reader to consider this introduction as an appeal to report any variety of a Sign Language natively used in a community in India for inclusion in future editions of this volume. We consider the inclusion of the Alipur variety in the present volume as good beginning in this direction.

In a similar vain, we also appeal to the readers of this volume to bring to our attention any organisation or individual actively engaged in the propagation of ISL that deserve a place in an expanded version of the present volume. In this connection, we apologise in advance of any error in inadvertently excluding any individual or organisation that may have been engaged with the development, teaching, and propagation of ISL for a long time.

Tanmoy Bhattacharya
Delhi; July 2013

Abbreviations used, or charts included, transliteration/transcription symbol chart

(to be added by co-ordinator)

Any note that you may wish to offer on Official
Statistics used in the volume
(to be added by co-ordinator)

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PART 1:

FEATURES OF INDIAN SIGN LANGUAGE

Overview and Early History of Indian Sign Language

Madan M Vasishta

It is assumed that Indian Sign Language (ISL) is used by five million deaf people in India. However, very little was known about its history and use until the later part of 20th Century. ISL is a complete language with its own grammar, syntax and vocabulary, in addition to other linguistic attributes. However, the existence of this language has been denied in various forms by educators of deaf children since at least 1975.

Miles (2000) compiled a historical bibliography on the education of children with disability in South Asia and found only a few citations relative to deafness and the education of children who are Deaf over a span of 4,000 years. Miles pointed out that until the 20th century, deafness was considered as punishment for sins of earlier incarnations. People who were deaf were not allowed to inherit property by law, until the beginning of the 20th Century (Miles 2001).

It is interesting that Emperor Akbar did some research on signing. He had hearing children sequestered in a separate building called Gung Mahal. No one was allowed to talk to these children as they grew. As the result of a lack of oral linguistic input, these children, all hearing, developed a sign language to communicate among themselves (Miles 2001). No other reference to signing in India in earlier times was found.

There is no written history about when and where ISL originated. However, we can safely assume that varieties of ISL evolved in schools for the deaf that were established during the latter part of 19th Century. Since some of these schools were established by British missionaries, it is possible that there might have been some influence of British Sign Language (BSL) on ISL during that time. Later analysis, however, indicates that there is little or no influence of BSL on ISL (Vasishta et al 1979). It is quite possible however that some signs may have been influenced by British or American. Deaf people in India do use British manual alphabet, which is a representation of English alphabet on fingers but it does not have to do anything with sign language itself.

The general public due to a lack of information about sign languages, believes that sign language is universal and Deaf people all over the world use the same sign language. In truth, each country has its own sign language, however a few countries with shared borders — Canada and the United States, for example — do have the same sign language. Like all spoken languages, sign languages depend on interaction of people. Deaf people develop indigenous sign languages and these regional or local sign languages conform to each other when Deaf signers from different parts of the country interact. For example, the sign languages of India and Pakistan—known as Indopakistani Sign Language (IPSL) — are very similar. Due to geographical contiguity, even Nepali Sign Language is similar to ISL (Zeshan 1996, Woodward 1993).

The main difference between a spoken language and ISL (and other signed languages) is that the spoken languages are auditory while sign languages are visual. The spoken or oral languages depend on sound. The basic unit of these sounds is called a phoneme; a combination of phonemes form words. As far as the nature of sounds is concerned, words are formed by combination of consonant and vowel sounds. These words are put together in an established format (following the syntactic principles of a particular language) to encode a message.

In sign languages, words are formed by handshapes, orientation of hands, location of the sign and movements, as well as facial expressions. We can call these phonemes of sign language. Spoken languages are linear while sign languages are three-dimensional. For example, verbs are inflected to show past or present tense in spoken languages. In sign language, tense is indicated by signing behind or in front of the shoulder. Thus more than one sign can be produced simultaneously.

Do all deaf people in India use ISL? The answer is both yes and no. Profoundly deaf people use ISL in schools and in daily communication with other deaf and hearing people. Deaf people with usable hearing and good lipreading skills depend on speech and speech reading when communicating with hearing people. However, these oral deaf people also use ISL when communicating with other deaf people and, at times, with each other. Deaf people living in rural areas with limited contact with other deaf people generally depend on gestures and some rudimentary signs. Some researchers believe that the ISL used in rural areas is entirely different than ISL used in cities and should be known a Rural Indian Sign Languge or RISL (Jepson 1991). It is possible, however, given the fact that deaf people in rural areas rarely meet each other, chances of such rural varieties of ISL developing into a separate language are very slim. In addition, this would also mean that ISL used in rural areas in Punjab is totally different that the ISL used in rural areas in Tamil Nadu. Thus, RISL cannot be called one language. We can assume that some varieties of ISL are used in various part of rural India. Deaf people may incorporate some gestures while communicating with hearing people. For an outside observer, such communication might look like some kind of sign language.

Hearing children learn the language spoken by their family from early childhood. They also learn other languages spoken by neighbours. They learn one or more language naturally and without much effort on their part. However, it is very difficult for deaf people to learn a language they have never heard. Most parents of deaf children do not know how to sign and they are discouraged by medical and educational professional from learning or using signs. Since only 10% of deaf children are born to Deaf parents, most deaf children miss out on learning a language during their early years. They start to learn the written language when they begin school. This is an uphill task as these children have missed the crucial years (birth to 3 years of age) for learning a language (Newport 1987).

It is important to mention here that contrived signs (that is using ISL signs with inflections to manually represent a spoken language) used in the total communication approach is not ISL. In this system, ISL signs are used in the word order of a given spoken language, while ISL has its own grammar. The term 'total communication' is

also a misnomer. Total Communication is a philosophy, which supports a deaf child's right to use any mode of communication in which s/he feels comfortable. For example, if a deaf child can learn orally and is comfortable using speech and reading lips, s/he should use the oral method. In the same vein, if a deaf child feels comfortable communicating in signs, s/he should have the right to use signs. In other words, a communication method is provided to a deaf child that best fits his needs for communicating and learning.

The role of ISL in communication among deaf people is very important. Even more important is its role in education. Deaf children who have limited residual hearing need ISL for their education. The role of ISL here is not just communication between the teacher and student, but as a first language of deaf children to learn a second language (spoken/written language) within a framework of bilingual education. Research has shown that deaf children learn a written language much better if they learn a signed language in their early years (Newport 1987).

Several Western nations have implemented bilingual education programmess for educating deaf children. In the United States, 54% of special schools and residential programmes are using the bilingual approach very successfully (American Annals of the Deaf, Volume 148, No. 2).

India is a polyglot country and bilingual or multilingual education is a common practice. However, deaf education is lagging behind in this area. Only two schools for the deaf — the Indore school and Bajaj Institute of Learning — are currently using bilingual education approach. There is a huge and glaring need for research in bilingual education of deaf children in India.

Conclusion
Some important work has been done in popularizing ISL during the last twenty five years; although it is not enough but it will go a long way. The attitude of the government and educators toward ISL as a language and educational tool is changing. This change is the most important factor in recognition of ISL. During the next few years, ISL classes, interpreter training, bilingual education of deaf children and linguistic research in ISL must be expanded. It will not be long when ISL has its rightful place in the lives of Deaf people.

Bibliography

American Annals of the Deaf, Volume 148, No. 2

Jepson J. (1991). Two sign languages in a single village in India. *Sign Language Studies*; 20(70): 47-59.

Miles, M. (2000) Studying responses to disability in South Asian history: approaches personal prakrital and pragmatical. *Disability and Society*; 16: 143-160.

Miles, M. (2001). *Signs of Development in Deaf South and South-West Asia: histories, cultural identities, resistance to cultural imperialism.* Internet publication URL: http:// www.independentliving.org.

Newport 1987

Newport, E and Supalla, T. 1987. *A critical period effect in the acquisition of a primary language.* Unpublished manuscript.

Vasishta M., Woodward J, De Santis S. 1981. *An Introduction to Indian Sign Language: Focus on Delhi.* New Delhi: All India Federation of the Deaf.

Vasishta M, Woodward J, and Wilson K. L. 1978 Sign language in India: regional variation within the deaf population. *Indian Journal of Applied Linguistics*; 4(2): 66-74.

Vasishta et al 1979??

Woodward, J. 1993 The relationship of sign language varieties in India, Pakistan and Nepal. *Sign Language Studies* 78: 15-22

Zeshan 1996 ??

Zeshan, Ulrike (2000). Sign language in Indo-Pakistan: A description of signed language. Amsterdam- Philadelphia: John Benjamins.

Distinctive features of Indian Sign Language in comparison to foreign sign languages

Ulrike Zeshan

1.0 Introduction

The explicit recognition that Indian Sign Language has a complex grammatical system of its own that is entirely different from the spoken languages of the Indian Subcontinent is still relatively new, as sign language linguistics started to develop in India several decades after the initial discoveries of sign linguistics in Western countries. Until the 1990s, most people in India, whether professionally involved with the deaf community or not, held a variety of misguided beliefs about sign language, and one could often hear statements such as 'there is no sign language in India' or 'each deaf school in India has its own sign language'. Some of these myths still persist amongst professionals providing services to deaf children and adults, as well as in the general public. It is the intention of this chapter to highlight a selection of grammatical features of Indian Sign Language and draw particular attention to those structures that are markedly different from other known sign languages around the world.

The term 'Indian Sign Language' (ISL) is used here as a cover term for those related sign language dialects that are used across the territory of India where substantial numbers of deaf people have come together to form linguistic minority communities of sign language users, which mostly includes urban and suburban areas. A number of previous linguistic publications (e.g. Zeshan 2000a, 2003; Zeshan & Panda 2011) refer to 'Indo-Pakistani Sign Language' (IPSL) due to the fact that the sign language is the same across the border on both sides. For instance, lexical comparison data reported in Zeshan (2000b) find a greater level of similarity between the sign language dialects of New Delhi, India, and Karachi, Pakistan, compared to the level of similarity between the Indian cities of New Delhi and Bhubaneshwar (Orissa). The overall average level of similarity between the sign vocabularies in various parts of India (around 75%) confirms similar findings reported by Vasishta, Woodward & De Santis (1978). It is possible that sign language varieties in parts of Nepal and in Bangladesh are also part of the same dialect cluster, but systematic research has not been carried out yet. In addition to ISL, there are some small-scale sign languages in rural communities in India, one of which, Alipur Sign Language, is described in the chapter by Panda in this volume (see also Panda 2012). Deaf people in more inaccessible or remote rural areas in India may not have access to a community of deaf people and to sign language, in which case they use ad hoc gestural improvisations known as 'home sign' (cf. Goldin-Meadow 2003); however, home sign is outside the scope of what is reported here on ISL structures.

This chapter draws on previous descriptions of ISL grammatical structures, both in-depth studies like Zeshan & Panda (2011) and Aboh, Pfau & Zeshan (2005), and broader summaries such as in Zeshan (2000a, 2003, 2006).[1]

This chapter is organised into sub-sections summarising aspects of the ISL lexicon (section 2), ISL Syntax (section 3), and spatial aspects of the grammar (section 4). This corresponds, to a reasonable extent, to traditional notions of the word level, the sentence level, and the text (discourse) level, and is intended to make the contents accessible to a broader audience. Likewise, technical linguistic terms are defined briefly where they occur, and more fine-grained, technical distinctions are often avoided.

2.0 The ISL lexicon

Like any other natural language, ISL has an extensive lexicon of thousands of signs. As argued in Zeshan (2002), the sign unit in sign languages closely corresponds to words in spoken languages. As mentioned above, the regional dialects of ISL show some degree of lexical variation, but there is a high degree of grammatical similarity across ISL dialects. In the following sub-sections, dialectal variation is mentioned where particularly relevant. Otherwise, the observations are based on north-western varieties of ISL.

This section discusses several lexical domains that are of particular interest because of their distinctive features that make ISL different from other known sign languages. Number signs, kinship terms, and semantic fields, that is, 'families' of signs from the same domain of meaning are discussed.

2.1 Number signs

Number signs, also known as numerals, have several interesting features in ISL. The set of lexical numbers is partly based on writing, and there is a degree of regional variation in ISL number signs. Numbers one through five consist of the corresponding number of vertically extended fingers in all of the dialects. Numbers six through nine employ special handshapes in some dialects, and in one set of forms, some of the number signs imitate the shape of written numbers (see Figure 1).

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[1] I am grateful to Sibaji Panda for the figures representing ISL signs in this chapter.
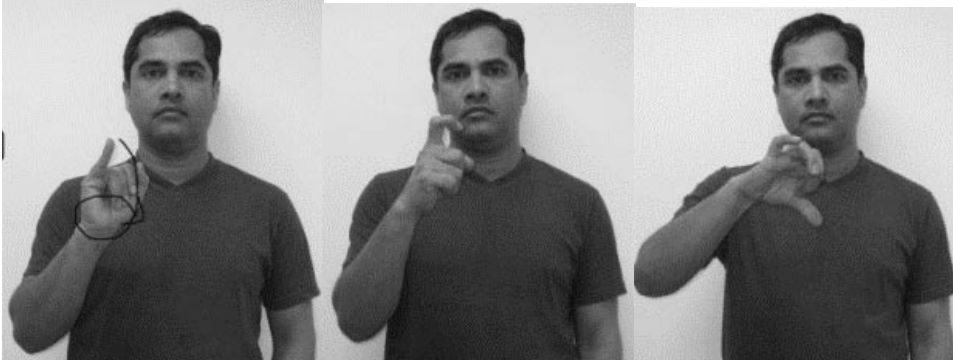
Figure 1. Regional signs SIX, SEVEN and NINE

This influence from writing is a type of iconicity, that is, a non-arbitrary relationship between the sign and its meaning (the sign 'looks like what it means'). Compared to other sign languages, ISL has a particularly high level of iconicity throughout its lexicon. The use of signs derived from writing has a peculiar side-effect on the sub-lexical ('phonological') system of ISL in that some handshapes occur only within the numeral system. In Zeshan (2000a), the IPSL handshapes that only occur in numbers are part of a small class called "marginal handshapes" because their distribution and occurrence is restricted.

Numbers greater than ten consist of a sequence of single-digit numbers corresponding to the written form. This can be called a 'digital strategy', and it involves signing the individual digits of a number, in the order in which they appear in writing, as in example (1).[2]

(1)

ONE TWO	'12'
TWO FIVE ZERO	'250'

This system is particularly interesting because digital systems of this type are not attested in spoken languages. Most sign languages use other types of systems with complex number sign formations, though there are some other sign languages that use digital systems like ISL's, for instance Ugandan Sign Language (Wallin et al 2006).

Digital numbers are also used for referring to dates (e.g. ONE NINE NINE SIX for '1996'). The ISL sign for 'thousand' is not used in dates. For numbers that are multiples of 1,000, some dialects use a system that takes the number of horizontally extended fingers to stand for the number of zeros, so that '1,000' has three extended fingers, and '100,000' has five. Forms with three, five, and seven extended fingers are attested and

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[2] Examples from ISL are notated using capital letter words (glosses) that stand for signs. Where relevant, a labelled line on top of the word glosses indicated non-manual actions such as facial expressions.

correspond respectively to the words *hazar*, *lakh* and *crore* (Figure 2a). Other dialects use a fingerspelled L for *lakh* and a fingerspelled C for *crore*, with a one-handed letter handshape and an upward movement (Figure 2b).

1,000   1,00,000   1,00,00,000

Figure 2a. Variant of HAZAR, LAKH and CRORE using extended fingers
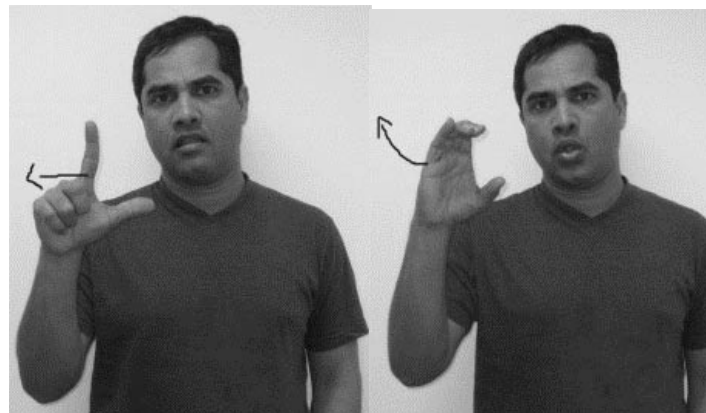
Figure 2b. Variant of LAKH and CRORE using fingerspelled letter handshapes

Finally, it is interesting to note that the counting system on the hands used widely in India, with the thumb indicating parts of the fingers of the same hand, is not used in ISL at all. In the gestural counting system, each finger can indicate three numbers on the finger segments, so that each hand can count up to fifteen. This system, used by both hearing and deaf people for counting, does not have any corresponding number signs in ISL.

2.2 Kinship signs

Kinship terms are words/signs that denote family relationships, such as 'sister' and 'uncle'. Kinship signs are particularly interesting in ISL because their realisation is different than in many other sign languages. Almost all signs for kinship terms are compositional, with the sign for 'man/male' or 'female/woman' preceding a sign for the

family relationship, for example MALE+SIBLING 'brother', FEMALE+MARRY 'wife'. The only single-sign kinship terms are the signs for 'male' and 'female', which in most ISL dialects also mean 'mother' and 'father'. This is unusual, as most spoken and signed languages have distinct terms for denoting parents.

While other sign languages also have some kinship terms that are compounds (that is, consisting of two signs), in ISL the compounding system is pervasive and is used for the following:

- daughter and son
- grandmother and grandfather
- wife and husband
- sister and brother
- aunt and uncle

There are no signs denoting family relationships that use other structures, and the same structure is also used for 'girl' (FEMALE+CHILD) and 'boy' (MALE+CHILD), although these are not kinship terms. Figure 3 shows two examples of kinship terms ('grandmother' and 'wife'). Interestingly, while the individual signs that form the second parts of these compounds vary across regional dialects of ISL, the structure itself ('male/female' first, followed by a sign for the relationship) is the same everywhere.
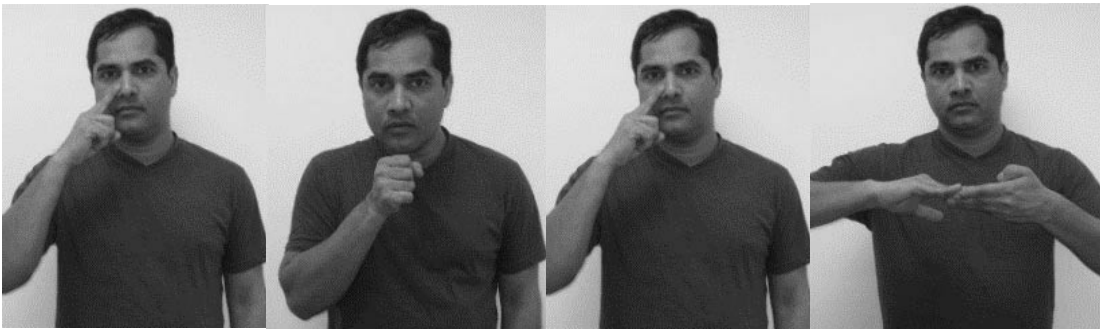
Figure 3. FEMALE+OLD-PERSON 'grandmother' and FEMALE+MARRY 'wife'

It is obvious that this kind of system is very unlike the kinship systems found in many spoken languages in India, many of which are known for their array of complex kinship terms. For instance, in Hindi there is often a different term depending on whether the relation is on the maternal or on the paternal side, so that for instance, a maternal aunt is designated with a different word than a paternal aunt.

2.3 Semantic fields

Compared with other sign languages, ISL has a particularly high level of iconicity in its lexicon; that is, for the large majority of signs there is some relationship between what the sign means and what it looks like. In comparison, some other sign languages, for instance in Turkey (cf. Dikyuva & Zeshan 2008) have many signs that are completely arbitrary, with no resemblance between the form and meaning of signs.

One way in which ISL signs are iconic is in the clustering of signs in semantic fields, some of which are associated with particular formational features. For instance, many signs related to the concept of time are articulated at the wrist location, and many signs related to cognition are located at the head or temple.

Among these sign families are the groupings represented in Table 1. Figure 4 shows examples from the 'cognition' and the 'up and down' sign families.

Sign family	Example signs	Iconic relationship
'Time'	TIME, WRISTWATCH, HOUR, MINUTE, SHARP-ON-TIME	Writs location for reference to wearing a wrist watch
'Money'	MONEY, PAY, RICH, INFLATION	Based on a communicative gesture for 'money'
'Cognition'	THINK, CRAZY, DREAM, WORRY	Head/temple area as the 'seat of cognition'
'Up and down'	HAPPY/SAD, WIN/LOSE	Sign pairs with upward movement for positivity, downward for negativity

Table 1: Clustering of signs into semantic fields
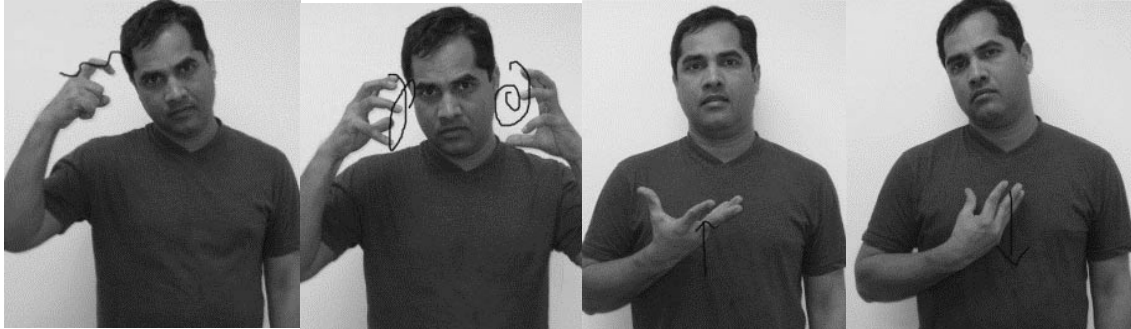
Figure 4. The signs DREAM, WORRY, HAPPY, SAD

Like all other languages, ISL in its history has found ways to expand its vocabulary, and this has resulted in groups of signs that share aspects of form and meaning with each other. While all sign languages have such strategies, the array of strategies used in ISL is particular to this language. Some sign languages in Western countries and in the Far East, such as in the US, Japan and China, make more use of writing as a source of new signs. In ISL, the influence of writing is more limited, as ISL has developed more autonomously from spoken languages than many other sign languages.

Figure 5 shows the ISL strategy of creating generic terms, such as 'vegetables', 'fruit', 'furniture', and the like. While in English, there are separate lexical items for generic terms, ISL uses a combination of the most prototypical member of the group with a sign meaning 'various kinds of'.
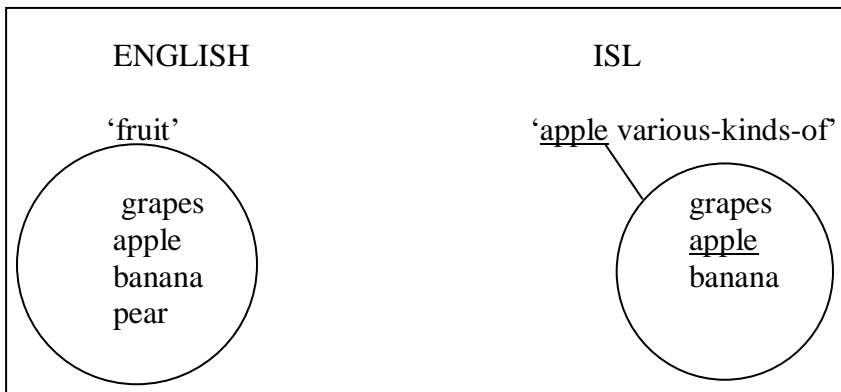
Figure 5. Generic terms in English and ISL (Panda & Zeshan 2005)

Another way to expand the lexicon relies on the semantic vagueness of many signs. ISL uses a set of signs denoting geometrical shapes that can be modified in a highly productive way, as well as signs with very generic meanings that can be made more specific by adding other signs. In the resulting two-sign combination, the specifying sign always comes first and the generic or geometric sign is the second member in the sign combination, as in the list of examples in Table 2.

Generic or geometric sign	Combinations	Meaning
PLACE	INDIA PLACES WORLD PLACES LAW PLACE	'states' 'countries' 'court of law'
PERSON	INTERPRETING PERSON	'interpreter'
	LAW PERSON	'lawyer'
	POLITICS PERSON	'politician'
WAVY-SURFACE	WATER WAVY-SURFACE	'sea'
	SAND WAVY-SURFACE	'desert'
SQUARE	PHOTO SQUARE	'picture'
	WRITE SQUARE	'blackboard'

Table 2. Generic and geometric signs in the ISL lexicon (based on Panda & Zeshan 2005)

Each of these groups constitutes a semantic field, and these may intersect in multiple ways. For example, in Table 2, the sign LAW is used in two of the groups, LAW PLACE and LAW PERSON, and there are many expressions where the sign WATER is accompanied by other signs.

3.0 ISL syntax

Syntax describes the grammatical structures operating at the level of the sentence. In this section, some central aspects of ISL sentence structure that are particularly interesting in comparison with other signed and spoken languages are highlighted. This includes functional particles in section 3.1, clause types in section 3.2 and 3.3, and complex clauses in section 3.4.

3.1 Functional particles

ISL has a group of grammatical signs (particles) that occur at the end of sentences (or, more accurately, at the end of clauses), and they are very important in the grammar of the language. These particles indicate the clause type, for instance, whether the sentence is a question, an imperative (command), or a negative. Thus functional particles assign a clause to a clause type. Not every clause has a functional particle, but if there is one, it is always in the clause-final position. It is very rare for several functional particles to

becombined within a single clause; most clauses have no more than one functional particle.

The clause types that are indicated by functional particles in ISL are the following:

- Imperative (command)
    - General imperative: 'X should be done'
    - Impolite, immediate imperative: 'must go and do X right now!'
- Negation (see below section 3.2)
    - Negative imperative: 'don't do X!'
    - Basic negation: 'is not X'
    - Contrastive negative: 'is not X (in contrast to something else)'
    - Negative existential: 'there is no X'
    - Negative modal: 'cannot X'[3]
- WH-question (see below section 3.3)
- Completion: 'X is done'
- Existence: 'X is'

Figure 6 shows the completive, existential, and imperative particles. Negation and WH-questions are explained in more detail in sections 3.2 and 3.3.

Figure 6. Completive, existential and imperative signs in ISL

The general template for ISL sentence structure is the following:

TIME EXPRESSION - ARGUMENTS - PREDICATE - FUNCTIONAL PARTICLE

As ISL verbs do not show any tense marking, the tense is indicated at the discourse level, and time expressions indicating when the event of the utterance happened are always at

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[3] Not all ISL dialects have a negative modal, and the same sign functions as an additional basic negator in other regional dialects.

the beginning of the sentence. ISL is a strongly verb-final language, which means that the predicate (what we say about someone or something) always follows the item(s) being talked about. As mentioned above, functional particles occupy a clause-final slot. Pronouns, in the form of pointing signs articulated with an extended index finger, can appear just about anywhere in the clause and may be repeated in more than one slot.

This sentence structure is very robust, and utterances that violate this basic structure will usually be ungrammatical. However, there is no need for all slots to be filled, and in natural conversations, many ISL utterances are elliptic; that is, those parts that are understood from the context are left out. Often the only mandatory part of a sentence is the predicate, which mentions the event, while the participants in the event (the 'arguments' in linguistic terms) can be left out if they are clear from the context.

3.2 WH-questions

In ISL, several clause types are marked by a particular non-manual configuration, consisting of facial expressions and head movements, which occur together with the manual signs. Two of these clause types are interrogatives: yes/no questions and WH-questions. Typically, WH-questions are characterised by raised eyebrows and the head tilted back. This non-manual expression always occurs with the clause-final WH-sign, but can also begin earlier in the clause and may cover the whole sentence. The extent to which the non-manual expression spreads over signs in the clause is called the 'scope' of non-manual marking.

In comparison with other sign languages, ISL has very few question words that consist of a single sign. Instead, most question words are compositional, consisting of a general interrogative and a preceding sign specifying the nature of the question.[4] Similar combinations are found in other Asian Sign Languages, for instance in Hong Kong Sign Language (Tang 2006), but the range of combinations is particularly large in ISL. The following combinations with the general question word (here glossed WH) occur in ISL:

TIME+WH	'when, what time'
PLACE+WH	'where'
FACE+WH	'who'
IX_{dist}+WH[5]	'which'
NUMBER+WH	'how many'
DAY+WH[6]	'when, what date'

[4] It has been argued (Aboh, Pfau & Zeshan 2005) that therefore, ISL may be considered to have a generic WH-particle rather than WH-words, but this distinction is not essential for the purpose of this chapter.
[5] The 'distributive' form of the index (IX) involves pointing to several locations one after another.
[6] This only occurs in some ISL dialects, while others use a single sign for 'when/what day'.

Figure 7 shows examples of composite questions in ISL.
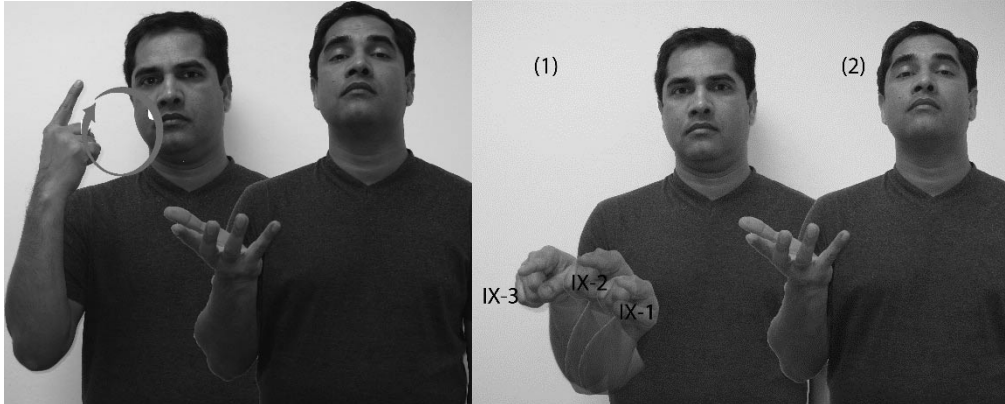
Figure 7. Signs for 'who' and 'which' in ISL

The questions 'what', 'why' and 'how' are expressed by WH on its own; there are no composite expressions for the meanings, and the intended meaning must be derived from the context. In addition, the sign WH can have the meaning of any question word on its own, if the meaning is clear from the context. This is the case in examples (2) and (3):

(2)   ___wh
     SHOP WH
     'Where is the shop?'

(3)   ___wh
     IX COME WH
     'Who is coming?'

The semantics of the sign FACE are particularly interesting in ISL, as the sign can be used to mean both 'face' and 'person', where most other sign languages use separate signs. Thus in (4) and (5), FACE is used to mean 'person/people'.

(4)   _____wh
     TOMORROW FACE COME NUMBER+WH
     'How many people are coming tomorrow?' (Literally: 'How many faces are coming?')

(5)   _____y/n
     FACE-DEM$_{pl:arc}$ ARRIVE COMPLETIVE

'Has everyone arrived?' (Literally: 'Have all faces arrived?')

Example (4) is also an instance of a 'split interrogative', where the expression 'how many people' (FACE NUMBER+WH) is interrupted by another sign (COME). This construction was first described for American Sign Language in Boster (1996). As mentioned above, the generic question sign WH is obligatorily clause-final.

In some areas of southern and eastern India, another variant WH(VAR) is used in addition to WH (see Figure 8). WH(VAR) is functionally equivalent to WH and is used in much the same way either on its own or as part of composite expressions.

Figure 8. Variant of the WH-sign, used in southern and eastern India

WH-questions illustrate particularly well the kind of variation found commonly across ISL dialects. Essentially, with few exceptions the grammatical structures are identical everywhere, but the lexical material that is slotted into the constructions is subject to regional variation. For example, different variant signs for PLACE may be used in PLACE+WH or DAY+WH, or WH(VAR) may be used in the sign combination instead of WH. The similarity in WH-constructions found across ISL dialects is all the more significant because WH-questions in ISL are quite different from what has been described for other sign languages. For instance, European and North American sign languages typically have a substantial list of question words that are all realised as separate signs (WHAT, WHERE, WHEN, WHY, HOW etc.). Compositional question words are much less common across sign languages, and ISL has a particularly large number of these combinations.

The syntax of WH-questions in ISL also differs from many other sign languages. Across sign languages, common syntactic positions for question words are clause-initial, clause-final and both of these (that is, using the question word twice). To allow only clause-final placement of question words is much less common across sign languages, and is very

rare in spoken languages, as argued in Cechetto, Geraci & Zucchi (2009), with data from Italian Sign Language.

3.3 Negation

As listed in Section 3.1, ISL has a substantial number of negative signs with subtle distinctions of meaning. In addition, a negative side-to-side headshake is also used frequently together with the negative manual signs. Similarly to the pattern found in WH-questions, the headshake in negative sentences can either co-occur with the clause-final negative sign only, or can spread over a larger part of the sentence. However, once started, the headshake must continue until the end of the sentence and must include clause-final negative signs.

The negative signs are incompatible with the existential sign EXIST. Instead, a different sign NOT-EXIST, the negative existential, must be used on its own. This is known as 'suppletive negation', meaning that the positive and negative counterparts are completely different lexical items. The suppletive ISL signs EXIST and NOT-EXIST are shown in Figure 6 (second picture) and Figure 10 (fourth picture) respectively.

Most other sign languages have more than one suppletive negative, particularly for the semantic domains of cognition (signs like NOT-KNOW, NOT-UNDERSTAND), emotion and volition (e.g. NOT-LIKE, NOT-WANT). For these same domains, most sign languages also use some sign formational (morphological) processes that turn positive signs into negative ones by adding negative clitics and affixes. ISL is exceptional in that the only suppletive negative is the negative existential, and no morphological processes are used for negation. In the *World Atlas of Language Structures*, Zeshan (2011) gives a survey of these 'irregular' (suppletive and morphological) negation strategies across sign languages, and the map in Figure 9 shows that there are very few sign languages in these data that only have one irregular negative.
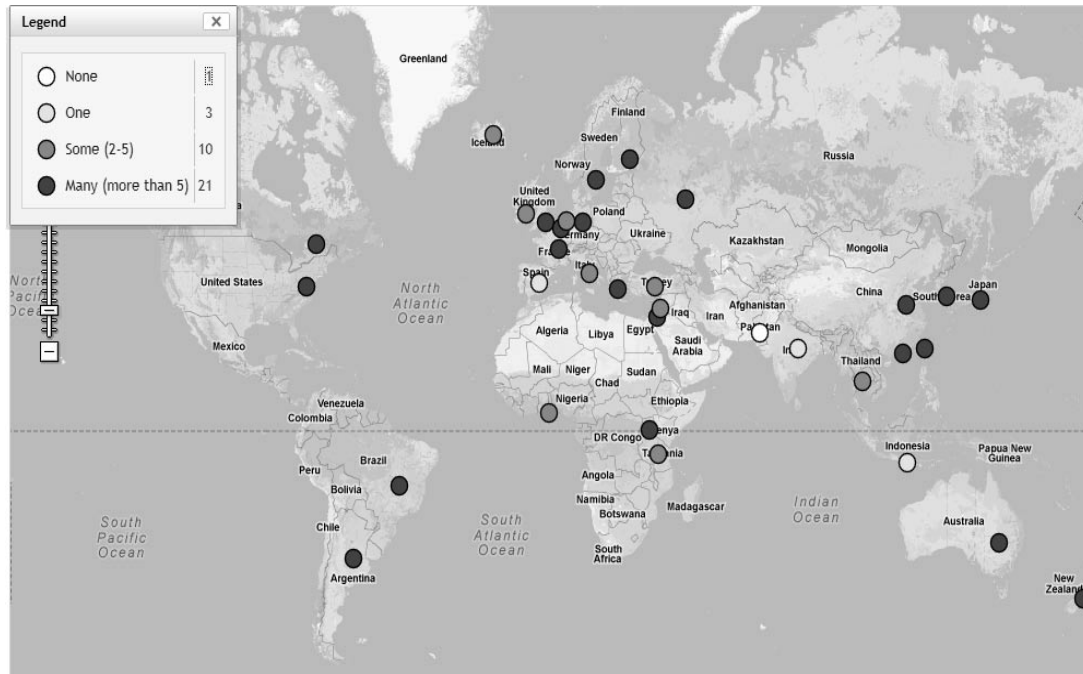
Figure 9: Map on irregular negatives in sign languages (adapted from Zeshan 2011)

Examples (6a-d) illustrate the subtle distinctions of meaning that are conveyed by the various clause negators in ISL. In these four examples, only the negative sign is different, and an equivalent translation into English or Hindi is difficult, as the same semantic differences cannot be conveyed at the lexical level in these spoken languages. In fact, all of the examples may be translated into English as 'No problem', but with different connotations. Therefore, a rendition with additional comments has been used to make clear the context in which each sentence may occur. The negative signs used in (6a-d) are represented in Figure 10.[7]

(6a)   PROBLEM NOT
        'There is no problem. / It is not a problem.'
        Both these meanings are possible interpretations, depending on the context. This is an instance of basic clause negation, which does not carry additional nuances of meanings besides simply turning a positive statement into a negative one. No specific context is required or evoked.
(6b)   PROBLEM NO-NO
        'No, there isn't a problem. / No, this isn't a problem.'

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[7]Some signers also use a loan sign from American Sign Language that is based on the fingerspelled letters N-O as used in the American one-handed fingerspelling system (ISL uses a two-handed fingerspelling system). This is a relatively recent borrowing and is not discussed in detail here.

This is an instance of contrastive negation, where NO-NO is used in contrast with something else, and therefore this requires a particular context. Either a previous utterance will have contained an explicit context that is being refuted (for example, someone may have asked 'Is it difficult for you to come to work tomorrow?'), or the contrast may be implicit.

(6c) PROBLEM DON'T
'There should be no problem.'
Here the negative imperative is used, which normally gives a negative command, like telling a child not to do something. The implication in the example is that the signer does not want any problem to be created, so a warning or directive is implied in the sentence.

(6d) PROBLEM NOT-EXIST
'There is no problem.'
This sentence uses the negative existential to deny the existence of one or several problems. It could be that a number of possible problems are being discussed in the context, and the signer wants to stress that none of them applies. The negation may therefore be somewhat stronger and more emphatic than in the other examples.
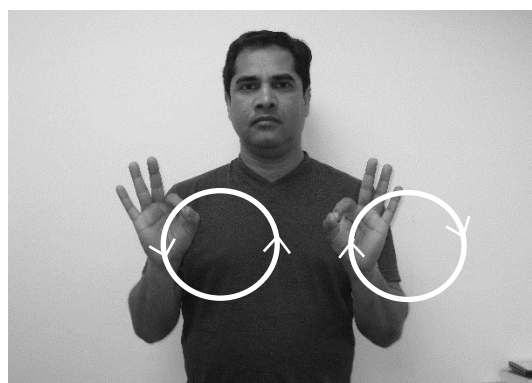
Figure 10. Clause negators in ISL

The negative existential in ISL is also used to talk about possession. For instance, 'I don't have a car' is expressed as 'I, a car does not exist', as in example (7).

(7)   _____headshake
        IX$_1$ CAR NOT-EXIST
        'I don't have a car.'

It is also possible in this case to use the multi-purpose basic clause negator (IX$_1$CAR NOT), and the possession meaning would have to be retrieved from the context. ISL does not have separate signs for negative pronouns like 'nobody', so to express a meaning such as 'Nobody has a car', one would have to say something like 'All (people) do not have a car'. Likewise, unlike in many other sign languages, there is no separate sign expressing the negative completive meaning 'not yet', so the difference between 'I do not have a car' and 'I do not have a car yet' cannot be expressed at the lexical level in ISL. Instead, one would have to say something like 'I do not have a car now, but may have one in the future'.

With respect to negation, sign languages differ as to the status of the negative headshake (cf. Pfau 2008). Some sign languages frequently use a headshake on its own for negation, for instance signing TODAY WORK accompanied by a negative headshake to mean 'No work today'. In many European sign languages, this is the usual way of negating a clause. In Zeshan (2004), these sign languages are said to have 'non-manual dominant' systems of negation. By contrast, negation using a headshake on its own is uncommon in ISL, where manual and non-manual negation usually appear together. In addition to a side-to-side headshake, other non-manual features can often be found in ISL negation, including backwards head or shoulder tilts and various facial expressions.

The use of ISL negatives in natural discourse is interesting in that signers will usually add a corresponding positive statement after expressing the negative. Although this is not a grammatical requirement, it is frequent in discourse, and this strategy is shown in examples (8) and (9).

(8)   IX$_1$ EXAM PASS NOT, FAIL
       'I didn't pass the exam, I failed.'

(9)   GO-AWAY DON'T, STAY!
       'Don't leave, stay here!'

3.4 Complex sentences

The status of ISL as a fully complex natural language is still called into question sometimes, and one issue is the comparison between ISL and spoken languages in India with respect to the complexity of grammar. It is clear from the above that ISL has complex grammatical rules that are entirely different from the spoken languages of the Subcontinent. In addition, grammatical complexity in ISL does also extend to complex sentences, that is, sentences consisting of more than one clause. In this section, information on complement clauses, relative clauses, and temporal subordinate clauses is presented (cf. Panda & Zeshan 2005).

A complement clause is usually associated with a verb that can be combined either with a noun or with a clause as its object. Consider the semantically similar examples in (10a) and (10b):

(10a) 'The boss announced an increase in salaries.'
(10b) 'The boss announced that salaries would increase.'

In (10a), the verb 'announce' is used with a noun as its object ('an increase'), while in (10b) there is a clause ('salaries would increase'), introduced by 'that'. Thus (10b) is an example of a complex clause with a main verb (called the 'matrix verb') 'announce' and a complement clause introducer 'that' (called the 'complementiser').

In ISL, complement clauses have the following structure:

MAIN CLAUSE WITH MATRIX VERB – (COMPLEMENTISER WH) – COMPLEMENT CLAUSE

The complementiser in ISL is the generic question word glossed WH that was discussed in Section 3.2. The complementiser is in brackets in the above structure because it can be omitted. However, using WH as complementiser is common in ISL, and the following in an example:

(11)   GOVERNMENT ANNOUNCE WH INFLATION 8% COMPLETIVE
        'The government has announced that inflation is now at 8%.

For relative clauses, the ISL structure is not unlike the structures found in other sign languages for which relative clauses have been documented. ISL uses the pointing sign IX (for index finger pointing) in relative clauses. A relative clause allows the speaker/signer to add further information to a noun. For example, in the English sentence

'The girl who works at the bookshop is married', there is additional information about the unmarried girl, namely that she works in a bookshop. This additional information is expressed in a relative clause introduce by 'who', which acts as the relative pronoun.

In ISL, as in other sign languages, pronouns are realised by index finger pointing, and the same pointing is used in ISL relative clauses. Relative clauses have been studied in other (European) sign languages (e.g. Cecchetto, Geraci, & Zucchi 2006 for Italian Sign Language, Pfau & Steinbach 2005 for German Sign Language), and ISL is in line with the observations therein.

The structural schema for a relative clause in ISL is the following:

NOUN (IX) – RELATIVE CLAUSE IX– MAIN CLAUSE

Again, the first (IX) occurring with the noun itself is in brackets because it is not obligatory. The relative clause following the head noun ends in an index finger point, after which the main clause follows. There is usually a short pause or hiatus (indicated by a forward slash) between the relative clause and the main clause. The sentence in (12) is an example, where the noun MEMBER is further specified by the information of not having paid the fee.

(12)   NEW MEMBER IX_3 / F-E-E $_3PAY_1$ NOT IX_3 / MEETING COME DON'T
        'New members who have not paid the fee should not come to the meeting.'

Finally, ISL has a particularly interesting construction that relies on the fact that two hands are available for signing. In this case, a first clause is signed and the final sign is held on one hand, while a second clause is signed with the other hand. The resulting meaning is that the actions reported in both clauses are happening at the same time, and a translation into English would use the temporal conjunction 'when' or 'while', as in example (13).

(13)   right hand: CHILD-pl SLEEP---------------------
        left hand: LIGHT DON'T
        'When the children are asleep, do not switch on the light.'

In this sentence, the sign SLEEP (the head resting on the palm of the hand) is held is place, while the left hand performs the signs LIGHT DON'T. The general structure is therefore as in the following structural schema:

FIRST CLAUSE -----(HOLD)-----
         SECOND CLAUSE

The existence of these and other complex clauses is compelling evidence that ISL grammar fulfils all functions that are also documented in spoken languages. In addition to the above, ISL also has conditional clauses ('if'-clauses), which have to follow a fixed schema, including appropriate grammatical facial expressions (cf. Zeshan 2000a).

4.0 Spatial grammar

The grammatical use of the three-dimensional signing space is a hallmark of sign language structures, and all known sign languages make use of spatial grammar in one way or another. This may involve so-called '(spatial) verb agreement' (e.g. Meir 2003), 'classifier constructions' (Emmorey 2003, Engberg-Pedersen 1993), and the mapping of real-life spatial arrangements onto the signing space (e.g. Perniss 2007). ISL, like other sign languages, uses these spatial constructions, but several aspects of its spatial organisation are peculiar and not shared with most other sign languages. I discuss the structure of the signing space in section 4.1 and the use of spatial auxiliaries in section 4.2.

4.1 Structure of the signing space

The structure of the signing space is defined as the conventional space around the body of the signer that is used to produce manual signs. Although some sign languages have very large signing spaces, particular in small-scale rural communities (see de Vos 2012), in most sign languages the signing space extends around the torso of the signer to the front, both sides, and above the head, covering an area that is within easy reach of the hands without using fully outstretched arms. This is the case for ISL as well.

In sign languages, the signing space can be said to be 'inscribed' with meaning, and different sign languages use different areas of the signing space for particular purposes. For example, Danish Sign Language uses a virtual 'calendar plane' extending vertically in front of the signer, so that, in the appropriate context, pointing to a particular area on this virtual calendar can make reference to months of the year and dates without explicitly naming the month or date (Engberg-Pedersen 1992).

In ISL, the upper signing space around the signer's head has particular significance. This area is associated with two concepts: distance and authority. Conceptually associating distance with the upper signing space means that when place names are mentioned in

ISL, they are typically accompanied by upwards index finger pointing. This is in marked contrast to many other sign languages such as those in Europe and North America, where places are associated with locations in a horizontal plane in front of the signer. In ISL, when the place where the signer is located at the moment is mentioned, the sign for the place is typically accompanied by downwards index finger pointing. Although leaving out the upwards or downwards pointing cannot be said to be ungrammatical in ISL, the tendency to use this pointing is very strong in. Thus in contrast with English, for example, ISL signers do not merely say 'in Mumbai' or 'in Kerala', but rather 'here in Mumbai' and 'over there in Kerala'. Figure 12a shows an ISL example of this construction.

The second concept that is associated with the upper signing space is authority. This could be considered a metaphorical extension of the more basic concept of physical distance, as people and institutions in a situation of authority are typically experienced as distant. Alternatively, there could be a direct cognitive connection between power and authority on the one hand and a higher spatial position on the other hand. In any case, the ISL construction when referring to persons and institutions of authority is the same as when referring to distance place names, that is, there is an accompanying upwards index finger pointing sign.[8] Figure 12b shows an example, the sign GOVERNMENT with index finger pointing upwards.
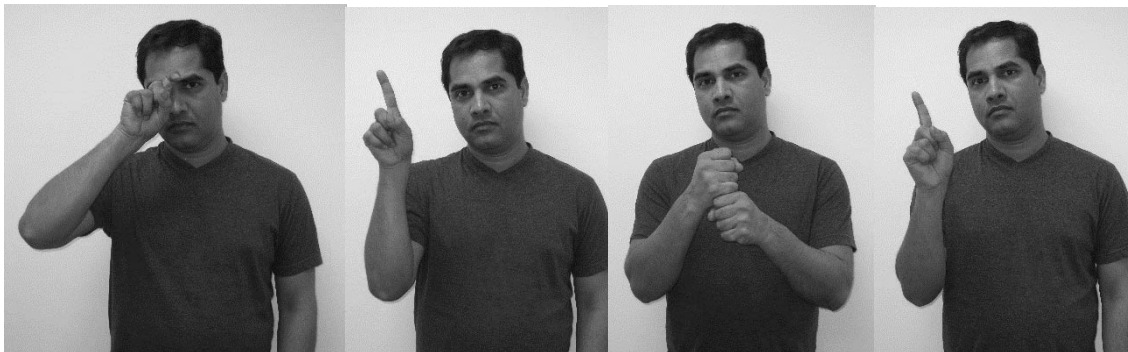
Figure 11a and 11b. Signs with upwards pointing: GUJARAT and GOVERNMENT

4.2 Directional verbs and auxiliaries

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[8] The exception is if the lexical sign itself includes an upwards hand movement that signifies a power relationship. This is the case for a number of signs that include an upwards movement of the thumb, a sign that means BOSS on its own. In a sign such as C-M BOSS ('Chief Minister'), there is no additional upwards index pointing.

In a signed text or discourse, sign language users often assign particular points in space to the objects or people they are talking about and make continuous reference to these locations, for example by pointing at them. This process is known as 'localisation'. When persons have been localised in the signing space, their location can then be used in other signs, whose forms vary according to where they are directed in the signing space. An important group of such spatially directed signs is known as 'agreement verbs' or 'directional verbs'. These have been found in the vast majority of sign languages around the world and they are important in ISL as well. An agreement or directional verb moves from the source of the action to the goal of the action, and this is often equivalent to the marking of subject and object in spoken languages. These signs often describe a transfer in some sense, that is, a concrete transfer ('giving,' 'taking'), an abstract transfer (e.g., of knowledge in 'teach'), or a transfer of information ('tell'). For instance, the ISL sign HELP means 'I help you' if it moves from the person who is signing to the person who is being addressed, but means 'you help me' if the movement is the reverse (see Figure 12).

Figure 12. 'I help you' vs. 'you help me' in ISL

While the use of directional verbs is very common across sign languages, ISL also has a related construction that has not been documented in many other sign languages so far. Instead of a verb sign moving between two locations, in ISL there is also an index finger pointing sign moving between locations, and this sign functions as an auxiliary. Across languages, auxiliaries are 'helping verbs' that have minimal meaning themselves but are necessary for the grammatical correctness of the verb phrase. For instance, in the English expression 'I have told', 'I was told', 'having been told', etc., the various forms of 'have' and 'be' are auxiliaries that indicate the grammatical categories applied to the main verb 'tell'.

ISL similarly has an auxiliary, glossed AUX, which ensures that the relationships between a source/subject and a goal/object of a clause can be expressed consistently in the grammar. For a verb such as in Figure 13, using the direction of hand movement to

express who is doing what to whom is straightforward. However, many signs in ISL have a form that does not allow them to add a spatial movement. For instance, the sign LOVE is obligatorily made on the chest and the sign TELL-A-LIE is made on the tip of the nose. It is not possible to add any spatial movement to these signs. Therefore, such signs are combined in sequence with the AUX sign, which indicates who is the source and who is the goal of the action. AUX merely specifies this grammatical relationship(translatable as 'he to me', 'I to you', and so on), and does not add any other meaning to the sentence. The sign AUX involves the index finger drawing a line between two locations in space, and it usually follows the main verb, as in example (14). AUX can also be used together with a directional verb, as in (15), in which case there is double marking of the grammatical roles. Moreover, a reciprocal relationship can be expressed with a two-handed derivation of AUX, so that both hands move across each other (example 16). The basic and the reciprocal forms of AUX, as they would appear in examples (14) and (16), are shown in Figure 13.

(14)   LOVE $_{3a}$AUX$_{3b}$ BUT $_{3b}$LOVE$_{3a}$ AUX NOT
        'He loves her, but she doesn't love him.'
(15)   _____y/n
        $_2$HELP$_{12}$AUX$_1$ RIGHT
        'You will help me, right?'
(16)   JEALOUS   AUX-recip   PROFIT   NOT-EXIST
        'There is no use being jealous of each other.'

Figure 13. $_{3a}$AUX$_{3b}$ and AUX-recip

In the history of the language, AUX in ISL has clearly developed from index finger pointing, that is, first pointing to one location and then to the other. However, the various forms of the sign have now become 'grammaticalised', and their grammatical behaviour is much more complex than simple iconic pointing. The grammaticalisation of auxiliaries

has also been described for other sign languages (Steinbach & Pfau 2007), and the development from index finger pointing to auxiliary constructions is attested in a few other cases.

Conclusion

The structures discussed in this chapter demonstrate several important points. First of all, the status of ISL as a fully complex, natural human language is now without question, and this has important implications for the official status of the language in India. In fact, ISL is unique in that it is the only pan-Indian indigenous language in the country. Therefore, efforts for its legitimisation in the form of a suitable official recognition should now be intensified, and these efforts rely on linguistic documentation of the kind summarised in this chapter.

It is also very clear that the structures of ISL are utterly unlike those of any spoken language used in India. Again, this potentially has important implications for language policy and planning. The acquisition of literacy skills by deaf signers in India, be it with regard to English, Hindi, or any of the regional languages, is notoriously difficult. If a contrastive grammar approach to teaching literacy on the basis of ISL could be developed, this may lead to better literacy outcomes because teaching could focus on the grammatical differences between ISL and the language(s) of literacy. ISL-using learners could overcome the difficulties of acquiring written language structures more easily if a conscious effort was made to address those areas of the grammar that will present most difficulty because they present the largest discrepancy in linguistic structures between ISL as the usual medium of communication and the target written language to be taught.

Finally, ISL, and indeed other minority sign languages in India, are a genuine and legitimate part of the linguistic and cultural heritage of India. The present volume is a concerted effort by specialists in the field to bring ISL to the forefront of attention, as its unique heritage has been largely ignored in the past. If theoretical and applied sign linguists continue to work together with other relevant disciplines, the future of ISL, with its large reservoir of human resources and potential, can be viewed with considerable optimism.

References

Aboh, E.O., Pfau, R.& Zeshan, U. (2005) When a wh-word is not a wh-word: The case of Indian Sign Language. In Bhattacharya, T. (ed.) *Yearbook of South Asian Languages and Linguistics 2005*. Berlin: Mouton de Gruyter, pp. 11-43.

Boster, C.T. (1996) On the quantifier-noun phrase split in American Sign Language and the structure ofquantified phrases. In Edmondson, W.H. & Wilbur,R.B. (eds.)*International Review of Sign Linguistics*.Mahwah, NJ: Erlbaum, pp. 159-208.

Cecchetto, C., Geraci, C., & Zucchi, S. (2006) Strategies of relativization in Italian Sign Language. *Natural Language and Linguistic Theory* 24: 945-975.

Cechetto, C., Geraci, C.& Zucchi, S. (2009) Another Way to Mark Syntactic Dependencies: The case for right peripheral specifiers in sign languages. *Language* 85(2): 278-320. New York: Linguistic Society of America.

Dikyuva, H. & Zeshan, U. (2008) *Turk Isaret Dili - Birinci Duzey* [Turkish Sign Language - Level One]. Nijmegen: Ishara Press.

Emmorey, K. (2003) *Perspectives on classifier constructions in sign languages.* Mahwah, NJ: Lawrence Erlbaum Associates.

Engberg-Pedersen, E. (1993)*Space in Danish Sign Language. The semantics and morphosyntax of the use of space in a visual language* (International studies on sign language and communication of the deaf 19). Hamburg: Signum.

Goldin-Meadow, S. (2003) *The Resilience of Language: What gesture creation in deaf children can tell us about language-learning in general*. New York: Psychology Press.

Panda, S. (2012) Alipur Sign Language: Sociolinguistic sketch. In Zeshan, U. & De Vos, C. (eds.) *Sign Languages in Village Communities: Anthropological and Linguistic Insights*. Berlin: De Gruyter Mouton & Nijmegen: Ishara Press.

Panda, S. & Zeshan, U. (2005) *Professional Course in Indian Sign Language*. Mumbai: AYJNIH.

Perniss, P. (2007) *Space and Iconicity in German Sign Language (DGS).* Nijmegen: Max Planck Institute for Psycholinguistics.

Pfau, R. (2008) The grammar of headshake: A typological perspective on German Sign Language negation. *Linguistics in Amsterdam* 1: 37-74.

Pfau, R. &Steinbach, M. (2005): Relative clauses in German Sign Language: Extraposition and reconstruction. *Proceedings of the North East Linguistic Society (NELS 35)*, Vol. 2:507-521.

Steinbach, M. & Pfau, R. (2007): Grammaticalisation of auxiliaries in sign languages. In Perniss, P. Pfau, R. & Steinbach, M. (eds.): Visible Variation. Comparative Studies on Sign Language Structure. Berlin et al.: Mouton de Gruyter, pp. 303-340.

Tang, G. (2006) Questions and negation in Hong Kong Sign Language. In Zeshan, U. (ed.) *Interrogative and Negative Constructions in Sign Languages. Sign Language Typology Series No. 1*. Nijmegen: Ishara Press, pp. 198-224.

Vasishta, M. M., Woodward, J. & De Santis, S. (1980) *An Introduction toIndian Sign Language: Focus on Delhi.* New Delhi: All India Federation of the Deaf.

Zeshan, U. (2000a) *Sign Language in Indo-Pakistan: A description of a signed language.* Amsterdam and Philadelphia: Benjamins.

Zeshan, U.(2000b)*Gebärdensprachen des indischen Subkontinents* [Sign languages of the Indian subcontinent]. *Munich: LINCOM.*

Zeshan, U. (2002) Sign language in Turkey: The story of a hidden language. *Turkic Languages* 6(2): 229-74.

Zeshan, U. (2003) Indo-Pakistani Sign Language grammar: A typological outline. *Sign Language Studies* 3(2): 157-212.

Zeshan, U. (2004) Hand, head and face: negative constructions in sign languages. *Linguistic Typology* 8(1): 1-58.

Zeshan, U., ed. (2006) *Interrogative and Negative Constructions in Sign Languages*. Sign Language Typology Series No. 1. Nijmegen: Ishara Press.

Zeshan, U. (2011) Irregular negatives in sign languages. In Dryer, M.S. & Haspelmath, M. (eds.) The World Atlas of Language Structures Online. Available at http://wals.info/supplement/9. [Accessed on 4 March 2013.]

Zeshan, U.& Panda, S. (2011) Reciprocal constructions in Indo-Pakistani Sign Language. In Evans, N., Gaby, A., Levinson, S.C.& Majid, A. (eds.) *Reciprocals and Semantic Typology. Typological Studies in Language Series.* Amsterdam: John Benjamins, pp. 91-114.

Space, Units and Order in ISL

Hidam Gourshyam Singh

Indian Sign Language is also known to some researchers as the Indo-Pakistani Sign Language (IPSL). IPSL as a name of the language was aptly given by Ulrike Zeshan in Zeshan (1996). No comparative work on India and Pakistani Sign Language was done until Zeshan started to publish her work in 1996. The term 'Indo-Pakistani Sign Language' is used because deaf communities in these countries use the same sign language. It has been amply demonstrated that the grammar of the languages used on both sides of the border are the same while there are some differences in the lexical items employed. Thus, IPSL became a relatively well-described sign language due to Zeshan's Master's thesis on IPSL grammar and the more extensive Ph.D. thesis, and other follow-up articles (see Zeshan (this volume) for an extensive reference). Zeshan's research also confirms that IPSL is indigenous to India which is used in the form of regional dialects all over the Indian subcontinent, that IPSL has a complex linguistic structure of its own and is not based on any spoken language, and that its grammar can be described by means of linguistic analysis.

For the current entry, Indo-Pakistani Sign Languge is abbreviated as ISL or Indian Sign Language (for easier identification by reader familiar with that abbreviation, with the assumption that IPSL and ISL are one and the same language).

This entry in part is based on based on work such Gourshyam (2010, in progress) and Sinha (2003, 2008) and draws liberally from them.

1.0 The Signing Space
Understanding the way that the space is used in sign language is very important. It can be regarded as the foundation of sign language grammar.
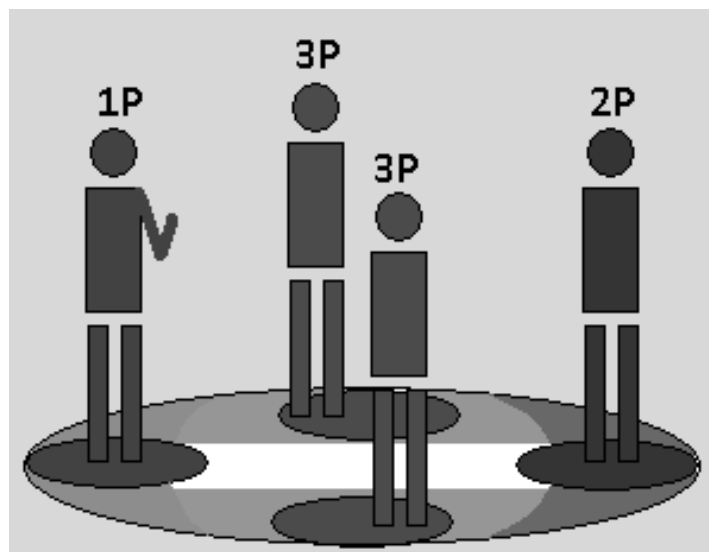
Figure 1: Signing Space (from signer's point of view)

Signers share a unique knowledge of space around them called signing space. The concept of persons (1st person, 2nd person and 3rd person) or the speaker, addressee and the others is deeply embedded in this commonly shared concept of signing space. A signing space (Figure 1) can be roughly divided into three parts. The positions are relatively fixed in a signing space as shown in the Figure 1. Literature on Sign language called this space, *nominal establishment* or *association of nominals with a locus*. Indexing in these locations are signs for different persons of the grammar and shaded colours are relevant for signing numbers (singular or plural) of the persons.
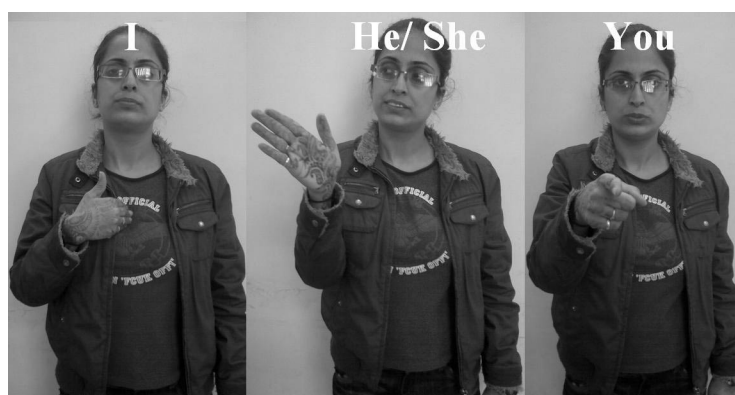
Figure 2: Persons

	Singular	Plural
1st Person	I (Index to oneself/ 1P)	We (collection of I, you and she/he/they)

2nd Person	You (Index to the addressee/ 2P)	You (index to extended (pink) area–s_of 2P)
3rd Person	He (Male + index to the 3P)	They (Index the extended (light green) areas of 3P)
	She (Female + index to the 3P)	

Table 1: Person, Number, Gender and Signing Space

ISL has dual signs as in "both of them" or "both of us". They are shown in the picture below
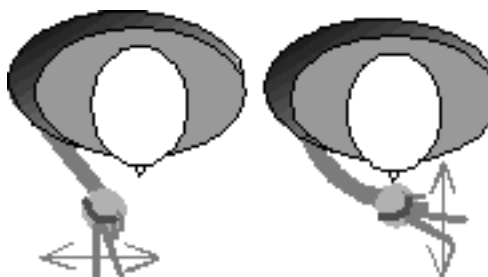
Figure 3: Dual: 'Both of them' and 'both of us'

Virtually occupying a space by a person within a signing space is important when we talk about a 3rd person who is not physically present in the signing space at the particular time of conversation. However, the person virtually occupies a space that (s)he is assigned by the signer and keeps holding the space as long as the context requires its reference. This process has been mentioned as *nominal establishment* as above. Note that physical presence is not the deciding factor but reference (indexation) is more important in the grammar. It is expected that therefore there is not much change or distinction between the physical presence and the virtual presence of (a) 3rd person(s).

These locations (persons) are virtually linked to each other just like we understand that there is only one straight line connecting two points in a space. A "virtual link" is an abstract link that the signers establish in their minds between the persons in the space. These virtual links in space come to life once two or more persons start signing to each other. The existence of the concept of space in addition to the physical presence of hands, fingers, and facial expressions etc. is crucial for several grammatical reasons. This is a commonly shared knowledge among ISL signers. Figure (4) shows the number of possible links/ lines that can be drawn; there are 12 such possible lines in the figure. These links are very closely related to the way verbs are signed.

Verbs can be divided into three types according to the number of *arguments* (roughly, *nouns*) they can take. They are known as *intransitive*, *transitive* and *ditransitive* verbs. Intransitive verbs take only one argument, i.e., the subject. For example; <u>Mary</u> *runs* and <u>They</u> *sleep.* Transitive verbs take two arguments, i.e., a subject and an object. For example; <u>John</u> *likes* <u>Mary</u>. Ditransitive verbs take three arguments, i.e., a subject, a direct object and an indirect object. For example; <u>He</u> *put* <u>the book</u> on <u>the table</u>. All the transitive and ditransitive verbs exhibit one of the 12 lines or directions given in Figure (4) except for a group of verbs called *stative* verbs. For example; *love, like, agree, promise, depend, believe* etc. Because of the origin of the links/ directions of the verbs, these phenomena in sign language are also considered to be person agreement markers.
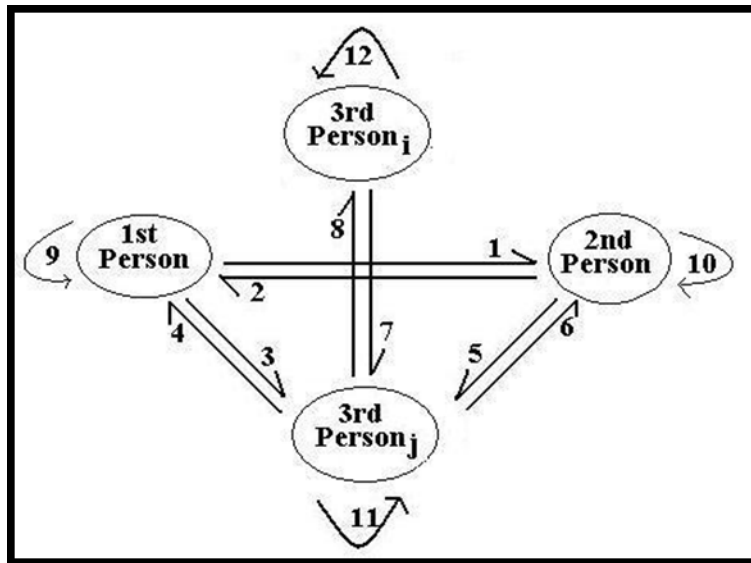
Figure 4: Possible links between persons

Stative Verbs:

| NEED | LOVE | LIKE | PROMISE |

KNOW

DEPEND

DOUBT

FEEL

AGREE (sign in sequence)

1

2
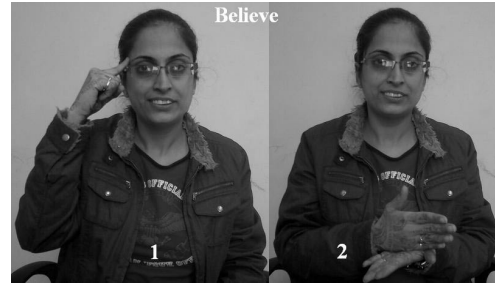
BELIEVE (sign in sequence)

1

2

UNDERSTAND (sign in sequence)

1

2
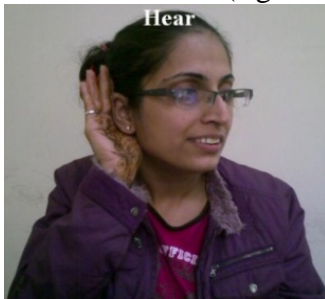
HEAR
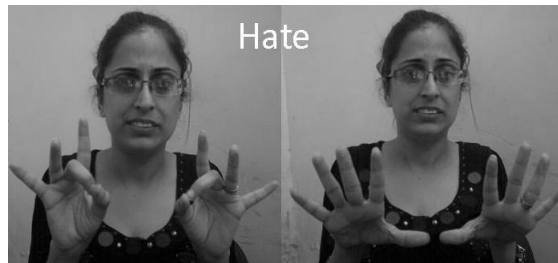
HATE (sign in sequence)
'to hate' as a stative verb in ISL is different from other stative verbs in the list.
It shows directions.

2.0 Other Components of Signing Space
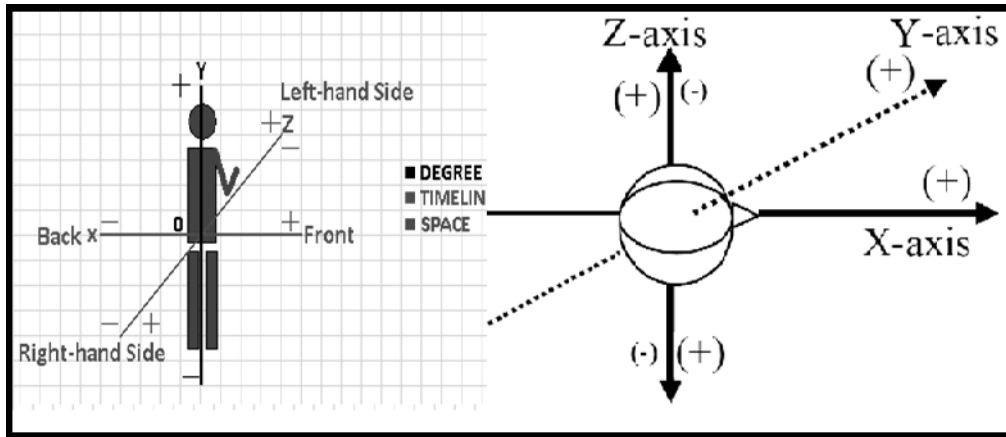
Figure 5: Components of Signing Space

The signing space is not just important from the (grammatical) persons' point of view but the concept of time (temporal expression) is also encoded in the space. The X-axis represents grammatical Timeline, Z-axis represents grammatical Space, and the Y-axis represents degree. The Y-axis is always used in coordination with Z-axis to mark different spaces. Y-axis coordinates with X-axis to mark different points of time. The X, Y and Z axes meet each other at '0'. '0' is approximately located at the base of the active signing area of the signer, which is very close to the signer's body. '0' represents *now (Time/ Present Tense)* for X-axis and *here (Space)* for Y-axis. Signing/ indexing towards positive numbers indicate *future* for X-axis and *distant* for Y-axis. Signing/ indexing towards negative numbers indicate *past* for X-axis. For example, *yesterday, long time ago*.

However, a single axis does not express the complete concept of either time or space. It is mentioned above that Y-axis coordinates with Z-dimension to indicate space related signs (deictic). Similarly, X-axis coordinates with Y-dimension to sign different times. Y-axis alone marks degree, i.e., more, less, etc. The higher the degree (Y-axis), the farther the Space or Time the signer intends to sign. One will notice that the Z-axis is marked with +ve on both sides, i.e., Left-hand side and Right-hand side. This is because of the existence of two potential spaces for signing 3rd persons (see Figure 1 and 5, Bhattacharya and Gourshyam, 2010).

Figure 6: Temporal expressions

The function of Y-axis particularly looks special because it facilitates to mark distinction between different points in the time and space of the language.

3.0 Word Formation: Compound Words

Languages employ different mechanism for word formation. Some words are simple and some are complex. A compound is a word made up of at least two bases which can occur elsewhere as independent words. There are some examples of the kinship compounds below. Kinship compounds in ISL are formed by simple concatenation of the nouns representing man/ woman or the noun representing sibling/ marriage or a relevant alphabet of English. The following are some of the examples.

(a)   Brother   =   Man + Sibling

(b)   Sister   =   Woman + sibling

(c)   Wife   =   Woman + Marriage

(d)   Husband   =   Man + Marriage

Husband

(e)   Uncle   =   Man + U

Uncle

(f)   Aunt   =   Woman + A

Aunt

The kinship terms are formed by combining two words. The following examples will show how time expression like month or year is combined with the signs of numbers. The following are the examples

(a)   Month + one   =

One-month

(b)   Month + two   =

Two-months

(c)   Month + three   =

Three-months

(d)   Month + four   =

Four-months

(e)   Month + five   =

(f)   Month + six   =

(g)   Month + seven   =

(h)   Month + eight   =

(i)   Month + nine   =

(j)   Month + ten   =

Note that for numbers higher than 5, the non-active hand of the signer comes up along with the active hand to form a new sign for the noun month.

The sign for 'year' in IPSL is similar to the sign of the alphabet "Y". The numbers of fingers unfold or show by the active hand of the signer while signing "Y" marks the number of years as shown in the relevant pictures above. Since the number of fingers in one hand is five, signing the number of years above 5 years is done by signing the (intended) number followed by the sign for 'year'. This example is particularly included to see the nature of combining the sign "Y" and numbers.

(a)	One year	=	
(b)	Two years	=	
(c)	Three years	=	
(d)	Four years	=	
(e)	Five years	=	
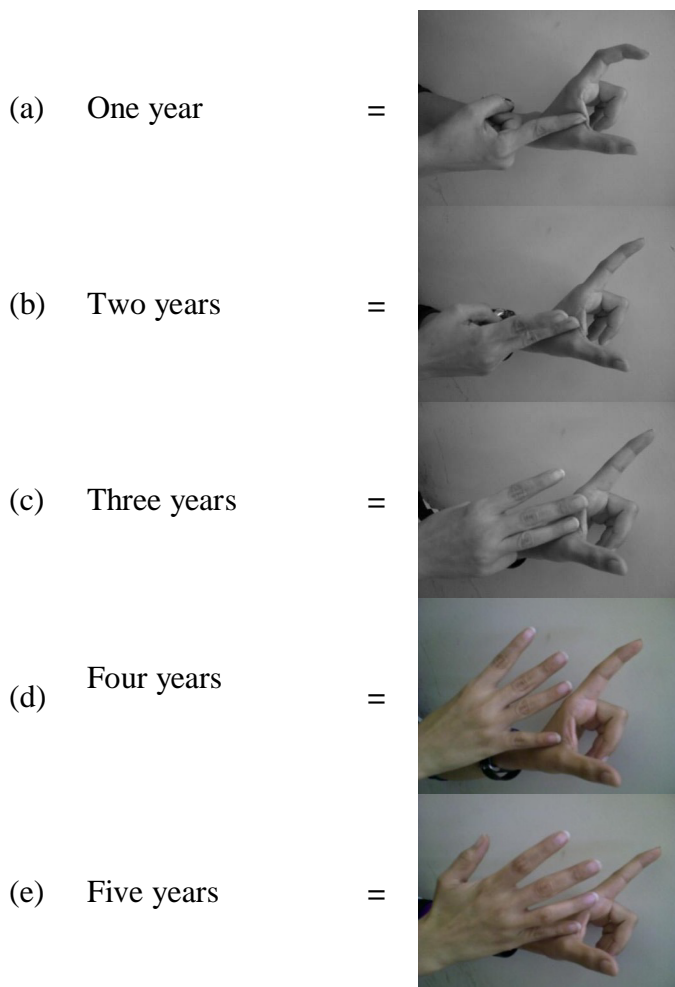
Similarly, signing 'one hour', 'two hours', 'three hours', 'four hours' and 'five hours' can be done with the active hand (finger) circling around the wrist (assuming the presence of wrist watch); the number of fingers used or unfolded marks the number. The number and hour signs have to be signed separately if one has to sign 'six hours' or more.

The signs for 'one-minute', 'two-minutes', 'three-minutes', 'four-minutes', 'five-minutes', 'six-minutes', 'seven-minutes', 'eight-minutes', 'nine-minutes' and 'ten-minutes' also depend on the anatomy of human hands, i.e., the maximum number of fingers that humans have . The signer lifts up (unfolds) the number of fingers equivalent to the number of minutes (s)he intends to sign and wriggles the fingers by showing the opposite side of the palm to the addressee. Both the hands are used to sign 'six minutes' or more. The maximum limit goes upto ten minutes as expected.

4.0   Phrases

Phrases are the immediate building blocks of sentences. Some basic phrases in the languages are determiner phrase (DP), noun phrases (NP), verb phrases (VP), adjectival phrases (AP), adverbial phrases (AdvP), prepositional/ postpositional phrases (PP) and tense phrase (TP). Determining the way these phrases are ordered and combined with each other will throw some light about how the sentences in Indian Sign Language are formed.

In ISL, the determiners are signed after the nouns. Tense is neutral in usual ISL sentences and the temporal adverbs play a very important role of anchoring the sentences (events) to real world time. Figure 6 in connection with Figure 5 will show the nature of expressing time in ISL.

Among the categories of words or phrases, PPs in ISL need special attention because they are not visible as separate signs like other word classes in many sentences. If one has to sign sentences like the following, a separate sign for the postpositions will not be used; one will see only the signs for flower and a table.

The flower is *on* the table. or
The flower is *under* the table. or
The flower is *near* the table.
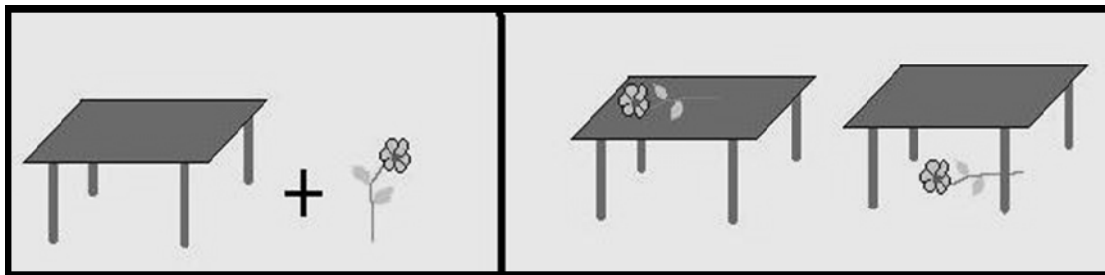
Figure 7: Adpositions

The adpositions seem to be there as a concept rather than signs. Importance of space in sign language is also reflected in the way adpositions are signed in ISL. Signing the flower spatially above the sign for table gives the meaning of "The flower is *on* the

table", Signing the flower spatially under the sign for table gives the meaning of "The flower is *under* the table." And signing the flower spatially next to the sign for table gives the meaning of "The flower is *near* the table."

5.0   Sentences

ISL is considered to be an SOV language, meaning, the order of words in the sentences of ISL is subject > object > verb.

Every language has some basic sentences that are used commonly. For example; Negative and positive sentences, Simple sentences and interrogative sentences, yes-no questions and wh-question sentences etc.

(a) Order of positive Sentences: The order of simple positive sentences in ISL is Subject-Object-Verb. For example,

ISL: He banana eat.
English: He eats banana.

(b) Order of Negative Sentence: The order of signing negative sentences in ISL is Subject-Object-Verb-Negation. There are two words for negation. There is a separate sign for negation in imperative sentences.

ISL: He banana eat no
English: He does not eat banana.

ISL: banana eat don't
English: Don't not eat banana.

(c) Order of Interrogative Sentences: The order of signing question sentences in ISL is Subject-Object-Verb-Question. Languages have wh-questions and yes/ no-questions. A Yes/ no-question in ISL is expressed by raising both the eyebrows simultaneously with

the verb of the sentence. Among the wh-questions, some words are compounds and some words have two signs.

Who	Face + Question
When (day)	When
When (time)	Time + Question
Where	Place + Question
Which	Plural Index + Question
What	What
Why	Why

6.0   Conclusion

Space plays a very important role in ISL grammar. It has been shown here that grammatical persons, numbers and even the temporal expressions are encoded in the space. Besides, adpositions of ISL are covert in many sentential constructions because of the spatial nature of the language. With so many important grammatical elements in the signing space of ISL, ignoring or failure to understand how space works for ISL will leave a major portion of the language misunderstood. Once the nature of space is clear to our mind, the work ISL does as a language starts to make sense. We have seen some examples of the nature of word formation and construction of different types of sentences. One of the most important parts that could not be covered sufficiently was non-manual markers which play a major role in all the sign languages (including ISL) of the world. However, the entry on Sign-writing in this volume may be referred for an appropriate example of non-manual marking in ISL.

References

Bhattacharya, Tanmoy and Hidam, Gourashyam Singh. 2010. Space-Machine. In *Proceedings of Episteme 4*, Homi Bhaba Centre for Science, Mumbai (international conference to review Research on Science, TEchnology and Mathematics Education)

Hidam, Gourashyam Singh. 2010. Incorporation in Indo-Pakistani Sign Language. M.Phil. dissertation, University of Delhi, Delhhi 110007.

Sinha, Samar. 2003. *A Skeletal Grammar of Indian Sign Language.* M.Phil. dissertation. Jawaharlal Nehru University of Delhi, New Delhi.

Sinha, Samar. 2008/ 2013. A Grammar of Indian Sign Language. Doctoral dissertation (submitted). Jawaharlal Nehru University, New Delhi.

Zeshan, Ulrike. 1996. *Aspects of Pakistan sign Language.* Sign Language Studies 92. Philadelphia/Amsterdam: John Benjamins Publishing Company. 253-296

Zeshan, Ulrike. 2000. *Sign Language in Indo-Pakistan*: *A Description in Signed Language.*,Philadelphia/Amsterdam: John Benjamins Publishing Company.

Zeshan, U., Vasishta, M. and Sethna, M. 2005. Developmental articles implementation of Indian sign language in educational settings. *Asia Pacific Disability Rehabilitation Journal* 6 Vol. 16 No.1.

Local Representative Signs of the Western Region

Nisha Grover

1.0   Introduction

Interest in Indian Sign Language and its linguistics has been in evidence only in the past 25 years. William Stokoe's seminal work (1960 [1978]) on American Sign Language (ASL) paved the way for the position that sign languages came to occupy subsequently. A Survey by Vasishta et al in 1978 and the work of Zeshan on Indo-Pakstani Sign Language (IPSL) in 1996 led to an acknowledgement of Indian Sign Language .This was partly fuelled by the research that had been taking place, since the 60's, in the West on Sign Language , partly on the perennial search for answers to the question of how best to facilitate literacy skills and academic competence in deaf students and partly on the right of Deaf people in India to have the freedom to communicate in a language which belongs to a body of languages which have been called the 'natural languages of the Deaf'.

In this entry some representative signs of the basic terms of Indian Sign Language are presented[9]. Signs comprise of shape of the hand, movement of the hand and location, in relation to the body of the signer. Sometimes another component, like orientation, is included. The locations of the hands are usually in a space which occupies a square in front of the chest. The expressions of the face and body language including movement of the head are important aspects in the communication channel. The speed with which a sign is made also has a bearing on the meaning intended to be conveyed. The size of the signs is influenced by the number of people who will receive the message as well as the distance to be covered.

The signs in this section are representative of terms of kinship, number, colours, time, days of the week and months of the year, parts of the body and objects on earth and sky from the western part of India. Regional variations of lexical terms are known to occur in

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[9] The drawings of the representative Signs are provided in APPENDIX I

Indian Sign Language as in other sign languages, and the present entry is a reminder to that effect.

2.0   Methodology

After the initial planning, data was collected and then edited. During this stage, the description of the signs was prepared. Finally in the last stage the representative sample of the signs was compiled.

In the initial stage experts met and made a comprehensive plan regarding the terms, sampling, data collection and recording procedure, timing, budget, and personnel. At this stage some initial sketches of the signs to be included were also made.

The process of selection of terms was based on basic categories which applied to all the Languages included in the People's Linguistic Survey of India (PLSI). Whereas the process of sampling involved determining the sample size, the process of contacting Persons with Disabilities who use Indian Sign Language (ISL) actively, data collection and recording procedure.

At the stage of selecting the terms, the experts met and made a list of terms for the representative collection of signs. About 200 terms from eight basic areas such as kinship, colours, places, time, days of the week, months of the year, numbers and body parts were selected based on the same categories as in the other volumes of the series.

3.0   Data collection

The data collection stage began in August 2010. In order to construct a representative sample, 10 educational institutions working in the field of hearing impairment, 5 Deaf clubs and 10 Persons with hearing impairment were contacted from the east, west, north and south Gujarat. The response was poor to begin with, and further efforts were made in that direction. SSA (Sarva Sikshya Aviyan) teachers were contacted but data collection was a problem for them due to literacy issues, transportation, etc. Finally, contact was made with literate hearing impaired adults who agreed to participate in the process. There

were 7 persons in total, 1 each from Anand and Ahmedabad, 3 from Akshar Trust, and 2 alumni students of Akshar Trust, Vadodara, who agreed to participate in the video recording.

Data from all the persons was collected on different days and in three different sessions in one day. In the first session, the purpose and the procedure were explained to the persons. Simultaneously, an informal interview was also taken to assess the persons' level and build rapport. In the second session the list of terms was given to the person and s/he was told to read and prepare herself/ himself for signing. In the third session, the terms were written on the blackboard and a video was made of the signs which the person presented. This was recorded by camera.

After the completion of the video recording, the artist made some sample sketches from the video recording. But, during discussion with the artist it was understood that making sketches on the basis of video recording was very difficult. So, the recorded video was shown to one deaf student and he was asked to make the same sign. A photo was taken of this. These photos were sent to the artist. The artist made draft sketches from them.

4.0   Editing

The draft sketches were checked by the resource persons and sent back to the artist for correction. Simultaneously, on the basis of the video recording the description of the signs was prepared by the resource persons.

After the collection of the final sketches the same was scanned and editing using Microsoft office picture manager and paint. After completion of this procedure the scanned edited images were pasted in a word document with the description.

5.0   How to use this representative sample of signs

These representative sample signs must be read from left to right. Many signs have two positions. The first position is represented with a dotted line while the second position is represented with a complete line. When there are more than two signs for any one term, each sign is presented in different sketches. The sketch on the left side is one

representation and the one on the right is the other. In the instruction sometimes a reference sign is given. For example, Mother's mother involves signing 'mother' followed by grasping of the chin with the thumb and middle finger; in this example, the sign for 'Mother' is the reference sign. The Finger Spelling method used in this representative sample is the 'Two-Handed' Finger Spelling method[10].

6.0   Conclusion

It is quite clear from comparing with signs from other regions that language variation exists mostly at the level of lexical items or vocabulary, the sentence structure or even complex sign forming strategies are largely invariant. The sample here is constructed with the hope that more rigorous comparative work in this domain may be undertaken which may show the specific areas of variation within the lexicon of a language, which, in turn, may throw some light on how the lexicon is organised within the human brain in general.

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[10] Further elaboration of Fingerspelling can be found in the entry on the same topic in this volume by Ketkar.

References

Stokoe, Willian C. 1960 [1978]. *Sign Language Structure*. Silver Spring, MD: Linstok Press.

Zeshan, Ulrike. 1996. *Aspects of Pakistan sign Language*. Sign Language Studies 92. Philadelphia/Amsterdam: John Benjamins Publishing Company. 253-296

Vasishta M, Woodward J, and Wilson K. L. 1978. *Sign language in India: regional variation within the deaf population.* Indian Journal of Applied Linguistics; 4(2): 66-74

Fingerspelling

Rajesh Ketkar

Fingerspelling also known as manual alphabet is an integral part of sign languages used around the world. Words that do not have signs are spelled on fingers to facilitate communication. The most popular fingerspelling system is the American Manual Alphabet. It is one-handed and easier to learn and can be used more effectively than the two-handed British Manual Alphabet for its speed.

Devnagri and other Indian writing scripts have a very complex vowel system and representing those on fingers is much harder and almost impossible to read. However, some efforts were made to develop fingerspelling systems for Hindi and other regional languages. These might be used in schools for teaching purpose, but to the best of our knowledge, these were never adopted by the Deaf community.

The American Manual Alphabet is used by some Deaf people in larger cities and has been becoming more popular due to the ease of use. Most deaf people in India use the Indian variation of British fingerspelling system. This is basically the same as the British, except that vowels are rendered differently. All consonants are exactly the same.

The charts below show various fingerspelling systems.
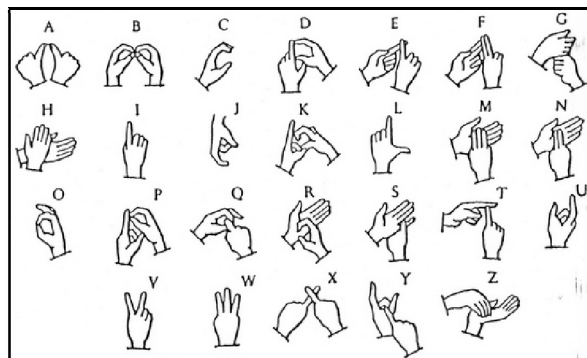
Table1: Indian Fingerspelling System

Table 2: Gujarati Fingerspelling System

Table 3: Hindi Fingerspelling Alphabets
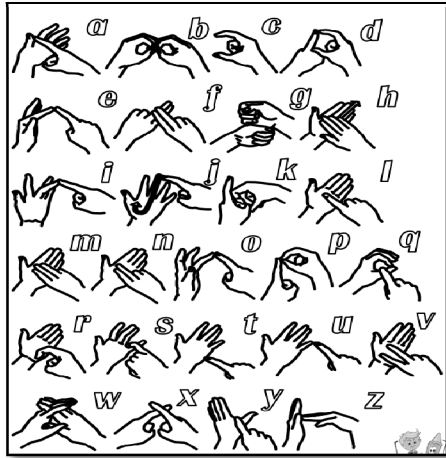
Table 4: British Fingerspelling System

Table 5: American Fingerspelling System

Sign Writing

Hidam Gourashyam Singh

1.0   Introduction

One issue that often appears in the agenda of certain types of demands for Deaf education and literacy is the one of the need for devising, implementation, and adoption of a writing system for signed languages. It may be pointed out that such a type of demand is inspired by and derived from the perspective of similar issues of literacy and education in and through spoken languages. The devising and adopting of the Olciki script for writing Santhali, and the recent demands for recognition of a series of scripts designed to represent the Apatani languages of Arunachal Pradesh, or even revival of older scripts (Meetei Mayek) for languages like Meiteilon are some instances. In short, the need for a writing system for signed languages is most prominently felt from the spoken language perspective of education and literacy. The history and description of the system to be outlined in this essay also has a similar history.

Orthographic systems devised for spoken languages address the problem of space and time in communication by improving the nature of storing and sharing information. The invention of writing system marked advancement in the human history. It helped tremendously in preserving, spreading, propagating knowledge among humans for centuries. Over the years or centuries, the way (speed and amount) of sharing of information has only increased. If the goal of using sign writing is to achieve the same purpose as that of the orthographic system of spoken languages, it must be emphasized that there are better or more accurate technology available today than when sign writing was attempted.

Orthography, as we know, involves a convention or a shared understanding of a set of rules (representations) which are required to fill up the gaps between orthography system and the language; it can be called standardization of writing systems. Despite all the discrepancies, history retains the evidence of achievements of certain civilizations/ cultures with in comparison to other groups who did not posses a writing system. Some cultures borrowed (therefore, shared) the writing systems from other cultures, even from their enemies due to its importance and benefits. It may be worth having such a system to store or share knowledge which is externalized by language or the knowledge which the language itself represents.

There are meanings in the sentences of the language or in the words abstracted from them. Meanings can be simply a reference to a physical object or abstract entities which are not iconic (that is, independent of the objects that depict or carry a certain property).

If both of these types of meanings are represented by different sounds or shapes and movements of body parts, and if these movements are represented by conventionalized drawings we have a writing system.

2.0 Comparing with conventional writing systems

Compare the following two systems:

For Sign Language:

	1st	2nd	3rd
(a)	BOOK $_{MEANING}$ = VISUAL →	WORD $_{SIGN}$ = VISUAL →	WRITING VISUAL

	1st	2nd	3rd
(b)	NICE $_{MEANING}$ = ABSTRACT →	WORD $_{SIGN}$ = VISUAL →	WRITING VISUAL

OR

For Spoken Language:

	1st	2nd	3rd
(a)	BOOK $_{MEANING}$ = VISUAL →	WORD $_{SPOKEN}$ = SOUND →	WRITING VISUAL

	1st	2nd	3rd
(b)	NICE $_{MEANING}$ = ABSTRACT →	WORD $_{SPOKEN}$ = SOUND →	WRITING VISUAL

There are a few options to choose in the writing system, i.e., to draw a picture of a 'book' or to draw the WORD $_{SOUND/ SIGN}$ itself in order to represent the BOOK $_{MEANING}$. It is obvious in the case of spoken language like English that the association of a visual object (the book) by a sound (*buk)* and to represent the very sound by drawing some conventionalised symbols (*B/b,o,k*) in a certain manner and order. For this reason, the written systems of spoken languages are often classified as logographic or syllabic or alphabetic. Knowing how to draw *B/b,o,k* doesn't necessarily mean that the person knows the sounds associated and, vice-versa being able to produce the sounds doesn't necessarily mean that s/he knows that the sound represents the BOOK$_{MEANING}$.

The relations (1st, 2nd and 3rd in the tables above) shown in (a) and (b) are mostly arbitrary. It will be seen in case of Sutton sign writing, what is the nature of the system that makes it easily acceptable (keeping aside the gaps which are generally filled by convention or standardisation). The relation between the 2nd and 3rd for sign language are both VISUAL and Sutton's sign writing exploits this relation and closes the gap to the maximum, which makes it closer to the visual representation of the signs.
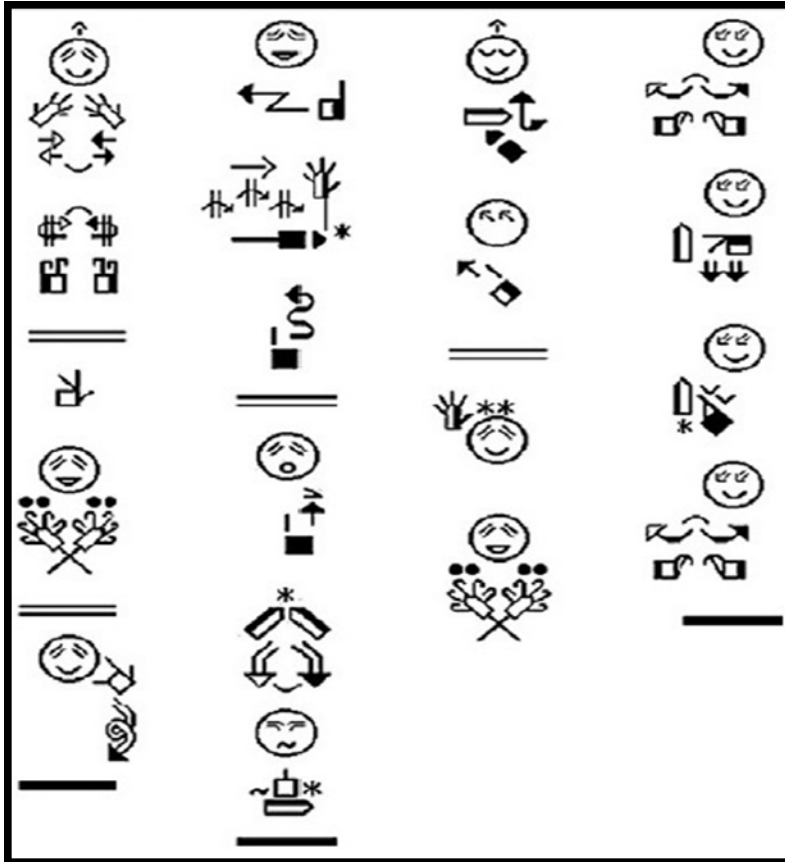
Figure 4: Sutton Sign Writing (Source: Erika Hoffmann-Dilloway, 2011:348)
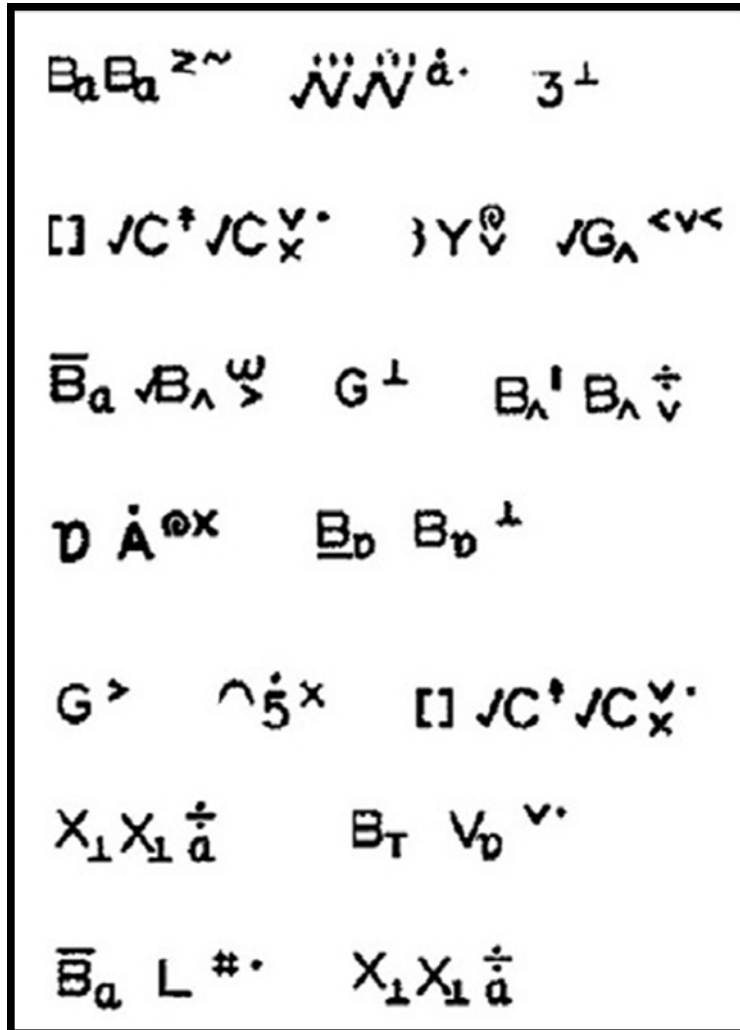
Figure 5: Stokoe's Notation (Source: Erika Hoffmann-Dilloway, 2011:348)

In case of sign languages, the signs for concrete objects need not be the same in different sign languages. The writing systems can use common symbols like the sign notation introduced by William Stokoe or it can relate to signs (movement of body parts) which are visual in nature unlike spoken language. Though one still has to learn the association of such drawings/ symbols with the intended meaning in a certain language, there is an advantage of being able to relate to one another if the writing/ symbols (visual) are closely related to the signs (visual). This is the kind of writing we will see in case of Sutton Sign Writing system. Standardization is required to sort out several technical common problems of ambiguity etc., which can be resolved. Figures 1 and 2 clearly show the differences between Stokoe's Notation and Sutton Sign Writing. The symbols in Figure 2 represent Stokoe's Notation and the symbols in the Figure 1 represent Sutton Sign Writing. It can be seen from this figures that the Sutton Sign Writing is closer to signing in terms of embedded iconicity.

3.0　　Sutton Sign Writing[11]

In spite of the following quotation from Stokoe, fuelled quite obviously by the multi-modal nature of sign languages, writing systems for sign languages have been attempted and used.

> *''theory suggests that sign languages cannot be written''*
>
> (Stokoe, 1978, p. 118)

One the of early system of sign writing system was inspired by and developed from Valerie Sutton's way of transcribing movements of dance in 1974. She was a ballet dancer who wanted to preserve various dances and choreograph new dances but could not actively participate on stage or in training due to personal health problems. Therefore, the focus and goal of her writing system was to represent the body movement, which later proved to be very useful to use as a writing system for sign language.

The origin and purpose of the two systems of writing shown earlier in Figures 1 and 2 have been very different right from the beginning. The Stokoe Notation was developed under a structural linguistic rubric and it has several limitations to represent the spatial relationships, bodily movements, and facial expressions that characterise the grammar of many signed languages. On the other hand, the Sign Writing of Sutton is claimed to have gained more acceptance among the D/deaf, popularity and technical supremacy from the users' point of view. It is said that there are more than 30 countries which are using the Sutton Sigh Writing.

3.1　　Composition of a Sign

Just like a spoken word can be composed of several consonants and vowel sounds, a signed word can be composed of several shapes, movements, order of signing or simultaneous signing and different body parts. Some of the parts and movements that need to be focused are as follows:

- Place of signing in relation to the body of the signer
- Handshapes
- Nature of hand movement
- Direction and angle of rotation of signs (hands)
- Speed
- Direction of movement
- Other associated body movements
- Facial expressions

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[11] The discussion below is culled from the sources mentioned in the References, especially Hoffmann-Dilloway, 2011, Martin, 2007 and Pankhurst, 2008/2010.

- Temporal order of the parts of signs
- The nature of associating or touching of different signs and parts of the body

A single sign can be composed of several elements. In the following example from American Sign Language (ASL), the writing shows the place of articulation (around the lip of the signer), the shape of the hand, the direction of movement and the way the hand touches the lips etc. This example of Sutton Sign Writing can show all the detailed complexities:
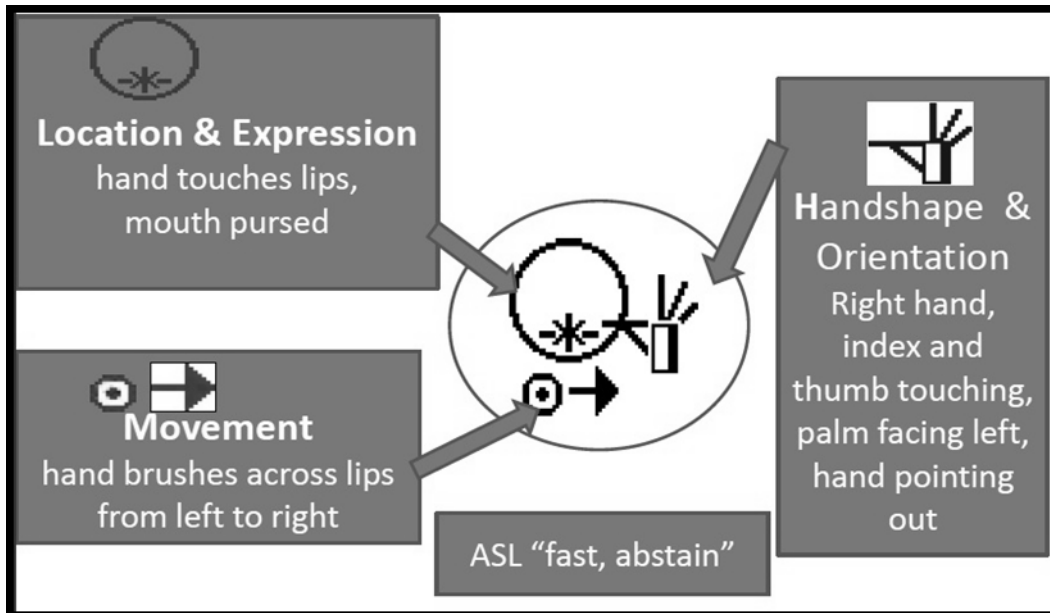
Figure 3: Composition of a Sign

(Source:
http://www.signwriting.org/archive/docs7/sw0623_TISLR_2010_SignWriting_SignTyp_Poster.pdf; http://www.signwriting.org/forums/linguistics/index.html#research)

3.1.1 Place of Signing

The place of signing is where the signer articulates his/ her signs and the addressee also observes the signs in the language. The spatial relation and orientation of the signer's body and hands with respect to the signer himself/ herself and addressee (as in the following figure) needs to be understood for better understanding of several other components of the signs that will be discussed below.
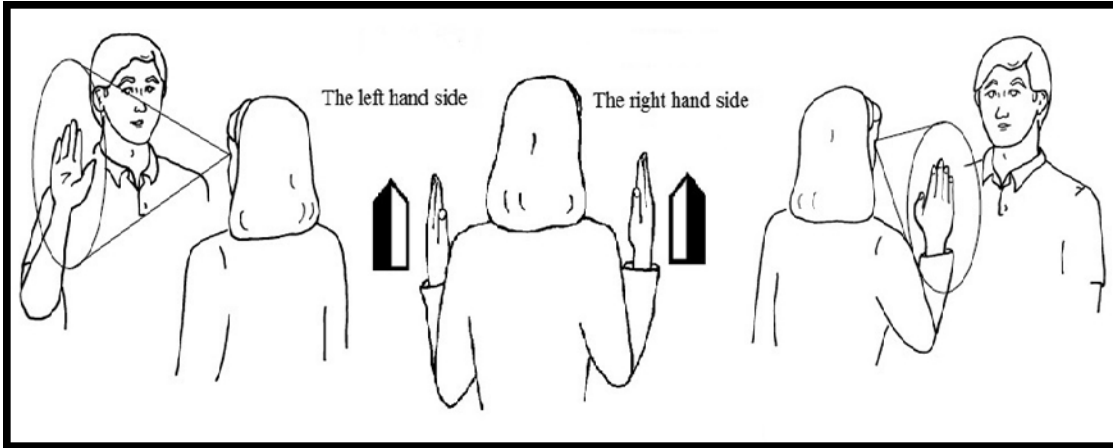
(Source: Parkhurst, 2008/ 2010: 2)

3.1.2 Handshapes

These are one of the most fundamental parts of manual signing, handshapes in combination with other spatial features and orientation alone can create an innnumerable amount of signs. The examples below will show many such possibilities and all of these signs needs to be represented in the writing system.

Examples of Different Handshapes:

Right Index hand Palm faces reader	Right index hand faces left	Right index hand faces away from reader	Right index hand face upward	Right index hand points forward	Right index hand face down
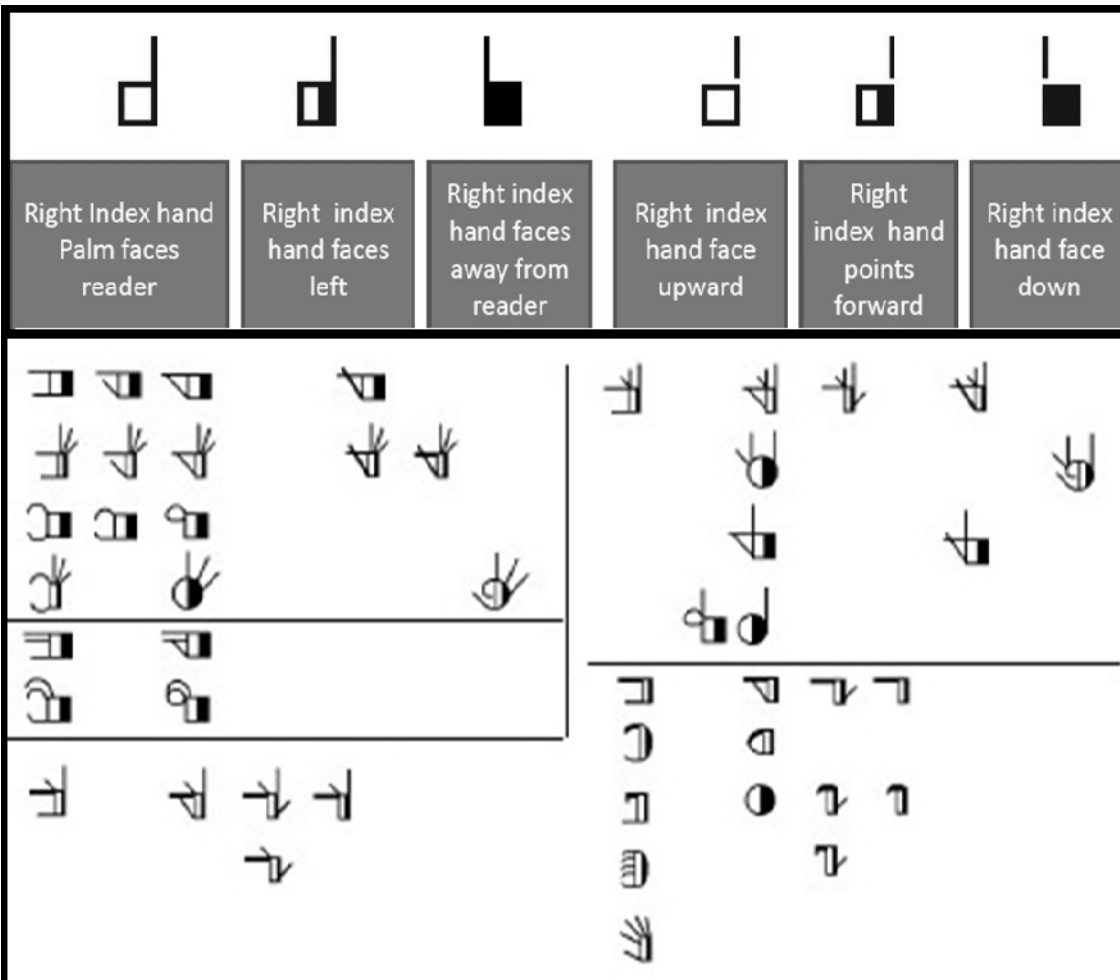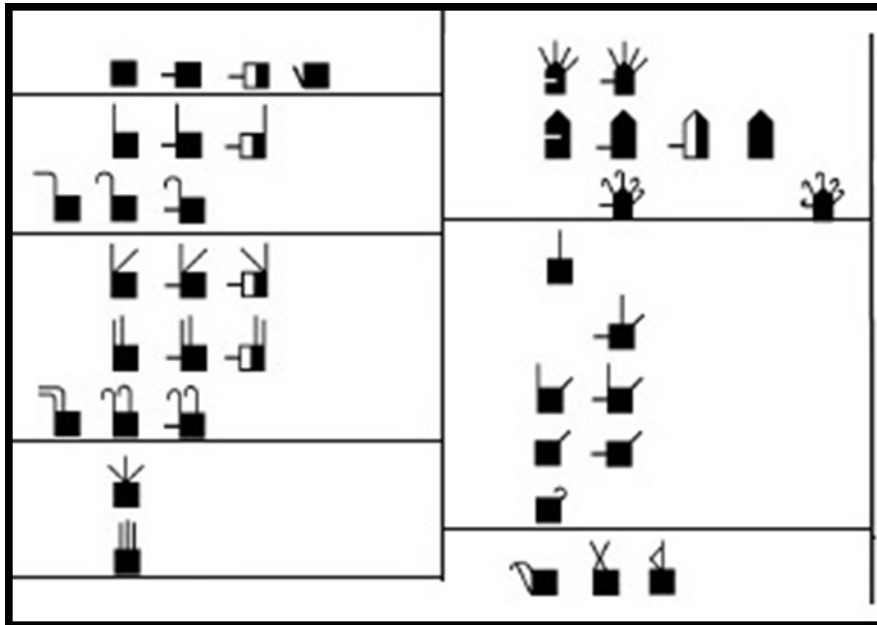
(Sources for both: Parkhurst, 2008/ 2010: 142)

3.1.3 Movement of Hands

It has just been observed in the above examples that Sutton Sign Writing uses a lot of drawings resembling handshapes. Those handshapes in combination with the direction and nature of movements shown in the symbols below will form words or the drawing/ writing of the words.
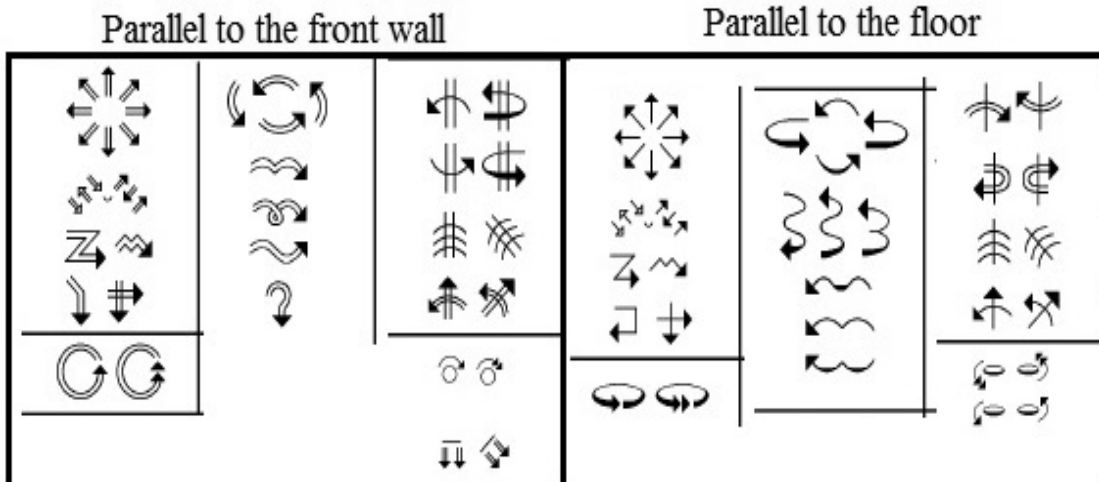
(Source: Parkhurst, 2008/ 2010: 143)

Parallel to the side wall
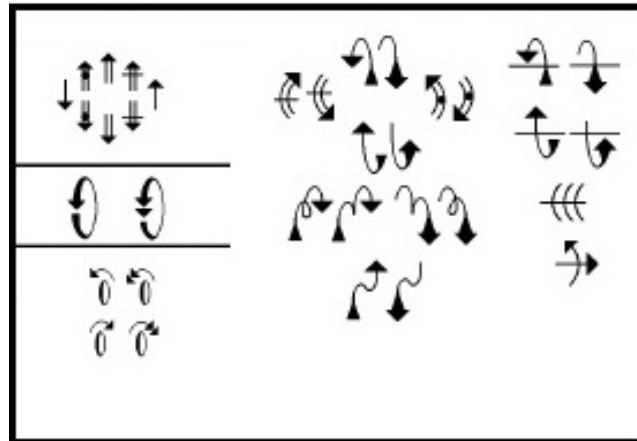
(Source: Parkhurst, 2008/ 2010: 143)

3.1.4 Mouthing

Besides handshapes and movement of hands, mouthing is also one of the most important non-manual part of signing which is used widely by signers of different sign languages all over the world. Including them in a writing system is crucial for sign language users to be able to write the language correctly.

Sign writing for mouthing:

| lips spread ("ee") | open mouth ("ah") | wide open mouth | rounded mouth ("oh") | rounded mouth, lips extended ("u") | lips rounded and extended, mouth closed (kiss) |
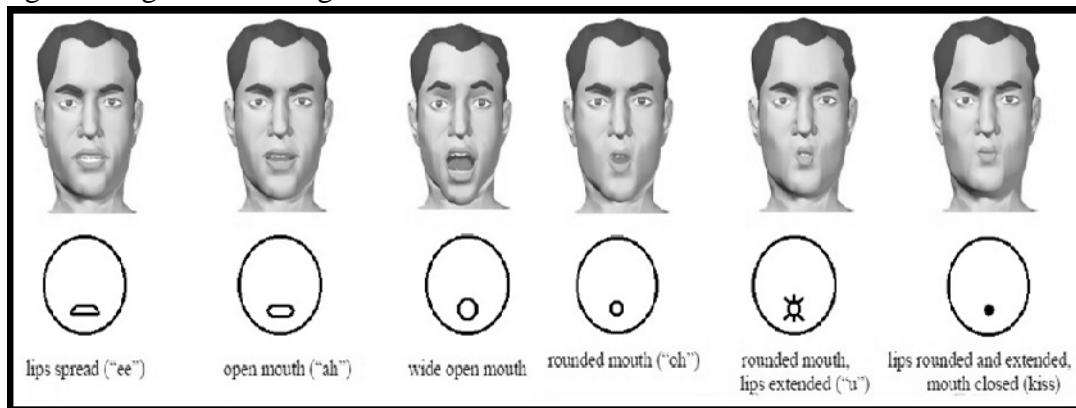
(Source: Parkhurst, 2008/ 2010: 132)

3.1.5 Opening/ closing of eyes

Like mouthing, eyes can express different types of non-manual signs used in combination with other signs to express important words and to make distinction between similar signs with different meanings. Deploying a range of writings (drawings) to represent different types of eye-expressions is as important as having consonants or vowels in written alphabets.

Examples of the writings are:
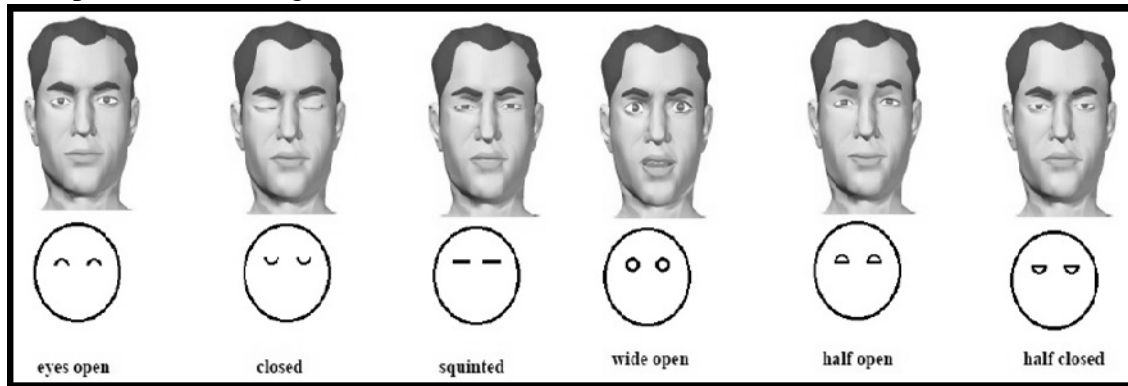
(Source: Parkhurst, 2008/ 2010: 128)

3.1.6 Nature of eyebrows

Just to mention one example of its importance, 'raising eyebrows' is an important non-manual sign for question formation in Indo-pakistani Sign Language (IPSL). Without raising eyebrows, perhaps, there is no way at all in IPSL to ask a question. Therefore, a writing system that needs to be used for IPSL requires this important part of the sign. This is an example of the importance of what eyebrows can do. The examples below show the different shapes and figures that eye-brows can exhibit, which all have the potential of combining with other signs.
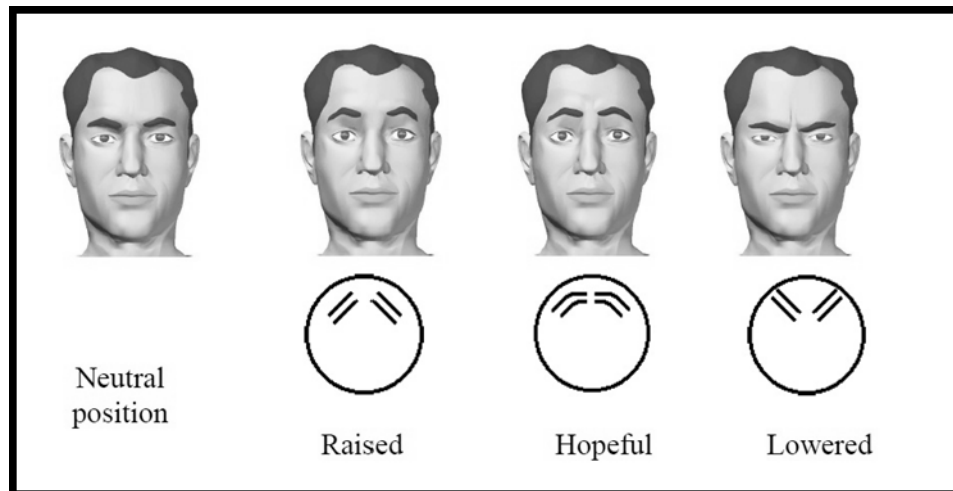
(Source: Parkhurst, 2008/ 2010: 115)

3.1.7 Lip Movement

As it has been discussed about other non-manual signs above, lip movement is also one of the important non-manual signs like the others. There are four examples of writing the way lips appear. The leftmost figure stands for "smile". The dilemma is whether or not we can write the word "smile" in sign language without having to draw the smiling lips shown in the picture below or the word "frown" without having to draw frowning lips below.
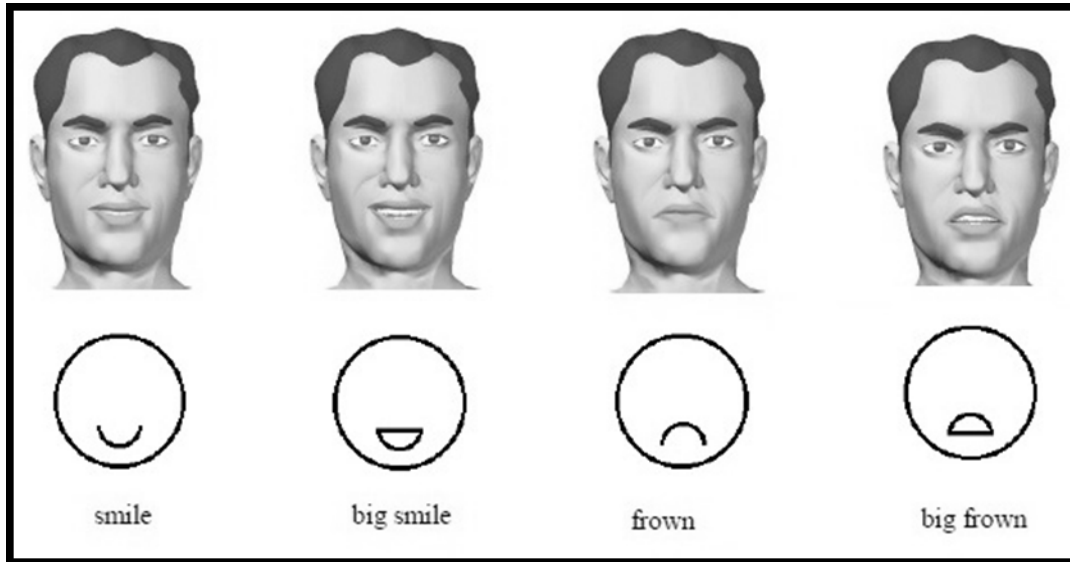
(Source: Parkhurst, 2008/ 2010: 131)

3.1.8   Others

Most of the signs we know are composed in different ways with different manual and non-manual signs. The picture below will highlight more elements about the way signs are combined in general.
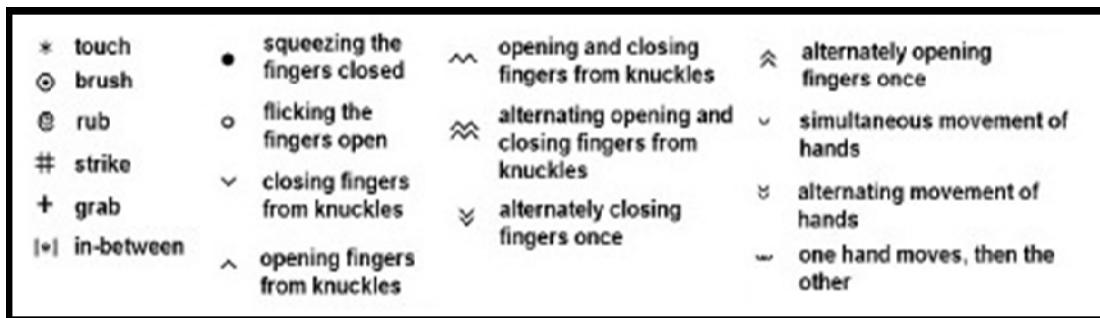
(Source: Parkhurst, 2008/ 2010: 144)

The picture below will highlight more about the way signers use their body. From shoulders to the teeth, almost every movable body part is utilised to add meaning or to disambiguate signs.
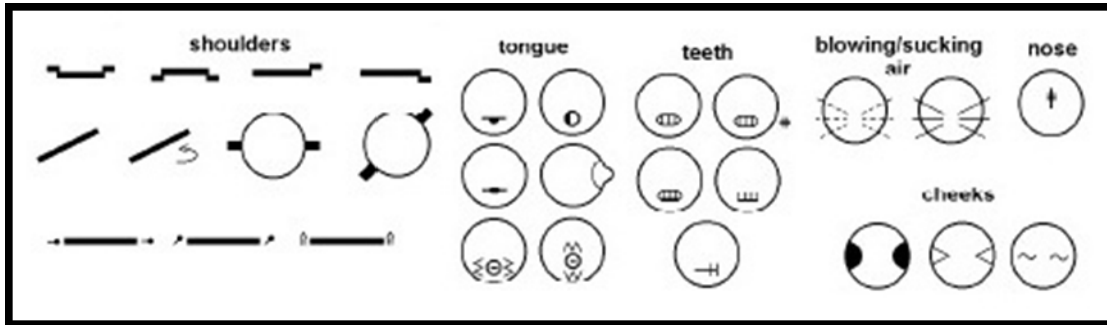
(Source: Parkhurst, 2008/ 2010: 145)

5.0   Conclusion

This entry provides a suitable way of writing sign language or its use in print media. It has already been mentioned in the introduction of this article that there are better technologies today than using written systems. Sending video files, video chat and video call etc., have become normal modes of communication among many sign language users these days. It is clear therefore that videos best represent sign languages and function better than any sign writing system, provided, the technology is available. It can be seen that the complexities or composition of sign(s) that are articulated simultaneously by several parts of the signer are unavoidable if and when a visual and dynamic system is embodied by a limited system of graphemes.

References

Hoffmann-Dilloway, Erika. 2011. Writing the smile: Language ideologies in, and through, sign language scripts, *Language and Communication, 31, pp 345-355*

Parkhurst, Stephen. 2008/ 2010. A Cross-Linguistic Guide to SignWriting: A phonetic approach. SIL-UND courses, summer, 2010.

Martin, Joe. C. 2007. Writing and Signed Languages. MA dissertation, University of South Carolina

Stokoe, W., 1960 (1978). *Sign Language Structure,* revised ed. Linstok, Silver Spring, MD.

PART 2:

EDUCATION AND POLICY

Sign Silingualism

Surinder Randhawa

1.0   Introduction

The present volume is on a language which in many parts of the world is still struggling to be recognised as a language. The use of a language for communication purposes is an important function and several minor languages which do not have written form serve just this function. However, when we talk of a language where the number of users is in millions and they belong to a category to which spoken languages are not accessible naturally, in such a case there is also a serious need to discuss the use of accessible language for educational purposes. The target population in this case is the D/deaf population, a population with varying degrees of hearing loss and unique communication needs and the language in question is sign language. For the children who are born profoundly deaf or become deaf pre-lingually, sign language which is visual-gestural in nature is more accessible. Since in most cases sign languages do not have a written form (efforts to develop writing systems for particular sign languages is in the process, also see the entry on 'Sign Writing' in the current volume), for educational purposes, use of another spoken language has to be made and that is how Bilingual Education of the Deaf or Sign Bilingualism has become an important trend in the education of the D/deaf and is very much related to the linguistic rights of the D/deaf.

Till very recently two trends have been dominating the scene: viewing deafness from a medical-deficit model where the deaf are viewed with impairment which needs to be fixed. The main premise being what they don't have rather than what they have. The second trend has been the spread of myths about sign languages. From being called as 'collection of gestures' to a 'defective form of a spoken language', sign languages were shown in a negative and inferior light in comparison to spoken languages. However, Stokoe's (1960) research finding proved beyond doubt that Sign Languages fulfil all the parameters of a language like any other spoken language and they have their own complex grammar. Natural signed language like American Sign Language (ASL) or Indian Sign Language (ISL) demonstrate the same linguistic properties as spoken

languages including phonetic, phonemic, syllabic, morphological, syntactic, discourse, and pragmatic levels of organisation (New port & Meir,1985; Petitio,1994).

By now we also know that there is no one universal sign language and each country has its own sign language with several regional variations. For the Indian deaf population it is the Indian Sign Language with various regional variations mainly in the lexical domain (Vasishta, 1978).

2.0   The nature of Bilingualism in sign language education

In simple terms Bilingualism means successfully speaking/using two languages. India being a multilingual country, most of its population knows more than one language and being bilingual or multilingual is not exceptional. However, in monolingual countries like USA, UK or Australia where English is the predominant language, becoming bilingual or to allow bilingual education, was/is a matter of national debate. Though various acts were put in place to safeguard the right of 'meaningful education' for children whose home language was other than English, research has increasingly shown that being bilingual can have a profound effect on the brain, improving cognitive skills not related to language and even shielding against dementia in old age (Cummins,1976).

The premise of bilingual education in Cummins' 'Model of Linguistic Interdependence' is that competency in one language (L1) helps in the learning of a second language (L2) and there is cognitive skill transfer from one language to another. In other words, they may look like two separate languages on the surface but there is a common underlying structure. However, in the case of Sign bilingualism, the two languages use two different modalities, one being visual and the other one a spoken language which is mainly aural but the deaf however, would develop mainly through reading and writing. In case of such dissimilar languages, transfer will consist primarily of conceptual and cognitive elements (Cummins, 2005). However, Haptonstall-Nykaza and Schick (2007) reported that fingerspelling and other sign language based bridging techniques may encourage transfer of specific linguistic elements as well as provide a visual phonological bridge. However for effective transfer to occur, a child has to be proficient in the first language (L1). The

child also needs a good input of the second language (L2) and needs to be motivated to learn this second language (Mayer & Leigh, 2010). With regard to the deaf children, first two of these three conditions are rarely met. Maribel Gárate (2012) while elaborating on models, methodologies and strategies in ASL/English Bilingual education emphasizes that in order for a child to benefit from the cognitive advantages of bilingualism the development of both languages needs to be fostered in all social and academic interactions.

3.0   Sign Bilingualism

In the 1970s, when mono-lingual countries were warming to the idea of Bilingual education for the children whose home language was different from the national language of a country, research had already showed that sign languages were also true languages (Stokoe, 1960 [1978]) and hence the seeds for Bilingual Education of the deaf were also sown.

The Sign Bilingual approach in deaf education is based on the concept of deafness as difference rather than defect; Deaf people are viewed as a group with their own linguistic and cultural identity. A bilingual school uses the natural sign language of Deaf people so that Deaf children have an easily accessible first language for communication and learning. The spoken/written language of the majority is learnt as a separate, second language. Deaf staff is a key element of a bilingual school: they provide high standards of sign language, and also act as positive role models for the children. It has been clearly demonstrated in a number of Sign Bilingual programmes in the UK and elsewhere that deaf children educated through this approach are able to match the educational achievements of hearing children, as sin their performances in national examinations.

Bilingual-Bicultural (Bi-Bi) approach is now gradually becoming *the* teaching approach for Deaf children world wide. It is based on the socio-cultural model of deafness whereby Deaf are viewed as a linguistic minority, belonging to the Deaf culture with their own unique Deaf identity. In this approach, Sign Language and the spoken/written languages (like Marathi, Hindi or Bengali) are kept separate in use and in the curriculum. Sign

Language is respected as the first language (the mother tongue) of Deaf people and is also used as the language of instruction in the classroom. Based on the competence of this first language, spoken language of the society is learnt by the deaf mainly through reading and writing as a second language.

Though speech is not emphasized, children are given an opportunity to develop speech if they have the aptitude to learn it. The bicultural aspect of BiBi education emphasizes the study of Deaf culture and strives to create confidence in deaf students by exposing them to the Deaf community. It also strives to equip the D/deaf to function well in the hearing society hence becoming bicultural.

In her very famous paper "The right of the deaf child to grow up bilingual" which has been translated in more than 30 languages including Hindi and Tamil, François Grosjean (2001) stresses that every deaf child, whatever the level of his/her hearing loss, should have the right to grow up bilingual. By knowing and using both a sign language and an oral language (in its written and, when possible, in its spoken modality), the child will attain his/her full cognitive, linguistic and social capabilities. Research has shown that effective language has to be fast and clear and sign language is an efficient language for visual learning and is easier for Deaf children to acquire as a first language than any form of a spoken language. A solid foundation in a first language leads to better second language performance over time, and skills transfer from one language to another (Johnson, Liddell, Erting, 1989).

Like many children with disabilities in India, deaf children face social isolation, poverty and Discrimination. Deaf children lack access to the auditory base that hearing children have for acquiring a spoken language. Historically, education of the deaf in India and elsewhere, failed to support the use of native signed languages of the Deaf community in classrooms or educational programmes for deaf students, due to widespread conceptions that learning a signed language will hinder the development of spoken and written language skills.

4.0   Rationale for Sign Bilingualism

As a co-medium of instruction, sign bilingualism has opened up opportunities for the deaf in many parts of the world thus enhancing their quality of life. In India it has a very specific significance in the light of the fact that so called (and not up to the mark) Oral education has failed the majority of the deaf and has not produced the desired results. They are passing out of high schools literally illiterate hence marring their chances of higher education as well as access to good jobs. Johnson, Liddell and Erting (1989) pointed out two main reasons for the failure of deaf education: i) Lack of linguistic access to curriculum at grade level ii) Low expectations. The first reason very specifically demands the use of an accessible language i.e. sign language in the education of the deaf.

One way of approaching sign bilingualism in the education of deaf in India is to let Indian Sign Language (ISL) and Hindi/English or other regional languages share the role of medium of instruction in the teaching at all levels of education. ISL would be the medium of active communication, while second languages play the role of mainly written communication and in spoken form wherever possible.

4.1   Reasons for development of Sign Bilingualism

This section discusses the various reasons for development of Sign Bilingualism.

4.1.1   Recognition of Sign languages as languages

In India, the term Indian Sign Language (ISL) was first used by Vasishta and others in 1980s when they studied regional variations in ISL and use of ISL in schools. Because of misconceptions about sign languages, schools denied and also prohibited its use but the fact remains that most children of most deaf schools use sign language for communication. Teachers too, to ease their communication with students, use random signs. With more awareness, it is presumed that ISL will soon find a more prominent place in the education of the D/deaf children as efforts to do skill development of pre-service as well as in-service teachers in ISL are in the process.

4.1.2   Failure under the oral approach

At around the same time as sign languages were being recognised as true languages, dissatisfaction with oralism started to grow. Beginning in the 1970s till recently research studies   repeatedly kept showing that deaf pupils left school with median reading ages of nine; with poor speech intelligibility and with lip-reading skills no better than those of the hearing population, despite their training in this area (Conrad, 1979). Gregory, Bishop and Sheldon (1995) showed that one in seven deaf under their study did not have adequate linguistic skills in any language to participate in an interview and these were all young people born in the late 1960's and educated under the oral system. As mentioned before, in their groundbreaking paper "Unlocking the curriculum" Johnson, Liddell and Erting (1989) pointing at the failure of both Oral and Total Communication methods cited Lack of Linguistic access to curriculum as one of the main reasons of failure of deaf education.

From various studies, for example, Akamatsu, Musselman, & Zweibel, 2000 (cited in Snoddon, 2012), it can be deduced that the majority of Deaf children begin school deprived of access to full language and fall steadily behind their hearing peers as they progress through grade levels. For Indian students the problem of accessibility/ inaccessibility is many fold. Lack of schools with proper bilingual approach and the failure of the so called oral or total communication schools prevent access to spoken language. Over-aged children enter schools without any spoken or signed language and leave school without much spoken language or reading writing skills (literacy) even after spending 12-15 years.

4.1.3   Success of Deaf children of Deaf parents

Sign Bilingualism as a viable option to teach D/deaf children in fact has got strength from the studies done on the attainments of D/deaf children, a number of which indicated that Deaf children of Deaf parents were more successful academically than those with hearing parents (Kourbetis,1982; Weisel,1988; Braden, 1995). These results emerged in studies of reading, writing and academic achievement and, in some instances, spoken English. Attributing this to the early use of sign language in these families, lead to the conclusion

that sign language could be beneficial in the education of deaf children. It also has gone to prove that the early use of sign language with deaf children does not inhibit intellectual and linguistic development.

4.1.4 Detrimental effects of first language delay

For long, the failure of deaf children was attributed to their deafness. However deaf children are visual learners and it is beyond doubt now that lack of access to a sign language environment (an accessible language to a deaf baby), rather than any inherent deficiencies in deaf children's language learning or developmental abilities, is behind the problems faced by D/deaf late first-language learners (Snoddon, 2012).

Researchers have documented the effects of delayed first language acquisition on Deaf people's language performance and processing skills (Mayberry,1993; Mayberry and Eichen,1991, New Port, 1990, 1991 cited in Snoddon,2012). Cormier et.al (2012) found that accuracy on sensitivity to grammatical judgements in British Sign Language by deaf adults decrease as age of acquisition increases. In addition to offering support for a critical period for language learning, these studies indicate that the long-term effects of delayed first-language acquisition are much more detrimental than the effects of acquiring a second language late in childhood. Other research studies also have shown that the deaf children whose parents support early development through the use of signs appear to have linguistic, social, and academic advantages during the early years (Calderon & Greenberg, 1997)

4.1.5 Preferred language of deaf school leavers

In India, irrespective of the communication policy of the school, I have found that deaf children, especially the older ones, use sign language for communication and given opportunities, would prefer to be educated through ISL. After leaving school, they look for places where sign language is used as the medium of instruction. In the absence of such colleges, they demand interpreters in the classroom. In a study done in Britain, it was found that 38% school leavers used British Sign Language as their preferred or only language, demonstrating a significant role for this language in their lives (Gregory,

Bishop and Sheldon, 1995) and having implications for the education of deaf pupils.

4.1.6   Changing ideas of bilingualism in general

As discussed earlier, language development was not inhibited and greater cognitive flexibility was achieved in some tasks. The native language was in fact a resource and not a problem in the development of the second language. This changed the underlying view of bilingualism as a disadvantage. In 1960s, with research giving equal status to sign languages as true languages, the sign bilingual approach to teach deaf children received more recognition in which early exposure and competence in sign language as L1 or primary language of the deaf is advocated. India by its very nature is multilingual, most of its population is bilingual and most schools also follow the three language formula; one would therefore expect that bilingual education of the deaf will be the norm. However, in reality bilingualism is only practised for hearing student and for spoken languages in the schools.

4.17   Linguistic Human rights awareness among the deaf

Denying sign language to deaf children amounts to violation of human linguistic rights. World Federation of the Deaf has issued a resolution stating that Sign Bilingualism is a human rights issue (2012). "Bilingual education is the only way for deaf children to gain equal opportunities and allowing them to become full citizens in their own right".

In India, National Association of the Deaf (NAD) and All India Federation of the Deaf (AIFD) and the Indian Deaf Youth Forum (IDYF) have recently become active in this mission. Promotion of Bilingual education of the deaf is one of the main objectives of Indian Sign Language Research and Training Centre (ISLRTC) established in 2011.

5.0   Challenges/issues in sign bilingual education of the deaf in India

It is more than 25 years that Sign Bilingualism became an option to be used in the education of the Deaf children. Countries like Sweden, Denmark, Netherlands, Norway and some states in the USA became pioneers in implementing it and some countries joined later, making it *the* approach. With this option becoming available, it seemed that

possibilities in the education of deaf pupils were opened up in terms of literacy development and access to the wider curriculum. However, over the years many theoretical and practical challenges have emerged and complex issues of educational practice, staff training and administration need to be addressed for it to progress further.

In a country like India with a large Deaf population using Indian Sign Language, Sign Bilingualism should have been adopted long back but apart from a couple of schools adopting it formally, the rest of them are still hesitant though irrespective of communication policy, students of almost all schools communicate among themselves using sign language and teachers pick up random signs from students and use them to ease communication in the classrooms.

Let us now discuss some of the issues facing the implementation of Sign Bilingualism in India.

5.1   Attitudes of professionals and parents

Most hearing professionals in the field, who are more in number and influence decisions, are pro Oral education and in the absence of a strong lobby of Deaf and hearing professionals for Bilingual education, the status quo continues. Hospitals and the existing early intervention centres have only audiologists and speech therapists to counsel the parents. They are not even presented with the option of the use of sign language at a young age for their deaf child nor are they presented with a successful Deaf role model. Under the circumstances, it is conveniently propagated that parents want their deaf kids only to speak. No efforts to educate the parents about the socio-cultural model of deafness or to help them make informed choices are made and it is only more than 15 years or so later that parents realise that their children have neither learned to speak, nor have they learnt to read and write. For Bilingualism to succeed, early exposure of sign language in the critical age period is important and deaf adults need to be trained to work with families and need to be attached to hospitals. Myths about sign languages need to be cleared and both in-service and pre-service teachers given additional courses in Bilingual education of the Deaf.

5.2   Training of Teachers and Parents

Apart from a firm conviction in the Sign Bilingual approach, implementation of Sign Bilingualism would involve training of thousands of teachers in ISL, equipping them with skills to use two languages, using one to teach another and also using sign language to teach non-language subjects. Most teachers are resistant to such an idea and would rather continue with the old methods. Learning sign language from deaf teachers, treating deaf teachers at par with themselves and facing students who would be more skilled in sign language than themselves are major barriers, in addition to the lack of a clear governmental policy, commitment or resources for such an effort.

Randhawa (2006) reported that though majority of teachers in special schools recognise that the first language of their deaf students is sign language, when asked about improving communication with the deaf students, they emphasized on more speech training to the deaf students. This suggests not only their misconceptions about sign language but also their resistance towards their own skill enhancement. Success of sign bilingualism lies in early exposure of sign language to the deaf child. The role of trained deaf adults who serve as role models and also as sign language instructors or early sign language literacy experts is most valuable in such an effort.

5.3   Advances in Amplification technology

Though it will be long before India will have a universal screening policy in place or when most deaf babies would have the option to get cochlear implants, there is no denying the fact that the amplification technology has advanced and there are more chances of success of oral education than ever before. Under the conditions, importance of early sign language exposure even to babies using cochlear implant or hearing aids would require the professionals to update themselves with latest research and assertions that oralism and manualism need not be two parallel banks of the river and it is not either cochlear implant or sign language but it is cochlear implant and sign language.

5.4   Setting of standards

In India, Sign Bilingualism is just beginning to establish itself and for its success, it is imperative that those involved in developing bilingual education need to establish criteria to say what must be in place for an approach to be called bilingual. Half hearted and unsupervised implementation would not yield any positive results and sign language would get the blame. Minimum criteria could include the involvement of native users of ISL, delivery of at least some curriculum areas in ISL, and explicit approaches to using ISL to develop reading and writing skills in the second language. Along with this, developing ISL curricula at various levels, ISL material to support all areas of the curriculum, the presence of at least two native users of ISL, qualified Deaf teachers of the D/deaf, etc. would also need to be taken care of for the success of the programme. Developing and offering 'Deaf Studies' (including study of ISL course at various grade levels and deaf culture) would also be required.

6.0   Education of the D/deaf in India

Formalisation of deaf education started in the 17th century and in the initial years the presence of deaf teachers and use of signed languages was very much a part of schools for the deaf. At the infamous 1880 Milan conference of educators of the deaf, Alexander Graham Bell's assertion of promotion of speech dominated and the demand for sign language and deaf teachers diminished radically over the next 100 years or so.

Formal education of the deaf in India started in 1880s with the first school established in 1885 in Mumbai by missionaries. Though the approach adopted was mostly Oral, the third school set up in Pallamkotai in Tamilnadu is believed to have used sign language. Though there were lean phases, after independence number of special schools for the deaf grew rapidly and at present we have more than 550 schools. However, considering the large number of school age children with hearing impairment, the number of special schools is very less and do not cater to the needs of more than 10% of the needy group. 80% of these schools are in urban areas where as 80% of the deaf population is in rural areas. Most of these schools are at primary or upper primary level and the number of schools at senior secondary level is not more than 40.

Analysis of the schools in the Directory of Resources for the Hearing Handicapped (AYJNIHH,2001) show that 3/4th of the special schools are run by NGOs, though most of them are aided by the Government. Analysis also shows that 1/3rd of the special schools claim to follow Oral/Aural approach and the rest a Total Communication approach where teachers mostly use speech and gestures. Put of these, 8 schools mention the use of sign language but it is doubtful if Bilingual approach in its true meaning is implemented (Randhawa, 2006). It can be safely said that less than 50 schools follow strict Oral/Aural approach in the country and most of them are Early Intervention centres located in Tamil Nadu and Kerala.

Under the Total communication approach, the use of signing systems[12] where teachers speak and sign simultaneously did not become very popular in India and at present not more than 10 schools in India use it. At a practical level, most schools following a Total Communication system in fact use speech and gestures only and some random signs learned from older deaf students. Partial input of language leads to partial out put, with the result that both Oral/Aural and Total communication approaches have failed to show desired results and students are passing out of schools almost illiterate or semi-literate. Bajaj Institute of Learning in Dehradun, Mook Badhir Sanghatan in Indore and two schools in Punjab and a few more around the country are making sincere efforts to implement the Bilingual approach to teach the deaf students.

Since 2001, under the centralGoverenement's inclusive education policy ('Education for all' or in *Sarva Shiksha Abhiyan*) goverment and government aided schools also must admit all disabled or children with special needs including the deaf. However, the quality of education for the deaf children in these schools in the wake of severe communication barrier is highly doubtful and many of these children come back to special schools without learning anything. Till now Teacher training curricula at both diploma and degree level were preparing teachers only to function in Oral/Aural schools which in reality do not exist in good numbers. Only recently, Rehabilitation Council of India (RCI)

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[12] In a signing system, signing is in the word order of the spoken language and every single word including inflections and verb endings are signed. A Signing system is *not* a natural sign language and is representation of a particular spoken language on hands

has thought of revising the curricula and adding skill development in ISL also as part of syllabus. Add-on courses in Bilingual Education of the deaf are also planned. Deaf students in great numbers are demanding use of ISL as mode of communication and the medium of instruction in the schools; however, considering the state Government's apathy towards the communication needs of D/deaf children, it will be long before such a change become possible.

7.0   Advances in Sign Bilingualism in India

Though millions of Deaf persons in India use Sign Language for communication, its official use in educational setups is still only in its early stages. Only a couple of schools have adopted Sign Bilingualism as their communication policy and in many others, the teachers are not skilled in Bilingual approaches to teach deaf children. After India became a signatory to UNCRPD, the RCI initiated a few steps to revise pre-service teacher training curricula to include skill development in Sign Language which still is heavily biased towards Oral education. There is a proposal to start add-on courses on Educational Bilingualism for the benefit of in-service teachers.

In 2011, the RCI also published a manual on 'Communication options and students with deafness' (reference?). There has been an increasing demand from teachers in special schools to learn sign language. In 2009 Indira Gandhi National Open University (IGNOU) in partnership with University of Central Lancshire (UCLan) started B.A. in Applied Sign Language Studies for Deaf students using the Bilingual approach. Sign language interpreters are provided to those teachers who themselves can not sign. However, there is a severe dearth of qualified and competent sign language interpreters. Few other university level programmes like BCA and BFA at NISH in Kerala have changed their communication approach from Oral to Bilingual. Many NGOs like ISHARA, Mumbai, Deaf Way, Delhi, Noida Deaf Society, LEEDS, Pune, Speaking Hands, Rajpura (Punjab) etc. use ISL to teach English and various academic and vocational courses. Establishment of ISLRTC in 2011 by government of India is a major step towards research in ISL as well as promotion of bilingual education of the D/deaf.

8.0   Conclusion

Sign Bilingualism is based on the socio-cultural model of deafness and is a human rights issue. Under this approach, sign language, which is fully accessible to a deaf baby, is treated and developed as the first/primary language and its early acquisition and competence is emphasized. Simultaneous or later development of the second language is done mainly through reading and writing. However, the use of the auditory faculty and development of speech is not prohibited and is planned on individual basis based on the aptitude of the deaf child and the family's choices. Research has shown that early exposure to sign language does not hinder later development of speech and babies exposed early to sign language have better cognitive, social and emotional development and their language and academic achievement are also far better than deaf children who do not get exposure to sing language early in life.

For more than 25 years now, many countries have adopted this approach as *the* approach to teach the deaf children but a lot of groundwork needs to be done for its successful implementation in India. RCI's efforts to revise diploma and degree level curricula, establishment of ISLRTC along with efforts of certain NGOs to use sign bilingual approach for English literacy are some of the positive developments and it is hoped that in the near future these efforts would be strengthened to give deaf children an access to accessible and quality education. Sign Bilingualism will get impetus only when deaf themselves become qualified teachers of the deaf and more number of hearing individuals opt to learn sign language to become teachers and interpreters.

References

Ahlgren, I. (1994) "Sign Language as the First Language": Bilingualism in Deaf Education. In I. Ahlgren and K. Hyltenstam, (eds). Hamburg, Germany: SIGNUM Press, pp. 55-60,

Akamatsu, Musselman, & Zweibel, (2000), " Nature versus nature in the development of cognition in deaf people". In P. Spencer, C. Erting, and M. Marschark (Eds), The deaf child in the family and the school: Essays in honour of Kathryn P. Meadow Orlans,pp 255-274. Mahwah, NJ: Lawrence Erlbaum Associates

Braden J. (1994) Deafness, Deprivation and I.Q. London : Plenum Press

Calderon, R. & Greenberg, M. (1997). The effectiveness of early intervention for deaf and hard of hearing children. In M.J. Guralnick (Ed.). In M.J. Guralnick (Ed.).

Conrad, R. (1979) The Deaf School Child London: Harper Row

Cummins, J. (1976). The influence of bilingualism on cognitive growth: A synthesis of research findings and explanatory hypotheses. Working Papers on Bilingualism, 9, 1-43.

Cummins, J. (2005), "Teaching for cross language transfer in dual language education: possibilities and pitfalls." Paper presented at the TESOL Symposium on dual language education: Teaching and learning two languages in the EFL Setting. Bogazici University, Istanbul, Turkey.

Gregory Susan, (1996), "Bilingualism and the education of deaf children", retrieved from internet: http://www.leeds.ac.uk/educol/documents/000000306.

Gregory, S., Bishop, J. and Sheldon, L. (1995) Deaf Young People and Their Families Cambridge University Press : Cambridge.

Grosjean, F. (2001), "The Right of the Deaf Child to Grow Up Bilingual", Sign Language Studies, Vol.1, No.2, pp. 110-114.

Haptonstall-Nykaza, T., & Schick, B. (2007). The transition from finger-spelling to English print: Facilitating English decoding. Journal of Deaf Studies and Deaf Education, Vol. 12, No. 2, pp. 172-183.

Johnson, R., Liddell, S., and Erting, C. (1989), "Unlocking the Curriculum: Principles for Achieving Access in Deaf Education", Gallaudet research institute Working Paper 89-3, Gallaudet University, Washington, D.C.

Kester, Ellen and Brice Alejandro (2011), "Focus on Bilingualism: The Benefits of Sign Language in Early Acquisition" retrieved from the internet http://www.pediastaff.com/blog/foucs-on-bilingualism-the-benefits-of-sign-language-in-early-acquisition-

Kourbetis, V. (1982). Education of the deaf in Greece. First International Conference on Education of the Deaf, Athens, Greece.

Mahshie, Shawn Neal (1995), "Educating Deaf Children Bilingually: With Insights and Applications From Sweden and Denmark.", Pre-College Programs, Gallaudet University, Washington D.C.

Malkowski, G.: 1995, "Student-Centred/Deaf Centred Education: Empowering Deaf People", Proceedings of the XII World Congress of the World Federation of the Deaf: Towards Human Rights, Vienna, Austria, July 6-15, 427-429.

Maribel Gárate (2012), "ASL/ English Bilingual Education: Models, Methodologies and Strategies", Visual language & Visual Language (VL2) Research brief #8, Gallaudet University (June 2012) Pp 1-8

Mayer, C & Leigh, G, (2010), "The changing context for sign bilingual education programs: issues in language and the development of literacy", International Journal of Bilingual Education and Bilingualism, Vol. 13, No. 2, March 2010, pp175-186

Moores, D. (1991), "The Great Debates: Where, How, and What to Teach Deaf Children', American Annals of the Deaf, 136, No. 1, pp. 35-37

New port & Meir, R. (1985), "The acquisition of American Sign Language." In D. Slobin (Ed.), The crosslinguistic study of language acquisition: Vol. 1(pp.881-938). Hillsdale, NJ:Lawrence Erlbaum Associates.

Petitio, L (1994), "Are signed languages "real"languages? Evidence from American Sign Language and Langue des signes quebecoise. Sign post, Vol 7, No. 3 pp. 1-10

Randhawa, Surinder P.K. (2006), "A Status Study of Special Schools for the Deaf and Identification of Intervention Areas", an unpublished Ph.D. thesis. Indian Institute of Technology, Roorkee, India, 2006.

RCI(2010), "Communication options and students with deafness", A manual developed for authorities, governing bodies, trustees, headmasters and teacher.

Schick, B. & Gale, E. (1995), "Preschool deaf and hard of hearing students' interactions during ASL and English storytelling". American Annals of the Deaf, 140, 363-370.

Snoddon, K. (2012), "American Sign Language and Early Literacy: A model Parent-child Program", Gallaudet University Press, Washington D.C.

Speights Alice (1996), "Bilingual-Bicultural Education for Deaf Students: Why and Why Not" Web site:
http://www.geocities.com/Athens/Delphi/6190/bibi.html

Stokoe, W., 1960 (1978). Sign Language Structure, revised ed. Linstok, Silver Spring, MD.

Vasishta M, Woodward J, and Wilson K. L. (1978), "Sign language in India: regional variation within the deaf population". Indian Journal of Applied Linguistics; Vol. 4, No.2, pp 66-74.

Weisel, A. (1988). Parental hearing status, reading comprehension skills and social-emotional adjustment. American annals of the Deaf, 133,356-359.

"Why Bilinguals Are Smarter" retrieved from internet:
http://www.nytimes.com/2012/03/18/opinion/sunday/the-benefits-of-bilingualism.html

Alipur, a village with hereditary deafness in India: A sociolinguistic and socio-educational profile

Sibaji Panda

Indian Sign Language (ISL) is used by the vast majority of deaf people in India as the primary language of communication. The research that has been conducted to date suggests that Indian Sign Language is used throughout India, and exhibits regional variation (Zeshan 2006). Recently, however, an indigenous sign language used by deaf people has been found in Alipur, a village near Bengaluru; this has been referred to as Alipur Sign Language (APSL) (Panda 2008). Alipur is notable because almost everyone can use sign language, regardless of their hearing status. This chapter discusses the sociolinguistic situation of the village, and provides an overview of communication and life in Alipur, which is contrasted with the deaf ISL-using communities in India.

1.0 Background

1.1   Alipur village and its sign language[13]

Alipur is located in southern India in the state of Karnataka about 70 kilometres from the garden city of Bengaluru. The village is well known as a Muslim (Shia) enclave in the area. Except for 2-3 Hindu families, all the villagers belong to the same religious denomination. As a result of religious/social practice, endogamous marriage[14] has been common practice for generations. This has resulted in high incidence of hereditary deafness, which in turn has led to the emergence of a village-based sign language and a local deaf community. The village has 150 deaf people out of a total population of 20,000. Deafness is known to have existed for several generations. Many villages in India have deaf inhabitants, who use various ad-hoc manual communication systems known as Home Signs (Jepson 1991). However, a village with high incidence of deafness and a well established deaf community of their own is a first-time discovery. In addition to the deaf signers, the sign language community in Alipur also includes many hearing sign language users, resulting in a sizeable population of both deaf and hearing sign language users who share the use of sign language to meet the communicative needs in the village. In several other similar situations around the world, the presence of deaf people in small-scale communities over several generations has given rise to indigenous sign languages

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[13] Most of the information in this chapter pertains to the male deaf population only; due to social restrictions in Alipur, men and women do not mix freely, which means that, as the author is a male researcher, this chapter does not include information relating to deaf women in Alipur.

[14] Endogamous marriages are those that take place between close relatives, or within a similar social unit.

that are used by both deaf and hearing people in the community. Initial reports (Nonaka 2004; Sandler et al 2005; Nyst 2007; Marsaja 2008, Dikyuva 2010, Escobedo 2010) show that the sociolinguistic situation and the linguistic structures of such sign languages can differ radically from those of urban sign languages.

1.2   Village sign languages around the world

Since the beginning of sign language research in the 1960s most research has focused on urban sign languages, mostly in industrialised countries, and a substantial literature is now available on sign languages. However, in recent years, so-called "village/rural sign languages" or "shared signing communities" around the world have emerged as a new area of scientific interest due to their unique social setting and linguistic properties. In the village sign language setting, deaf and hearing people share a common culture and social environment at a very intimate level (Meir, Sandler, Padden & Aronoff 2005; Nonaka 2004; Nyst 2007; Marsaja 2008).

Though not all the village sign languages have been studied explicitly, there are at least two research studies (Nyst 2007, Marsaja 2008) with a detailed and in-depth study of two village sign languages, Kata Kolok and Adamorobe Sign Language (AdaSL), and their related deaf communities. In view of the unique and unusual constructions in village sign languages that challenge linguistic universals, Zeshan (2010) raises the question whether village sign languages form a linguistic sub-type in contrast with urban sign languages; however, Zeshan notes that due to lack of research such a claim is currently premature.

Recent studies (Panda 2008, 2010, 2012) have found that APSL is not related to any other sign languages, including ISL or American Sign Language, which are both used in Bengaluru. This chapter gives details of the sociolinguistic and educational situation of APSL, but does not report on APSL's linguistic properties.

2.0   Discovering a deaf village: Fieldwork in Alipur

Until 2007, no linguist had ever visited the village of Alipur. Most of the visitors to the village were audiologists, social workers, geneticists, or doctors, but these professionals

had no interest in the sign language and the characteristics of the unique social setting which is of interest to linguists and anthropologists. In 2007, the present author first visited the village without any intention of research, but merely with exploratory motivation. The subsequent visits were possible with support from two research projects - a pilot study grant from the Endangered Language Documentation Programme at the School of Oriental and African Studies (SOAS), London, and a project 'Sign languages in village communities' coordinated by European Science Foundation (ESF) and funded by the UK Arts and Humanities Research Council. More than 20 hours of video were collected including simultaneous narratives, dialogues, monologues and controlled linguistic data collected using stimuli materials. This chapter uses information collected from the video data and observation during the several visits to the village.

The unique history of Alipur village is maintained in the village's own records. During fieldwork research, one of the members of the relevant village committee, who also looks after issues of disability in the village (Mir Fazil Raza), summarised the history of the village and the emergence of its deaf population as follows (the quotes below have been translated from the original Urdu text):

> *Alipur village is believed to have been founded in the year 1745. After the assassination of Adil Shah, the early inhabitants of Alipur began their journey from state of Bijapur towards the city of Mysore, via Sehara, Sira now, and via Dabispet. They intended to travel to the city of Mysore, where the followers of the Jafri Sect were already residing. They wanted to reach Mysore, but when they passed through this village, the peaceful environment, climate and valuable agricultural land attracted them very much, and they stayed in this village, happily surviving here. And the name of this small homeland became Alipur.*

> *These people who came here to Alipur were all from one family; the name of the head of the family was Mr. Syed Mustafa Hussain, and his wife's name was Syeda Betula Begum. They used to marry their sons and daughters to spouses within the same caste, who were residing in a village a few miles away, known as Dabispet.*

That is how the population of Alipur expanded.

The residents of Alipur have developed a common tradition and habit to arrange marriages of their children to local blood relatives. This has resulted in a great many disabled people here, and most of them are hearing impaired. There were 120 deaf, 45 mentally disabled, 65 physically disabled (PH) and 15 blind people living here, according to the last census done by me (Mir. Fazil Raza) in 1998. A total of 235 disabled people are living in this village.[15]

During one of the author's field trips to Alipur, the map in Figure 1 was developed by deaf residents of the village. Each dot represents a deaf person, and the map therefore allows us to plot where deaf individuals live in Alipur. While deaf individuals are distributed over much of the village, there are also clusters of families with many deaf members. These are represented by the dots enclosed in circles on the map, and the map shows that they are concentrated in the north of the village.

Figure 1: Deaf inhabitants in Alipur

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[15] The deaf population has since increased, and there are now 150 deaf individuals in the village.

3.0   A sociolinguistic description of Alipur village.

3.1   Use of signed and spoken languages in Alipur

The sociolinguistic setting in Alipur is unique. Deaf children, and most hearing children born in the village, have early access to sign language, and many grow up as fluent users of APSL. With a high number of deaf people in Alipur, compared to other villages, sign language is available to both hearing and deaf and used regularly to meet all communication needs. Not all hearing people in the village sign fluently, but many are APSL users and some of them are as fluent as deaf people.

Interestingly, while the majority spoken language in Karnataka is Kannada, most hearing villagers have Urdu as their first language, which is used for education and religious purposes. Hearing villagers are multilingual, and English, Hindi and Kannada are also known and used in the village and its schools.

The use of sign language has led to different social patterns in Alipur, compared with elsewhere in India. Whereas deaf communities elsewhere in India tend to socialise apart from hearing communities, the shared use of sign language in Alipur means that there is much more engagement between hearing and deaf villagers. Through participation in family life, social and commercial activities, deaf and hearing people have used sign language to communicate with each other for generations. There is considerably less social isolation, and deafness is less stigmatised in Alipur compared with other parts of India. Though discrimination is noticeable in some instances, this is considered to be in line with the educational and economic status of the deaf. Similar discrimination can often be found even if a person is not deaf.

Most deaf children in Indian deaf communities experience many communication barriers, because over 90 per cent are born to hearing parents, and the acquisition of any language – signed or spoken/written – is delayed until later on in childhood or beyond.

Communication with family and other community members who do not use sign language is often difficult. In contrast, the experiences of deaf children in Alipur are very different, since APSL is used in all spheres of village life. Deaf people acquire APSL from an early age, because access to sign language is easy; even when a child's parents are hearing and do not sign fluently, sign language is widely used outside the home and in the community, which means that neighbours and close relatives fluent in APSL inhabit the child's environment. This means that deaf children exhibit a normal, age-appropriate pattern of language use and linguistic skills, equal to those of hearing children using a spoken language.

The shared signing environment of Alipur is very different from the experiences of urban deaf communities, where communication between deaf and hearing people is difficult due to the absence of a common language: hearing people cannot sign, and deaf people cannot speak. In urban communities, deaf people seek the help of interpreters, but in Alipur interpreters are not required in order to communicate with fellow villagers. Some of the deaf are supported in this way by hearing villagers, but only when making a telephone call or interacting with a stranger who is not a native to the village.

What is very interesting in Alipur is that, despite illiteracy and lack of formal education, deaf villagers are actively employed in family professions, and work in a range of different trades. The situation is very different in the deaf communities elsewhere in India, where the unemployment rate is high, and prospects for those without formal education are worse. In Alipur, deaf people begin their working life as early as 12 years of age, and the ability to earn, and feed a family, is considered more important than receiving a formal education.

Further sociolinguistic details about APSL are as yet unclear, because this language is new to linguists and anthropologists (see Panda 2010, 2011; Dikyuva, Escobedo Delgado, Panda and Zeshan, 2012).

3.2   APSL as an endangered language

Given the linguistic ecologies of village sign languages, they tend to emerge and disappear suddenly (Nonaka 2004), and the case of Alipur is not immune from the factors that put village sign languages at risk. There are many reasons why languages can become endangered. In Alipur, partly as a result of better literacy skills, deaf people are now highly mobile and travel alone or in groups, which was not the case until recently. As a result, they meet deaf people from other cities who use ASL or ISL. Mobile phones have given access to YouTube video clips, exposing deaf people to other sign languages, while 3G mobile technologies now enable conversations with deaf people within and without India who use other sign languages. These changes undoubtedly have an influence on APSL. Although APSL does not appear to have been affected greatly thus far, there are indications of increasing differences between the signing of younger and older APSL users.

At the same time, there are some reasons to suggest that Alipur Sign Language may not be as endangered as some other village sign languages. Firstly, the number of deaf people currently shows no sign of decreasing. Secondly, because of the unique socio-religious situation, deaf villagers do not usually prefer to leave, or marry outside of Alipur. The growth of the deaf population in Alipur and the use of sign language in this village both seem likely to continue, at least for the foreseeable future, but it is harder to determine how quickly the language might change as a result of contact with other sign language varieties.

4.0   Education and literacy of the Deaf in Alipur

4.1 Educational situation before 2008
Until 2008, the deaf people of Alipur had no literacy skills, and this has had consequences for contact between APSL and written languages which, unlike for urban sign languages, has been extremely limited; for example, APSL has not made use of a manual alphabet to fingerspell words. Illiteracy also made its mark on the everyday lives of Deaf people in Alipur, who either avoided dependency on written records, or relied upon hearing relatives for assistance with writing. Memory, rather than literacy, played a

key part in retrieving important information. Illiteracy and lack of formal education appear to have been considered a normal state of affairs by deaf villagers, who did not expect to be included in the education system, perhaps because it was not part of the experience of life as a deaf villager.

Prior to 2008, the village committee attempted to establish a deaf school, but this was not successful, for two reasons. Firstly, APSL was not used as the language of instruction. Secondly, for a traditionally illiterate community, there was perhaps little understanding as to the value and purpose of education. To this day, deaf villagers tell many stories about the teacher, who did not use sign language, but made them stay in the classroom for long periods of time. Most of them describe how they tried to avoid attending classes by hiding in various places until the end of the school day. It is clear that both the lack of access to instruction and the lack of motivation on the part of deaf children played a part in the failure of this early attempt.

The experiences of deaf people have been markedly different from the experiences of hearing people in Alipur. The vast majority of hearing adults have been to school; there are seven schools in Alipur, and accordingly, the hearing population can read and write well. Education has become increasingly important, and accessible, for hearing villagers. Traditionally, however, deaf people in Alipur have not been to school, and have no literacy or numeracy skills. Only two deaf people have acquired basic literacy skills to date, and this is because they have attended schools in Bengaluru for a short time. Several attempts by richer families to send deaf children to schools in Bengaluru have failed, since most soon returned home within a short period of time.

4.2   Bilingual education in Alipur after 2008

A more recent attempt to provide formal education for deaf villagers has been much more successful, because it allowed for changes in the understanding of the deaf villagers concerning the role of education, and changes in the understanding of hearing villagers concerning the capacity of deaf people to be educated. A number of workshops were held with deaf villagers and hearing community leaders in 2008-2009, and the potential

benefits of formal education were discussed in some depth. These workshops challenged the long-standing beliefs – held by deaf and hearing villagers – that deaf people cannot study, and that attempts to do so are not worthwhile. As a result, it was decided to create the Unity School of the Deaf, under the umbrella of Unity Education & Welfare Trust.

The class at the school began with eight deaf pupils of varying ages from five to 18. The first teacher, who was deaf and had studied in Bengaluru, had a good basic level of English. Classes ran for seven hours a day, and the aim was to teach basic literacy skills. After the first batch of pupils, some dropped out, new pupils enrolled, and various issues arose, including difficulties with financial and human resources. These have been tackled successfully by the leaders of the community, and the school is running well. The school follows the local curriculum at present, and subjects besides English literacy have been introduced. Students are examined alongside pupils at the hearing primary school.

Mir Fazil Raza recounts the events leading to the establishment of the school and it subsequent success in these words:

> *These deaf people started trusting me, sharing their problems with me, and this reduced the communication gap. When they became close friends with me, I called a meeting of their parents and had a chat with them to motivate them. Afterwards I succeeded in opening a school for special children 2008, which is known as The Unity School of the Deaf, Alipur.*

> *When the school started, we had only 8 children, but now, by the grace of God, we have 45 deaf children getting educated in this school. There is a male and a female teacher, and both are deaf. The boys and the girls are taught separately in the different rooms, because of Islamic rules and culture. The entire expenses to run this school have been borne by me and my friends for the past three years. So far we have not received any sort of grant or funding from Government, but we hope we will get it by the grace of God.*

A few years ago, an attempt to open a school for the deaf could not run it successfully, because the teacher could not use the local sign language.

The deaf boys and girls are now able to use SMS with cell phones and they are now comfortably sharing their happiness and sadness with their friends, and they are sharing every latest international news amongst each other. Now they have a happy environment amongst each other. Before all this happening, the deaf girls were deadly bored and fed up, sitting at home, but now they are telling the world, we are not less than anyone else in every matter. They are now well aware, conscious, and have no more inferiority complex, and have increased motivation.

Although no formal research has been conducted on the achievements of the deaf pupils, a written sample of work from the classroom shows that notable advances have been made in the pupils' literacy skills. In a limited period of time, and with limited resources, the results of teaching are remarkable, and the literacy skills of the pupils have improved dramatically. Figure 2 shows a written page produced by one of the children in the deaf school, 11 years old, who had been completely illiterate until entering the school one-and-a-half years ago.

"UNITY SCHOOL OF THE DEAF." ALIPUR - Name Sun Raja

I ST SEMISTER EXAMINATION – 2010-11- Date 23/3/10

TIME: 2 HRS   MARKS: 50

I   FILLING THE BLANKS.   [5]
1) the mirror is on the Basin. (Cover, under, on)
2) Aunty is in the Kitchen (In, over, near)
3) the Black Bag is under the table (on, in, under)
4) Uncle is under the Bed Room (in, under, on)
5) Baby is infront of the T.V (infront of, under of, go)

II Answer the following Questions –   [10]
① What is dady doing?
Ans: daddy a Take on the Telephone
② What is mummy doing?

Figure 2: A writing sample from examination paper.

This rapid development of literacy is very unusual when compared to the general situation of deaf education in India. According to Surinder Randhawa, a researcher in the field of deaf education in India 'even after attending school for 10 years, most deaf children still tend to have very limited literacy skills, and can often be described as only semi-literate.' With this in mind, the outcomes of the class in Alipur are surprising. How has the school been so successful in such a short space of time?

Language is one of the key reasons for the success of the school. All of the children are fluent in APSL, and the teacher is also fluent in APSL. This means that communication is straightforward, and acquisition of English as a second language is rapid. The children had no written or spoken language before attending school, but acquisition of written language is possible using APSL – the first language of the children – as the language of instruction. In deaf education settings elsewhere in India, the picture is very different, as

teacher-pupil communication is often laboured, and this impairs the learning process. Further research is needed in the classroom in the Unity School for the Deaf, in order to see what insights can be found pertaining to bilingual education that uses sign language as the primary language of communication. This research is crucial, since bilingual education has not yet been piloted and systematically evaluated elsewhere in India.

Conclusion

Finding tribal or unusual languages may not be very surprising in India, where languages are many and diverse. However, a village where sign language is shared between deaf and hearing people and widely accessible to deaf children from birth, provides an interesting and important counter-example to urban deaf communities in India, where communication and access are generally more limited. In this chapter I have reported on what is known of the sociolinguistic and socio-educational situation of APSL, but it is clear that more research is needed on the community of APSL users, alongside a full description of APSL's linguistic structure. As with other endangered languages, documentation is likely to make the future of the language safer.

In particular, there are two ideas that can be retained from this overview of Alipur Sign Language and its users. Firstly, the achievements of the Unity School for the Deaf provide evidence that those who acquire sign language as their first language are perfectly able to learn a second written language without difficulty. Secondly, Alipur village offers something of a model for how the use of a shared sign language can bridge the gap between deaf and hearing people, enabling a more equal society.

Acknowledgements

References

Dikyuva, H. (2010) Mardin Sign Language in Turkey, in Panda, S., ed. (2010). *Sign languages in village communities*. Nijmegen: Ishara Press.

Dikyuva, H., Escobedo Delgado, E., Panda, S. and Zeshan, U. (2012) Working with village sign language communities – Deaf classrooms and linguistic heritage. In: Zeshan, U. & De Vos, C. (eds.) *Village Sign Languages – Linguistic and anthropological insights.* Sign Language Typology Series No. 4. Berlin: De Gruyter Mouton & Nijmegen: Ishara Press.

Escobedo Delgado, C. E. (2010) Chican Village sign language in Panda, S., ed. (2010). *Sign languages in village communities*. Nijmegen: Ishara Press.

Jepson, Jill. 1991. "Urban and Rural Sign Language in India." *Language in Society*, 1/2:37-57.

Marsaja, I Gede (2008): *Desa Kolok. A deaf village and its sign language in Bali,* Indonesia. Nijmegen: Ishara Press.

Meir, Sandler, Padden and Aronoff (in press) "Emerging Sign Languages" in *Oxford Handbook of Deaf Studies, Language, and Education, Oxford University Press, Vol-2*

Nonaka, A. M. (2004) "Sign Languages-The Forgotten Endangered Languages: Lessons on the Importance of Remembering*." Language in Society* Volume 33(05):737-767.

Nyst V. (2007) *Descriptive analysis of Adamorobe Sign Language (Ghana),* LOT, the Netherlands.

Randhawa, S. (2005) Status of deaf education in India. PhD dissertation, IIT, Roorkee.

Sandler, Wendy, Irit Meir, Carol A. Padden & Mark Aronoff. (2005). The emergence of grammar: Systematic structure in a new language. *Proceedings of the National Academy of Sciences* 102(7), 2661–2665.

Zeshan, U. (2010). Significance of village sign languages for the typological study of sign languages. Presentation at TISLR10, Purdue University, USA.

Zeshan, U., ed.(2006) *Interrogative and negative constructions in sign languages (Sign Language Typology Series No. 1).* Nijmegen: Ishara Press.

Legislation and Policies in relation to Sign Language and Sign Language Rights

Tanmoy Bhattacharya and Surinder Randhawa

1. Introduction

The denial of rights for a community may extend to and have direct effect on their being denied entry into the general education, employment and cultural system of a nation. For the deaf population, the denial of rights springs from the denial of language rights of a minority by not encouraging the use of Signed Languages, Indian Sign Language (ISL) for the D/deaf[16] population of India, overtly, and covertly by encouraging the use of speech training or a very inapt and weakened version of sign language in education of deaf children in deaf schools as well as regular schools. This state of affairs in India has led to a lamentable situation with regards to penetration of education among the deaf population.

When a vulnerable section of a population is denied linguistic and cultural rights, the role of legislation and policies, attain even greater importance. Legislation, especially for persons with disabilities, is not enacted automatically, but only as result of continuous and intensive struggle wedged by the affected community and their advocates and sympathisers. Activism of and advocacy for the D/deaf population is only beginning to take shape in the country, as a result, acts and policies to do specifically with the D/deaf population are almost absent, save intermittent mention of Sign language here and there. However, the various disability related acts and policies do take within their ambit the D/deaf population as well, but a recognition of ISL as the first language of D/deaf person is India is still a very far cry.

2. United Nation's Convention on Rights of Persons with Disabilities, 2006 (UNCRPD)

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[16] As per convention in Padden (1980), Deaf is used for deaf people who share a language and cultural values which are distinct from the hearing society, whereas the phrase 'deaf people' is used to include Deaf members as well as those members of the deaf community who may not use SL fluently but may still have culturally and linguistically diverse experiences; D/deaf therefore a shorthand to include both.

Since India is a signatory and has also ratified the UNCRPD in 2007, the Convention is binding on the Indian state. The Convention, as a part of "definitions" of terms used in it, states that "Language" includes spoken and signed languages and other forms of non spoken languages. Further, Article 9 on Accessibility, sets the onus on State parties to provide forms of live assistance and intermediaries, including professional sign language interpreters, to facilitate accessibility to buildings and other facilities open to the public. Also, in Article 21, Freedom of expression and opinion, and access to information, it is binding on the State parties to take measures to ensure freedom of expression by accepting and facilitating the use of sign languages and other modes of communication of their choice by persons with disabilities in official interactions, in addition to recognizing and promoting the use of sign languages.

It is clear from these that Signed Languages are accepted internationally as the language of communication and expression for D/deaf persons. This is also clearly expressed in Article 24 of the Convention on Education, which encourages facilitating the learning of sign language and the promotion of the linguistic identity of the deaf community. Furthermore, Article 30 (Participation in cultural life, recreation, leisure and sport) states that persons with disabilities shall be entitled, on an equal basis with others, to recognition and support of their specific cultural and linguistic identity, including sign languages and deaf culture.

3. Sign Languages Rights as Linguistics Minority Rights

Bhattacharya and Haobam (2010) point out, in the context of linguistic minority rights, that education through mother tongue is a constitutional right as per Article 29 of the Constitution of India. Article 29, falling under cultural and educational rights, named as *Protection of interests of minorities*, is assumed to relate to minorities:

> Article 29: *Protection of interests of minorities*
> (1) Any section of the citizens residing in the territory of India or any part thereof having a distinct language, script or culture of its own shall have the right to conserve them.

(2)   No citizen shall be denied admission into any educational institution maintained by the State or receiving aid out of State funds on grounds only of religion, race, caste, language or any of them.

Thus in its scope, Article 29 is applicable to minority sections of citizens resident in the territory of India. ISL as the mother tongue of D/deaf minorities of India should therefore be the automatic choice of language of instruction for education and communication.

Furthermore, Article 27 of the International Covenant on Civil and Political Rights renders the following right to minorities:

> In those States in which ethnic, religious or linguistic minorities exist, persons belonging to such minorities shall not be denied the right, in community with the other members of the group, to enjoy their own culture, to profess and practice their own religion or to use their own language.

It was pointed out in Bhattacharya (2010a) that the focus on child-centred learning approach (Article 29(2)(a), (d), (e), and (f)) of the *Right of Children to Free and Compulsory Education Act, 2009* (RTE), may be interpreted for the advantage of D/deaf students, wherein the academic authority appointed by the Central Government must take into consideration, (a) conformity with the values enshrined in the Constitution; and, (f) medium of instruction shall, as far as practicable, be in child's mother tongue.

Article 29 of the Constitution, as pointed out earlier, guarantees minority rights through mother tongue education. This is particularly relevant for a D/deaf child since Sign Language is the mother tongue of such a child. Article 2(d) of the RTE is relevant in this connection as it is about the intended semantics of the phrase "child belonging to disadvantaged group" and allows, among other things, linguistic basis for defining a group. Quite clearly then, on the basis of Article 29(2)(a) and (f) of the RTE, a D/deaf child can be considered to be a part of the above group.

4. Acts and Policies Concerning Persons with Disabilities

With respect to the few acts that concern persons with disabilities in India, the currently applicable act in the court of law, the PwD Act 1995, does not recognise ISL as a medium of instruction or communication. The proposed Bill does although recognise use of ISL as the primary language for the D/deaf, it does not however distinguish – as in the case of the PwD Act 1995 – the need to make a distinction between the hard of hearing and the D/deaf. In the front of policies, there have been several policies that make provisions in education and employment for persons with disabilities including the D/deaf population.

4.1. Rights of Persons with Disabilities Bill, September 2012

Through several rounds of consultancy at state and the centre level, the RPD has been proposed by the MSJE, to be taken up in the parliament for it to be turned into an act. RPD is inspired very much by the UNCRPD, and mentions similar sentiments with respect to the definition of 'language' by stating that 'language' includes spoken and signed languages and other forms of non spoken languages. Further, in Chapter 3 on Education, as per the duties of local government authorities to promote inclusive education, training and employing teachers, including teachers with disabilities, who are qualified in sign language, is included. It also suggests persons with disabilities have access to electronic media through sign language interpretation and close captioning, as means to ensure accessible information and communication technology.

However, the current act, the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995, does not mention anywhere even the word sign, and does not therefore recognise ISL as the language of communication and expression for persons with hearing impairment and D/deaf persons.

It is not therefore unexpected that the RCI syllabus (which is the *only* government recognised course) for B.Ed. Special Education (Hearing Impairment) is heavily biased against Sign Language.(only 3% of total teaching time is devoted to Sign language). Most deaf schools in the country as well as education of D/deaf or hearing impaired

students in the country still emphasize speech training and a form of oralism called total communication that has been given up in more advanced countries.

4.2. Indian Sign Language Research & Training Centre (ISLRTC)

In this connection, very significantly, vide order No. No.4-12/2009 NI, the MSJE approved setting of ISLRTC on 21st July 2011 with several broad objectives, among others, such as: to promote the use of Indian Sign Language (ISL) in India, to carry out research in ISL and create linguistic record/analysis of the language, to train persons in Sign linguistics and other related areas at various levels, to design, promote and offer programmes in ISL, interpreting and bilingual education, at various levels, through various modes including the distance mode, to facilitate educational use of ISL in special schools, as the first language or medium of instruction, and in mainstream schools, as second language or as interpreter mediated language of classroom communication. Although the functioning and continuation of the Centre is far from satisfactory at the moment, it is hoped that with such grand objectives, ISL will be established as the only language of communication and expression for D/deaf person in India and that in the near future ISLRTC will play a major contributory role towards actions leading to enhanced use of ISL in schools and in public life.

4.3. Education Policies for Persons with Disabilities

The UNESCO Education Report for the 21st century affirms the importance of higher education in the economic development of a country. The population of persons with disabilities (PwD) in the country ranges from 7 to 8 per cent by any conservative estimate – though the last, and therefore the latest – census of 2001 grossly under-reports the percentage to be 2.13, whereas WHO and World Bank have estimated 15 per cent worldwide. However, number of students with disabilities in universities is less than 0.5%. In comparison to work done to promoting higher and technical education among the disadvantaged sections such as Scheduled Caste, Scheduled Tribes, Other Backward Class (OBCs), women, and others, very little has been done for persons with disabilities with regard to higher and technical education.

This state of affairs is clearly reflected in the education of D/deaf students; as per the 2001 census 2,196 children with hearing impairment are enrolled in government schools at age 5 and the corresponding number still in school at age 19 is 2,487. It is also rarely realised that among the students with physical disabilities, D/deaf students are the most vulnerable when it comes to education, since the current education system in the country is heavily biased towards the hearing (see Bhattacharya, 2011, 2012 for details).

One of the reasons for this woeful scenario, more so in case of education of D/deaf students as briefly stated above, is the lack of true inclusion in education of students with disabilities. In Bhattacharya (2010a), it was shown that with the more modern policies to do with education of disabled children, the rhetoric and the metaphor of special schools attains more significance. That is, although not an integral part of the National Policy on Education (NPE) 1968, NPE 1986 onwards – for example, Programme of Action (POA) 1992, Person with Disabilities Act (PwD) 1995 – special education/ schools attains more prominence and in POA 1992, the largest section is devoted to "Education in Special Schools".

In Bhattacharya (2010b) it was further shown that Segregation as a political practice was already well established and therefore lend itself readily when Special Education emerged out of Enlightenment in the 18th century. Within the Indian context, this is shown by (i) Segregationist practices in Women's Education, 1948-49 University Education Commission, (ii) Consistent use of integration as the operative term, (iii) Emphasis on Special Education (e.g. B.Ed. (Special Education) of Rehabilitation Council of India), (iv) Home-based education, Distance education, and (v) In directly encouraging the role of NGOs in imparting special education as a sign of evading State responsibilities.

The handful of students who manage to come of either special schools or mainstream schools, nonetheless face hardship in higher education in terms of lack of infrastructure and facilities in the universities, colleges and professional institutions.

Among the achievements of the XIth 5-year plan in the report of the Working Group on Higher Education for the XIIth 5-year Plan, Government of India, published by the Ministry of Human Resource Development, Department of Higher Education, in September 2011, are counted the department's initiatives to promote higher/ professional education among the persons with disabilities (PwD). UGC has integrated schemes such as Teacher Preparation in Special Education (TEPSE) and Higher Education for Persons with Disabilities (HEPSN) to support disabled persons in higher education. All India Council for Technical Education (AICTE) also has a scheme of tuition fee waiver for PwDs. UGC has furthermore issued several guidelines to the universities including 3% reservation for PwDs, relaxation of marks, exam reforms, etc.

The Higher Education Steering committee for the XIIth five year plan, under the rubric of 'Equity', suggest the need to create at least one model university per state and one model college per district and 2 technical education institution in each geographical region of the country which is able to provide comprehensive support service. Among various suggested facilities, the model universities and colleges must have, the Committee also suggested support for students with hearing impairment. It further states that due to the teaching and non-teaching staff not knowing sign language and universities not providing Sign Language Interpreters or speech to text conversion facility in classes, or installing induction loop systems in all colleges, it makes almost impossible for a person with hearing loss to pursue higher education in universities in India. In universities, resource centres should be established exclusively for students with disabilities which must have Sign Language Interpreters on its panel to be made available to students on request. The proposed Resource centres are also suggested to conduct sign Language courses for university staff.

4.4.   Scholarships for Higher Education for PwDs
This section discusses governmental scholarships and assistants available for students with disabilities in general and students with hearing impairment in particular. It must be noted that the official term 'hearing impairment' is maintained here since that is the only hearing related disability that is recognised by the law at present; D/deaf students

(including students who know and identify with ISL, and those who do not) are a part of this general name-tag. Since it is only through successful education that an increased awareness and indispensability of ISL for D/deaf students can be achieved, it is important to understand the role of the government in providing educational facilities and incentives for D/deaf students.

National Handicapped Finance and Development Corporation (NHFDC), for and on behalf of the Ministry of Social Justice & Empowerment (MSJE), Government of India, every year, invites applications from Students with Disabilities for award of scholarships under various schemes. Hearing impaired students, in addition, are provided financial assistance for purchase of aids & appliances. For example, they are provided upon successful application Binaural programmable hearing aid with provision of button cells for Rs. 50,000 + Rs 30,000 p.a., a Cell phone with SMS SIM card for Rs. 5000, and a laptop with WiFi Bluetooth facility for Rs. 70,000, for the years 2012-2013.

As with students with other disabilities, Deaf students are eligible for national scholarships awarded by the MSJE for pursuing graduate, postgraduate and research (M.Phil./ Ph.D.) degrees/ diplomas in professional/ technical/ vocational courses at the rate of Rs. 1000/ month. However, students with profound or severe hearing impairment, along with other so-called "severe" disabilities, are also eligible for scholarship for pursuing general/ professional/ technical/ vocational courses even after class VIII at the rate of Rs. 700/ month.

In addition, the students selected for the national scholarship awards are also reimbursed the course fee subject to a ceiling of Rs.I0,000 per year.

However, since there are only a limited number of such national level scholarship available (1500 for 2012-2013), only a miniscule number of D/deaf students can take advantage of the schemes.

4.5. Reservation and Reforms with Regards to PwDs

Advisories and circulars have been issued from time to time by various governmental organisations (MHRD, MSJE, CCPD, UGC) for implementation of 3% seats in all the courses by the universities/institutions/colleges, etc., as mandated under by Section 39 of the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995 (PwD Act). The reserved seats for persons with disabilities are open to all categories of disabilities unlike the reservation of vacancies in employment which is for only four categories of disabilities. Further, the reserved seats are not meant to be distributed among different disabilities. Reservation of at least 3% seats in admissions is mandatory in all Under-graduate, Post-graduate, M.Phil. and Ph.D. degree courses and other diploma courses.

Advisories and circulars have also been issued for providing reasonable accommodations to students with disabilities in the matter of accessible Teaching Learning Material (TLM) and other services related writing exams. Similarly, the University of Delhi, accepted vide circular No. Exam.VI/Conduct/WP/2011/ an Examination Reform policy which, among other things, also recognised the need to provide Sign language interpreters for D/deaf students writing exams.

Significantly, MSJE issued an order (No. 30-17/2010-DD-III dated 9th March 2012), to appoint member secretary, RCI to undertake a survey of Sign Language interpreters required at various public places, occasions, institutes and to set up a pool of Signers for this purpose. Further, setting up courses Sign Language interpretation courses and Sign Language departments at all the universities was ordered.

Government of India vide O.M. No.36035/1/89-Estt. (SCT) dated 20/11/1989 introduced reservation for persons with disabilities in promotion to Group 'C' and Group 'D' posts. Ministry of Social Justice and Empowerment, Govt. of India have issued the lists of identified posts for persons with disabilities vide Notification No.16-70/2004-DD.III dated 18.01.2007 for Group A & B posts and dated 15.03.2007 for Group C & D posts after consulting all the concerned Ministries/Departments of Govt. of India. Department

of Personnel & Training have consolidated the instructions on implementation of reservation of vacancies for persons with disabilities vide their O.M. No. 36035/3/2004-Estt (Res.) dated 29.12.2005.

5. Role of NGOs and Deaf communities/ Clubs

History is witness to the fact that major onus of preservation of sign languages has always been on Deaf communities and Deaf clubs. Deaf is a scattered population and many D/deaf especially in rural areas grow without the proximity of deaf clubs or D/deaf communities and hence are deprived of development of proper sign language, hence a Deaf culture and a Deaf identity. A Sign language being visually accessible is naturally the primary language/ the first language for a Deaf person. Sign languages incidentally are the only languages of the world which are passed down from one generation of the Deaf to the younger Deaf as most deaf children are born to hearing parents who do not know sign language. Before 1880's Milan conference of educators of the deaf, sign languages and deaf teachers in European and American countries flourished but after this conference where speech was declared superior to sign and a resolution was passed to promote only Oral education of the deaf, there was large-scale suppression of sign languages all around. Deaf teachers and teachers knowing sign languages were thrown out of schools. However, even in those times of suppression and in the continued audism from hearing professionals, Deaf communities and Deaf clubs strived and continued to strive to preserve and promote sign languages. They met regularly, published magazines and produced silent films. The history of National Association of the Deaf in the USA is a good example, how under all odds it strived to preserve American Sign Language.

In India too, D/deaf persons to meet their communication needs have been using some form of signed languages since ancient times. Those deaf persons, especially in urban areas who become part of Deaf communities and deaf clubs start using more uniform and advanced form of sign language than those who rarely come across other D/deaf and develop only home signs. As noted above, like in many other countries, ISL is also still struggling to get an official language status and as a mode of communication and medium of instruction in the education of the D/deaf.

In this connection, many NGOs and Deaf clubs have been playing very active roles in empowering the younger D/deaf youth by arranging lectures and activities on the importance of sign language in the lives of D/deaf persons and how the D/deaf people a linguistic minority and why there is a need to view deafness from socio-cultural view and not a medical-deficit model which has been prevalent for centuries. Earlier deaf clubs like Indian Deaf Society of Mumbai, Delhi Association of the Deaf and All India Federation of the Deaf (AIFD) started with providing a non-threatening accepting environment to socialize and enjoy deafhood and deaf culture and communicate using their own language or provide opportunities to learn vocational skills. However, with time, the focus of these and other deaf clubs is now more on activism, making the deaf and hearing population aware of the human linguistic rights of the D/deaf and getting an official language status of ISL.

National Association of the Deaf (NAD) along with Deaf Way which has always been active on issues of paramount importance to the D/deaf community is staging a huge rally on December 3, 2012 to demand official language status for ISL from Indian Govt. Establishment of the ISLRTC, as noted above, in New Delhi has been a big step by the government in recognising Indian Sign Language as a proper language.

Most states have state level Deaf organizations and most cities have Deaf clubs. These organisations, apart from organising cultural and sports functions, have become active in D/deaf Empowerment. D/deaf activists are often invited to deliver talks centring around the need to promote ISL in homes and schools. Along with the National Institute of Hearing Handicapped (NIHH), Mumbai and its branches, many NGOs like Bilingual Academy Indore, NOIDA Deaf Society in NOIDA and Speaking Hands in Punjab run ISL classes for parents and teachers and for those wanting to become interpreters. Deaf Way was India's first Deaf club which propagated the use of sign language and offered English and computer education to the D/deaf in sign language taught by D/deaf teachers. Indian Deaf Youth Forum, the youth wing of AIFD, which is recognised by the World Federation of the Deaf, is also very active on this front. The coming years will witness a significant contribution from these deaf clubs and NGOs in the propagation of ISL.

6. ISL and the Education of the Deaf in India: Future Prospects

Formalisation of education of the D/deaf in India started in the late nineteenth century with the establishment of a special school for the Deaf in Bombay. The Calcutta Deaf and Dumb School was set up in 1893, a detailed history of the school can be found in Bag (2012) and its interpretation in Bhattacharya (2012). It was the time when after the 1880's Milan conference oral education of the deaf with emphasis on speech was spreading and sign languages and deaf teachers were no more welcome in the schools for the deaf. India too followed on the same lines. Apart from one or two schools, all special schools are based on oral education. However, apart from ignoring the linguistic rights of the D/deaf, like elsewhere, in India too, oral education of the deaf failed to produce desired results. Literacy skills, academic achievements and even speech skills have continued to remain poor. Out of more than 550 schools not more than a handful have a clear communication policy. The situation continues to be the same as both diploma and degree level teacher training curriculum continue to prepare teachers only for oral schools where as in reality most schools do not fulfil the pre-requisites to become successful Oral schools. In the absence of universal screening and network of early intervention centres, most deaf children are still entering school late without any language, oral or sign, and apart from few exceptions, even after 15 years of schooling, pass without much reading, writing and spoken skills.

Madan Vasishta and other researchers of the Gallaudet University, USA in their survey in 1980s and later Dilip Deshmukh found that most of the principals of deaf schools refused that sign language is used in their schools. This situation continues and most principals and teachers are still unaware that ISL can be a viable option for teaching. Ironically, all D/deaf students irrespective of the communication policy of the school know and use sign language of varying degrees. Although ISL was used among the D/deaf, the first grammar of the language based on a linguistic analysis was published by Ulrike Zeshan in 1996 based on her PhD work (developed later as Zeshan, 2000). Further, with her efforts, a BA programme in Applied Sign Language Studies for the D/deaf students was started in IGNOU, New Delhi in the year 2009 in collaboration with the University of

Central Lancashire, UK . The medium of instruction of this programme where students are enrolled not only from India but also from many developing countries is ISL. This course will produce qualified D/deaf teachers who can in future teach D/deaf students in special schools using ISL.

The Rehabilitation Council of India (RCI) on its part produced a manual on Communication options in 2010 and copies were sent to all the special schools asking them to make a clear choice of the communication option out of Oral/aural, Total Communication and Sign Bilingualism. Sign Bilingualism considers ISL as the first language of the D/deaf students, using it as a mode of communication and medium of instruction and develops the majority language as a second language mainly through print. The newly formed ISLRTC is also planning add-on courses for the in-service teachers and a B.Ed. in Bilingual Education for the D/deaf.

Apart from working towards greater awareness building and demanding an official language status for ISL, deaf clubs have started to play an important role in the value addition of educational process of the D/deaf. Many deaf clubs like the ISHARA Foundation in Mumbai and Vadodra, Deaf Way Foundation in Delhi and other places in India, Deaf Enable Foundation in Hyderabad, Ability Foundation in Chennai, Sai Swayam Society in Delhi, Youth Association of Deaf in Mumbai, LEEDS in Pune, All India Federation of the Deaf in Delhi, NOIDA Deaf society in NOIDA and Speaking Hands in Zirakpur, Punjab work with the D/deaf where D/deaf teachers use ISL to teach English and IT courses to the D/deaf. However, these efforts are not sufficient unless state authorities wake up to the need to use ISL for education for the D/deaf.

References

Bag, Bubai. 2012. "Mainstreaming Disability in West Bengal: An Alternative Perspective". Paper presented at *Interrogating Disability: Theory and Practice* workshop, IDSK, Kolkata.

Bhattacharya, Tanmoy. 2010a. Re-examining the Issue of Inclusion in Education. *Economic & Political Weekly*, Vol XLV, No 16.

Bhattacharya, Tanmoy. 2010b. "Education of Students with Disabilities: An Evaluation of the Indian Educational Policies" invited paper presented at the International EDICT 2010 (ENABLING ACCESS TO EDUCATION THROUGH ICT) conference, New Delhi.

Bhattacharya, Tanmoy. 2012. History of the Calcutta Deaf and Dumb School. *DHA Newsletter*; Spring. Disability History Association

Bhattacharya, Tanmoy. 2011. "Deaf Education and Identity in the face of Prevailing Audism", Paper presented at Panel discussion on Disabilty and Cinema, Nehru Memorial Museum and Library, New Delhi.

Bhattacharya, Tanmoy and Haobam Basantarani. 2010. The politics of multiculturalism. *Problematizing Language Studies*, ed. By Imtiaz Hasnain and Shreesh Choudhary, AAKAR Books, Delhi; India. pp 169-184

Deshmukh, Dilip.1997. *Sign Language and Bilingualism in Deaf Education*", Deaf Foundation, Ichalkaranji, India.

Padden, Carol. 1980. The deaf community and the culture of deaf people. In C. Baker and R. Battison (eds) *Sign Language and the Deaf Community*. Silver Spring, MD: National Association of the Deaf.

Vasishta, M.M., Woodward, J., & De Santis, S. (1987), "Indian [sign languages]. In: John V. Van Cleve (Ed.), Gallaudet Encyclopedia of Deaf People and Deafness, III, McGraw-Hill: New York, 3 Vols. pp. 79-81.

Vasishta, M.M., Woodward, J.C., & Wilson, Kirk, L. (1978), "Sign language in India: Regional Variation within the Deaf Population", Indian J. Applied Linguistics, Vol. 4, No. 2, pp.66-74.

Zeshan, Ulrike. 1996. *Aspects of Pakistan sign Language*. Sign Language Studies 92. Philadelphia/Amsterdam: John Benjamins Publishing Company. 253-296

Zeshan, Ulrike. 2000. *Sign Language in Indo-Pakistan*: *A Description in Signed Language.*,Philadelphia/Amsterdam: John Benjamins Publishing Company.

Zeshan, Ulrike, Madan M. Vasishta, and Meher Sethna. 2005. Implementation of Indian Sign Language in educational settings. *Asia Pacific Disability Rehabilitation Journal* 16.1: 16-40.

Acts and Policies

"International Covenant on Civil and Political Rights" (1966): (United Nations)

"National Policy on Education" (1968): (New Delhi: Ministry of Human Resource Development, Government of India).

– (1986): (New Delhi: Ministry of Human Resource Development, Government of India).

"National Policy on Education 1986, as modified in 1992" (1992): (New Delhi: Ministry of Human Resource Development, Government of India).Programme of Action, 1992.

"The Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995" (1996): in the *Extraordinary Gazette of India* (New Delhi: Ministry of Law and Justice and Company Affairs, Government of India).

"The Right of Children to Free and Compulsory Education Act, 2009" (2009): in the *Extraordinary Gazette of India* (New Delhi: Ministry of Law and Justice, Government of India). "Programme of Action" (1992): (New Delhi: Ministry of Human Resource Development, Government of India).

"United Nations Convention for Rights of Persons with Disabilities" (2006): (United Nations).

PART 4:

THE PRESENT SITUATION

A personal account of historical developments of Indian Sign Language

Madan M. Vasishta

The first published work on research on Indian Sign Language (ISL) was the comparison of sign languages used in three schools in Bengal. Sign vocabularies used in three schools for the deaf (Dacca, Barisal and Calcutta) were compared. There was significant difference in signs used in the three schools (Banerjee 1928). Given the limited interstate or even intrastate mobility of population during those days, lack of similarity in sign languages used in the schools is understandable. Use of sign language, according to Banerjee, was strongly discouraged in all schools, but students used sign for communicating with each other, which had led to development of flourishing sign languages in those schools. It is believed that the same was true about other schools for the deaf in India at that time. Administrators of almost all schools claimed that they are oral while students and some teachers used signs outside of the classrooms (Cross 1977). Use of sign language, the natural language of deaf people, was suppressed almost all over India.

It may be worth mentioning here work done by M. Miles, who complied a historical bibliography in 2001, which details the development from ancient to modern times of signs and sign language in the region.

No other research work on sign language in India was done until 1977 when Madan Vasishta, Dr. James C. Woodward and Dr. Kirk Wilson from Gallaudet University in the United States visited the four major cities in India to find the answer to the question (and the belief): Is there sign language in India? At that time, many sign languages in the world, especially American Sign Language, were already identified as bona fide languages and were being used in educating deaf children as well as in social, cultural and professional lives of deaf people. These sign languages were well researched and

volumes on research were already published.

This 1977 survey was partially supported by Gallaudet University. The All India Federation of the Deaf also supported the effort. Vasishta had contacted schools and organisations in Mumbai, Bangalore, Calcutta and Delhi for providing local support in finding deaf consultants who met the required criteria -- born deaf, used ISL since birth and attended a school for the deaf -- and sites for holding meetings and collecting data. The researchers had expected problems in finding consultants as communication with and among deaf people at that time was very difficult. However, they were pleasantly surprised how the word that "three American people are trying to make a book about sign language" spread in each city. The turnover was substantial and the enthusiasm demonstrated by all consultants was touching and inspiring. The researchers needed only a few consultants and had a "bench" of waiting people who sat around watching the process. They socialized among themselves and provided unasked input on all issues related to sign language.

The analysis of the data collected in the four cities showed that ISL is one language with regional variations. The grammar and syntax of the four varieties of ISL is the same. The results of this study were published in the *Indian Journal of Linguistics* (Vasishta et. al. 1978). The results encouraged us to follow up with the plan to research further and compile dictionaries of the four regional varieties.

Around 1978 there was a UNICEF-funded sign language project in India headed by head of Department of Education Dr. Prabha Ghate at NIHH Mumbai. However, the outcome of that project is not available in the public domain.

Dr. Woodward received a small research grant from the National Science Foundation to collect data for the dictionaries. In the summer of 1979, Dr. Woodward, Ms. Susan DeSantis and the author came to India for six weeks. They visited each of the four cities and spent over one week in each city to collect signs for the dictionaries. They photographed each sign and also made 8mm movies of signed stories for grammatical

analysis. Vishnu Sharma, a very talented deaf artist in Delhi, drew line drawings based on these photographs.

The first dictionary of ISL with focus on Delhi was published in 1981 with funding from Gallaudet University and some support from the All India Federation of the Deaf (Vasishta 1981). The efforts to publish the other three regional dictionaries in Kolkata, Mumbai and Bangalore were thwarted for various reasons. However, after two years, limited editions of those dictionaries (Vasishta et al. 1987) were published at Gallaudet and distributed to researchers and schools.

No other major research was conducted on ISL until 1996 when Ulrike Zeshan published her treatise on Indo-Pakistani Sign Language (Zeshan 1996). Indian and Pakistani sign languages, she proposed, had mostly the same vocabulary and grammar, therefore, constituted one language – Indo-Pakistani Sign Language (IPSL). Zeshan analysed morphological and syntactic structures and described the IPSL grammar thoroughly. This was the first major work focusing on all linguistic aspects of ISL.

It was felt that one ISL dictionary instead of the four dictionaries for each variety was needed. A comprehensive dictionary that included signs from all over India was published in Coimbatore in 2001 (Ramakrishna Mission Vidyalya 2001). This research and production of this dictionary was supported by CBM International, which was involved in a lot of research and development work in education and rehabilitation of visually impaired persons and had decided to include work on deafness also. Ramakrishna Mission Vidyalya assigned Dr. Mani, a professor at the R. M. Vidyalya, to coordinate the project. He organized a national seminar of educators of deaf children. In this seminar, he met and hired Mr. V. Gopalkrishanan, a deaf professional, and his son, G. Amaresh to help with the project. Signs were collected from cities all over India and were analysed for use in various regions. Signs that were more common all over India were selected and included in a comprehensive dictionary published in 2001. This dictionary was distributed to schools and organisations for the deaf. It is imperative that we have an electronic format of this and other dictionaries, so interested persons can

access these on the Internet.

No formal classes for teaching ISL were conducted in India until 2001 when Ali Yavar Jung National Institute for the Hearing Impaired (NIHH) established the ISL Cell in Mumbai. It was noticed that most deaf children did not have the benefit of early education -- oral or manual -- and fell through the cracks as illiterates. Prof. Ulrike Zeshan was similarly asked to develop the curricula to start ISL classes. Later Mr. Sibaji Panda worked as the teacher and master trainer in the programme. All this work was completed within a few months. This was a historic move, which resulted in starting of ISL classes and laid the foundation for future development in this area.

Later, these classes were offered in NIHH's regional centres in Hyderabad, Bhuvaneshwar, Kolkata and Delhi. *Mook Vadhir Sangathan* in Indore and several other organisations are also offering classes in ISL now. This is laudable, however, these efforts were just a drop in the ocean as there is a huge demand (and need) for more classes/ courses.

Despite the lack of a formal and comprehensive interpreter training programmes, two national interpreter organisations have been established in India. Association of Sign Language Interpreters (ASLI) was established in 2006 by Arun Rao, a self-educated interpreter and one of the founders of the National Association of the Deaf. Another organisation was founded by Monica Punjabi from Indore in 2008, called Indian Sign Language Interpreters Association (ISLIA), Both these organisations have a modest membership representing the small but growing profession of interpreters. Both provide some training to its members once or twice a year. This is a laudable effort, however, we need a concerted thrust and more organisations to realise the importance of interpreter training.

With respect to research on ISL, there has been a welcome spurt in research on ISL during the last decade on the face of the prevailing situation of educators of deaf

children not even believing that there was a sign language in India. So far 6 M.Phil, and Ph.D. dissertations on ISL and Sign Linguistics have been defended in the Linguistics departments of Jawaharlal Nehru University and University of Delhi since 2002, prominent among them are works by Melissa Wallang, Samar Sinha, Hidam Gourshyam Singh, and Neha Kulsheshtra. There is also work on problems and awareness of ISL and typology of ISL verbs (Morgan 2009, 2010) by independent scholars. Apart from these there have been continued work by scholars on linguistic aspects of ISL as well as on varieties of ISL (Bhattacharya and Gourshyam, 2010, Aboh, Pfau, and Zeshan 2005, Zeshan and Panda 2011, Panda 2012).

One of the major projects launched with the support of the Government of India is on corpus creation at FDMSE in collaboration with Central Institute of Indian Sign Languages in Mysore and Ramakrishna Vidyalya in Coimbatore (ISL Corpus 2012). The goal is to provide corpus of annotated Indian Sign Language in digital video format in order the have the Central Government recognize ISL as a language of minority people.

In 2009, IGNOU and University of Central Lancashire collaborated on starting a B.A. programme in Applied Sign Language Studies (BAASLS) on Indira Gandhi National Open University (IGNOU) campus. It is the first post secondary programme in India for deaf people which use ISL as the main language of instruction. There are about 80 students in the programme. This programme is indirectly encouraging use of and research in ISL. This will help ISL evolve into an academic language as well.

The government of India through the Ministry of Social Justice & Empowerment provided funding for establishing a research and training centre on ISL in its 11th Five Year Plan. Since IGNOU was operating the BAASLS program, it became the logical choice for establishing the Indian Sign Language Research and Training Centre (ISLRTC) on its campus. The ISLRTC was inaugurated on 4th October 2011 and will play a major role in research on ISL and bilingual education as well as training of interpreters.

Conclusion

During the last 40 years, ISL has evolved from a non-entity to an accepted and recognised language of deaf people in India both by the government and educators. The recent interest by academics in ISL in some universities indicates that research on ISL and training in the areas of bilingual education and interpreters will increase gradually. There is a dire need for research on varieties of ISL used in different regions, especially in rural areas. All this work was long overdue and a very welcome development.

References

Aboh, E.O., Pfau, R.& Zeshan, U. (2005) When a wh-word is not a wh-word: The case of Indian Sign Language. In Bhattacharya, T. (ed.) *Yearbook of South Asian Languages and Linguistics 2005*. Berlin: Mouton de Gruyter, pp. 11-43.

Banerjee, H.C. (1928) The sign language of deaf-mutes. Indian Journal of Psychology 3: 69-87. (quote from p.70

Banerjee JN. India. **International Reports of Schools for the Deaf, 18-19.** Washington City: Volta Bureau, 1928.

Bhattacharya, Tanmoy and Hidam, Gourashyam Singh. 2010. Space-Machine. In *Proceedings of Episteme 4*, Homi Bhaba Centre for Science, Mumbai (international conference to review Research on Science, TEchnology and Mathematics Education)

ISL Corpus. Retrieved December 21, 2012 from http://indiansignlanguage.org/ongoing-projects/

Kulsheshtra, Neha. 2013. *Wh Question in Indo-Pakistani Sign Language*. Unpublished M.Phil. dissertation, University of Delhi.

Miles, M. (2001). *Signs of Development in Deaf South and South-West Asia: histories, cultural identities, resistance to cultural imperialism.* Internet publication URL: http:// www.independentliving.org.

Morgan, MW (2008) Deaf and Sign Languages in India: Problems, Awareness and M3. In Delyth Prys & Briony Williams, editors. GUM3C: Global Understanding in Multicultural, Multimodal and Multimedia Contexts (Proceedings of GUM3C Conference, Bangor University, 22-23, August 2008). 95-104.

Morgan, MW (2009) Typology of Indian Sign Language (ISL) Verbs from a Comparative Perspective. In Rajendra Singh, editor. Annual review of South Asian Languages and Linguistics, 2009. Berlin & New York: Mouton de Gruyter. 103-131.

Panda, S. (2012) Alipur Sign Language: Sociolinguistic sketch. In Zeshan, U. & De Vos, C. (eds.) *Sign Languages in Village Communities: Anthropological and Linguistic Insights*. Berlin: De Gruyter Mouton & Nijmegen: Ishara Press.

Singh, Hidam Gourashyam (2010). Incorporation in Indo-Pakistani Sign Language. M.

Phil dissertation, University of Delhi.

Sinha, Samar (2003). A Skeletal Grammar of Indian Sign Language. Unpublished M.Phil. Dissertation. New Delhi: Jawaharlal Nehru University.

Sinha, Samar (2008/ 2013). *A Grammar of Indian Sign Language*. Doctoral dissertation, Jawaharlal Nehru University, New Delhi.

Vasishta, M., J. C. Woodward, and K. L. Wilson (1978). "Sign Language in India: Regional Variation within the Deaf Population". *Indian Journal of Applied Linguistics* **4** (2): 66–74.

Vasishta, Madan. Woodward, James, DeSantis, Susan. (1981) An Introduction to Indian Sign Language: Focus on Delhi. New Delhi: All India Federation of the Deaf.

Vasishta, Madan. Woodward, James, DeSantis, Susan. (1987) An Introduction to Indian Sign Language: Focus on Calcutta. Washington, DC: Gallaudet University.

Woodward, J (1993). "The relationship of sign language varieties in India, Pakistan and Nepal". *Sign Language Studies* (78): 15–22.

Wallang, Melissa (2007). *Sign Linguistics and Language Education for the Deaf: An Overview of Northeast Region*. Academic Excellence.

Zeshan, Ulrike. 1996. *Aspects of Pakistan sign Language*. Sign Language Studies 92. Philadelphia/Amsterdam: John Benjamins Publishing Company. 253-296

Zeshan, Ulrike (2000). *Sign Language of Indo-Pakistan: A description of a Signed Language*. Philadelphia, Amsterdam: John Benjamins Publishing Co.

Zeshan, Ulrike and Panda, Sibaji. (2011) Reciprocal constructions in Indo-Pakistani Sign Language. In Evans, N., Gaby, A., Levinson, S.C.& Majid, A. (eds.) *Reciprocals and Semantic Typology. Typological Studies in Language Series.* Amsterdam: John Benjamins, pp. 91-114.

Indian Sign Language and Humour in Cyber Space

Neha Kulsheshtra

"Cyberspace. A consensual hallucination experienced daily by billions of legitimate operators, in every nation, by children being taught mathematical concepts... A graphic representation of data abstracted from banks of every computer in the human system. Unthinkable complexity. Lines of light ranged in the nonspace of the mind, clusters and constellations of data. Like city lights, receding..."

— William Gibson, *Neuromancer*

1.0   Introduction

Well, did we ever think that fun things like YouTube, Facebook, Twitter etc. can have such a complex definition? In simple terms, cyberspace is a virtual world where billions of people share common space to communicate and connect with each other through the use of global network and interdependent information technology infrastructures located in the physical world or the real world. Cyberspace has become a very large pool of gallons of information from where anyone can take what they want. Cyberspace has reduced physical distances and hence it has made everything accessible with a single click. There is hardly any restriction and every group, cultural, social, political, ethnical, children, elders, youth, has benefited from this space. It is not limited to the so called 'normal people' but has gained huge popularity with the Persons with Disabilities too.

Within PwDs also, there are mainly two groups: the blind and the Deaf who have realized the significance of the cyberspace and accepted it as an inevitable part of their daily lives. Cyberspace has improved the accessibility options for them. Apart from the general features of the cyberspace such as mailing, downloading , uploading, chatting, there are some very specific features like talking books, screen readers, screen magnifiers for the

partially blind, subtitles or written transcripts for the Deaf, sign language videos, online sign language dictionaries for translation etc.

Out of all the disabilities, Deafness has been perceived in a very different manner and hence it has a very abstruse status. Deafness is not a disability; this is the view of the researchers and people who have reframed the definition of deafness and turned it into more positive concepts like Deafhood (Ladd, 2003), Deaf Culture or a Linguistic Minority. However, governing bodies in different countries still see Deafness as a disability. Developed countries have been pioneers in introducing positive concepts on Deafness and spreading them around the world. Deaf people from other countries have also identified with these notions and now they consider themselves a part of a large Deaf community and culture but by no means, disabled.

Another view suggests that Deaf people want to be included as a linguistic minority since their identity is about retaining and practising in a language that is yet to be recognised in many countries in addition to them being a part of a cultural minority as well. There have been many debates and researches which confirm that a sign language is a proper language, but an identical status as given to other languages is not given to the sign language in many countries across the world.

The advent of internet related technology has brought about a sea-change in the ground realities. Social media and networking has enabled them to be in touch with the Deaf in other parts of the world and share interests, experience and knowledge easily through videos and video chats. Cyberspace, in short, has revolutionised the Deaf life.

In terms of the status of sign languages in cyberspace, some languages are far more popular on cyberspace than other less developed sign languages. ASL (American Sign Language) and BSL (British Sign Language) are among the most popular sign languages. There are many reasons for this, one of them is the fact that rights based movement for the Deaf stared in these countries which have transformed the lives of Deaf people all over the world.

The introduction of sign languages to a wider and more general population began with the research proving their authenticity, sociological research which helped in establishing notions like Deaf culture, community, Audism, Deafhood etc., political reearch which defined the role of politics in acceptance of sign language and a variety of linguistics research which reflected on the structure and modality of sign languages, education for the Deaf, methodology issues etc.

The contribution of the Indian Deaf community in the appraisal of ISL cannot be ignored. Deaf organisations and institutions have worked in encouraging ISL so that it can reach even the hearing people and they can become part of their culture. Deaf students have also contributed by uploading many videos showing their experience, their plight, their demands and their expectations.

2.0   Deaf Humour

Any language is incomplete without the element of humour in it. The most ancient literatures around the world talk about humour. Chaucer, Shakespeare showed humour as a story or play with happy ending. In India, Bharat Muni described nine *Rasas* in his *Natya Shastra,* out of which one was *Hasya Rasa.* So, a legitimate language like ISL cannot remain untouched by this wonderful reason to smile.

A Deaf person perceives things visually and therefore sign language can really help in making great humour stories. It is a known fact that humans acknowledge or register visuals faster than speech or sound, and if the mode of communication is visual then it is ought to make deeper impression. ISL humour is still a lesser known territory on cyberspace. There are many videos on Deaf humour and jokes but most of them are in ASL or International Sign Language. ISL humour videos by few individual Deaf signers who have uploaded their own videos in order to make it public in the view of sharing some anecdote or personal experience can be found on the internet. It seems that most of the Deaf humour is based on their experience and encounters with the hearing people and are mostly situational, for example many deaf jokes show how a deaf person made a fool

of a hearing person by pretending to be hearing or how learning ISL can save hearing people from many situations. Here is one example:

> A deaf person asks a hearing person for a lift in his car. The hearing person was tired of driving and thought that it would be good if the Deaf person can drive it for a while. The Deaf person agrees and starts driving. After sometime he starts speeding beyond the given limit and the police catches him, he says that he is Deaf and due to the difficulty in communication the police man leaves him. The hearing person is amused and when his turn of driving comes then he also speeds. After sometime another policeman catches him and asks for his license. The hearing person thinks that he will fool the police man by pretending to be Deaf and when he gestures that he is Deaf, police man says that he can handle him because he knows sign language.

ISL humour, focuses on the basic issues and problems like education, relationships etc. which the Indian Deaf face in their daily lives; political issues have still not found a place in Deaf Humour. Among the videos on Deaf jokes, there is a lot of contribution from a signer named Mili Anand. She enacts it so well that it looks like a high class standup comedy or mimicry in sign language. There are other individuals too who have also uploaded a few videos on Deaf humour. There are no sad stories by Deaf people in cyberspace; among the videos found in ISL, either they are on education and awareness or jokes. This seems fair as there has been so much ignorance on the Deaf inflicted by the hearing world that the Deaf seek solace, comfort and happiness in these jokes and feel proud about their unique sense of humour.

Cyberspace has made all these things possible and hopefully in the next few years we can also see great animations in ISL and a variety of comic books in ISL which will definitely work in developing ISL and strengthening it in a way that it will be enjoyed by the hearing people too.

References

Anand, Mili (2012). *Sign Language Joke; Cabin, Russian, Indian Deaf*.
www.youtube.com/watch?v=zNAYmf5aBSo. [Viewed on: 11/02/2013].

Anand, Mili (2012). *Sign Language Joke: Deaf Driving*.
www.youtube.com/watch?v=OMLAFNq4kB4. [Viewed on: 11/02/2013].

Anand, Mili (2012). *ISL Jokes: Deaf Lion*.
www.youtube.com/watch?v=NH0D_TEqVFs. [Viewed on: 11/02/2013].

Bryant, Rebecca (2001). *What kind of space is Cyberspace?*
http://www.minerva.mic.ul.ie//vol5/cyberspace.html. [Viewed on: 12/02/2013].

Gibson, William (2004). *Neuromancer:20th Anniversary Edition*. New York: Ace Books.

Ladd, Paddy (2003). *Understanding Deaf Culture: In Search of Deafhood.* Multilingual
Matters.

Organisations of Deaf People

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1.0   Introduction

As in the case of the history of the Deaf communities the world over, the history of deafness in India is replete with the medical view of deafness and an associated non-recognition of the status of Indian Sign Language (ISL). The only way a deaf person could be a part of the community was only if s/he could speak. From family members to *tantriks*, medical intervention speech and audiology, all emphasised that a Deaf person young or old should speak to be considered 'normal'. Using sign language was a taboo. Deaf kids were not introduced to guests, were not allowed to use sign language in public or family gatherings as it was looked down upon. The social situation of a Deaf person is slowly changing and the awareness about ISL is helping in this transformation.

Given the prevailing social isolation of Deaf persons, deaf people started finding ways to meet, share their experiences, 'talk' amongst each other and vent out their emotions. They found places where they would meet up weekly, monthly away from their hearing families and just be free from 'hearing eyes' to talk to their heart's content. Thus, started the trend of Deaf Clubs across the nation. At these clubs, the sole aim was to have fun, share personal experiences, discuss issues from the Deaf perspective, come together to support a fellow Deaf who is in need.

It is here in these clubs that the Deaf kept alive their language – Indian Sign Language. The Deaf selected leaders to manage activities at these clubs among themselves so that there was one controlling hand to run the activities smoothly. Weekly activities like playing games, discussing news about the neighbourhood, state, nation and world, planning outdoor trips, activities for women all were planned and executed at the Deaf

Clubs. It was almost a relief for every Deaf individual as s/he could freely use their native language ISL.

In due course there felt a need to set up a governing Deaf Association that could control and take care of the various clubs, associations for the D/deaf across the nation. This need gave birth to the All India Federation of the Deaf [1955], Indian Deaf Society [1956], DeafWay [1991] so on and so forth.

2.0   Organisations

In this section, we will briefly outline history of some of the organisations for the Deaf in India and point out some of their activities. It is to be noted that this listing is necessarily partial and may not perhaps provide a bird's eye view of the history of development of Deaf organisations in the country.

2.1   The All India Federation of the Deaf (AIFD) was established on 22 December, 1955 at the first All India Conference of the Deaf held at the Constitution Club, New Delhi. The aim of the Federation was deaf unity at national level. All Deaf people were welcomed to share their problems with AIFD. The aim and objective of AIFD was to provide support to Deaf Indians and work towards development of the Deaf community with support from the Indian government.

Although the Deaf members of AIFD realised the need to have a Deaf president for AIFD, they decided to have a hearing person as President, since such a person could help make contacts, communicate with other hearing and government officials for all the activities of the AIFD. Savitri Nigam, a member of Parliament, served as its president for many years. Later, I.K. Gujral, who became India's prime minister in 1997, was nominated.

In 1957 the AIFD got affiliated to the World Federation of the Deaf. The Training Centre for Photography was established in November 1960. The Printing Press Institute for the deaf was set up in November 1962. The AIFD organised the 2nd All India Deaf and

Dumb Sports Meet at the National Stadium in 1965. A special feature of this meet was the creation of an All India Sports Councils of the Deaf (AISCD) as the sports wing of the AIFD.

The AIFD also started the official magazine *Mook Dhawani* in March 1968. Dr. Zakir Hussain, the then President of India, accepted to be the Chief Patron of the organisation. Rehabilitation activities and distribution of free hearing aids to children, were some of the important activities of that period. The Federation decided in 1982 to hold special programmess at various places for free hearing aids to people in various states of India including Rajasthan, Madhya Pradesh, Tamil Nadu, Kerala, Orissa, Maharashtra, Assam, Gujarat, Haryana, Punjab, Jammu and Kashmir, Himachal Pradesh. Since then about 11,600 hearing aids have been distributed. In 1975, the AIFD established the Multipurpose Training Centre for the Deaf. It provided training in Printing Technology, Photography, Fitter and Turner training, Computer and tailoring.

With growing awareness of ISL, Deaf Community, Deaf Culture and Deaf problems the Deaf in India are realising their Rights and are fighting for them. Earlier there were very few Deaf Associations mostly focusing on Drama, culture and sports. Today in India many new associations are being set up for Deaf youth empowerment. Some Deaf youth leaders have travelled to Europe and South Africa, and have been exposed to the developments of Deaf youth in those countries. This knowledge has been shared with Indian Deaf and Deaf youth empowerment has started in India.

There are several regional and state organizations of young deaf people like DYF, YAD, MYWAD, however, the deaf in the villages have no support. The AIFD and local associations need to look at village deaf and plan for their development.

2.2   Delhi Foundation of Deaf Women (DFDW) [1973] is a voluntary social organisation put together by three Deaf women-- Mukti Uppal, Renee Kuriyan, and Mahalakshmi Tikku along with Shashi Pal that began in March 1973. The main aim of the organisation was 'help them [women] to help themselves.' DFDW conducts various

activities and trainings for the Deaf women in Delhi ranging from Self employment scheme, Technical education, Social rehabilitation, and much more.

2.3   *Mook Badhir Mandal*, Vadodara (MBM) [1972] was founded by Amrut Bhai Parikh as a social entity to bridge the gap between the Deaf community and the mainstream society. MBM has created a platform of learning, sharing and empowerment for each Deaf individual. It has transformed the lives of many Deaf people by facilitating employment and counselling for career, vocational training, education and by providing information about the developments in the world through ISL. MBM has done some pioneering work in the field of Deaf Empowerment in Gujarat such as creating and publishing the ISL Dictionary, ISL training to parents of Deaf children for communication at home, English literacy by creating a branch of Ishara Foundation. MBM is also active in the sports front by encouraging Deaf youth to participate in various sports like chess, athletics, badminton and cricket. MBM has contributed substantially to wide range of film entertainment for the Deaf using ISL; their films have Deaf actors and their movies cover different genres like action, comedy, horror and Social awareness[17]. Not leaving Women Empowerment behind the MBM team arranges various activities related to women issues. Currently Mr Rajesh Ketkar is heading the activities of MBM.

2.4   Bombay Foundation of Deaf Women (BFDW) [1983] was founded on 4th December 1983 with few Deaf people under the guidance of Renee Kuriyan from DFDW. Deepa Virgankar, Aruna Varadkar, Bakulaa Dalal and Aruna Vaidya managed to bring together about 65 Deaf women at the Hindu Gymkhana Hall with the idea of uniting Deaf women in Maharashtra. It became affiliated to All India Foundation of Deaf Women (formerly National Foundation of Deaf Women). BFDW has adopted the policy of 'Hard Toil and Perspiration' and has resolved to work harder with serious thinking and planning for better results. The organisation has much to owe to Damodar Ambolkar, Zal Tavakkuli and B J Shah, prominent social workers and/or interpreters who helped strengthen various activities of the organisation.

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[17] The Appendix has a list of films using ISL, among which MBM produced films can also be found.

Currently it has more than 470 members who are learning new different skills sign language, empowerment, awareness, education, arts, culture, games, crafts, stitching, embroidery, cooking, etc. They also take part in competitions in different parts of India and perform folk dances, drama, sports, etc., especially the 'All India Festival of Dance, Mime, Drama for the Deaf' which is held every year for four days in different cities like Mumbai, Delhi, Hyderabad, Bangalore, etc. where exhibitions are held alongside where the members get an opportunity to sell their craft products. BFDW also hosted and co-organised with All India Deaf Art & Cultural Society (Delhi), a 'Miss Deaf India' competition, which was held on 29th and 30th December 2012 in Mumbai for the first time.

2.5   National Association of the Deaf [NAD] was established in December, 2005. NAD aims to be a representative body of D/deaf people across India, especially in negotiating with various ministries of the Government. Deafness being a hidden disability, various schemes, plans and facilities being implemented by the Ministry are not reaching the Deaf community at large. Considering all these issues and many more obstacles, some Deaf adults came together and set up NAD. NAD is actively involved in lobbying and advocacting for Deaf Rights in various spectrums such as Deaf human rights, empowerment, employment and recognition of ISL as an official language of the Deaf. The various lobbying by NAD has brought a positive change to the lives of Deaf people in India. It has hosted state level meetings across India. There are up to 2500 members of NAD. NAD also conducts meetings with the aim to increase its members from across the country.

Besides lobbying for Deaf Rights at the Ministry, NAD is also active in creating awareness among the Deaf in India by conducting events, seminars related to various issues NAD, like National Deaf women's Empowerment, National Deaf conference, National awareness workshop on UNCRPD, Deaf youth empowerment seminar, National Workshop on Grassroots Deaf Leadership, State level workshop on empowerment of Deaf youth and State level workshop on empowerment of Deaf women.

2.6   Deaf Enabled Foundation Hyderabad, [DEF] was set up in 2009 out of the need felt by Deaf youth groups to start an organisation in Hyderabad**.** Under the leadership of T.K.M Sandeep and his team DEF is working for upliftment of the Deaf youth in Andhra Pradesh. From various vocational trainings, regular workshops, seminars and activities Deaf Enabled Foundation has made a big difference to the lives of many deaf youth. Their work is focussed on three areas: advocacy on the cause of the Deaf, public awareness on the cause of the Deaf, and empowering and building the Deaf community from Deaf youth. It has two wings, namely, Deaf Enabled Education Centre (DEEC) and Deaf Enabled Rural Development Centre (DERDC).

The activities under of DEEC include conducting courses such as General English, Quality Computer Education, Vocational Training, Placement Services, Practical Life Skill Training and an Architectural Course. Whereas under DERDC, programmes in the rural areas such as HIV awareness, legal workshops for Deaf women, leadership training for the Deaf and working on various issues related to the Deaf at the grassroots' level, are regularly conducted.

2.7   Deaf Youth Associations in India

India being the largest Deaf populated country has a huge Deaf youth population who are uneducated, misinformed, unemployed, frustrated and are not well equipped with life skills to lead an independent life. To bring about a significant and positive change Deaf youth groups emerged and are being established across India. Focus of the Youth groups is Human Rights, Deaf Empowerment, Awareness on Deaf Culture/Community, Deaf identity, Deafhood, Audism, etc. Deaf youth associations or sections have been established in various states of the country. Due to inspiring work by Deaf youth, Deaf youth associations sprung up in Mumbai, Delhi, Pune, Kerala, Dehradoon, Coimbatore, Tamil Naidu and few districts of Maharashtra. The sections below, briefly describe the work of some of the Deaf youth clubs in the country.

2.7.1   Deaf Way Hyderabad [1991] is among the first few organisations that were put together for the welfare of the Deaf youth in India by J.S.K. Rao, a hearing person who befriended 12 teenage deaf and began a journey that was to benefit others. He learnt sign language, inspired, motivated the deaf and trained them in various skills. He met the authorities of the Rehabilitation Council of India to bring out many issues faced by the D/deaf.

2.7.2   Deaf Way New Delhi [2001] The Deafway Foundation is a voluntary organisation working for the welfare of Indian Deaf. It aims to reach out to the million Deaf across the country and provide the required support. Education, empowerment, vocational training, job placement, matrimony for D/deaf, Counselling for youth and also for the parents of D/deaf children, leadership training and personality development, sign language seminars, Deaf education methodology seminars for Deaf schools and more, are the services provided by Deafway to the Deaf community in Delhi.

2.7.1   Indian Deaf Youth Forum (Delhi) was set up in March 2011 by AIFD when its Multi Purpose Training Centre was made available to conduct weekly activities for the Deaf Youth. Students from the BA in Applied Sign Language Studies at the ISLRTC, are now the active team that conducts activities for the Deaf Youth in Delhi. The team organised a Deaf Camp in Mussoorie in 2012. Besides adventurous activities the Deaf Youth Team also organises regular discussions related to Deaf issues faced in various states of India. The Deaf Youth Forum also celebrated the 'International Week of Deaf' in 2011 and 2012, where the theme was 'Bilingualism is the Right of the Deaf'.

2.7.2   Yuva Association of Deaf [YAD] Mumbai, was started by Vicky Shah and Mohammad Shafique in Mumbai. Topics related to the Deaf community, Deaf Identity, Deaf culture, Deaf hood, empowerment, leadership, are discussed regularly. Yuva gatherings are conducted at AYJNIHH every Sunday. The YAD team has been active in developing visual materials for the Deaf. Its members have set up a group that call themselves Deaf Entertainment. This group prepares songs in ISL with themes ranging from love, empowerment, etc.

2.7.3 Leadership Education Empowerment of Deaf [LEED] Pune, was set up in 2010 to make sure the Deaf youth in Pune are not left behind. Md. Aqil Hajee and Atiya Hajee decided to start English literacy for the Deaf in the city when the importance of learning functional English dawned. With weekly English literacy classes, LEED conducts lectures on the importance of education, Deaf culture, Deaf identity, the importance of family in personality development, developing life skills and understanding work culture in the hearing world. LEED has conducted various activities - summer workshops for hearing children creating awareness on Deafness and communication with Deaf friends, inviting Deaf leaders to conduct lectures, workshop on the responsibility towards environment, creating videos in ISL with moral and messages for the Deaf community and deaf kids, summer classes for school of the D/deaf, information on sign language interpreting and how to use services of an interpreter. Recently LEED got the opportunity to provide placement to some of its participants. All these activities have made a positive impact on the Deaf youth in Pune to make them more aware of themselves, to become independent, thinking and confident young individuals.

2.8 Apart from these organisations mentioned above, there have been various other organisations of the Deaf that have actively played roles in bringing about a change in the way the Deaf are now perceived. These organisations range from trade unions, to bank employee's associations to religious deaf clubs. We present a brief overview of some of these oranisations in this section.[18]

2.8.1 All India Deaf Bank Employee Association started [ADBEA] in 1987 with a small group of 5 deaf bank staff now has over 700 members spread across India working in various banks. The main aim is to promote jobs for the deaf in banks and give special training to those in service. The ADBEA is based in Chennai and is very active since its inception and regularly hosts regional and national meetings. It is not a trade union but an association of the Deaf Bank Employees in India. They have their national headquarter as

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[18] We are thankful to Sibaji Panda for alerting us to the existence of these organisations and for providing an outline for this section.

well as several state chapters with regional representatives. The association also provides legal services to those who are discriminated in service-related promotion, payments, transfers, etc. The association is currently led by T. Raghava from Chennai.

2.8.2   All India Central Government Deaf Employees' Association is a national level associations with regional representatives in several states chapters across India has more than 1000 members. Their function ranges from solving problems of retired Deaf members, conducting medical camps, tour trips, training courses for the members, to creating job opportunities for Deaf candidates. The association regularly meet every year locally and nationally to discuss various issues related to their jobs and to give a platform for retired D/deaf government employees to get together and form a community of similar social and professional interests.

2.8.3   National Foundation of Deaf Women [NFDW] is a national association of the Deaf women. It has been active for more than a decade and has had several national levels meetings including the last one in 2012 to give it a legal status and to establish several state chapters. NFDW works towards empowerment and equality of D/deaf woman and trains them to be independent D/deaf women. The newly formed working group/executive committee at national level includes young women and women leaders, who aim to expand the foundation's activities across India. NFDW at the moment functions with support from the Delhi Foundation of Deaf women.

2.8.4   All India Sports Council of the Deaf (AISCD) is the only national level organisation of the D/deaf in sports and recreation. It is also recoginsed by the Sports Authority of India and is affiliated to the International Sports Committee for Deaf Sports. India hosts national level sports meets regularly and also participates in the Deaflympics regularly. Since sometime now the Sports Authority of India has been funding the association to promote deaf sports within India and enable them to participate in international sporting events. AISCD has its state level affiliated member organisations.

2.8.5   Religious Deaf organisations in India

There are a number of religious deaf organisations in India operating to promote religious beliefs among D/deaf population. Deaf missionaries, Hindu and sanatana dharma organisations, Islamic group meetings are spread across India and they perform their activities to spread their religious beliefs as well as provide religious educations in sign language. There are several organisations such as Sanatana Dharma for the Deaf, Deaf Jeovah witness groups, other missionaries as well some Islamic D/deaf movements. Sign language plays a crucial role in operating the organisations.

3.0   Summary and Conclusion

As mentioned at the outset, this chapter does not cover all the organisations due to lack of adequate information. The goal here is not to develop a 'directory' of organisations, but just to provide a description of organisations that have provided information to work with. Some organizations also conduct Miss Deaf Indian pageant and send the winner abroad to compete at international level. Hopefully, in the future, a comprehensive description of all the organisations will be prepared.

VOICES

Compiled by

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Nine Deaf persons from various walks of life were asked 4 questions about different dimensions of ISL. What follows is a very precise and consolidated summary of their responses. As has been indicated in the Introduction of the volume, this summary represents the "voices" of the Deaf people in terms of their views ISL.

How has ISL changed your life?

ISL has changed lives of many deaf people so much that some believe that through professional training, sign bilingualism can be applied at an early stage for deaf children, Many asserted that better ISL skills enhance cognitive development which help them to later read and write better.

Before they knew ISL, they used few signs and gestures, unaware of the fact that ISL is a complete language and their most prized skill. One person said that his life changed drastically when he joined the ISL Teachers Training at AYJNIHH where he realised that he could do anything with ISL and express himself in many ways. His association within the Deaf community increased. Access to language gave them access to knowledge and self-development and abstract thinking. It not only became a medium for education, but also a tool to learn another language, namely, English.

The overall experience gave them the confidence to interact with international students about the exchange of experience at par with them. The language was also a medium to interact with others and help develop their social network.

How ICT (Information Communication Technology) in ISL improved your life?

Communication:
The use of various communication devices such as text telephones, pagers, email, cell phones, videophones and the internet has revolutionised interaction opportunities for people. They can communicate with friends and family through video chatting online, 3G video call, etc.

Medium of information, entertainment:
They also watch signed videos on YouTube and other websites, to study sign linguistics, see journal articles in sign language, to watch the news, to see theatre, short movies etc.

Learning:
Many Deaf people learn different courses which includes MS-Office, DTP, and Internet online courses and also improved English skills of some of the users (through frequent use of typing etc.)

Do you think Sign Languages are more complete in conveying a thought?
Sign language is a complete mode of communication and highly expressive just like any other spoken language. They can enjoy discussing about various topics using sign language and have full fledged communication. They understand the meaning of concepts of English texts through ISL, a medium through which they can learn another language.

What are the elements or factors that will lead to further development of ISL?
Use for child's language and other development:

Sign language benefits a baby's language development in several ways, including increased vocabulary, more advanced literacy skills, sentence structure, greater expression in gestures and spoken language engagement in two-way conversations, and allowing communication between different spoken languages. Along with language skills, early use of sign language enhances cognitive, academic, social, and emotional development

More use of ISL and building awareness of impact of ISL:
Research on how deaf people's quality of life is enhanced by ISL and by access through ISL, is needed. Exposure to higher education, involvement in new projects will encourage the users to create new vocabulary. As of now borrowing signs from other sign languages is a trend in India. ISLRTC can conduct a project on linguistic structure of ISL, about deaf culture and history in India to increase awareness. By raising awareness of impact of ISL through media to a wider public will increase its development. One way this can be done is by conducting a study on deaf children communicating with each other, their personal and intellectual development etc. this will highlight the need for bilingual education.

Education in ISL
Teaching English through ISL at NIHH, Noida Deaf Society, and many NGOs enhance English literacy skills.

Is there any other issue related to ISL that you wish to talk about?
Developments in the field of linguistics and an emerging body of research in education have validated the historical views on ISL and its value in the education of deaf and hard of hearing children. The inherent capability of children to acquire ISL should be recognised and used to enhance their cognitive, academic, social, and emotional development. Accordingly, the NAD supports the bilingual approach for deaf and hard of hearing children. Deaf and hard of hearing children must have the right to receive early and full exposure to ISL as a primary language, along with English.

Some of them felt the need to safeguard ISL and at the same time develop, create new vocabulary. Borrowing from International or ASL signs should be limited and focus should be on protecting and developing Indian Sign Language.

Finally, the Deaf persons wish for ISL to be recognised as one of the Indian Languages.

The Future of ISL

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1.0   Background

Deaf people who are users of ISL were interviewed about ISL. The variables of the group of Deaf ISL users who were interviewed, was age, ranging from 20-45, gender, including both male and female members, who have deaf family members or have no one in their families who are deaf. These deaf adults are students of higher studies or professionals. In addition, there was also a variable on how early in their lives they learnt sign language, varying from birth, 5-10 years to not until much later when they left school.

The following questions on ISL were asked:

- What is the future of ISL
- How it changed their lives
- How ICT in ISL changed their lives
- If ISL is complete in conveying a thought
- What elements would lead to further development of ISL
- what issue related to ISL they thought should be addressed

The notes below summarise their inputs on these parameters.

2.1   Future of ISL

ISL is seen as the first language and a foundation for education. ISL is useful for communication with Deaf persons and can be a strong foundation for education, access to

information, sign language interpretation. It is hoped that ISL is provided to all deaf children as their first language to access subjects fully, while to hearing people to learn ISL as another language like German, French.

2.2   Awareness of importance of ISL

The current ISL users are proud of ISL as their language and believe that a lot of work needs to be done to create awareness about ISL across India, about the use and importance of ISL. This awareness can be spread through the use of media and news. More accessible higher education, involvement of various associations of the D/deaf and self help groups that have come up for Deaf youth empowerment like CCTD in Latur at Maharashtra, ISLRTC in New Delhi, Noida Deaf Society in Noida (UP), LEED in Pune at Maharashtra will be able to contribute to take ISL to various heights. Institutions like IGNOU teaching concepts of ISL, and exposure to higher education in ISL is lending more visibility to the importance of ISL as the language for the Deaf.

2.3   ISL as a medium for access for deaf people

With increased awareness for ISL as the preferred language for the Deaf, increasing access to jobs, day-to day facilities will be provided to the Deaf through ISL. For examples, to teach ISL awareness for a short time to all hearing people in jobs situations such as police office, metro station, doctor's clinic, shop, etc. There is also a need to focus on providing ISL interpreters at educational institutes, doctor's clinics, courts, police and railway stations, etc.

PART 5

SIGN LANGUAGE AND
OTHER KNOWLEDGE SYSTEMS

Sign In Indian Tradition -- the *Chinha Shastra*

Ganesh Devy

It is commonly observed that people in different cultures tend to use markedly different gestures to communicate the same or similar meanings. A gesture or a body movement that means one thing in a given culture may mean a completely opposite meaning in another cultural context. It is not rare for Indian visitors to European countries to be misunderstood as saying 'no' in response to a question while they intend to say 'yes' because of the 'peculiar' manner in which they shake their heads. Their gesture would be immediately understood in any part of India as an affirmation; but in Europe it gets interpreted as denial. This is so because gestures and body movements are culturally conditioned. They do not have a universal grammar.

Not all body movements have the ability to convey any coherent meaning. For instance, simple acts of walking or getting up from the bed or a chair do not get interpreted as attempts to convey any meaning. However, these movements or gestures may amount to statement of meaning if placed within the context of an art performance in a dance sequence or drama. The grammar of body movements or gestures which lend themselves to semantic interpretations gets defined over a period through conventions. The bringing together of the thumb and the index finger forming a hollow circle and moving the palm making one's wrist the fulcrum has come to mean in contemporary India 'okay' or 'excellent' while till the early twentieth century the same movement used to mean mental peace. The new meaning has come from the signals that acquired currency during the Second World War, whereas the meaning of that gesture previously was based on the prescriptions in the *Natya Shastra* of Bharata Muni.

When the meaning associated with certain gestures and movements as accepted by a given culture get noticed and catalogued, they get canonised as meaningful signs. The

process is closely comparable to the manner in which quite arbitrary verbal signs acquire the status of word in a language.

Just as it is later that a student of languages can trace back the etymology or part of the formation process of words, it is subsequent to their emergence that body signs can be studied for their historical origin. However, essentially they are arbitrary in nature. Thus, *namaskar* – joining of both palms to wish well to another person—or *kurnisat* bowing down as salutation—or *peri-panna* – touching the feet of an elder in seeking blessings, have all an arbitrary beginning but have a cultural sanction as signs/body movements with profound meanings.

In ancient India two types of signs were chosen for formulating a system or grammar of signs: one, the signs that the body can generate, and two, the signs inscribed on/in the body. The latter category was covered by the chinha shastra, the former by the natya shastra. It would not be inappropriate to translate *chinha shastra* as 'metaphysical semiology'. This branch, a highly popular branch of Indian hermeneutics further sub-divided the field into the *samudrik* and the *jyotisha*. The *samudrik* dealt with the interpretation of lines and marks on the body of a person such as *shankha* (conch), *padma* (lotus), *chakra* (circle), etc., imbued with spiritual significance. It was expected of a person deemed fit to be a ruler to have certain kinds of marks on the forehead, neck and other parts of the body, as well as certain configuration of lines on the palms. These were known as *lakshana* (which was also the term that Indian linguistics used to describe one layer of meaning of words. The term literally means the stated or visible meaning). However, it was accepted that the *lakshana*s were all a handiwork of destiny or supernatural powers. The other development in interpretation of signs related to those signs which are socially created, conveyed and accepted as meaningful movements. The branch of science that dealt with these came to be known as *natya-shastra*. Though the term immediately evokes the name of Bharata Muni, the greatest among the theorists of drama in India, it is necessary to bear in mind that dramaturgy was a well developed branch of interpretative sciences in ancient India and that Bharata Muni was only one of

the theorists to have commented on *hasta-mudras*, signs used in dance and drama to convey meaning.

Several centuries before Bharata Muni, Nagnajita, a Buddhist scholar had described the correspondence between *mudras* and meaning. His work, unfortunately lost to Sanskrit scholarship in subsequent periods and available to us now thanks to its translation into Chinese (and from Chinese to German and then from German to English), focused on the Buddhist practice of sculpture in his times. Nagnajita discusses in his treatise on the correspondence between form and meaning the importance of proportion and balance in sculptural *mudras* (the expression on the face of Buddha figures) for communication of *bhava*, the feeling conveyed. Thus, one of the sources of Bharata's dramaturgy was the Buddhist sculptural tradition; and it had a profound impact on Bharata's understanding of how meanings work in relation to signs generated by body movement. Not surprisingly, the *mudras* as conceptualised in the *Natya shastra* were seen as essentially symbolic and not as a mime for objects or experiences (for concrete or abstract signification). The twin principles along which Bharata presented his ideal of *mudras* were opposition and balance.

If one were to think of signs created through body movements for height or ascending high, or the divine or royal stature of a person – as a person at a high position--, a normal mime would tend to use raising of hands high in air. In Bharata's conceptualisation, this is to be done by bending the head and the body backward as much as possible, bringing them closer to the ground. On the stage, this movement of the dancer/actor makes the audience look 'down' rather than 'up', and yet as the convention is now well established, the audience understands this as a reference to something high.

Similarly, for indicating the wild flapping of wings of a wounded bird (such as *Jatayu* or a royal swan), a straight mime would require the actor to spread her or his arms and flip-flop them violently. In the *Natyashastra* tradition of *mudras* this is accomplished by bringing both arms together in front of one's face and moving them in the manner of gentle waves. By using these principles of balance and opposition, Bharata turned the

mudras into a science of symbolic gestures rather than a mechanical translation of meaning or feelings. Once, *mudras* come to be seen as being symbolic, the range of feelings or meanings expressed by the possible range of body movements gets infinitely expanded. Therefore, the Bharat Natya tradition could speak of the variety of meanings generated by mere movements of fingers and movements of arms. It also spoke of the moods generated by the movements of head and the eyes. And finally, all these were further compounded by meanings associated with the movements of feet. All of these together formed the basis of Bharata's interpretation of body signs /body movements and the meanings they generate. His interpretation later became the foundation for the entire *Bharat Natyam* tradition of dance (and probably that is why it was called the Bharat-Natyam, though *natya* would mean drama while *nritya* would mean dance.)

While the Bharat-Natyam received royal patronage all through India over the centuries enabling it to become canonical, a different kind of *mudra* tradition or *chinha shastra* continued to flourish in India mainly in the area of iconography. The conventions of iconography originate in the nature of the material medium used for making figures of godheads. Though in most cases the material used was rock, it was a wide spread practice to make terra-cotta figures of godheads, gram-devatas, ancestors, specific cult related pantheons and natural elements and cosmic bodies. These originated from craft traditions of India. Within these craft traditions, exuberance dominated the making of figures. Thus, large eyes, long noses, thick lips, very broad chins, multiple arms, tails, etc., became elements of these *murti*s.

This kind of iconography then became the source of characterisation in popular theatre as well as in various painting traditions. The Ramayana and the Mahabharata scenes as depicted in various wall paintings or scroll-paintings exemplify this. The works of Raja Ravi Verma, an early twentieth century artist, had such figures in his work that stand out by exuberance of colour and line rather than by their suggestive power. In modern times, the *murti*-iconography came to impact the depiction of characters in theatre and cinema. Quite naturally, the *murti*-tradition too has had a deep impact on the meanings associated with various body movements and signs. For instance, the combined movement of head

and hands by a young woman suggesting a denial but indicating acceptance widely in circulation in Indian visual culture in more from the *murti* tradition rather than the *natya-nritya* tradition. An easier example would be the way Indians point a finger to the skies or ask 'Wh' questions like what, when, where, why, etc., by up-turning the palm half-way. This sign can communicate, with no assistance from any additional verbal signal, the meaning. The origin of this particular sign is in theatre arts which often use of masks (rather than dance), and particularly in the need in mythological plays to depict *rakshasas*, the super human diabolic characters. This particular gesture is not to be used by heroic characters.

The history of gestures, signs and body movements for communication in India, brought to every member of the society through a myriad manner of performance, visual representation, narration of myth, social relations, norms of behaviour in public places, all jointly and imperceptibly influence the unconscious association between gestures or signs and the meaning they convey. Therefore, when a person is left to convey meaning with no other means but gestures, signs and body movements invariably draws upon the wealth of such gestures and signs canonised in history and society. Therefore, it will not be surprising if a closer look at the formation of signs in Indian sign language(s), the context of their use, the semiotic functions performed by them reveals that these are well rooted in the local tradition. Such an analysis may also help one in understanding why the Indian Sign Language used by communities of deaf cannot be entirely identical with any other national Sign language, even when elements of those languages may receive partial acceptance.

Sign Language and Signing in the traditions of Performance in India*

Tista Bagchi

0.   Introduction: Sign Language versus Dance or Other Performative Gestures

While engaging with sign language studies in India, it becomes imperative to place Indo-Pakistani Sign Language (IPSL) in its historical context in India, specifically that of the Indian tradition of performance with special reference to dance. It so happens that, while IPSL has its own distinctive grammar and pragmatics, body language of a highly stylised nature is used in traditional Indian dance forms as well as in the Indian dramatic tradition, not merely as a matter of fossilised convention but in fact with deep communicative significance. In particular, the elaborate system of signing concepts and emotions known by the term *Mudra* in certain religious traditions – particularly in the Tantric traditions in South Asia – has come to be developed to a high degree of elaboration in many, if not all, of the major traditions of classical Indian dance.[19]

Sign Language, on the other hand, is most obviously a language that is subject to principles of Universal Grammar (UG), subject to both structural and semantic constraints that are driven by UG, as well as its occurrence in one or more speech-communities for functional and not merely aesthetically communicative purposes. While both Sign Language and stylised manual and bodily gestures in dance are multi-modal in their expressive aspects, it is vital to keep in view this fundamental difference between

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A note on the transliterations from Sanskrit forms that I have followed in this paper: I have employed the usual diacritics as used in the Roman transliteration of Sanskrit forms, except that long vowels are represented by double vowel characters rather than by the usual vowel character with a macron over it, as follows:

aa	represents long /a:/
ii	represents long /i:/
uu	represents long /u:/.

[19] See Nair (1993) for an introductory exposition on the philosophical significance of gesture in Indian notions of spirituality and the human versus the divine spheres.

signing systems in the performing arts in any tradition and Sign Language as used for communication by and among hearing-impaired communities. The former merits systematic study for its communicative structure and content in the aesthetic realm, which are distinct – albeit often closely related – dimensions from the spiritual dimension associated with specific bodily configurations termed *mudras* in the Tantric traditions. The latter, on the other hand, cannot afford vagueness, unlike the former: it is claimed to belong to the realm of natural language, and is therefore hypothesised to be subject to all the relevant constraints and features of clarity, if not unambiguous signification.

1.   Sign Language in India – Basic Notions

There is now a significant literature on both the description and the teaching of Indian or Indo-Pakistani Sign Language (Jepson 1991; Woodward 1993; Zeshan 2000, 2003; Pfau and Zeshan 2003). A key feature of sign language is its multi-modal nature: manual signing runs along a parallel tier to non-manual signs such as facial configurations and specific parameters of body posture. With significant differences, this is echoed in the use of manual *Mudras*, facial mime, and bodily configurations and movements in the Indian dance-related and other performative traditions, keeping in view the fundamental difference between Sign Language and the latter traditions that I have outlined in the previous section. The following are just a few features of IPSL that merit mention for the purpose of comparison and contextualisation in relation to performative signing systems in India.

1.1. The Dimensions or Tiers in Sign Language

Zeshan (2000, 2003) outlines the following components to signing in IPSL:

SIGN, which has the following components:

   manual signs, with several formational features:

            handshape, place of articulation, movement (path movement and internal movement), orientation, and

   non-manual components:

            mouth pattern, mouth gesture, and facial expression;

            body posture, head orientation, and eye gaze.

However, such signs are realised through a multi-tier morpho-syntax, and thus a set of tiers or dimensions are typically recognised, in an analogy to the multiple tiers of phonological elements recognised in a framework of sound pattern study called autosegmental phonology (Goldsmith 1990). These tiers or dimensions underlie the combinations of signs and their components, but as is typically the case with sound patterns in spoken natural language, they do not coincide exactly with the surface syntax of signed sentences.

1.2.Salient Typological Points of Comparison with Performative Signing

Sign Languages, IPSL included, have their own distinctive typological features that are notably different from those found in spoken (and written) languages, and are all the more distinct from any broad typological features that are to be found in Indian performative signing systems such as of Mudra (manual signs) and facial/bodily mime. Keeping these significant differences in mind, it is useful to take cursory stock of certain salient typological characteristics of IPSL:

Simultaneity of sign components is of vital importance on both the lexical and the morphological levels (Zeshan 2003: 158). In terms of its "word-structure" typology, IPSL has certain isolating (i.e., one word, one idea) traits as well as a reasonable number of derivational processes (i.e., processes of modification of a basic word into new but related words). There are no affixes as in spoken or written language, however, since "all of morphology is realised as simultaneous modifications of one or several of the formational parameters" (*loc. cit.*). Sign formation is almost entirely derivational, with a possible limited set of exceptions in the case of directional signs, especially those signalling 'you', 'I', '(s)he/someone' through directionality. Fig. 1, from Zeshan (2003: 176), illustrates this kind of directionality expressed on the same verb 'invite'.
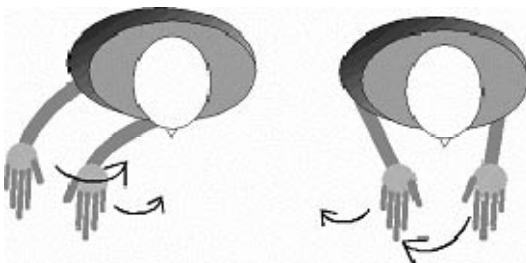
Fig. 1. Directional signs (''I invite someone'' and "someone invites me")

Interestingly, temporal markers do not occur as features on action signs (typically expressed by verbs in spoken language) either in Sign Language or in performative signing in the Indian traditions; instead, in Sign Language they are signalled by time signs (Zeshan 2000: 91-92). There is some kind of ordering of signs (syntax) in performative signing, as there is in Sign Language, but with a similar flexibility in the order of participants with the relative participant roles largely inferred pragmatically (Zeshan 2000, 2003), although the action/state sign usually comes utterance-finally in both, analogously to verb-finality in most spoken languages of South Asia. However, the order of signs in performative signing is also largely derivative from the sung or chanted text.

2.0   Mudra and Other Modes of Signing in the Indian Performative Traditions – Basic Notions

The term Mudra – or, in a closer transliteration to the original term in Sanskrit, *mudraa* – is actually used in three distinct domains of the cultural heritage of South Asia overall: (i) to denote conventionalised manual "signs" or gestures in classical Indian dance, the major focus of this paper; (ii) for stylised, symbolic and ritual gestures employed in iconography and in spiritual practice in Hinduism, Buddhism, and also Taoism; and (iii) in the domain of Carnatic music, one of the two major systems of classical music in India (originating in Southern India). While *mudraa* in the domain of (i) classical Indian dance has features in common with the *mudraa* systems in the other two domains I have just mentioned, it is nonetheless distinct in both its grammar and its context of usage. Thus, for instance, while *mudraa* in the religious iconography and meditative practices typically consists of a steady, individuated, durative manual (and occasionally also bodily)

configuration, classical Indian dance has entire families of Mudras, so to speak, which are typically accompanied by other stylised movements and body postures as well. In the remaining subsections of this section, a concise overview of certain salient categories and features of manual Mudras from the domain (i) and facial and bodily mime is presented, based on Bagchi (2010).

2.1   Manual Signing or the System of Mudras in Indian Dance and Performative Traditions

A regular "lexicon" of Mudras – or more accurately, of individual Mudras and families of Mudras – has, in fact, come to be in use, from the tradition of the ancient Indian text called the *Naaṭyaśaastra*, authored by Bharata and historically held to date from between about the 3rd century B.C.E. and the 2nd century C.E. In addition, an especially noteworthy treatise on Mudras and facial mime in classical Indian dance is the classical text *Abhinayadarpaṇam* (literally, 'Mirror of *abhinaya*¸ mime/acting') by Nandikeśvara (of uncertain provenance, but thought by some to date from around the 3rd century C.E.). The first broad classification of Mudras – occasionally cutting across a Mudra family – is into the two rich classes of (i) *samyukta-hasta* (literally, 'combined-hand') Mudras, in each of which both the hands combine to form a single Mudra, and (ii) *asamyukta-hasta* (literally, 'separate-hand') Mudras, which are each expressed by one hand (held separate from the other hand). Nandikeśvara, in his text, lists twenty-eight Mudras of the second kind, viz., *asamyukta-hasta* Mudras and twenty-four of the first kind, viz., *samyukta-hasta* Mudras. However, these listed Mudras clearly do cut across entire families of Mudras instead of respecting the grouping of individual Mudras into families and itemising these families.

Notable among the Mudras and families of Mudras listed by the *Naaṭyaśaastra* and the *Abhinayadarpaṇam* are the following:

2.1.1   The "Pataaka" ('flag') Mudra

The *Pataaka* or 'flag' Mudra, mentioned as being first in the dictionary of Mudras in the tradition of Bharata's *Naaṭyaśaastra*, is actually a family of more than twenty specific

hand-signs that share a common configuration of the hand: in all of them, the fingers of one or both hands are straight and together, with the thumb also to the side of the palm but slightly bent towards the base of the index finger (Somashekhari 2007), so that each hand approximates a flag (*pataakaa* in Sanskrit). Different Mudras in this *Pataaka* family express concepts such as 'the beginning of a dance [episode]', 'clouds', 'forest', 'night', 'river', 'wind', 'entering a street', 'opening the door', 'blessing [someone]' – to name just a few (*ibid.*).

2.1.2 The "Suuchii" ('needle') Mudra

The *Suuchii* or 'needle' Mudra is another family of Mudras that is mentioned as second in the dictionary of Mudras in works such as the *Naatyaśaastra*, all of which have in common an upheld index finger (of one or both hands, depending on which specific Mudra in the family it is), with the remaining fingers curled in and the thumb also curved inwards. This family of Mudras can also express diverse concepts such as 'scolding (someone)', 'braiding hair', 'contemplation', 'playing a drum', and in a particular stylisation even *Parabrahma(n)*. Fig. 2 depicts the use of the *Suuchii* Hasta Mudra by a dancer.

Fig. 2. The *Suuchii Hasta* Mudra performed with the right hand.
(Source: shaktibhakti.com/mudras-of-indian-dance.php)

2.1.3 The 'question' or Shikhara Mudra

The 'question' Mudra may take different forms in different traditions of dance and in different contexts of use. It is typically combined with other Mudras to lend to those the force of a question being posed by the performer. What is particularly noteworthy is that, universally, spoken language also uses a special linguistic sign in combination with other signs to express one or more questions: the linguistic sign may be a special intonation in some languages (as in spoken English, Hindi, and Bangla, for example), a special reordering of words (as also in English, spoken or written, and also in German, as in *Gibt es …?*), or a question word from a special class of words (such as the *wh*-words *who*, *what*, *which*, *where*, … in English, or words such as *wer*, *was*, *wie*, *warum*, *wo*, … in German). In this respect, therefore, the signing system of Mudra in the domain of dance resembles natural language, whether spoken, or written, or – in the case of visual Sign Languages or tactile language (used by the Deaf-blind) – signalled visually or by touch. However, the 'question' Mudra can and does take different shapes in different classical dance traditions: in Kathakali, for instance, where facial mime plays a central role, certain movements of the forehead muscles and/or eyebrows may also be exploited to signal a question; and in Kuchipudi, where expressive facial and manual gesturing are particularly significant for the overall aesthetics of the performance, a question may be signalled by a combination of a hand-gesture of puzzlement and a movement of the head, with or without an accompanying raising of the eyebrows. These latter non-manual dimensions – head advancement and the raising of the eyebrows – are of course prominently present as features of questions in Sign Language.

2.1.4   The Mudra of 'listening'

A variant of the Pataaka Mudra is used in some dance forms in India to signal 'listening', with the hand held higher to signal 'listening to a friend', but held lower, often with an accompanying bowing of the head, to signal 'listening to a senior/divine figure'.[20] Interestingly, this contrast in the hand position to signal these two different kinds of 'listening' maps on to a two-way contrast between second-person pronouns found in many languages of the world: archaic Modern English *thou* (less formal) versus *you* (earlier, more formal; later retained as the sole second-person pronoun in present-day

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[20] I owe this specific point to Vidya Rao.

Modern English), German *Du* versus *Sie*, and French *tu* versus *vous* illustrate this contrast, but many Indian languages – including Sanskrit and Pali, among the more ancient languages of India – exhibit this two-way pronominal contrast as well, and a few languages of India today display even a three- to five-way contrast in their second-person pronouns. The Mudra of 'listening' thus reflects a central feature of sociolinguistic usage in the majority of Indian languages in their communicative dimensions and social contexts. Worth emphasising, however, is the fact that in this it is clearly derivative of traditional *spoken* language, without any analogue in Sign Language.

2.1.5   The "Chandrakalaa" ('moon-crescent') Mudra

The *Chandrakalaa* is a special Mudra used in Bharatanatyam (Anjali 2008) whose name means 'crescent of the moon'. It is begun with the hand configured as for the basic *Suuchii* Mudra, but thereafter the thumb is released and held extended upward from the rest of the hand, so that the thumb and the index finger come to represent a (somewhat angular) crescent shape. The *Chandrakalaa* Mudra is used to denote the following concepts: 'the moon', 'the face', 'crescent-shaped object(s)', 'extent between the thumb and the index finger', 'the crescent adorning Lord Shiva's head', 'the river Ganga (Ganges)', 'a club (weapon)'. It is noteworthy that the 'moon' symbol is used not only literally but also as a multi-dimensional metaphor in both classical and folk performative traditions in India.

2.1.6   The "Naṭaraaja" ('Lord of the Dance') Configuration

The god Shiva of the Hindu pantheon is often portrayed in Indian temple iconography and sculpture as *Naṭaraaja*, literally 'Lord/King of the Dance', in a very special bodily configuration that is often enacted in a stylised Mudra by dancers in different Indian classical traditions. While Shiva as *Naṭaraaja* is, strictly speaking, presumed to be the originator of *all* the different Mudras – hence a famous rock-cut sculpture at Badami in Northern Karnataka depicting an eighteen-armed *Naṭaraaja* performing a different hand-gesture with each hand, thus giving rise to a total of $9^2 = 81$ different *asamyukta-hasta* Mudras – he is typically portrayed in actual classical dance performances with the dancer's left leg suspended crossing the right leg in front of it, while the right hand is

held with palm facing the audience in the Pataaka configuration and the left arm is extended below the right palm sideways (in front of the right hand) with the fingers extended and pointing downwards at an angle, to partially symbolise the more usual four-armed *Naṭaraaja* manifestation of Shiva as depicted in everyday artistic reproductions as well.

Fig. 3. The Shiva (Naṭaraaja) sculpture at Badami, northern Karnataka, depicting different *asamyukta-hasta* Mudras. (Photo: Mahantesh C. Morabad)

2.2 Abhinaya – The Facial Miming System

According to Trenkelbach (2004), *abhinaya*, the rich system of facial miming that forms an essential component of noted classical Indian dance forms such as Bharatanatyam, Kathakali, Kuchipudi, and Mohiniyattam, has two affective components, namely, *rasa*, feeling, and *bhaava*, disposition. In accordance with the *rasa* component, several different facial expressions (and attendant bodily attitudes or postures) can be portrayed by the dancer:

(i) *śriŋgaara*, 'romance', portraying romantic or erotic love;

(ii) *haasya*, 'laughter' – portraying joy or mirth;

(iii) *krodha*, 'rage' – portraying anger;

(iv) *viibhatsa*, 'horror' or 'disgust' – portraying a reaction of horror or disgust;

(v) *bhaya*, 'fear(some)' – portraying fear or terror;

(vi)   *viira*, 'valour' – portraying strength and bravery;

(vii)   *karuṇa*, 'sad' – portraying (empathetic) sadness;

(viii)   *adbhuuta*, 'curious, strange' – portraying wonder or curiosity;

(ix)   *śaanta*, 'peaceful' – portraying tranquility.

Each of these *rasas* are combined with *bhaava* to form the different "frames", so to speak, of a sequence of *abhinaya* in a dance episode, which typically tells a story or presents a slice-of-life frame from the life of a deity or legendary figure. Some dancers, in fact, prioritise *abhinaya* over active dance-moves complete with Mudras, while others concentrate on the dance-moves and Mudras more than on *abhinaya*, even within a single tradition of dance such as Bharatanaatyam or Odishi.

2.3   Signing and Body Language in Folk Performative Traditions in India

Needless to say, so-called 'little traditions' in Indian performing arts also have elaborate signing and kinesic conventions, but these are yet to be studied systematically as signing systems. The Sufi performative traditions of India, for instance, have elaborate manual gestural conventions as well as of rotatory bodily movement and sometimes rapid footwork, depending on the tempo, mood, and specific theme of the piece performed. Co-ordinated, highly stylised movements and acrobatics characterise several martial arts and of course salient tribal dance forms of India such as Chhau, Kalaripayattu, and Raybenshe, which lend themselves especially well to interpretation as communitarian expressions of both playful competition and co-operative solidarity in spaces that are constantly under threat from forces of marginalisation, extinction, and proscription by mainstream pressures. In these respects, they share a certain kinship with the ways in which Sign Language still has to contend with forces of resistance and marginalisation in the Indian context, as demonstrated amply in the other articles of the present volume.

3.   The blending of communication and aesthetics: An asset for performative signing, but a liability for Sign Language?

Some years back, I was part of an audience to whom Green (2001) presented a visual array of facial expressions in which one sees the duality of communication and aesthetics

represented along different dimensions of the array: each facial expression-image had a distinct communicative function (that of expressing joy, or dismay, or sorrow, …, etc), while the transition in each row of the array marked a flowing, aesthetically organised continuum of sorts across the different expression-images.

In classical Indian dance, Mudra and *abhinaya* are combined in analogous ways: individual hand-signs are combined with additional movements and with facial mime in sequence, but with seamless transitions that create an aesthetically performed "flow" of communicative action, so to speak. Such a "flow" of communication, however, cannot afford to obscure the natural-language structure in the case of Sign Language in general and IPSL in more specific terms. However, Deaf poetry performances through a particular sign language does indeed cross this barrier, a crossing which in fact makes such performances poetic.

4.   Transcending the particularities of the gendered body: Mudra in role-
        playing across genders and the category-neutrality of Sign Language

Since Mudras are often executed in particular shapes with specific stylization and accompanying body language differently by women and by men performers in different classical Indian dance traditions, interestingly, these particular executions of Mudras can be – and usually are – exploited by male performers to signify a temporarily assumed female character or role in dance episodes that tell stories (i.e., are not merely ritualised devotional pieces or conventionalised pieces to display the dance forms, *tout court*), and conversely, by female performers to signify a divine male protagonist such as the god Shiva or Krishna, or a king, or simply a male consort. Mudra thus occupies a crucial place among the signifying devices for role-playing across genders in classical Indian dance traditions such as Bharatanatyam, Odishi, or Kathak. Of course, Abhinaya is crucial in such episodes of the transcendence of the gendered body by the performer, whether male or female, as also in the transcendence of actual physical age of the dancer. It is through the combination of Mudras and Abhinaya that, for instance, a young woman performer can portray the character of a veteran male divine figure just as effectively as a male dancer in late middle age can portray the actions and moods of a wilful teenage girl.

In such successful performances, the actual, physically gendered body of the dancer almost ceases to matter in the viewer's eye, at least temporarily while the performance of that role lasts, another testimony to the signifying power of Mudras.

Sign Language, in India as elsewhere, is of course neutral across social categories such as gender in its fundamental nature, although of course there may well be variation in details across such social categories, as are to be found in any living natural language that exists in a communitarian setting. A crucial difference between bodily signing in Indian performance traditions and Sign Language also lies in the dependence of the former on classical or traditionally transmitted songs, incantations, and playtexts, as contrasted with the textual independence of Sign Language, which in fact itself serves to create new discourse or even 'texts', so to speak, as it unfolds. In this latter role, Sign Language has a much more flexible role than is accorded to the performative signing systems of India.

5.   Conclusion

This paper has made a brief attempt towards comparison and contrast of Indo-Pakistani Sign Language (IPSL) in the context of Mudras as located in and expressed through bodily signing systems in Indian traditions of performance, notably classical dance and drama and folk performative traditions. It has also sought to indicate that, contrary to any social preconceptions that might occur as regarding the view that Sign Language in India is largely derived from western sign languages, IPSL and its most central characteristics are deeply related to traditional Indian performative signing systems, keeping in mind the significant differences between the two genres of signing.

REFERENCES

Anjali. 2008. Chandrakala Hand Gesture (Mudra). Retrieved 15 December 2008. http://onlinebharatanatyam.com/2008/01/chandrakala-hand-gesture-mudra/

Bagchi, Tista. 2010. The signing system of Mudra in traditional Indian dance. *Paragrana: Internationale Zeitschrift für Historische Anthropologie* 19.1: 259-266.

Goldsmith, John. 1990. *Autosegmental and Metrical Phonology*. Oxford: Blackwell.

Green, Mitchell S. 2001. Expressive meaning. ACLS-Burckhardt Fellowship Project talk delivered at the National Humanities Center, Research Triangle Park, North Carolina, October 2001.

Jepson, J. 1991. Urban and rural sign language in India. *Language in Society* 1.2: 37-57.

Nair, Savitry. 1993. "Hands that speak volumes". UNESCO Courier, September 1993. FindArticles.com. Retrieved December 1, 2008. http://findarticles.com/p/articles/mi_m1310/is_1993_Sept/ai_14526983

Nandikeśvara. c. 3rd century, third edition 1975. *Abhinayadarpaṇam*. Edited and translated from the Sanskrit original by Manomohan Ghosh. Calcutta: Manisha.

Pfau, Roland, and Ulrike Zeshan. 2003. Wh-movement and wh-split in Indo-Pakistani Sign Language. Paper presented at the South Asian Languages Analysis Roundtable / SALA XXIII, University of Texas at Austin, October 11, 2003.

Somashekhari, Gurubhakti-Ratna Kumari. 2007. Mudras in Indian Classical Dance. http://www.somadance.in/publication_1.htm. Retrieved August 2, 2008.

Trenkelbach, Shelby. 2004. Indian Dances. www.ccds.charlotte.nc.us/History/India/04/trenkel/**trenkelbach**.htm. Retrieved July 16, 2008.

Woodward, J. 1993. The relationship of sign language varieties in India, Pakistan, and Nepal. *Sign Language Studies* 78: 15-22.

Zeshan, Ulrike. 2000. *Sign Language in Indo-Pakistan: A Description of a Signed Language*. Amsterdam & Philadelphia: John Benjamins.

------------. 2003. Indo-Pakistani Sign Language grammar: A typological outline. *Sign Language Studies* 3.2: 157-211.

Sign Iconicity and New Epistemologies

Tanmoy Bhattacharya

1.0   Naming

In the very definition of a sign, in one of the most well-researched and thought-out philosophical traditions, sign as a *silent mirror* image is unmistakable:

> I define a sign as anything which is so determined by something else, called its Object, and so determines an effect upon a person, which effect I call its interpretant, that the later is thereby mediately determined by the former (Peirce, C.S., 1998).

This definition clearly implies that without the so-called 'Object', a Sign cannot come into existence. Sign Language as a language as encoded in the mind/brain of its native signers, is therefore unfortunately named thus, a mistake which is carried over to vernacular translations. To elaborate further, in the same way that a language cannot be merely represented through iconic symbols, Sign Language cannot be represented through a system of mere 'signs' in the above sense. That is, a system of symbolic or iconic representations cannot be the *metalanguage* to describe sign language.

2.0   The Politics of Misnaming

There is another side to this issue. One of the most deeply entrenched stereotypes about sign languages is that they are a set of gestures. Gestures, though infused with cultural meaning, are iconic representations of activities, processes, states, substantives, manner, intensity, size, etc., of objects and expressions. Symbols too, at least in the popular imagination, are iconic or near-iconic representations of many of the substantives that are represented by gestures. It is easy therefore for a stereotype to emerge, since in some ways, symbols are the frozen gestures, that is, while gestures can be dynamic, symbols are static. Therefore to see sign language as a set of gestures or a symbolic language is not surprising. However, such misrepresentation in the case of sign language can be far more damaging than other similar naming issues. The politics of misrepresentation can

cause great harm to a minority language like sign language, especially when the language under discussion is the language of a community that also belongs to the larger community of persons with disabilities. Misnaming, in the case of sign language, the native language of the Deaf, therefore, has a dual negative effect on Deaf persons and the Deaf community from the perspective of their membership in two overlapping or intersecting communities. Naming is important as it may lead to internalisation of oppression; for example, being labelled as Mentally Ill (MI) is to be made to feel 'ill', needing cure, a victim of an oppression some have termed 'saneism'.

3.0   The Saussurian System of Signs

A sign in Saussure is the union of a concept and a sound-image:
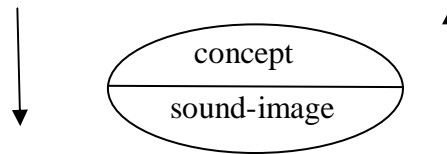
Figure 1: A Sign in Saussure

The corresponding French terms were later changed by the editors of *Cours de linguistique générale* (CLG) (Saussure, 1916) to Signified (*Signifié*) and Signifier (*Signifiant*) upon Saussure's insistence. The title 'Language as a System of Signs' was proposed by Saussure himself for Part 1, Chapter 1, of *CLG*. It encapsulates a central point in Saussure's theory, namely that a language (*langue*) is a system of signs forming a well-defined object which can be studied independently of the other aspects of natural language. Saussure's importance in the context of sign languages can be seen in the following two ways.

First, Saussure was opposed to nomenclaturism, the view that language 'is a naming-process only - a list of words, each corresponding to the thing that it names' (*CLG*, 97, 65). Seen from the point of view of sign language, the claim that sign language is iconic will amount to nomenclaturism.

Secondly, a Saussurian theory of language assumes that there are no language-independent meanings; the meaning which a particular linguistic item has depends in some way on its intralinguistic relations to other items in the language rather than on its relation to something extralinguistic

This later point further derives two things, one clearly more well-known than the other. The Saussurian system that signifying features of a linguistic sign depend on the ways in which it is related to those other signs, obviously leads to the launching of structuralism. The less obvious connection is more relevant to our present purpose: a sign has no reference outside the system of objects that it stands for or other signs.

4.0   Arguments Against Iconicity of Sign Languages

While discussing the origin of language, discussion of sign languages often arise in the philosophical discourse of the origin of language, evidenced by the late 18th century preoccupation with gesture, sign language, and deaf communities (Rosenfeld 2001; Davis, 1995). It seems therefore necessary to examine the points of contact between sign language and language.

Furthermore, the strategy of bowling for iconicity as some Deaf scholars seem to engage in (Thoutenhoofd, 2000), can play into the hands of popular psychologists and educationists and can only strengthen such stereotype as the following expressed by the American psychologist, Helmer Myklebust, who writes in his 1957 Psychology of Deafness (quoted in Bauman, 2008):

> The manual language used by the deaf is an ideographic language … it is more pictorial, less symbolic … Ideographic language systems, in comparison with verbal symbol systems, lack precision, subtlety, and flexibility. It is likely that man cannot achieve his ultimate potential through an Ideographic language … The manual sign must be viewed as inferior to the verbal as a language. (241-2)

Furthermore, one virtue often expressed in arguing against the 'linguistic turn' in sign language studies, post-Stokoe (1960), is that such a turn denies the continued oppression of Deaf people as a collective and as an individual. In other words, it pretends that 20th Century linguistics put an end to oppression of Deaf people by demonstrating that sign languages are true languages. This is exactly the kind of argument presented by Thoutenoofd (2000) against Rée (1999).

Thoutenhoofd's argument against Rée is based on the issue of language maintenance, without however, presenting any clear evidence in support of his arguments. Emergence of new languages over a short period is a supposed evidence he gathers against the 'absent iconicity' argument of Rée, and refuses to accept the innateness hypothesis, again without any substantial argument. It is stated that there is convincing evidence (e.g. Kegl, 1994a/b) that natural sign languages can, and do, develop in communities in very short spates of time but his refusal of a perfectively logical Chomskyan explanation of this is done by simply saying that he doesn't much like the theory. His use of Rée's examples with reference to the reason for the 18th century French sign language instructor Laurent Clerc facing no problem understanding English Deaf children who were not trained in any sign language but who seemed nevertheless to have developed one among themselves, or the reason for Native Americans' ability to easily converse with Deaf children in America's first Deaf school, as being the presence of iconicity, can also be used as arguments in favour of a systematic and formal relationship existing among the signs and sign systems, rather than iconicity.

5.0   The Peircean System

Saussure's unfortunate equation of sign as symbol is philosophically shallow, which denies the importance of interpretation. It is relevant therefore to reflect upon Pierce's sign composition. Signs, for Peirce, consist of three related parts: a sign, an object, and an interpretant (cf. section 1.0). A sign can be considered as the signifier, for example, a written word, an utterance, smoke as a sign for fire etc. The referential object can be whatever is signified, for example, the object to which the written or uttered word attaches, or the fire signified by the smoke. However, the interpretant is the most

innovative feature of Peirce's account, which can be considered as the *understanding* that we have of the sign/object relation. A signification is thus not a simple dyadic relationship between sign and object, rather, a sign signifies only when it is interpreted.

This makes the interpretant central to the content of the sign, in that, the meaning of a sign is manifest in the interpretation that it generates in sign users. This last point can be seen as a counterpoint to the almost sign-as-icon thesis that underlies the quotation at the beginning this paper. In the context of sign language, the essential presence of the interpretant is seen as the redeeming feature of the Peircean theory of signs.

Taking up the other important composite of a sign, namely, the object, not every feature of the object is relevant to signification, exactly as in the case of sign; only a partial identification is necessary to establish iconicity. The relationship is that of determination: the object determines the sign. However, determination is understood through conditions placed on successful signification by the object, rather than the object causing or generating the sign.

In conjecturing the relation between the object and the interpretant, Pierce arrives at the infinite semiosis[21] stage, where the resultant interpretant itself plays the role of a more developed sign of the object. This stage is determined through three ways: first, via "a mere community in some quality" (Peirce, 1982, 2:56). These he calls likenesses, but they are more familiarly known as *icons*. Second, those "whose relation to their objects consists in a correspondence in fact" are termed *indices*. And finally, those "whose relation to their objects is an imputed character" are called *symbols*.

Thus here we can see that icons and symbols are differentiated – a point clearly comes out of the quotation from Pierce at the beginning of this article. Interestingly, the notion

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[21] An infinity of further signs both precede and follow any given sign; interpretants are thus considered as further signs, and signs are interpretants of earlier signs. Since any sign must determine an interpretant in order to count as a sign, and interpretants are themselves signs, the notion of infinite chains of signs is conceptually necessary.

of infinite semiosis assumes that signs will act as objects for new signs – a situation that is difficult, if not impossible, to imagine for sign languages to arise.

By 1903[22], for reasons related to his work on phenomenology[23], Peirce further decomposed the central features of sign-vehicles[24] into three broad areas and classified signs accordingly. The three-way division highlights sign-vehicles signifying qualities, existential facts, or conventions and laws, classified accordingly as *qualisigns*, *sinsigns*, and *legisigns*, respectively. Any sign whose sign-vehicle relies on simple abstracted qualities is called a *qualisign*. The causal relation between the fire and smoke allowing the smoke to act as a signifier is an example of *sinsign*, whereas traffic lights as a sign of priority is an example of a *legisign*.

The nature of the sign is determined by the nature of the object being signified. By the above tri-partite division, objects may constrain signification qualitatively, existentially or physically, and conventionally and or in a law-like fashion. The sign is an *icon* when the sign reflects qualitative features of the object. If the sign utilise some existential or physical connection between it and its object, then the sign is an *index*. If the sign is required to utilise some convention, habit, or social rule or law that connects it with its object, then the sign is a *symbol*.

Out of these, let us say the sign of arm from the elbow upwards for the sign for a tree in ASL is neither of these, the nearest being the qualisign though the height of the tree is not an abstract quality of a tree, it's a concrete quality, more like a sign-vehicle of Peirce of 1867-68. This re-establishes the difference between an icon and a symbol, as before.

6.0   Sign Language as a Formal System

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[22] A series of lectures at Harvard, and at The Lowell Institute, published in Peirce, 1958.
[23] Husserl's (1970) approach is called "phenomenology" because it utilises *only* the data available to consciousness -- the *appearance* of objects. However, he places importance in intuition too: In his *Logical Investigations*, Husserl specifies that "logical concepts … must have their origin in intuition: they must arise out of ideational intuition founded on certain experiences, and must admit of indefinite reconfirmation". Peirce's project, on the other hand, is based on a denial of intuition.
[24] The signifying elements of a sign, since it is not the sign as a whole that signifies, but only a part of it.

Recall that like in the Saussurian theory, the Peircean theory of signs restricts itself to the intra-symbolic world as a result of his denial of the Cartesian philosophical method, especially the central place of intuition in the latter (cf. Footnote 23); this strategy for Peirce is most clearly manifested in his retention of infinite semiosis' discussed in the previous section. However, that is not the case with sign languages, first, as discussed above, a sign by itself does not act as an object for another sign, and therefore there is no possibility of infinite semiosis, second, signs do have meaning/ reference outside the system of signs and their objects, in the sense that the truth generated by a set of signs is greater/ beyond the mere summation/ product of its constituent signs (as in spoken language), in addition to the possibility of reference to a metaphoric truth.

This last point is brought out tellingly in Bauman's (2008) example in fact of iconicity (see Figure 2). This example clearly shows that the metaphoric performance is bigger than just a generation of proposition as derived from quantifying terms and variables in the Peircean system of logic.

> "…how one of my students at Gallaudet University explained the process of reading Foucault. He first signed that it was difficult to read, with his left hand representing the book, open and facing him, and his right hand was in a V shape, the two finger tips representing his practice of reading, re-reading, and then finally, his fingers got closer to the book, and finally, made contact; at this point, the eyes of the V shape then became a digging apparatus, digging deeper into the text. He then reached in between the lines of the page, now signified by the open fingers of the left hand, and began to pull ideas and new meanings from underneath the text. The notion of reading between the lines gained flesh, as the hands literally grasped for buried meanings. The result of reading Foucault, he said, changed his thinking forever, inspiring him to invent a name-sign for Foucault. The sign he invented began with the

signed letter "F" at the side of the forehead, and then twisting outward, showing the brain undergoing a radical reorientation."

Figure 2: Bauman' example of metaphoric performance

Furthermore, in Chomsky's (2010) lecture on "Poverty of Stimulus: Some Unfinished Business", it is clearly stated that with respect to referentiality, as far as is known, though animal communication works through referentiality, human communication does not, since the symbols do not have any real referential concrete things representing them in the real world. In short, it cannot be language if it is only referential, the interplay of iconic, the indexical and the symbolic in the form of a network of structures is essential for the system to transgress into a linguistic system.

It is therefore quite possible, as Golden-Meadow (2003) conjectures, that children perhaps perform the language-learning task as a formal system (cf. Karmiloff-Smith, 1992), where elements of the language apart from being related to the world, are also related to other elements within the language itself (Newport & Meier, 1985). That is, children make use of the network of relations that the sign establishes with other signs. Here, if iconicity does not conflict with the formal system, it may be incorporated. This clearly indicates one obvious aspect of the linguistic connection between sign languages and spoken languages, that of contrast – the main theme of the structuralist enterprise.

7.0   Iconicity and Sign Language Acquisition

Another argument in favour of iconicity might be that children acquire iconic signs first. However, this is not the case. When hearing adults learn ASL as a second language, they find iconic signs easy to remember and are very often the first signs they acquire. However, in the case of children, only one-third of the first signs that children produce are iconic (Bonvillian & Folven, 1993). In fact, the meanings of the early signs that Deaf children produce are not different from the words used by one-word speakers in other languages (e.g., "milk," "mommy," "daddy," etc.; Newport & Meier, 1985).

Another example of how deaf children must be unaware of the iconicity aspect of their language is visible in their acquisition of pronouns (Golden-Meadow, 2003). 1st and 2nd Person pronouns are produced in ASL by pointing either at oneself or the addressee, respectively, which are indeed iconic, being no different from their usage in spoken language. It might be expected that Deaf children acquire these pronouns early. However, this is not the case and their acquisition proceeds in the same manner as in hearing children acquiring a spoken a language.

8.0   Deaf Cognition: Difference and Similarity

The argument presented above that Signs cannot be just icons, cannot be stressed enough. The totality of the network of system that Sings construct is also at work in not only in understanding the construct of identity through language – by now a well-established assumption in language and identity studies – but also in the existence of the being itself. Speech affects the construction of the self in various ways (Derrida, 1976), however since the abstract totality of the sign system that constitutes the language in sign language, is not visible to fully affect the construction of the self in the same manner, it must therefore give rise to a different system, inscribed by non-presence as such, and construct the self differently since unlike hearing one's voice, it is never possible to see oneself sign in its full totality.

This, along with recognition that sign languages are true languages (Stokoe, 1960), gave rise to the "cognitive revolution" of the 1970s and the emergence of cognitive neuroscience in the 1990s resulted in efforts to understand the underlying determinants of learning, language, and cognition. Emmorey (2002), among others, studied in detail learning patterns of Deaf children.

8.1   The Difference of "Culture"

Various studies demonstrated that Deaf children often construct knowledge, perform conceptual organisation, and develop cognitive/perceptual strategies differently from their hearing peers. These differences may give rise to academic disadvantage in a

mainstream classroom, compared to settings designed to take into account the differences.

According to Padden and Humphries (2005) Deaf people's ways of "seeing" may be affected by the long history of interacting with the world in certain ways and not necessarily be considered natural or logical, just because of the presence of a heightened sense of vision. This specific mode of interaction gives rise to a certain 'cultural' way, which describes the lives of Deaf people.

Culture here focuses the central role of sign language, which distinguishes Deaf people from hearing people and from other deaf and hard-of-hearing people who do not use sign language. Following Woodward (1982) they adopted the convention of using the capitalised "Deaf" to describe the cultural practices of a group within a group, whereas the lowercase "deaf" was used to refer to the condition of deafness, or the group of individuals with hearing loss without reference to this particular culture.

8.2   The Similarity of Learning
In spite of this difference of 'Culture', overwhelming evidence points towards the similarity of language learning and by extension, identity construction. As Bauman (2008) points out, "Neurons, it seems, are not choosy -- whether goaded into action from visual or auditory stimuli, they still ignite into consciousness."

The manual modality therefore is as good a medium for language as the oral modality, the capacity for learning a linguistic system therefore is modality-independent. Given that the ability to process information through eyes and ears differ hugely, it is surprising – as Goldin-Meadow, 2003 conjectures -- that the linguistic structuring of both signed and spoken languages is broadly similar.

It has been shown that Deaf children born to Deaf parents, thus exposed from birth to a sign language, acquire that language as easily as hearing children acquire spoken language. It has also been shown that the stages a Deaf child goes through while learning

a sign language are identical to the stages a hearing child learning a spoken language goes through (Lillo-Martin, 1999; Newport & Meier, 1985).

Goldin-Meadow (2003) further reports that Deaf children produce their first recognisable signs slightly earlier in development than hearing children produce their first recognisable words (Bonvillian & Folven, 1993; Meier & Newport, 1990), however, these early signs are not used referentially until about 12 months -- precisely the age at which hearing children produce their first recognisable words in referential contexts (Petitto, 1988).

Given this similarity, it is quite possible that the politics of difference is often overplayed to keep in place a system of exclusion where administrators and teachers perpetrate hegemonic social norms, the "iconic-only" claim for signed languages helps reinforce these exclusionary practices.

9.0   De-Centring Knowledge

Against the background of this dominant ableist stance, I would like to offer a new perspective of de-centring epistemological practices (Bhattacharya, 2010, 2012) to afford an insight into the possibilities that Signed Language offers.

A striking example of de-centring can be read into Keller's (1985) account of the Nobel laureate but much neglected cytogeneticist Barbara McClintock's work on transposition. McClintock's philosophy can be understood from what she has to say about research in general and her own research on transposition in corn kernels in particular:

> "If the material tells you, 'It may be this,' allow that. Don't turn it aside and
> call it an exception, an aberration, a contaminant. . . . That's what's happened
> all the way along the line with so many good clues. … The important thing is
> to develop the capacity to see one kernel of maize that is different, and make
> that understandable. If something doesn't fit, there's a reason, and you find
> out what it is." (quoted in Fox Keller, 1985, 1995)

McClintock's world view begins and rests with difference. Instead of viewing the world as constituted by dichotomy, in this view, difference gives rise to a radical reorganisation of the world around us that finally resolves into multiplicity. The kernels of corn that didn't appear to fit in, revealed a larger world of multidimensional order irreducible to a single law. This is further reiterated in the following:

> "It never occurred to me that there was going to be any stumbling block. Not that I had the answer, but [I had] the joy of going at it. When you have that joy, you do the right experiments. You let the material tell you where to go, and it tells you at every step what the next has to be because you're integrating with an overall brand new pattern in mind. You're not following an old one; you are convinced of a new one, and you let everything you do focus on that. You can't help it, because it all integrates. There were no difficulties." (Sprangenburg and Moser, 2008)

9.1 Multi-modality of Sign language

My thesis of de-centring the traditional way of thinking about language exploits this notion of difference. It is based on a conspicuous character of Sign Languages – the *multi-modal* nature of the language that achieves the impossible task of uttering two words at the same time in terms of a spoken language equivalent. Sound, as we know, is embedded in time, we can only utter word1 after word2 after word3, etc. A Sign Language, on the other hand, being a visual language makes use of both space and time to produce language. For example, producing a certain handshape for asking a question does not by itself mean a question unless also accompanied by facial expression or non-manual marking, like raised eye-brow in this case. Producing a question with just a handshape will be taken as being inarticulate. In this example, thus the simultaneous production of handshape and raised eyebrow only can be a meaningful question.

However, a more striking example of multi-modality of Sign Languages comes from the frequent employment of what is known as classifier constructions in Sign Languages.

These are a set of handshape units that represent noun classes and/ or characterising spatial relations and motion events. However, a unique property of these classifiers is the non-dominant hand representing yet another classifier at the same time as the dominant hand. For example, if the dominant hand represents the classifier unit for a 'vehicle', the non-dominant one might at the same time represent the classifier unit for a 'tree'. Furthermore, not only are the two handshapes meaningful, but the locations articulated by the hand(s) signify the space to represent the event. On top of this, different types of movements of the two hands within the signing space indicate existence, location or motion (Supalla, 1986), a complexity that it beyond any known spoken language.

This multi-modal property of Sign Languages opens up dimensions otherwise invisible in spoken languages. Centring Sign Language in language studies can thus enable us to look at language -- the pure representation of the human mind -- in a new light. Research imagination must make such periodic leaps – not only within disciplines but across – to take us to newer worlds.

9.2   Further examples of centring

Consider the following example from Padden and Humphries, (1988: 41). In ASL [American Sign Language], as in English, HARD-OF-HEARING represents a deviation of some kind, it describes a condition that signifies a lack. Someone who is A-LITTLE HARD-OF-HEARING has a smaller deviation than someone who is VERY HARD-OF-HEARING … yet the terms have opposite meanings in the two languages … DEAF, not HEARING, is taken as the central point of reference.

Yet another possible example of centring could be a Deaf-centred architecture with fewer walls, more windows, and circular and curvilinear rooms. As Bauman (2008: 9), rightly points out: "The shape of a Deaf architectural environment would serve as an imprint, a Deaf Writing into the landscape etching a visual-tactile orientation within the world".

A *paradigm* is defined as the full range of assumptions and practices associated with fundamental theoretical approaches; a model, theory, perception, assumption or frame of

reference. Generally, it is the way one perceives, understands or interprets a topic or issue; it is, in short, an explanation or model. A critical approach to studying Language, Education and Philosophy by de-centring knowledge from the existing dominant ableist constructs to a Deaf world-view will bring about a radical, epoch-changing shift in paradigm in these domains to give rise to new epistemologies.

References

Bauman, H-Dirksen. 2008. Listening to Phonocentrism with Deaf Eyes: Derrida's Mute Philosophy of (Sign) Language. *Essays in Philosophy:* Vol. **9**: 1, Article 2.

Bhattacharya, Tanmoy. 2010. "Cartography of Disciplines: De-centring Knowledge". Talk delivered at the *Literature, Art and Other Disciplines: Interrelationships*, MIL, University of Delhi.

Bhattacharya, Tanmoy. 2012. "Diversity at Workplace and in Education", invited lecture at the International Development Studies Kolkata, Calcutta.

Bonvillian, J. D., & Folven, R. J. (1993). Sign language acquisition: Developmental aspects. In M. Marschark & M. D. Clark (Eds.), *Psychological perspectives on deafness* (pp. 229–265). Hillsdale, NJ: Erlbaum.

Chomsky, Noam. 2010. "Poverty of Stimulus: Some Unfinished Businesss," Lecture delivered at the *Conférence scientifique de Noam Chomsky*, CNRS, Paris, on Paris, 29th May, 2010. [http://www.youtube.com/watch?v=OSFgTuHQyvo]

Davis, Lennard. 1995. *Enforcing Normalcy: Deafness, Disability and the Body*. London, Verso.

Derrida, Jacques. 1976. *Of Grammatology*. Trans. Gayatri Spivak. Baltimore: Johns Hopkins UP.

Emmorey, Karen. 2002. *Language, Cognition, and the Brain Insights From Sign Language Research*. Lawrence Erlbaum Associates, NJ.

Goldin-Meadow, Susan. 2003. *The resilience of language: what gesture creation In deaf children can tell us about how all Children learn language*. Psychology Press, New York.

Husserl, Edmund. 1970. *Logical investigation*. New York: Humanities Press.

Karmiloff-Smith, A. 1992. *Beyond modularity: A developmental perspective on cognitive science*. Cambridge, MA: MIT Press.

Kegl, J. 1994a. The Nicaraguan Sign Language Project: An overview. *Signpost* 7.1: 24–39.

Kegl, J. 1994b. Nicaragua's Lessons for Language Acquisition. *Signpost* 7.1: 32–39.

Keller, E. Fox. 1985/ 1995. *Reflections on gender and science*. Yale University Press: New Haven.

Lillo-Martin, Dianne. 1999. Modality effects and modularity in language acquisition: The acquisition of American Sign Language. In W. C. Ritchie & T. K. Bhatia (Eds.), *The handbook of child language acquisition* (pp. 531–567). New York: Academic.

Meier, R. P., & Newport, E. L. 1990. Out of the hands of babes: On a possible sign advantage in language acquisition. *Language, 66,* 1–23.

Myklebust, Helmer. 1957. *The Psychology of Deafness*. New York: Grune and Stratton.

Newport, E. L., & Meier, R. P. 1985. The acquisition of American Sign Language. In D. I. Slobin (Ed.), *The cross-linguistic study of language acquisition: Vol. 1. The data*. Hillsdale, NJ: Erlbaum.

Padden, Carol and Humphries, Tom. 1988. *Deaf in America: Voices from a Cultur*e. Cambridge, MA: Harvard University Press.

Padden, Carol and Humphries, Tom. 2005. *Inside deaf culture*. Harvard University Press, Cambridge, Massachusetts.

Peirce, Charles Saunders. 1958. *The Collected Papers*. Volumes 7 & 8. Ed. Arthur Burks. Cambridge M.A.: Harvard University Press.

Peirce, Charles Saunders. 1982. *The Writings of Charles S. Peirce: A Chronological Edition*. Volumes 1–6. And 8. Eds. Peirce Edition Project. Bloomington I.N: Indiana University Press.

Peirce, Charles Saunders. 1998. *The Essential Peirce*. Vol. 2. (Eds.) The Peirce Edition Project. (Bloomington I.N.: Indiana University Press).

Petitto, L. A. (1988). "Language" in the prelinguistic child. In F. S. Kessel (Ed.), *The development of language and language researchers* (pp. 187–221). Hillsdale, NJ: Erlbaum.

Rée, J. 1999. *I See a Voice: Language, Deafness and the Senses – A Philosophical History*. London: Harper Collins.

Rosenfeld, Sophia. 2001. *Revolution in Language: The Problem of Signs in Late Eighteenth Century France*. Stanford: Stanford UP.

Saussure, Ferdinand de. 1916. *Cours de linguistique générale,* edited by Charles Bally and Albert Sechehaye, with the collaboration of Albert Riedlinger. Lausanne and Paris. (Page references are to the second edition of 1922, cited as *CLG*).

Sprangenburg, Ray and Diane Kit Moser. 2008. *Barbara McClintock: Pioneering Geneticist*. Chelsea House Publishers: NY.

Stokoe, Willian C. 1960 [1978]. *Sign Language Structure*. Silver Spring, MD: Linstok Press.

Supalla, Ted. 1986. The classifier system in American Sign Language. In Craig, Collette, ed., *Noun Classes and Categorization*. John Benjamins: Philadelphia.

Thoutenhoofd, Ernst Daniël. 2000. Philosophy's Real-World Consequences for Deaf People: Thoughts on Iconicity, Sign Language and Being Deaf. *Human Studies* **23**: 261-279.

Woodward, J. 1982. *How You Gonna Get to Heaven if You Can't Talk with Jesus: On Depathologizing Deafness*.Silver Spring, MD: TJ Publishers.

APPENDICES

A List of Films

(Compiled by Surinder P.K. Randhawa)

1.0   Introduction

In the last few years there is growing trend by deaf oganisations and deaf and hearing individuals to make films/documentaries using ISL or inserting ISL videos as subtitles. Most deaf clubs in the country make their voices 'visible' now by shooting ISL videos of important issues, of any upcoming events, lectures, conferences etc. and put them on YouTube or Facebook pages. These productions are geared towards entertainment, information, awareness and inspiration. This entry lists a compilation of films/documentaries made in recent years by certain deaf organisations or individuals.

1.2   Films made by Mook Badhir Mandal, Vadodra, Gujrat[25]

The following personnel are associated with film-making at MB:

    Rajesh Ketkar – Director
    Virbhadrasingh Rathod and Ankur Panchal – Film Editor and Videographer
    Fenil Parikh – Software and electrical work
    Imran Khan and Vibhuti Ketkar – Acting head
    Devang Bhatt – Graphic Arts
    Trushna Shah and Arpita Desai – Interpreters
    Deaf members – Actors & Actresses

List of films:

Nos	Films name	Duration	Brief Content
1	Family	00.45	Relationship and family issues
2	Horror	00.50	Property issues
3	Mr.420	02.45	People want to be rich fast, but they fail
4	CID	00.50	Planning to kill a friend who is good in carrier
5	Indian Sign Language	00.40	Importance of Indian Sign Language for parents
6	Benefit of ISL	01.15	Difference between families who have knowledge of ISL and one who don't have knowledge of ISL
7	Doctor	0.05.31	Communication with the Doctor with the help of Interpreter and its benefits
8	No fear	0.18.00	Deaf have no fear as they can't recognize different sounds
9	Problem in	0.04.00	Problems between the boss

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[25] Information provided by Rajesh Ketkar of MBM

	communicating		and Deaf at work premises due to communication gap
10	Seeing vs hearing	0.03.00	Visual perception is important for Deaf community
11	Communicating before marriage	0.04.30	Communication through the interpreter while fixing marriage
12	Gossip	0.05.20	Secret gossip through Sign Language
13	Parents meeting	0.03.00	Sharing points to Deaf or their parents/teachers during any meetings through interpreter
14	Deaf vs hearing	0.06.57	No disturbance to Deaf compare to Hearing
15	Am I having a boy or girl?	0.10.37	Explanation of having a baby boy or baby girl
16	Why baby is to be taught ISL?	0.15.00	Baby should know about his/her mother tongue "Indian Sign Language"
17	Why English is important?	0.10	Universal language to be learned for various use like job, etc..
18	Motherhood	0.05.00	Care and bonding within the mother and child is important and essential
19	How to empower women	0.05.00	Women should work hard to succeed and be familier
20	Why women empowerment?	0.05.00	For the development and growth women's should be in contact with others
21	Learning to do things	0.04.00	Females teaching certain work like banking to learn and be independent
22	Why SMS is important?	0.07.00	SMS as a means of communication for Deaf
23	No hurry in going out	0.04.25	Work on time and not in hurry as it spoils the work or matter
24	Why writing is important?	0.04.25	Writing increases the vocabulary and easy in communication with others
25	Voice call vs SMS	0.01.32	Mode of chatting for Deaf and hearing is different
26	Rich vs poor	0.02.15	All the natural things are same for both the Rich and Poor
27	Friendly to community	0.01.13	Be good and in touch with each and every member of

			Deaf community
28	Love story	0.08.00	Getting married to a girl who is not good looking but rich, later husband has to do all household work and she just enjoy her life
29	Love people	0.08.7	Being human we should all people knowing bad qualities of them also
30	Satyamev Jayatey in Sign Language	0.13.00	Translation of few episodes of Amir Khan's reality show Satyamev Jayatey into Indian Sign Language
31	Rap song through sign language	0.09.00	Singing with Sign Language on bits of the instruments played

Films on Nutrition and Health Awareness

Nos	Films name	Duration	Brief Content
1	Cherry	00.01.31	Explanation of the importance of particular food items, when to eat, what vitamins and minerals you get from them, benefits of eating it in proper quantity, etc..
2	Ginger	00.01.40	
3	Gooseberry	00.01.36	
4	Jamun	00.01.59	
5	Mango	00.01.37	
6	Tomato	00.01.47	
7	How to learn Nutritional food and health	00.09.00	
8	Nutrition Health Awareness	0.17.26	
9	How to eat Tomato	0.02.00	
10	How to eat Turmeric	0.01.22	

Films on Amazing news

Nos	Films name	Duration	Brief Content
1	The pet	00.01.4	Films on News which are important but Deaf fail to understand because of lack of ISL interpretation and captions
2	The lightning	00.01.49	
3	Hearing with help of glasses	00.01.49	

Films with Moral

Nos	Films name	Duration	Brief Content
1	Gossip	0.03.35	Few important morals from different books were selected and shared through the documentary films in Sign Language for Deaf
2	How are people	0.03.45	
3	Lucky	0.03.17	

To interview with experience person

Nos	Films name	Duration	Brief Content
1	AIDS awareness by Aline	00.14.43	Sharing experiences of different Deaf experts or those who have made achievements or have been selected for any conference/seminar were recorded and shared with Deaf people like a reality show
2	Deaf education by Dashrathsinh	00.15.21	
3	Deaf youth empowerment by Manan Shah		
4	Deaf school and ISL course in Indore	0.33.25	
5	Educational technology by Prabhu	0.25.25	
6	To research deaf women in Gujarat by Guro, Uk	0.25.30	
7	Team is important by Roshan	0.30.31	
8	Deaf businessman in Gujarat by Roshan Jain	0.15.00	

1.2 Deaf Entertainment Mumbai: Deaf Entertainment (DE) was founded by Mr. Mervyn Pereira and Ms.Heena Kausar Siddique in May, 2011 along with 6 Deaf team members. Deaf Entertainment, entertains its deaf and hearing audience through drama, comedy acts, short documenties/ movies, acts and sign music (songs). Apart from empowering their members, it aims to spread the awareness, fun and enjoyment. For the first time in Deaf history, DE performed a theatre on 17th June, 2012 at Marathi Sahitya

Sangh Mandir in Mumbai. They have plans to have shows every year.

List of films made by Deaf Entertainment Mumbai

Events	Date Released	Title	Director	Runtime
Deaf Entertainment	17th June,2012	Love Money Nahi	Mervyn Pereira	11 mins 12 sec
Deaf Entertainment	17th June,2012	Race	Vishal Sarvaiya	5 mins
Deaf Entertainment	17th June,2012	Kaun?	Heena Kausar Siddique	12 mins
Deaf Entertainment	17th June,2012	Deaf Best	Heena Kausar Siddique	3 mins
Punjab Association of the Deaf	29[th]September , 2012	Challenge Yourself	Vishal Sarvaiya	3 mins 59 sec

Deaf Expo 2012	29th and 30th December ,2012	Importance of Education/Literacy	Rohit Padte	15 mins
Deaf Expo 2012	29th and 30th December, 2012	Horror	Arti Umrotkar	15 mins

1.3   Films made by ISL cell, AYJNIHH, Mumbai as a joint project with National Human Rights Commission (NHRC) in 2006-2007 are as follows:

Number of films: around 20
Duration: 3-10 minutes
Titles related to following topics:
Religions of India
Festivals of India
Akbar-Birbal children stories
Emperor's new clothes
English Alphabets
Numbers

Geography
Science
Ecological footprints
National Anthem in ISL (with audio and captions in many Indian Languages, which won First prize in the International Film competition, 2012 held by 'We Care Foundation')

Apart from this, the ISL cell, AYJNIHH broadcasts important AYJNIHH, National and international news in ISL on YouTube every month.

1.4   List of Films screened at 1st Deaf Film Festival (2011): This festival was organized by K. Murali of DEAFLEADERS (an organisation of the Deaf, Tamilnadu)

1st India Deaf Film Festival, 2011

Deaf are not Dumb	Gajen Seth	23 mins
Deaf Challenge	Kajal Dhawan	30 mins
CID wanted	Rana	25 mins
The Stress	K. Murali	15 mins
Vishwamitra	K. Murali	5 mins
Mr. 420	Rajesh Kethar	210 mins
Deaf Vs Hearing	Rajesh Kethar	15 mins
Deaf Awareness	Rajesh Kethar	30 mins
CID	Rajesh Kethar	60 mins

The True and False	K. Murali	15 mins
I want to be a hearing person	Lazaro Conteras	30 mins
Silent Song	K. Murali	30 mins
Chaire Chaplin	K. Murali	5 mins

1.5   Other important films/documentaries made in ISL

(1)   DEAF: Hear Me[26] (Wild Mango Films) – 38 mins: A film by Carol Duffy Clay

A 'first of its kind' documentary within India which highlights what it is like growing up Deaf and the strengths and struggles of living in a country where sign language is not fully acknowledged. The production was a collaborative team effort of Deaf and hearing people. The film received various awards, including CINE Golden Eagle, Telly Award, WeCare Film Fest (India), and additional screening festivals include United Nations International Day of Persons with Disabilities, International Congress on Education for the Deaf (ICED) and the Deaf Rochester Film Festival.

(2)   Beyond Silence: A film by Viduyat Latay

The film is about raising awareness about deaf people in India and motivating the electronic media in India to start closed-captioning. *Beyond Silence* is a documentary made with an intention of understanding the perspective of deaf people in India. It has been screened at various festivals and won awards as follows: International Digital Film Festival, New Delhi, Mumbai-India, 2013, Cannes Film Festival, short film corner, 2012, Cyprus International Film Festival, Cyprus, 2012, Best Shorts competition, La Jolla, California (Best shorts documentary award winner), 2012, Peloponnesian Corinthian International Film Festival, Greece, 2012, Filmmakers Alliance, Vision Fest,Los Angeles 2010, and Echo Park Film Screenings, Los Angeles, 2010.

(3)   Films by Vishwajit Nair:

- Deaf Study Can, 2012, 42 minutes
- A Hero Boy, 2012, 40 mins

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[26] Information provided by Carol Duffy Clay

- Deaf Awareness, 2011, 15 mins
- Hearing eyes and speaking hands, 2011, 2.5 mins
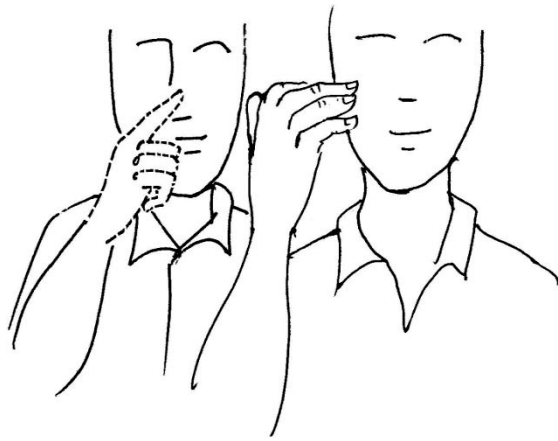
MOTHER (sign-1)
Tip of right 'one' hand index finger touch right side of nose then touch the open bend hand on the cheek
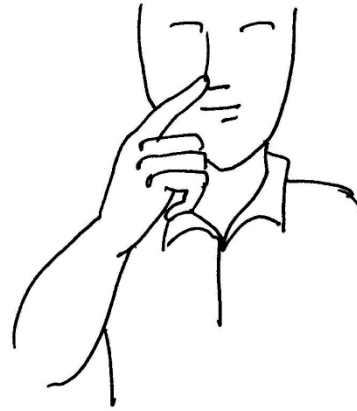
MOTHER (Sign -2)
Tip of right 'one' hand index finger touch right side of nose
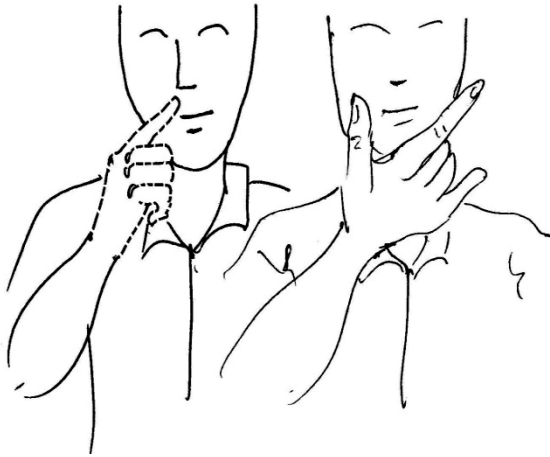
MOTHER'S FATHER (NANA)
Sign 'Father' (Sign - 2) then grasp chin with thumb and middle finger
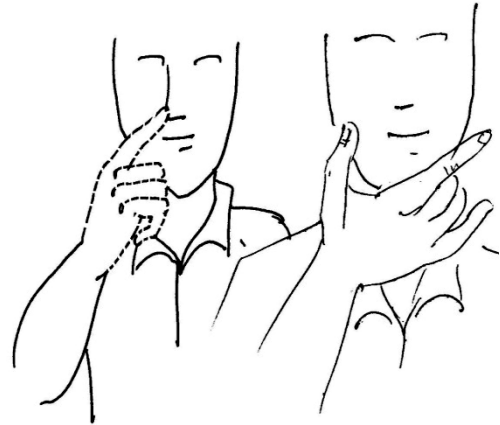
MOTHER'S MOTHER (NANI)

Sign 'mother' (sign-2) then grasp chin with thumb and middle finger

MOTHER'S BROTHER
Sign 'Father' (sign -2) then
finger spell 'M'
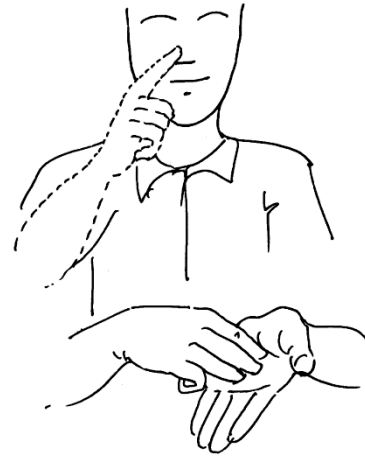
MOTHER'S BROTHER'S WIFE
Sign 'mother' (Sign-2) then finger
spell 'M'
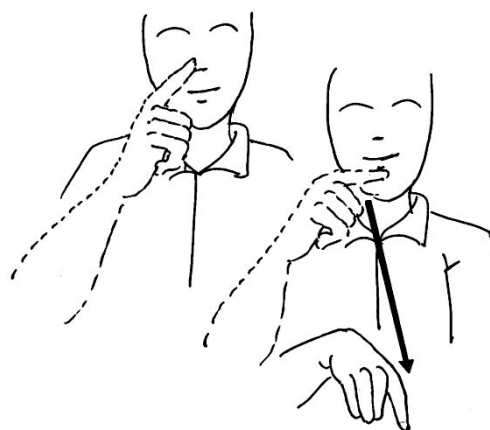
MOTHER'S SISTER
Sign 'Mother' (Sign-2) then move the index finger from up to down at chest level
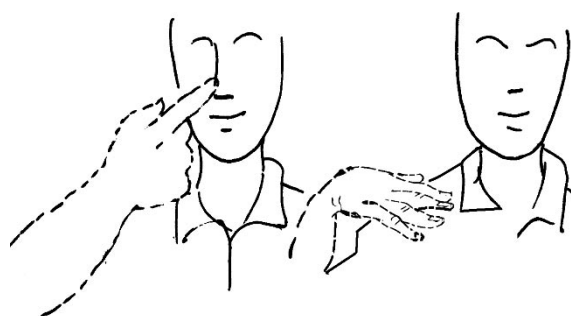
SISTER

Sign 'mother' (sign-2) then touch fingertips of right bend hand on right shoulder
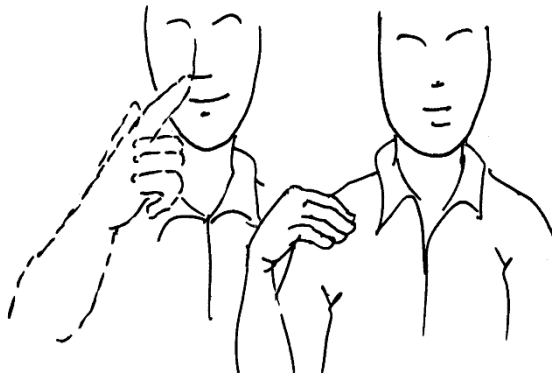
BROTHER
Sign 'father' (Sign-2) then touch fingertips of right bend hand on right shoulder

OLDER BROTHER
Sign 'brother' then raise the same hand up to head level
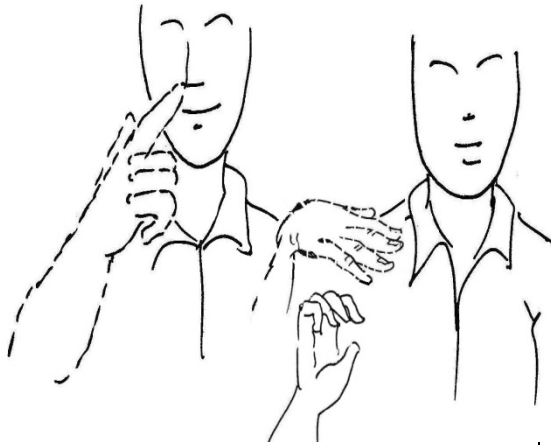
YOUNGER BROTHER
Sign 'brother' then the bend
hand, facing down move down
to chest level
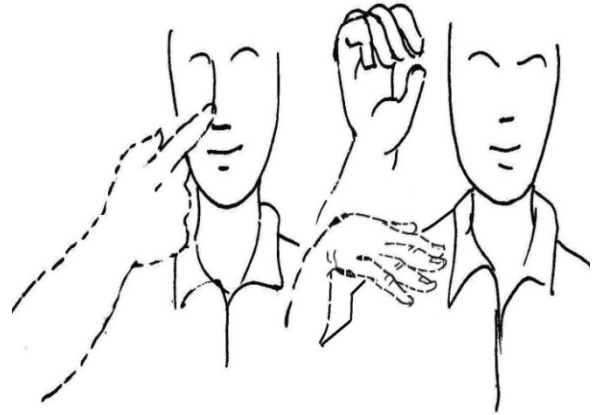
OLDER SISTER

Sign 'sister' then raise the same

hand up to head level
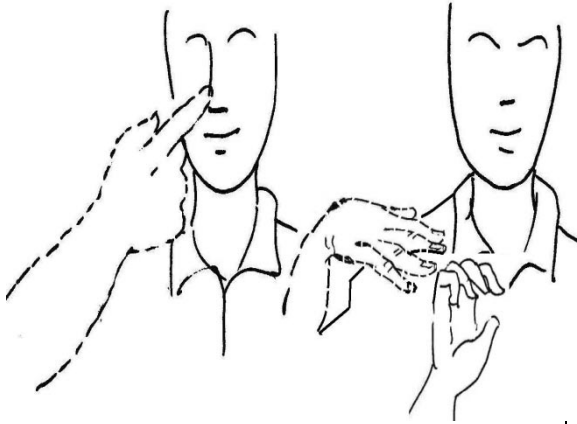
YOUNGER SISTER
Sign 'sister' then the bend hand,

facing down move down at chest

level
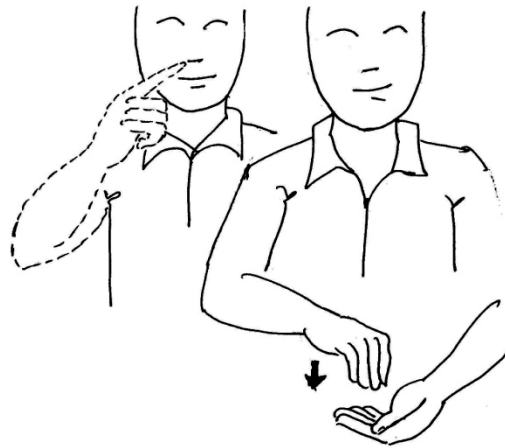
SON
Sign 'father' (sign-2) then both
'bend' hands, facing each other
and fingers pointing in opposite
directions, move down from chest
level to waist level
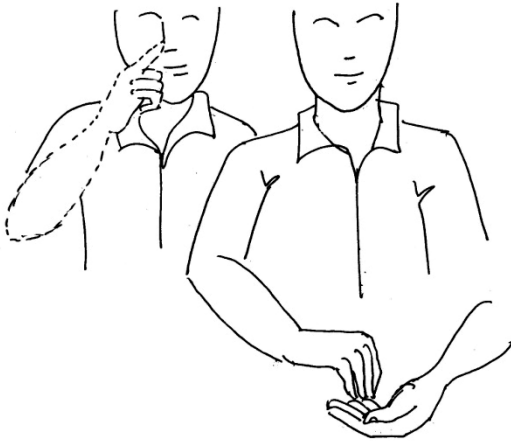
DAUGHTER
Sign 'mother' (sign-2) then both
'bend' hands, facing each other
and fingers pointing in opposite
directions, move down from chest
level to waist level
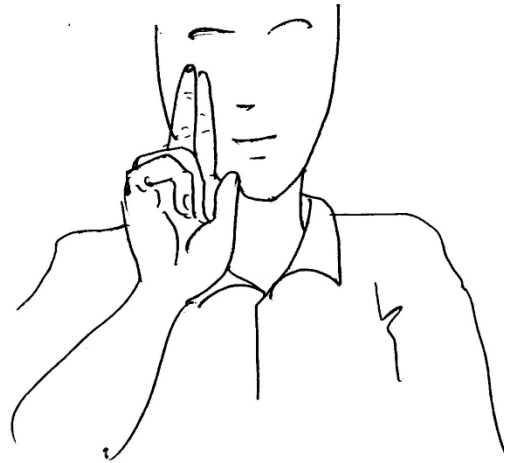
FATHER

Place index and middle fingers

on the right side of upper lips
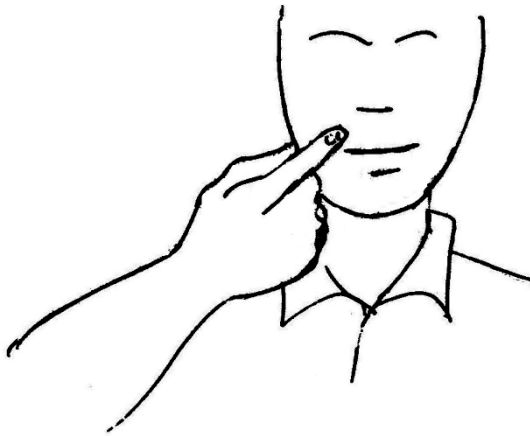
FATHER (SIGN - 2)
Place index finger on the right side of upper lips and move it down
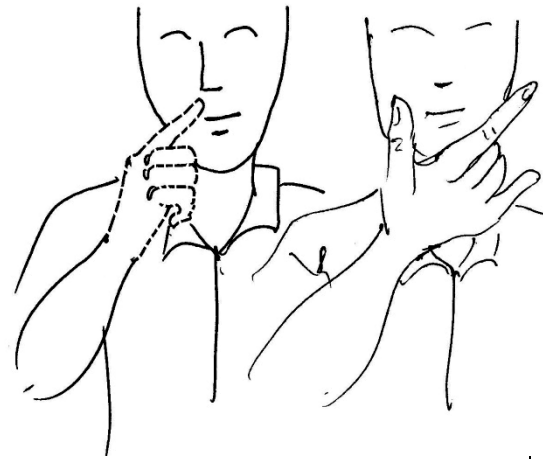
FATHER'S FATHER
Sign 'Mother's Father'
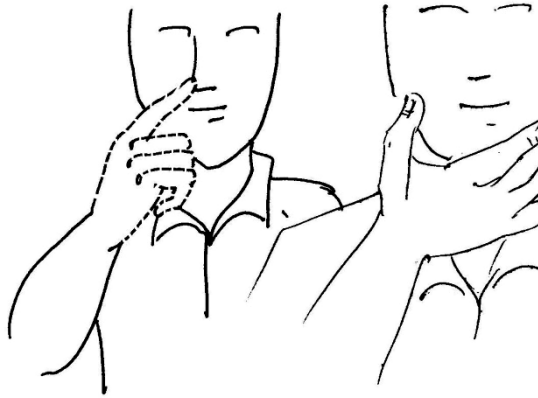
FATHER'S MOTHER
Sign 'Mother's mother'
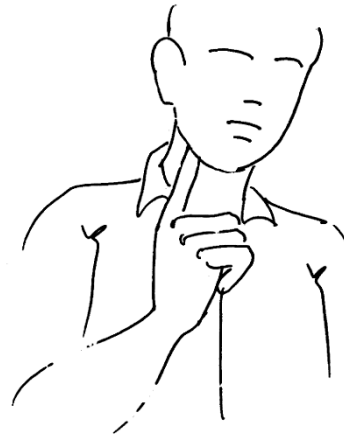
FATHER'S BROTHER

Touch tip of the index finger on throat
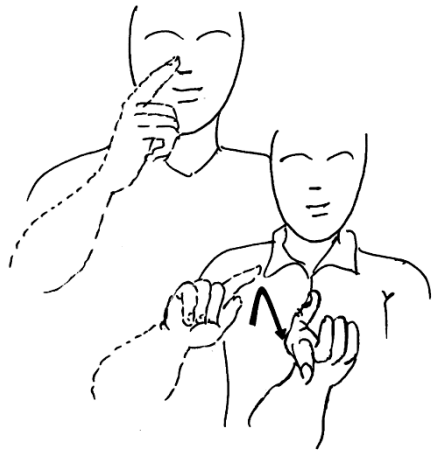
FATHER'S SISTER

Sign 'mother' (sign-2) then move the index finger from inside to outside at chest level
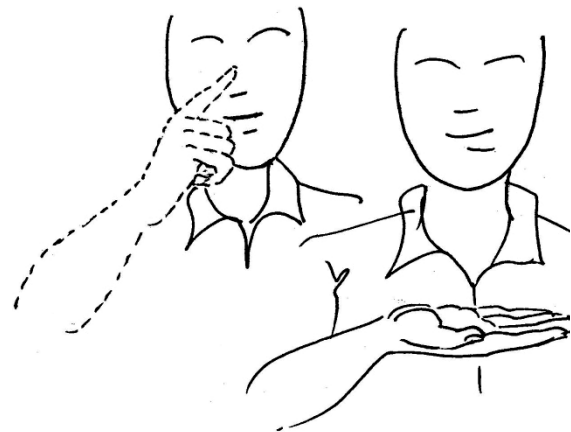
MOTHER-IN-LAW

Sign 'mother' (sign-2) `then place right open hand facing up horizontally below the neck
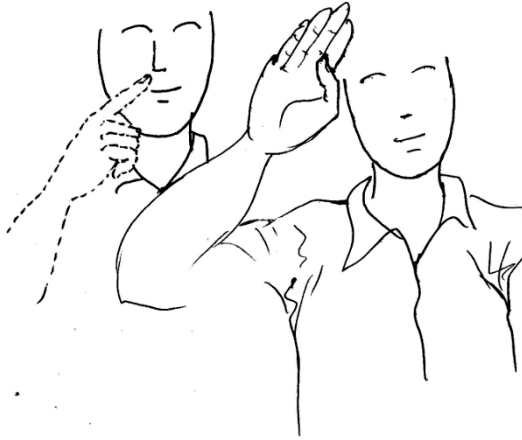
FATHER-IN-LAW
Sign 'Father' (sign-2) then touch right open hand vertically on right temple
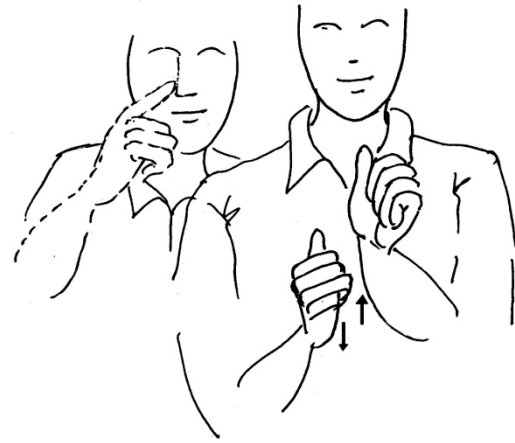
SISTER IN LAW

Sign 'Mother' (sign-2) then both fists place side by side and move up and down alternately, twice
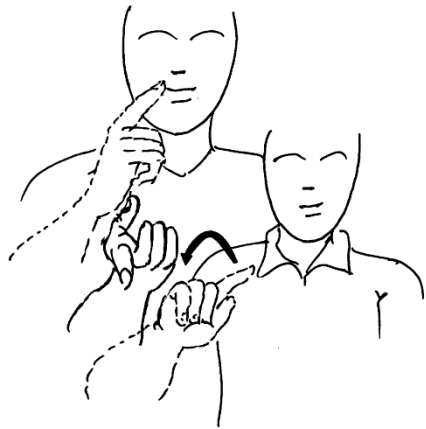
BROTHER-IN-LAW
Sign brother then touch the back of the index finger to the lips and move tips of the index finger up and down

DAUGHTER -IN-LAW
Sign daughter then touch the back of the index finger to the lips and move tips of the index finger up and down
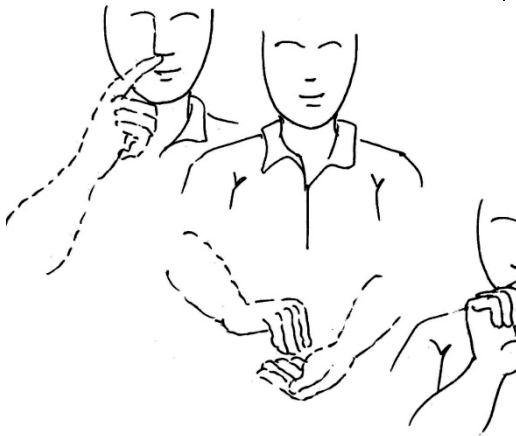
SON-IN-LAW
Sign 'Son' then touch the bend index finger on lips and move up and down
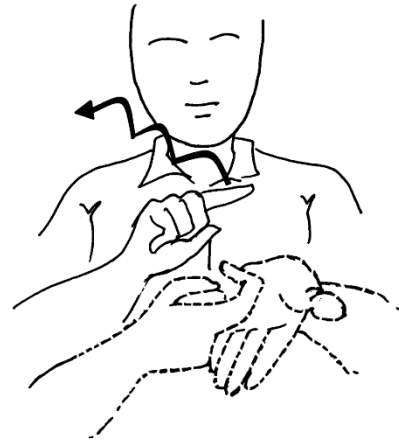
RELATION

Sign 'R' then move right hand index finger spirally in a movement from chest to head
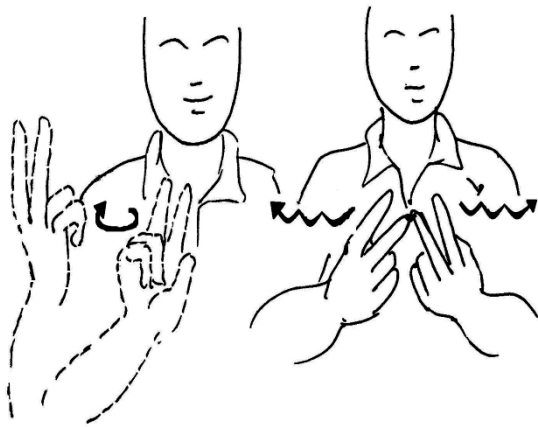
COLORS
Move 'V' shape horizontal right hand in eight shape then sign 'different'

BLACK
Index finger of right hand placed

above the head, then move it down
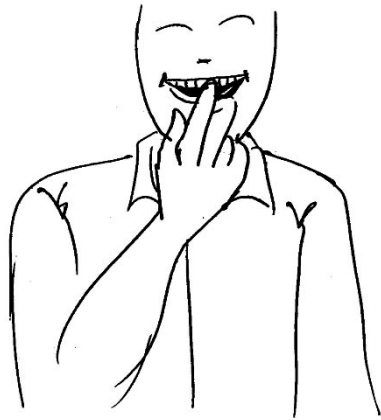
WHITE
Tap the teeth with the index finger

RED

Pretend to touch tip of tongue with tip of index finger
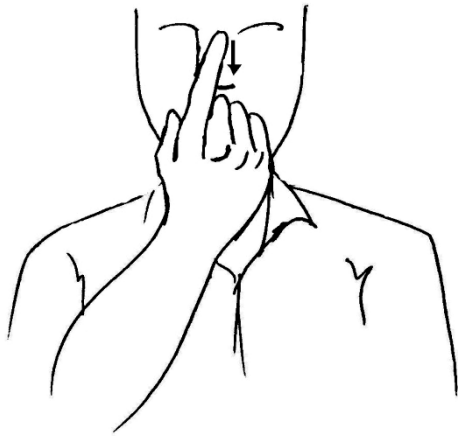
YELLOW
Index finger of right hand runs
down the nose from center of eye
brows to tip

GREEN
Bend index finger downward twice
near nose tip
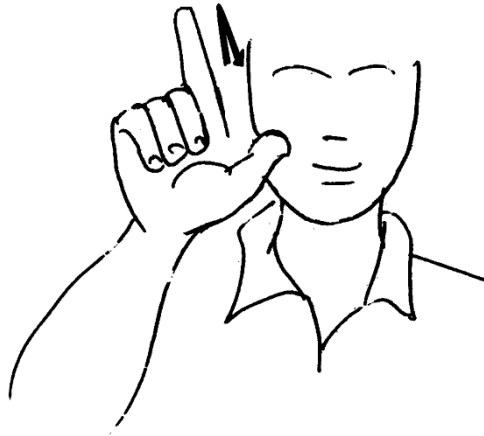
BLUE
Touch right temple with the tip of the thumb of right 'L' shaped hand then move the index finger up and down rapidly
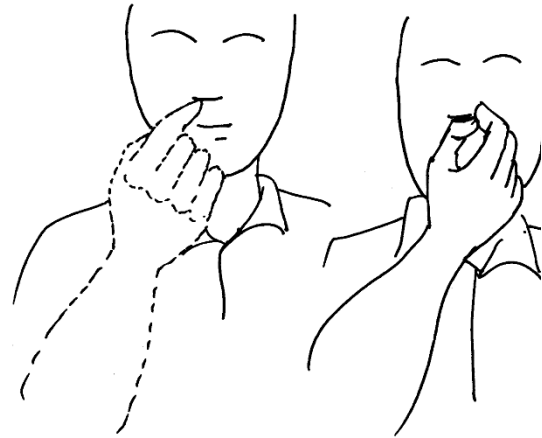
BROWN

The right 'zero' shape hand touches both sides of nose one by one
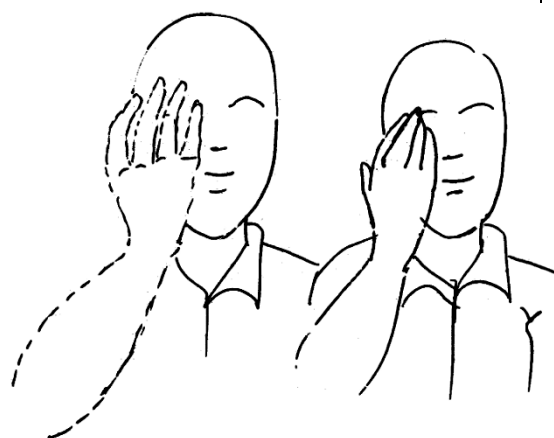
ORANGE
Right 'C' shaped hand, facing inside, at right eye level, bend repeatedly

HOUSE
Both slanted 'open' hands, fingers touching each other at chest level, then move away from each other
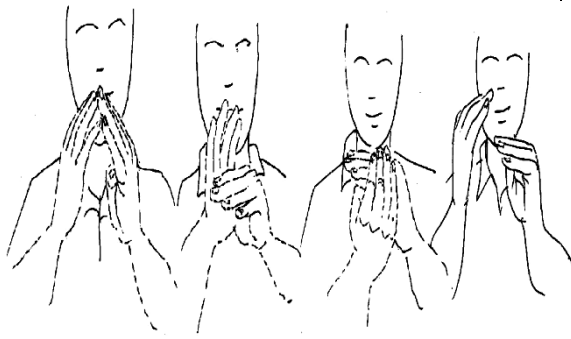
HUT
Sign 'house' then move left vertical hand up to down in three directions around the right horizontal hand

GARDEN

Right 'O' shaped hand pointing to the nose slowly opens and move out to open hand, then both horizontal open hands, facing up, in cross direction move opposite direction at chest level

VILLAGE
Both open hands, facing each other at chest level move towards and apart from each other, twice
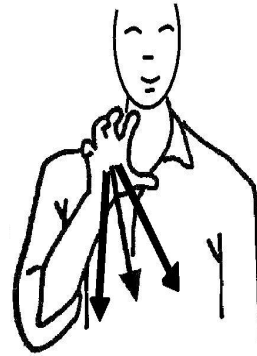
CITY
The right bowl hand facing out move in three different directions
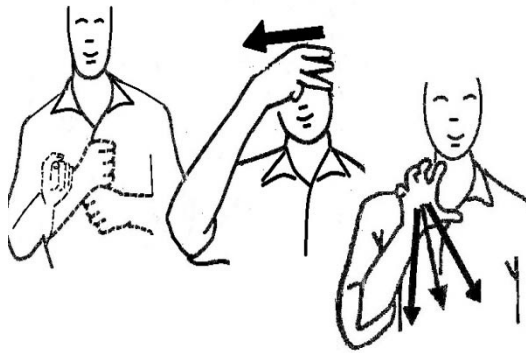
STATE
Sign 'GJ' then sign Madras then right bowl hand facing out move out in three different directions
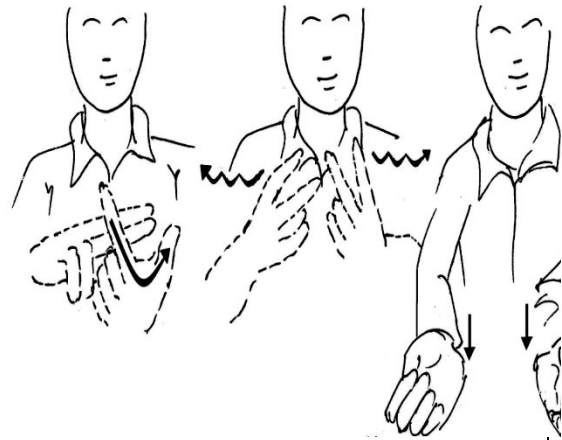
MARKET

Insert index and middle finger of right hand in between the 'L' shape of left hand and move from up to down then sign 'different', facing in at chest level, twirl out
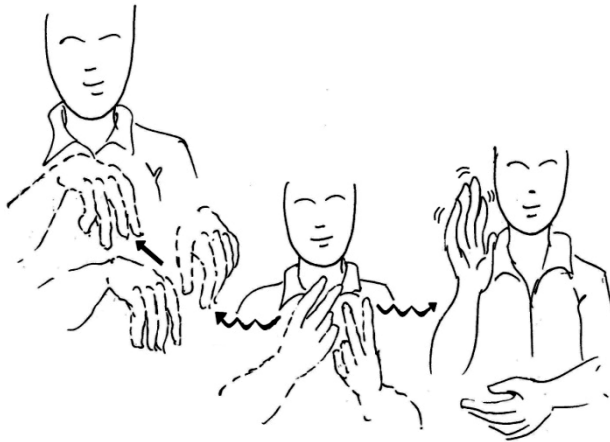
FOREST
Pull back right 'claw' hand placed behind the left 'claw' hand at waist level both facing down then sign 'different' then sign 'tree'

DESERT
Thumb of the right horizontal hand rub against each finger at forehead level then sign 'ground'
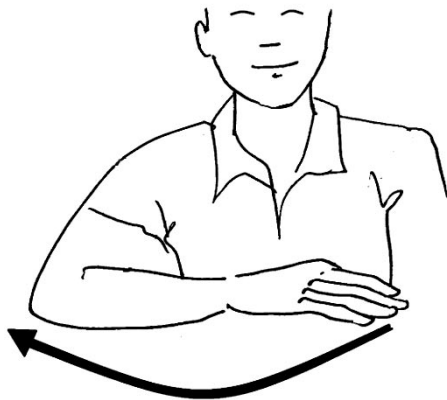
GROUND
Move right open hand from left to right facing down at chest level, in a horizontal plane
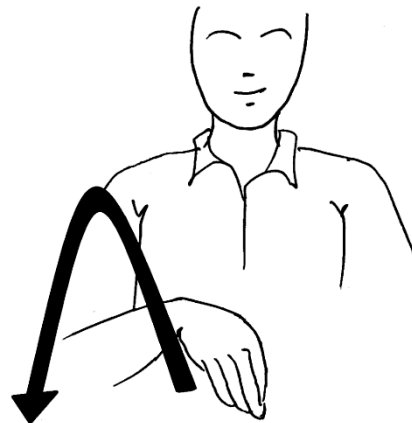
MOUNTAIN

Right bend hand, fingers facing down move to the right side in a big upward curve, three times

SEA/OCEAN
Sign 'water' then, both 'five' hands,
facing down at chest level move
outward while wiggling the finger
(to show waves)
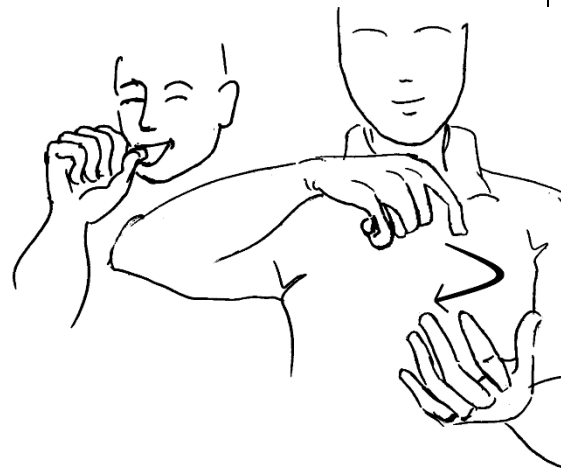
LAKE
Sign 'water'. Then, circle the index
finger of right hand around the left
open horizontal hand in front of the
chest
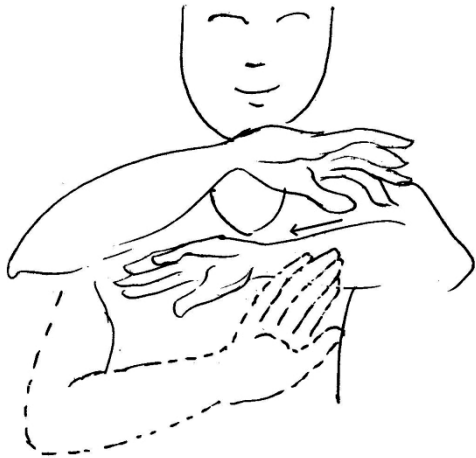
BRIDGE
Tap the tips of right hand fingers, twice below left horizontal hand, facing down, then move the 'c' shape right hand from the elbow to the palm on left horizontal hand
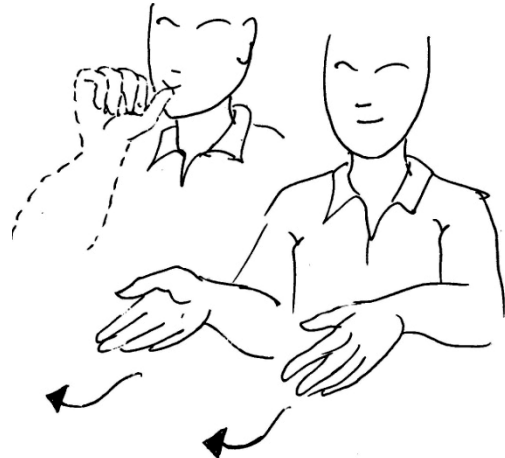
RIVER

Sign 'water' then, both horizontal 'open' hands facing each other at waist level, move forward in a curving path
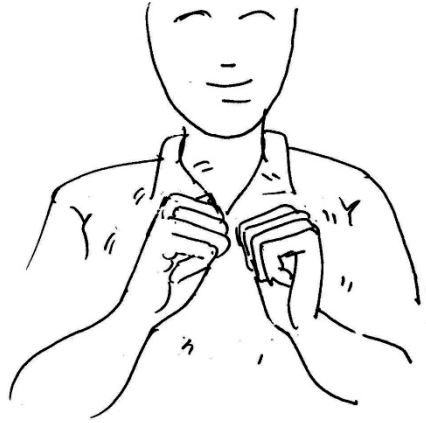
WINTER (COLD)
Both 'fists', facing each other at chest level, shake from side to side in a symmetric fashion
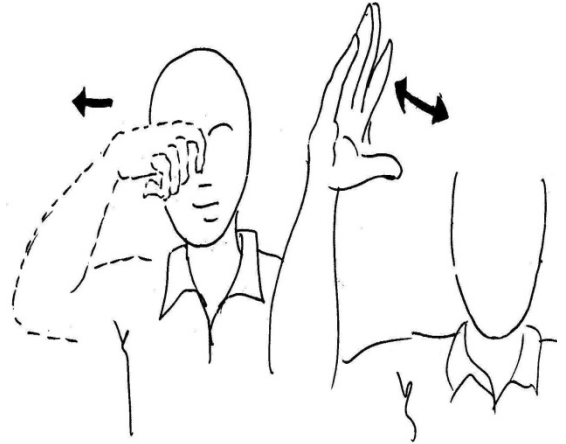
SUMMER
Run the right bend index finger across the forehead and then sign 'sun'

RAINY
Sign 'water' then fingers of both five hands, placed above the head and shoulders facing down and pointing in opposite directions run down
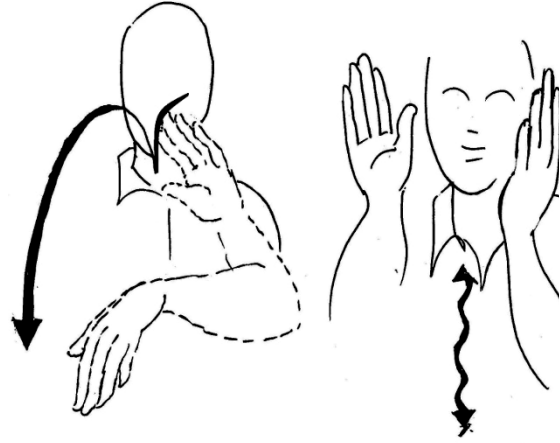
WATERFALLS

Sign 'mountain' then both open vertical hands facing each other move from up to down in a wavy motion

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BANKS/SHORES
Sign 'tree' then sign 'desert'
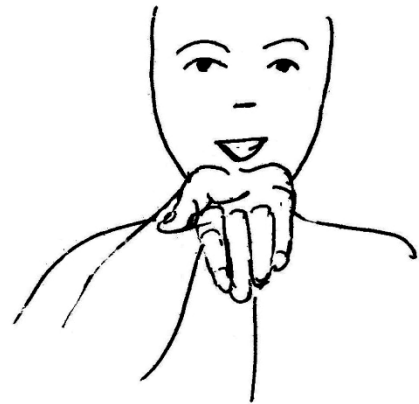
AIR
Place right hand palm near
the mouth then blow air
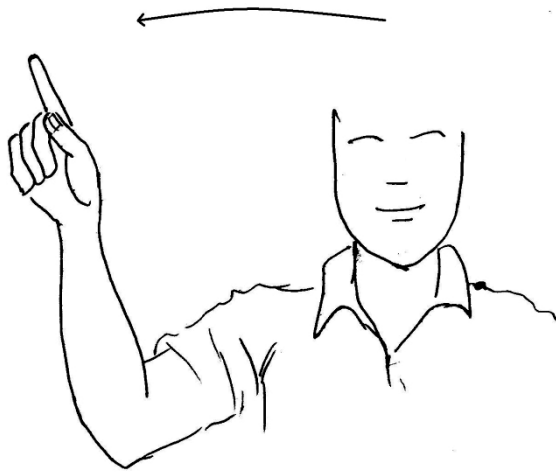
SKY
Move right hand index finger from left to right over the head

SUN

Shake bowl shape right hand, facing left above the right side of the head

MOON
Move right 'U' hand in a slanting
position at head level
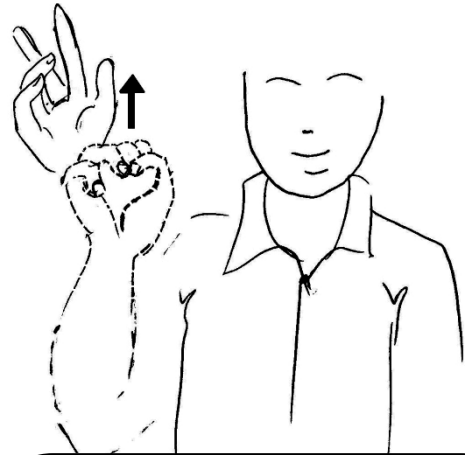
STAR
Place right hand above
shoulders and head, with tips of
thumb, index and middle finger
touching, and then move the
hand progressively to the sides,
while the fingers open
repeatedly
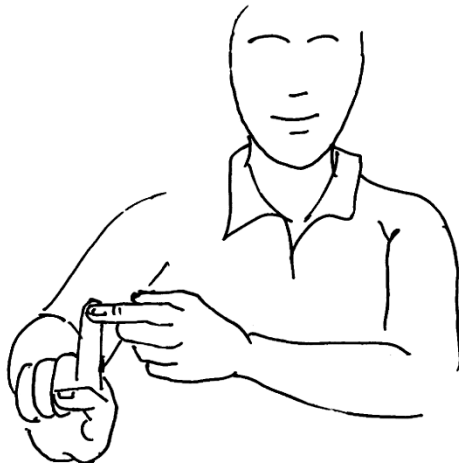
EAST
Finger spell 'E' then move it right at chest level
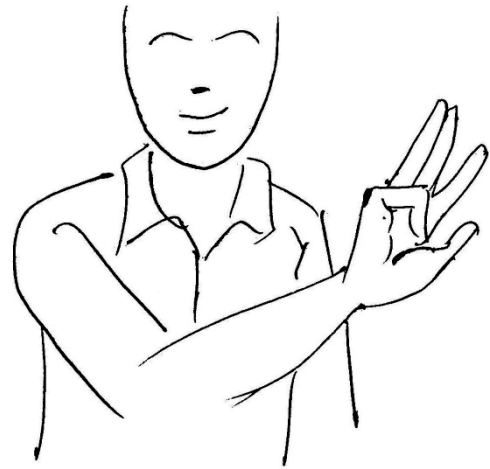
WEST
Finger spell 'W' then move it left at the body

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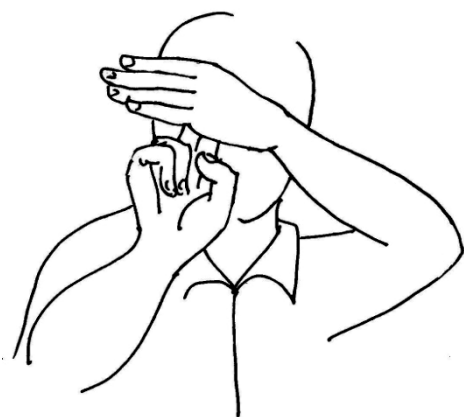
NORTH
Finger spell 'N' then move up
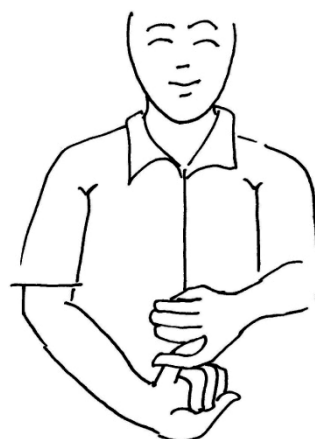
SOUTH
Finger spell 'S' then move down

PLANET
Both slanted 'open' hands, facing in with fingers pointing in opposite directions, circle around each other then sign 'different' then, sign 'City'
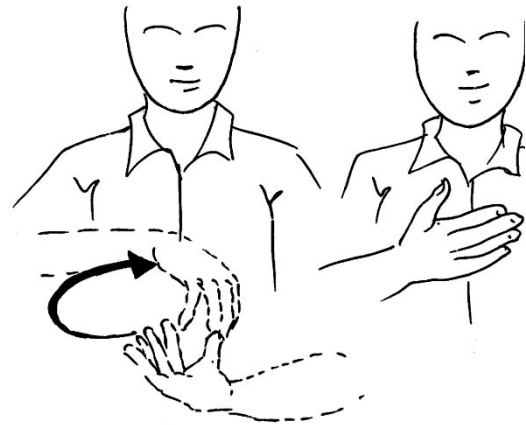
EARTH
Right 'bowl' hand, facing down, circles in clock wise direction around left 'bowl' hand facing up at chest level then sign 'chest'

HERE
Inverted 'open' hand, facing out,
dip down slightly at waist level
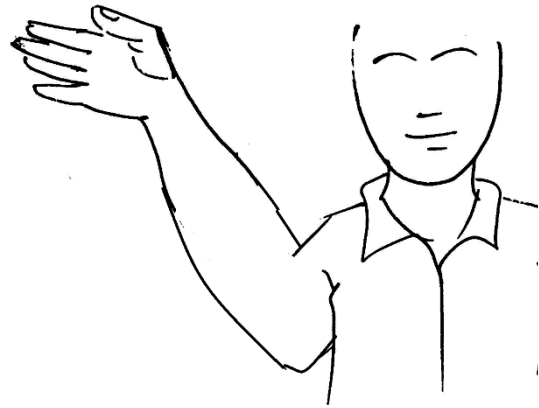
THERE
Point to the right side with right
'open' hand
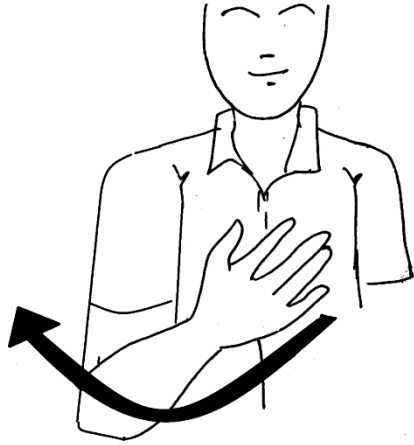
WHERE'
Move right 'five' hand facing up
from left to right at chest level

TIME

Tap back of wrist of left 'fist',
facing down at chest level, with
index finger of right hand,

THE FUTURE
Move right open hand facing in to
the chest & flick out to face out
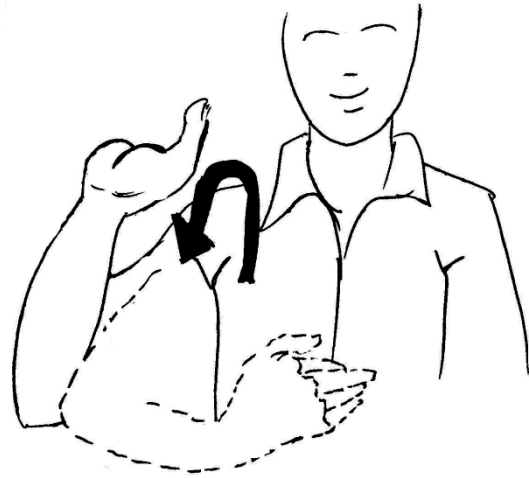
THE PAST
Right 'one' hand, facing in above
right shoulder drop behind the
shoulder in a circular movement
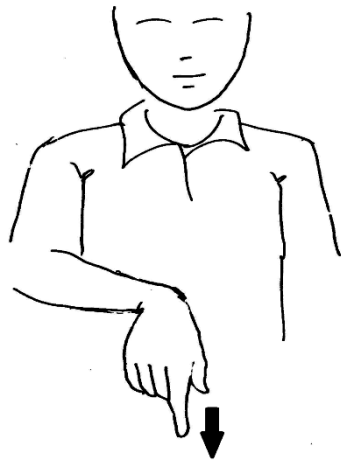
DAY
Sign 'today'

NIGHT

Tip of right 'zero' hand, facing down, runs down the index finger of horizontal left 'one' hand, facing right
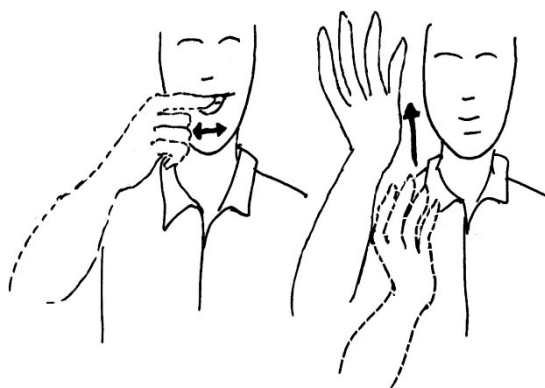
MORNING
Act out as if brushing the teeth then
right 'flat O' hand, pointing up,
move up and opens into 'bend five'
hand, facing up
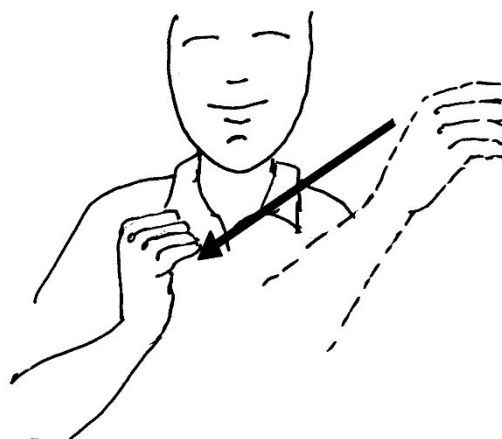
EVENING
Right 'bend five' hand, facing up
above right shoulder, move
down and closes into 'flat O'
hand, pointing up

AFTERNOON
Shake bowl shape right hand
above the right side of the head
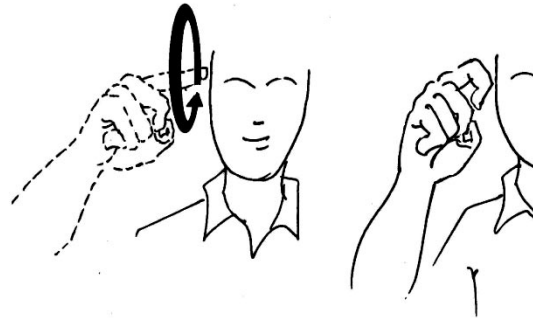
WEEK

Move the index finger, near the
right ear in circular motion then
sign 'seven'

MONDAY
Act out as if tossing a coin into the air, twice
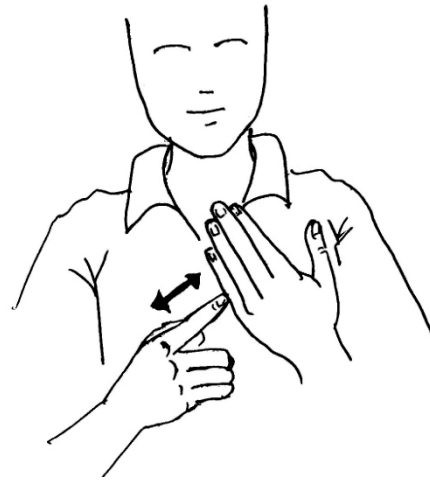
TUESDAY
Tip of index finger of right hand touches the edge of left 'open' hand, facing up, twice
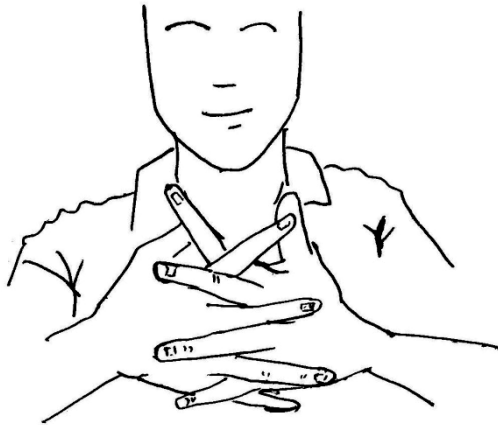
WEDNESDAY
Fingerspell 'W'

THURSDAY

Sign 'V' by left hand then tap the right hand index finger on the middle finger, twice

FRIDAY
Place right 'zero' hand facing in to
the right side of lips then twist out
wards to face out

SATURDAY
Touch both ears between index
and middle finger of both hands
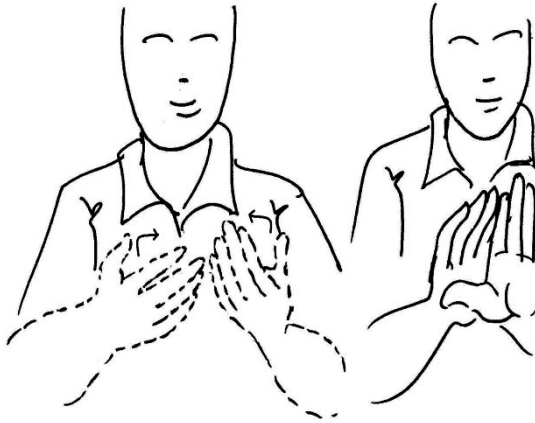
SUNDAY
Both 'open' hands, facing in, at chest level, turn and meet in front of the chest, facing out
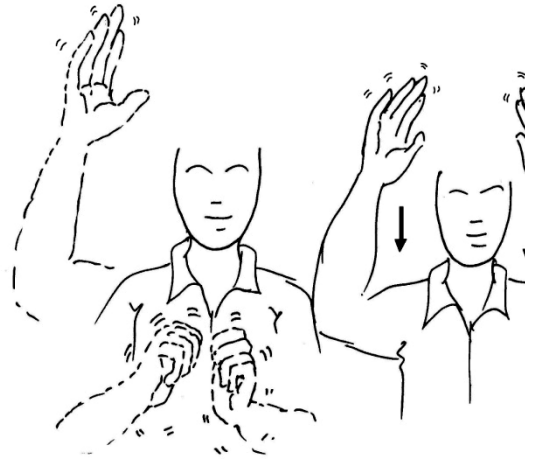
SEASON

Sign 'Monsoon, Winter then

Summer' one by one
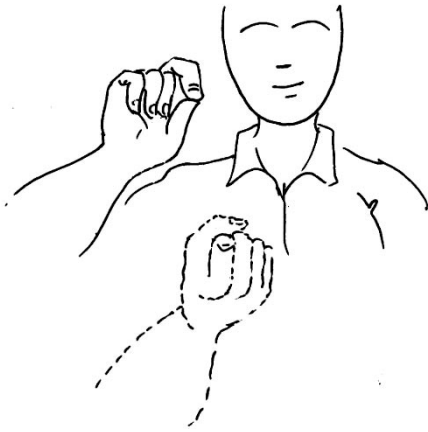
JANUARY
Fingerspell 'J'. Then, pull back index finger, bend the thumb of right 'fist', facing left, repeatedly (as if pulling a kite thread)
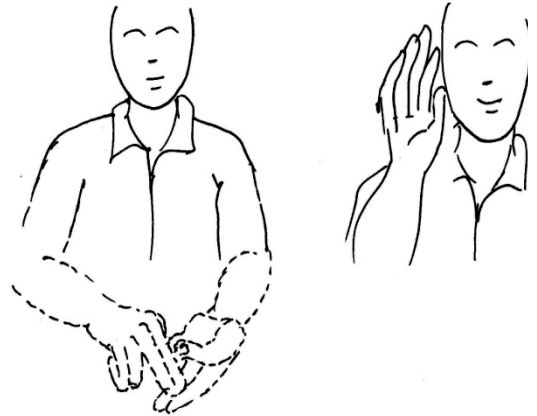
FEBRUARY
Finger spell 'F' then sign 'snake' with palm facing back then twist to face out
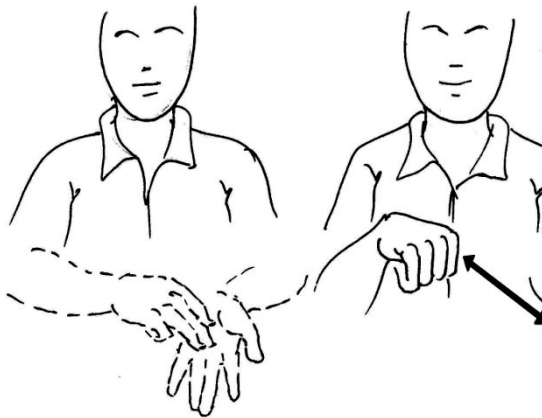
MARCH
Fingerspell 'M'. then, right 'fist' pumps against the thumb of left 'fist', at chest level, twice

APRIL
Finger spell 'A' then rub open hand at back of head
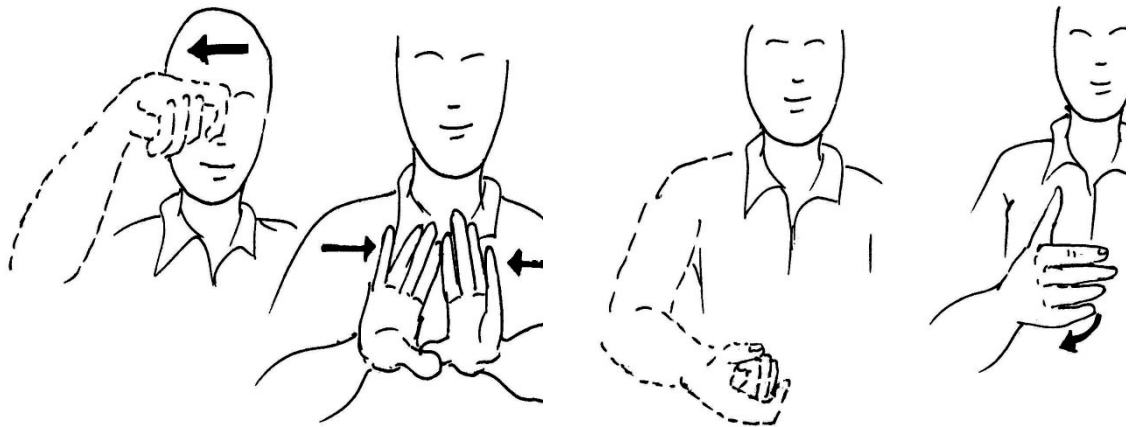
MAY
Bend index finger of the right 'one'
hand. run from left to the right
across forehead then sign 'close'

JUNE
Sign one handed finger spelling 'J'
then sign 'open'

JULY
Fingerspell 'J'. then, sign 'rain'
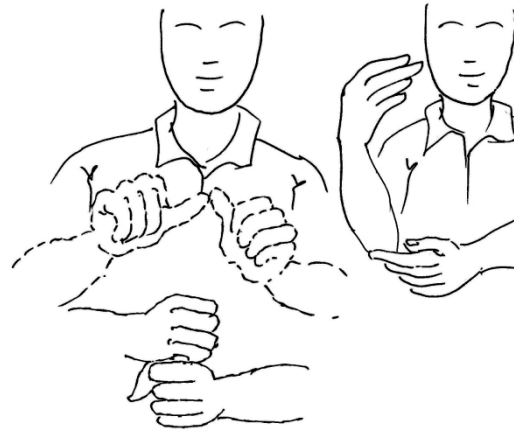
AUGUST

Fingerspell 'A', 'G'. then, sign 'Flag'
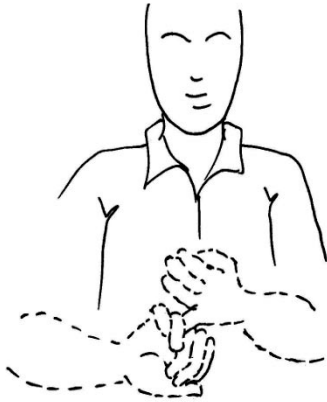
SEPTEMBER
Fingerspell 'S' twice. Right 'bowl' hand, facing in at the nose, move down to the waist in a wavy motion

OCTOBER
Right 'zero' hand makes clockwise circles, at chest level. Clap both 'five' hands twice
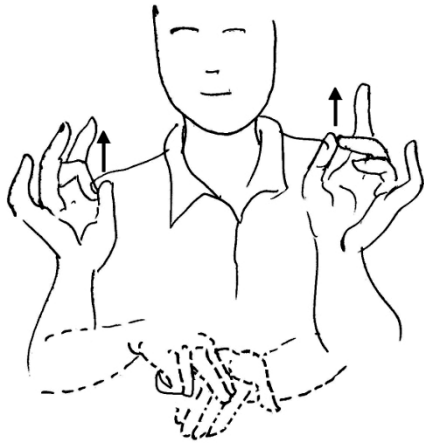
NOVEMBER
Finger spelling 'N' then touch the thumb and middle finger of both hands and open the fingers repeatedly
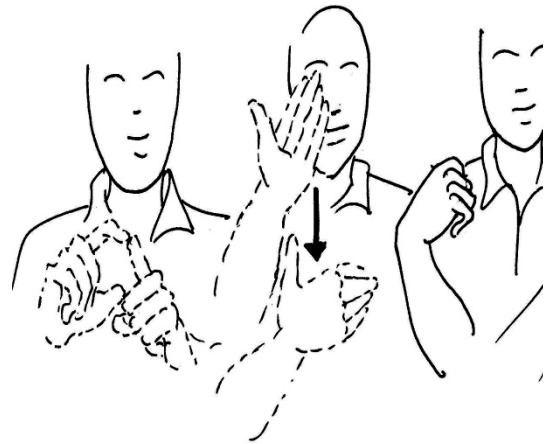
DECEMBER

Finger spelling 'D' then touch the forehead, the middle of the chest, the right shoulder and then the left shoulder with the fingertips of the right "open" hand
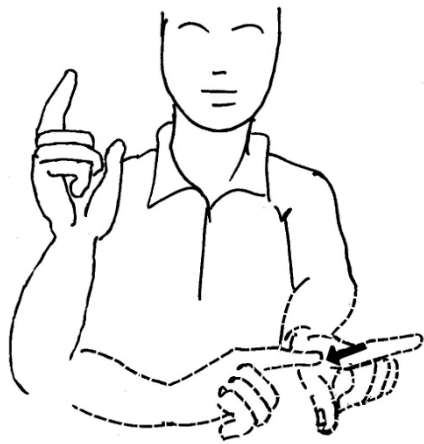
YEAR
Finger spelling 'Y' then sign 'one'
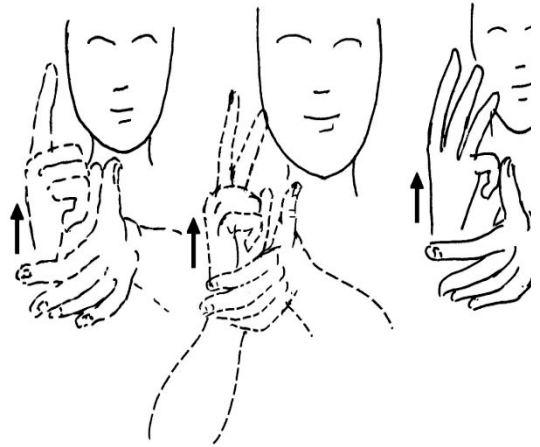
MONTH
Rub left palm against the edge of the right palm while signing 'count'

AGE
Tap open hand on the head then sign 'count'

AFTER 4 DAYS

Sign 'four' at forehead level then flip over the same hand facing out at chest level
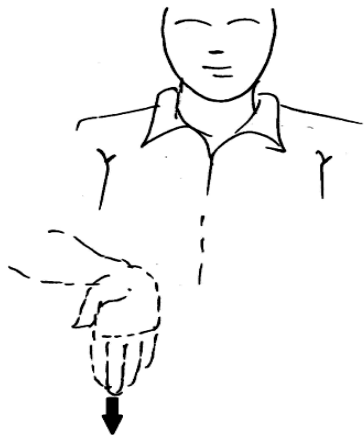
JUST NOW
Show right open hand, facing down at waist level

TODAY
Point down, twice, with the index finger of right hand
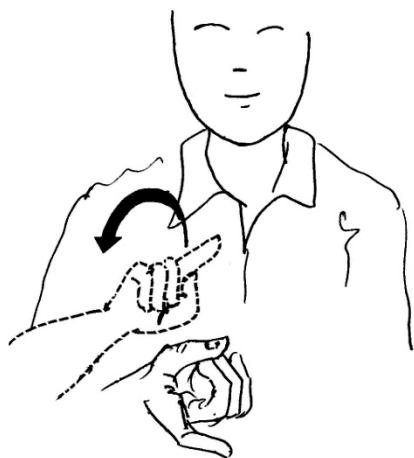
YESTERDAY
horizontal index finger of right hand facing outside, flips backward at chest level
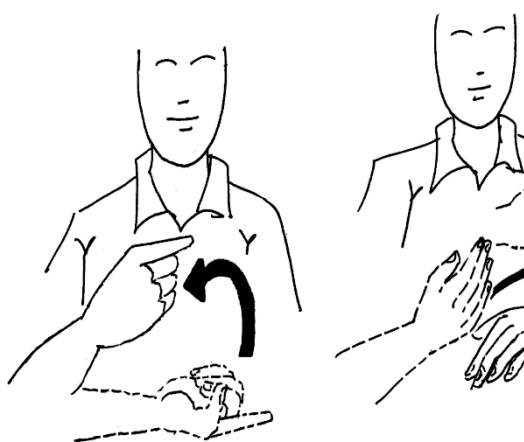
DAY BEFORE YESTERDAY

Sign 'yesterday' then touch the left hand finger against the right hand finger and move right hand, towards the joint of hand.
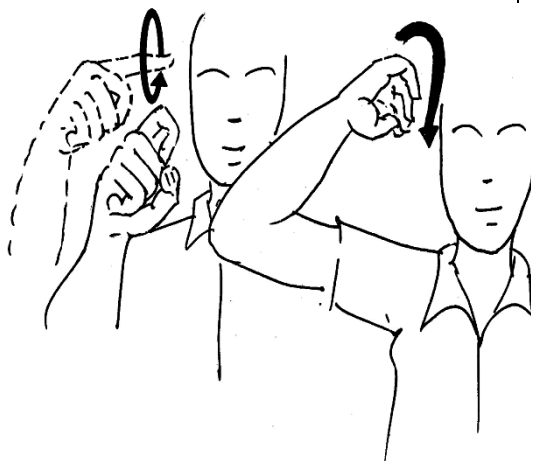
LAST WEEK
Sign 'week' then drop right open hand behind the right shoulder
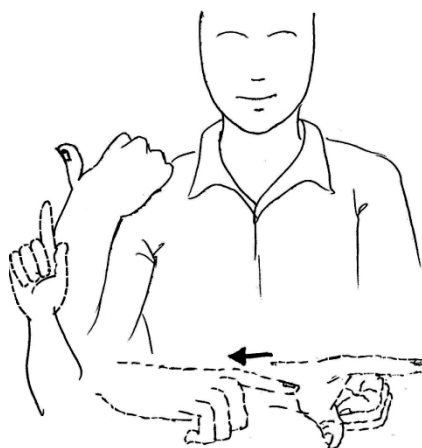
LAST YEAR
Sign 'year' then drop right open hand behind the right shoulder
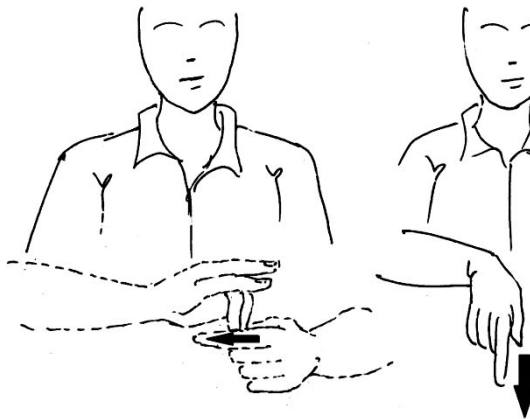
TONIGHT
Sign 'night' then sign 'today'
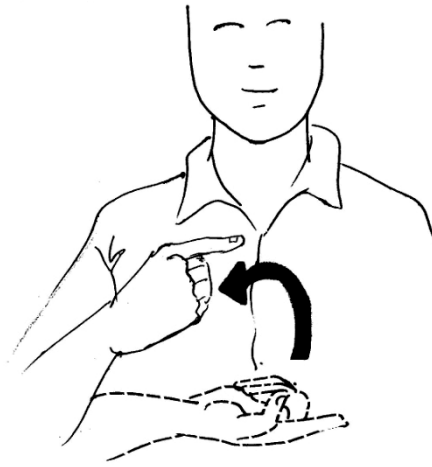
TOMORROW

Flip up vertical right hand index finger, facing down at chest level to rest facing up
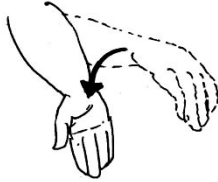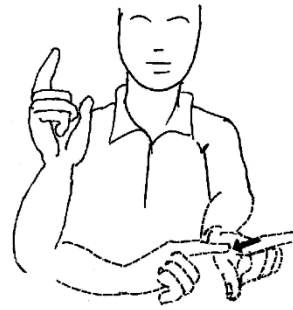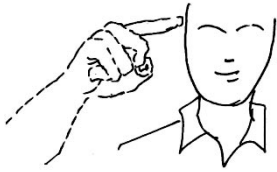
NEXT WEEK
Sign 'week' then flip over the
horizontal right open hand

NEXT YEAR
Sign 'year' then flip over the
horizontal right open hand
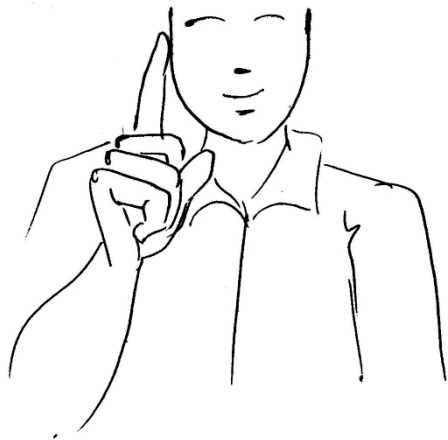
1
Show the index finger of right hand
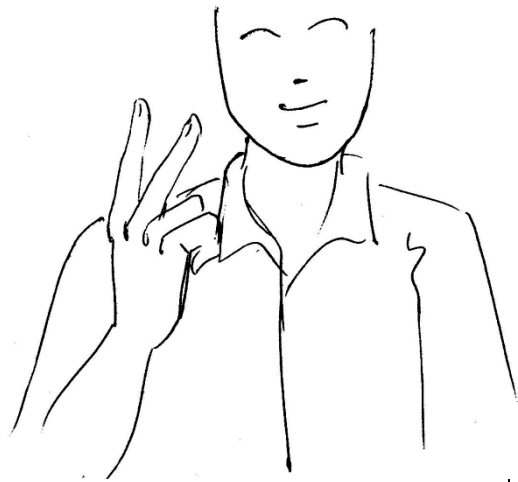
2
Show index and middle fingers in 'V' shape of right hand
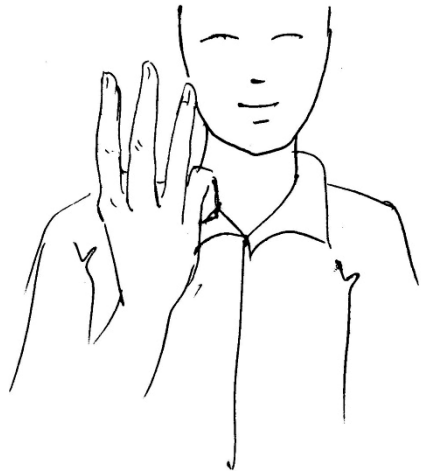
3
Show first three fingers of right hand
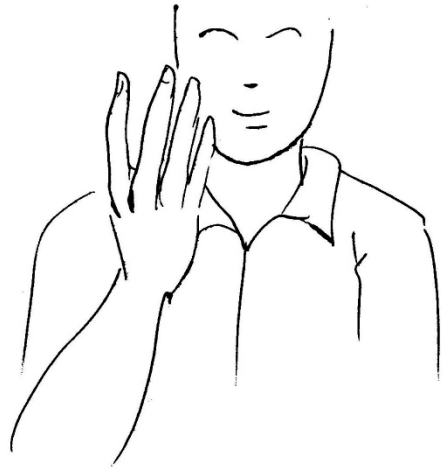
4
Show first four fingers of right hand
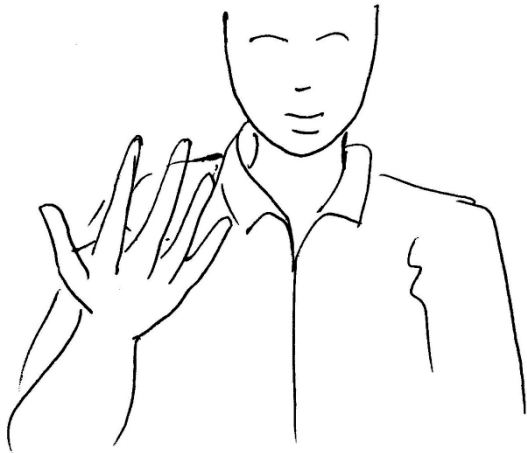
5
Show all five fingers of right hands
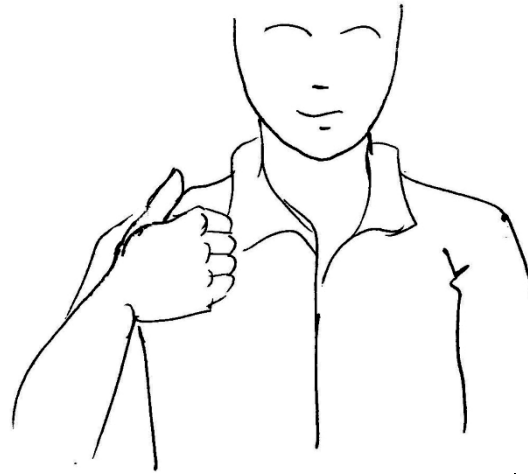
6

Show thumb at chest level,

facing inside
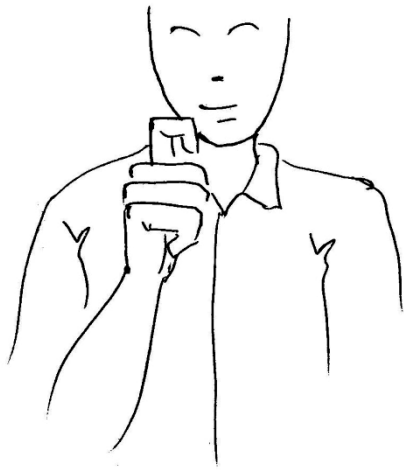
7
Show bent index finger
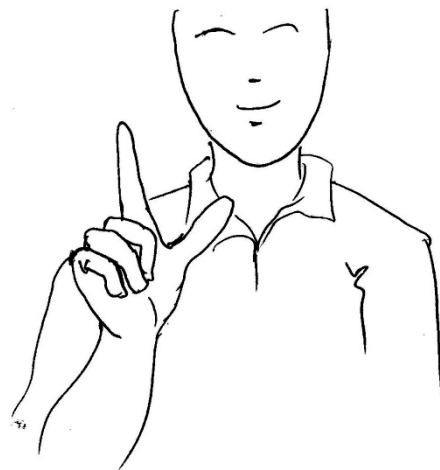
8
Show index finger and thumb in 'L' shape
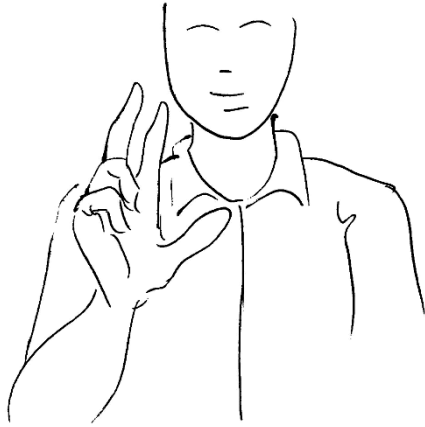
9

Show index finger, middle finger and thumb in 'L' shape

10

Sign 'one' then sign zero by the same hand

20
Sign 'two' then sign zero by the same hand
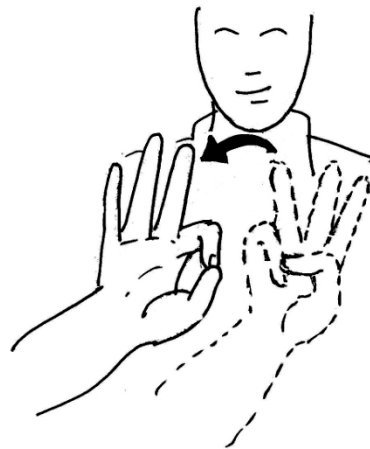
30
Sign 'three' then sign zero by the same hand
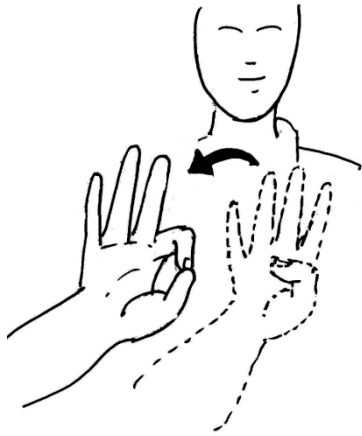
40

Sign 'four' then sign zero by the same hand

50

Sign 'five' then sign zero by the same hand
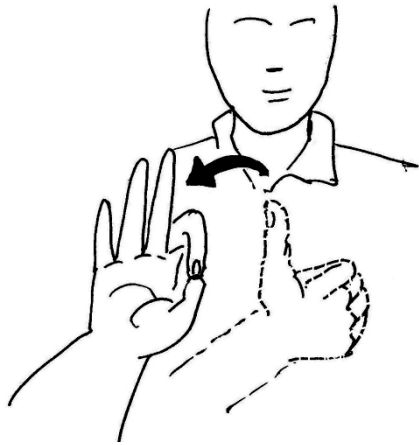
60
Sign 'six' then sign zero by the same hand
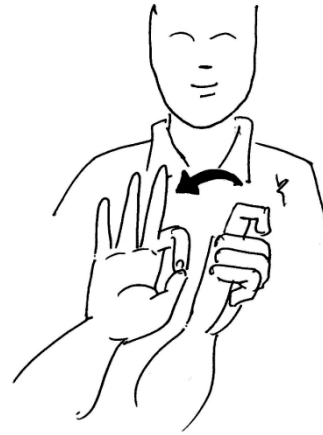
70
Sign 'seven' then sign zero by the same hand
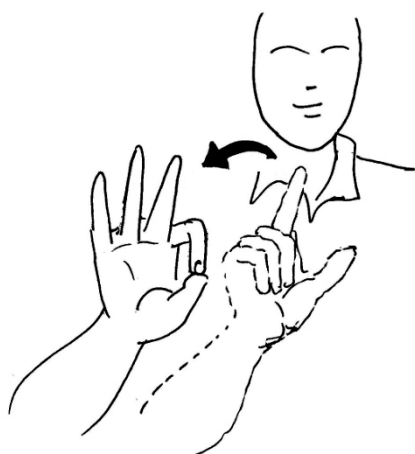
80
Sign 'eight' then sign zero by the same hand
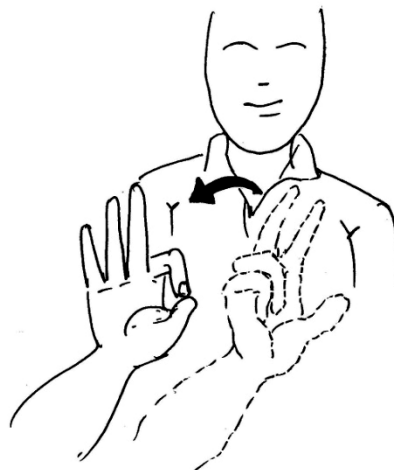
90
Sign 'nine' then sign zero by the same hand
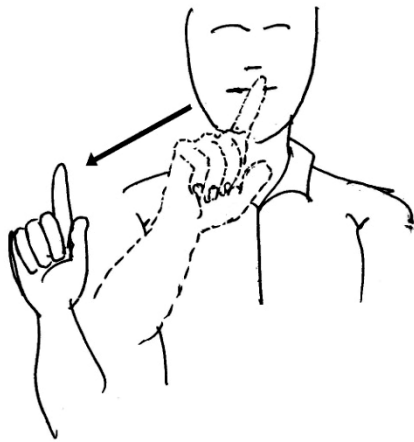
100
Move sign 'one' from mouth
downwards to shoulder level
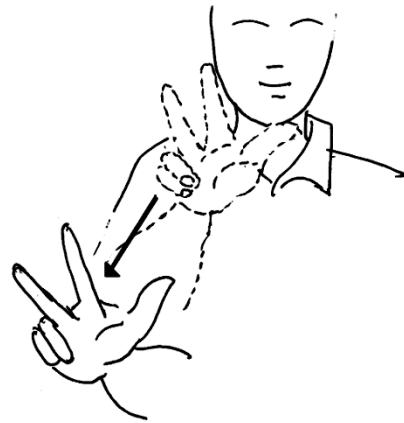
200
Move sign 'two' from mouth
downwards to shoulder level
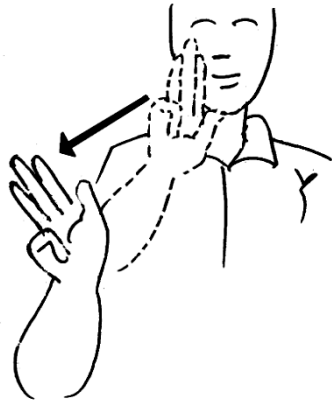
300
Move sign 'three' from mouth downwards to shoulder level

400
Move sign 'four' from mouth downwards to shoulder level
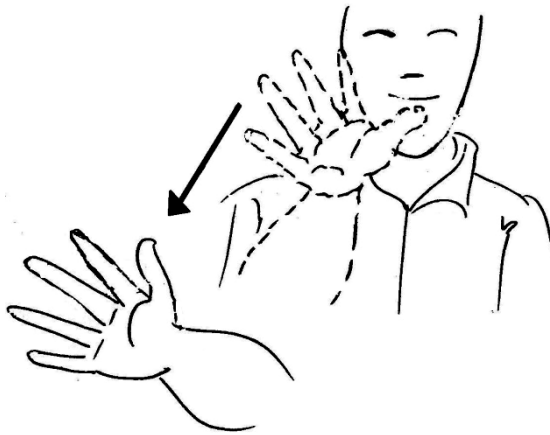
500
Move sign 'five' from mouth
downwards to shoulder level

600
Move sign 'six' from mouth
downwards to shoulder level
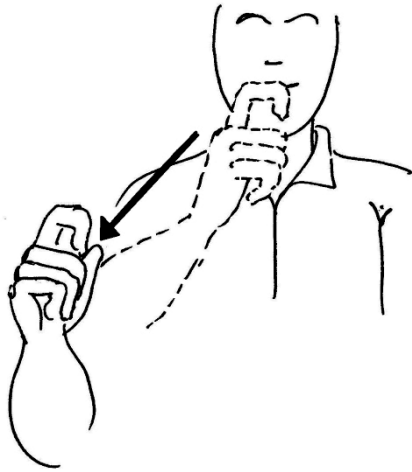
700
Move sign 'seven' from mouth
downwards to shoulder level
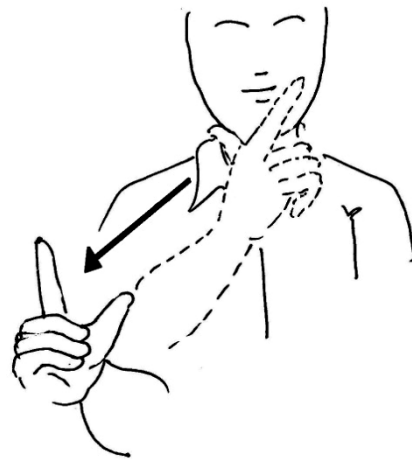
800
Move sign 'eight' from mouth
downwards to shoulder level

900
Move sign 'nine' from mouth downwards to shoulder level

1000
Sign 'one' then sign 'three' facing down and move away from body
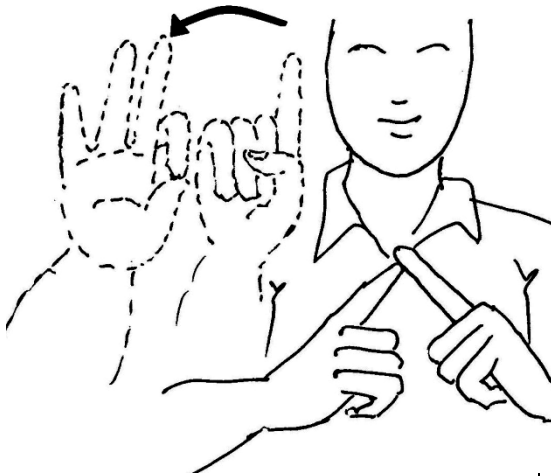
10,000
Sign 'ten' then fingerspell 'T'
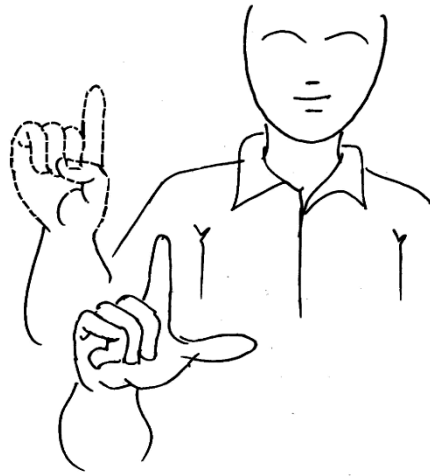
1,00,000

Sign 'one' then fingerspell 'L'
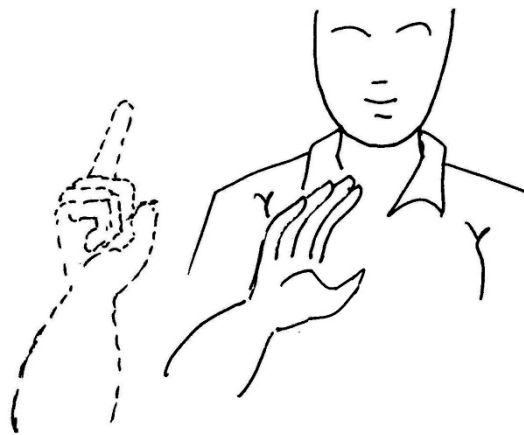
1 Crore
Sign 'one' then fingerspell 'C'
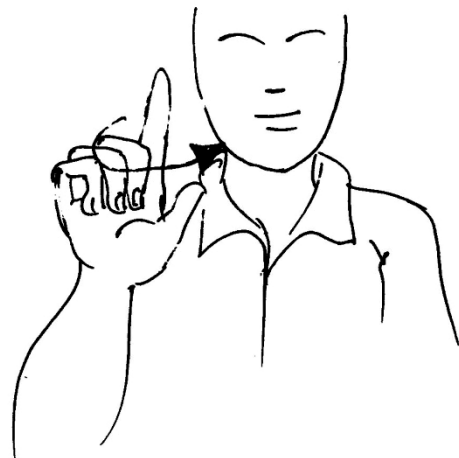
FIRST
Sign 'one' then twist in, in a
sudden motion
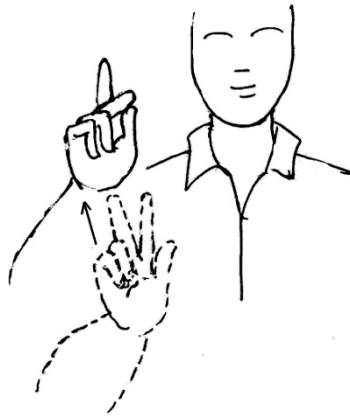
SECOND
Sign 'two' then touch the middle finger with the thumb and move upwards
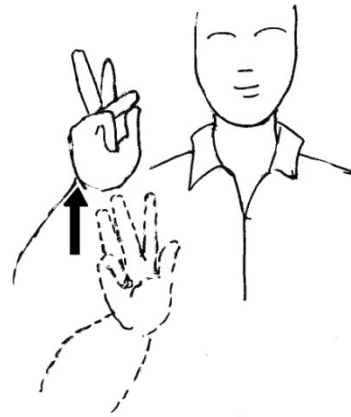
THIRD
Sign 'three' then touch the third finger with the thumb and move upwards

FOURTH
Sign 'four' then touch the last finger with the thumb and move upwards
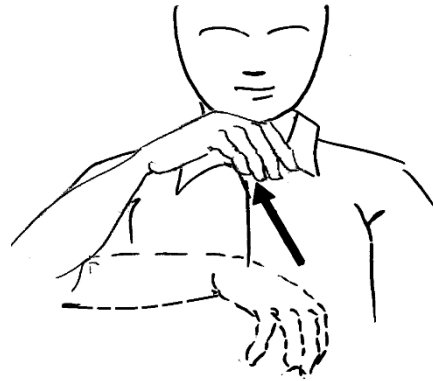
FIFTH
Sign 'five' then right 'flat O' hand, pointing down, move up
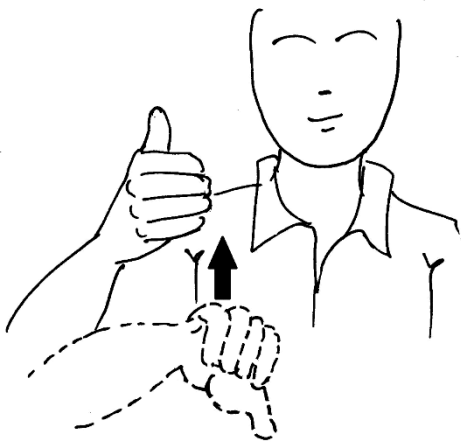
SIXTH
Flip up vertical right hand thumb, facing down at chest level to rest facing up
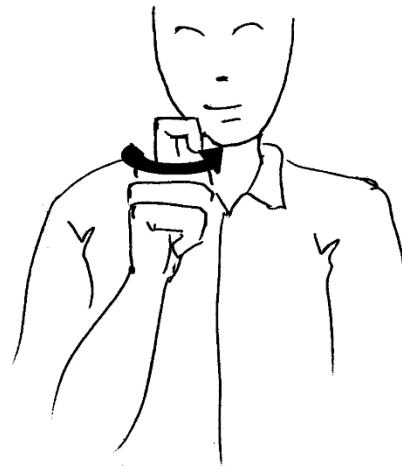
SEVENTH

Sign 'seven' then twist in, in a sudden motion

EIGHTH
Sign 'eight' then twist in, in a sudden motion

NINTH
Sign 'nine' then twist in, in a sudden motion
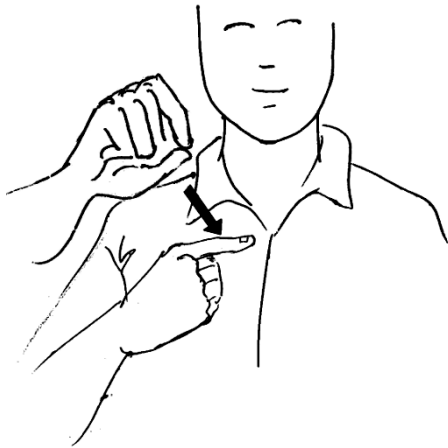
TENTH
Sign 'ten' then twist in, in a sudden motion
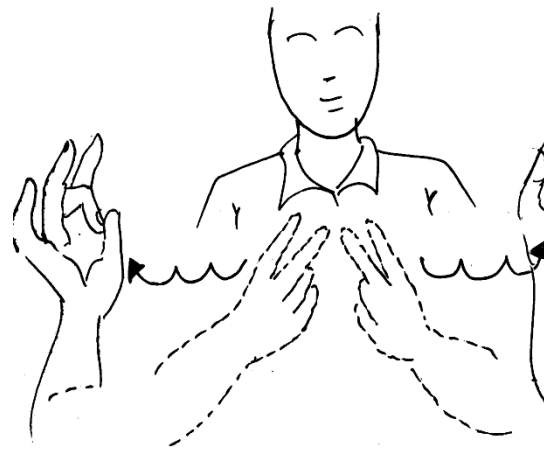
MANY

Both 'five' hands, facing in at chest level, move apart, while opening the fingers of both hands one by one
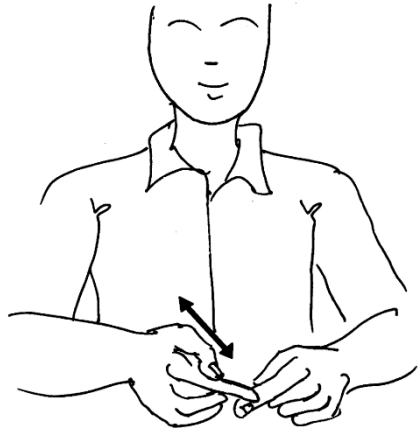
HALF
Right index finger makes a cutting motion on the left hand index finger at chest level

HEAD
Tap the head with the right hand

HAIR
Pick a few strands of hair with the index finger and the thumb of the right hand

FOREHEAD

Touch forehead with index finger and move it from one end to other end
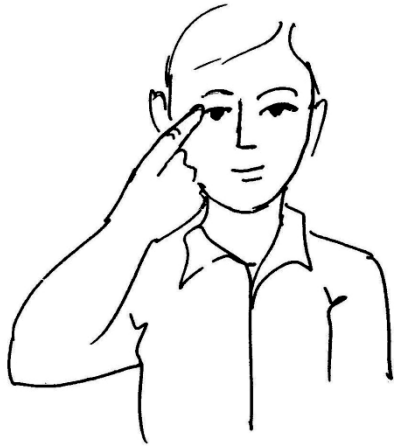
EYE
Point to the eye with right index
finger
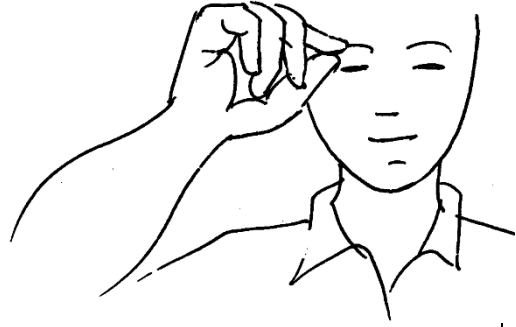
EYEBROW
Pinch the eyebrow with index
finger and thumb
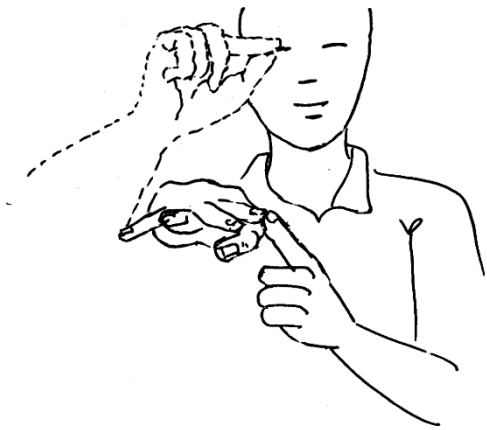
EYELID
Touch the eyelid, then show the palm downward and touch each finger with other hand index finger
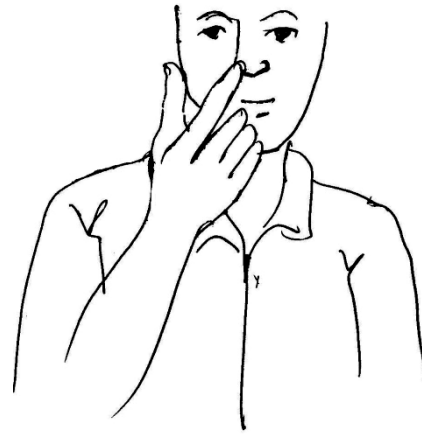
NOSE

Point to the nose with index

finger
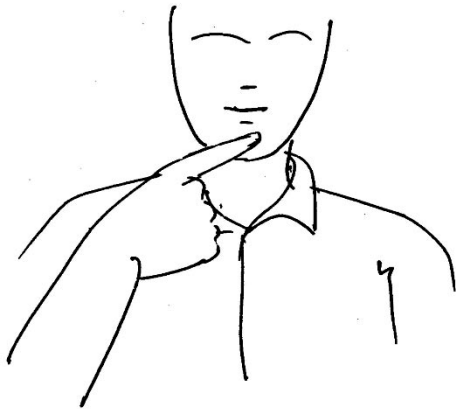
CHIN
Touch the chin with index finger

EAR
Touch the ear with index finger and thumb
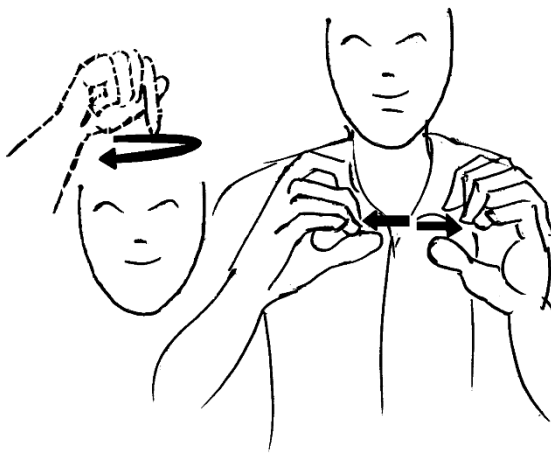
SKULL
Run the index finger in a clock-wise direction around the head then bend all fingers of both hands and place together and pull in opposite directions

SKIN

Pull the skin at the back of the left hand with the index finger and the thumb of the right hand
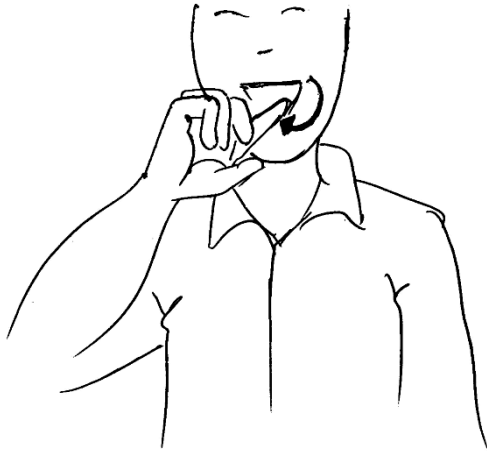
MOUTH
Run the index finger in clockwise
direction around the mouth

LIP
Touch the lips with index finger
and run it left to right

TEETH
Run the index Finger on the teeth from left to right

TONGUE
Show the tongue with the index finger of the right hand

PALATE
Open the mouth and show the palate with the index finger of the right hand
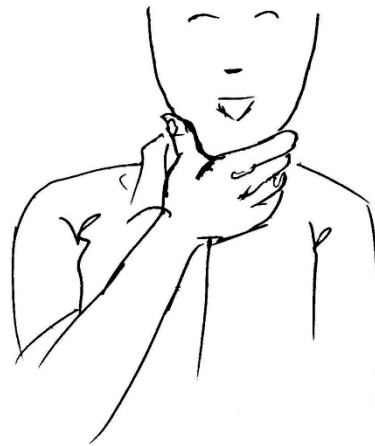
JAW
hold the jaw and move it
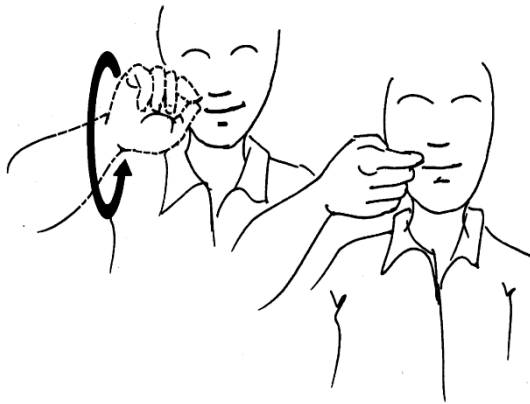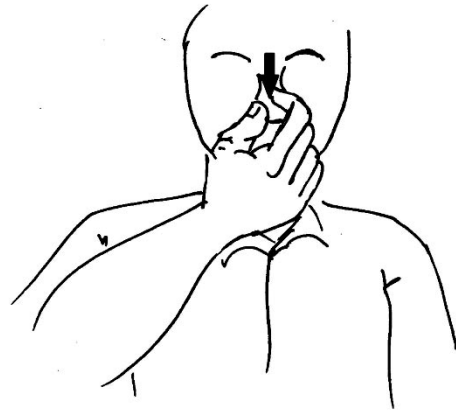
MOUSTACHE
Act out curling the moustache
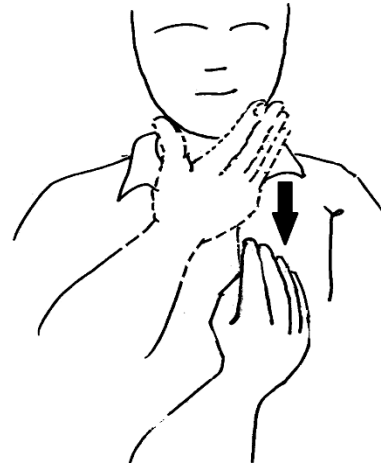
BEARD

Touch the jaw with the right bowl hand then move down and rest with 'flat o' hand pointing up at waist level
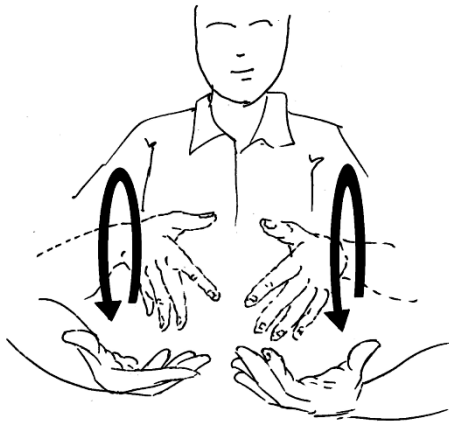
VOMIT
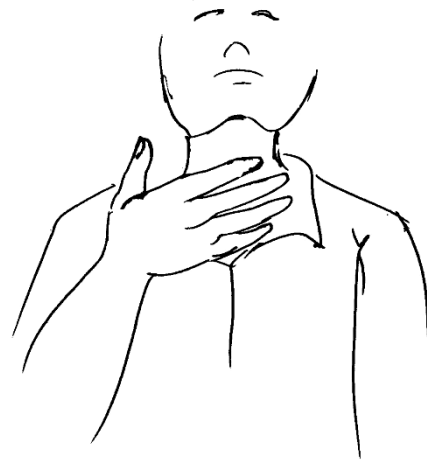Finger tips of both hands touch the chest and flip upwards and out ending in bend five hand

STOOL OF THE NOSE
Sneeze twice

EARWAX
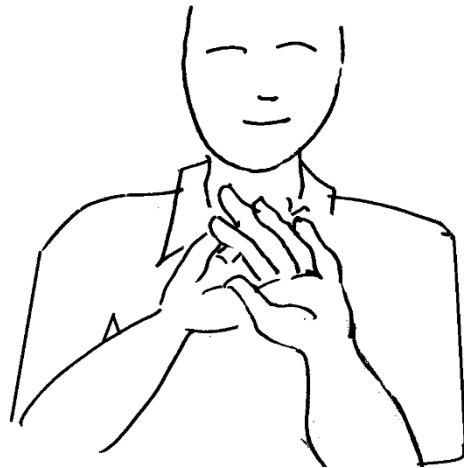Put the tip of index finger in the whole of the ear and move it twice, clock wise in it

NECK

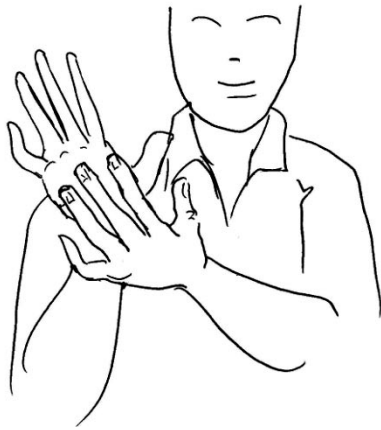Tap the right hand on the neck twice

SHOULDER
Tap the left shoulder with tip of
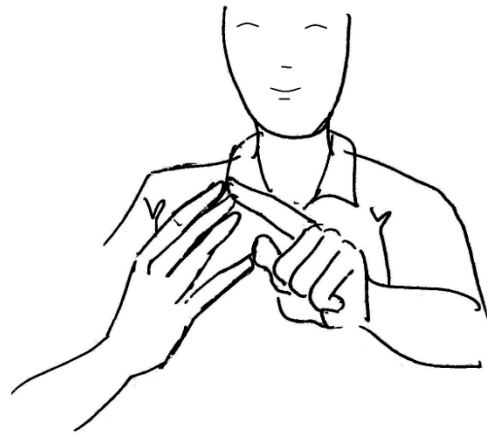index finger of right hand

HAND
Tap back of each hand by other
hand one after the other

PALM
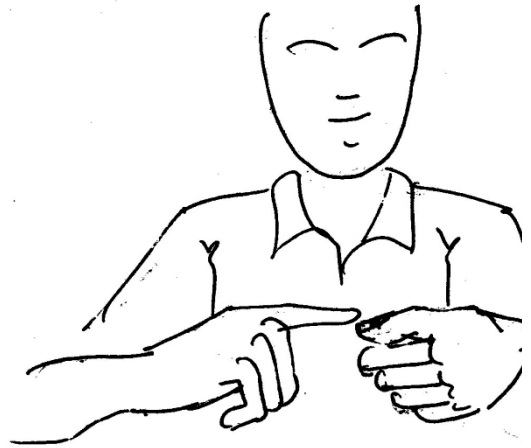Touch the left index finger to the right palm

FINGER
Touch the left hand fingers one by one with the right hand index finger
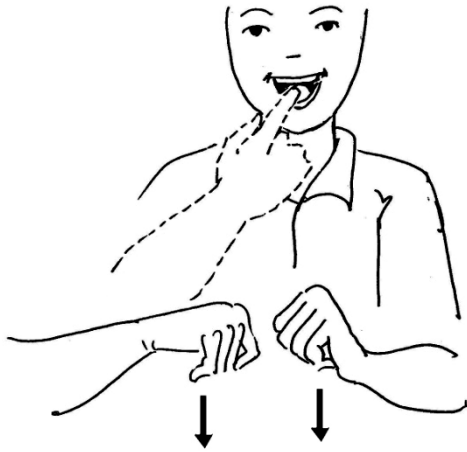
THUMB
Show the right thumb and touch with the left hand index finger
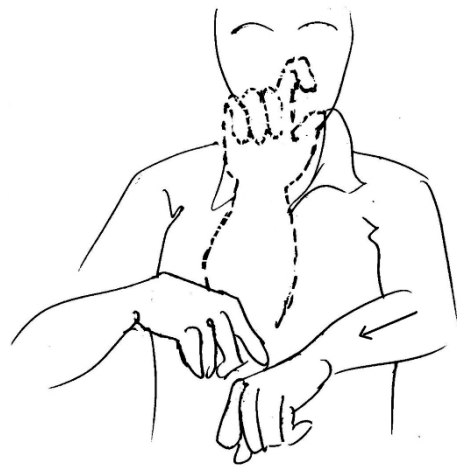

NAIL
Show the index finger of right one hand then act as if cutting the nail of index finger of left one hand facing down at chest level

MUSCLE
Sign 'red' then move both hand index finger up and down at chest level and then tap three times right hand index finger on the chest

NERVE
Sign 'green' then move index finger of right hand from shoulder to hand of left arm
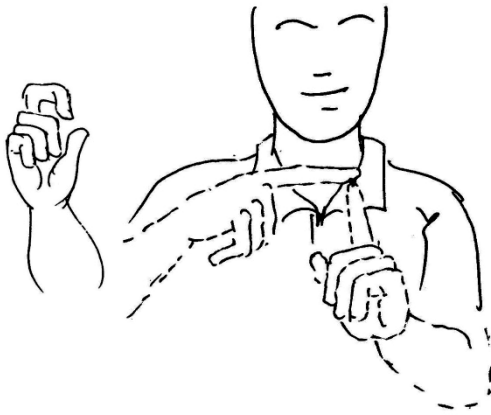
JOINT
Join tips of index fingers of both hands and move right hand up and down twice
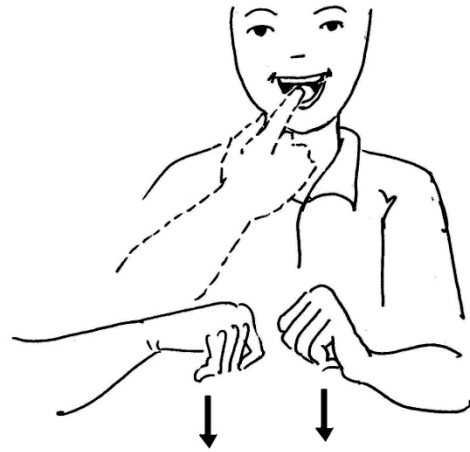
BLOOD
Sign 'red' then move both hand index finger up and dawn at chest level twice

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CHEST
Tap the right open hand on the chest
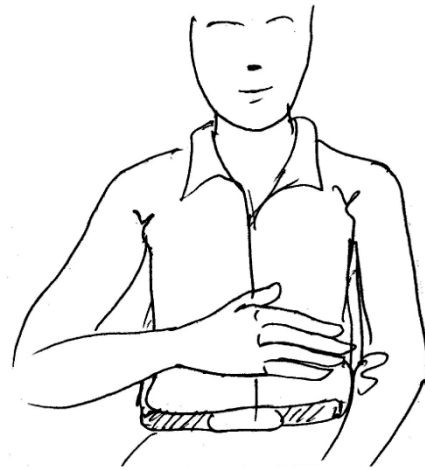
STOMACH
Tap the right open hand on the stomach
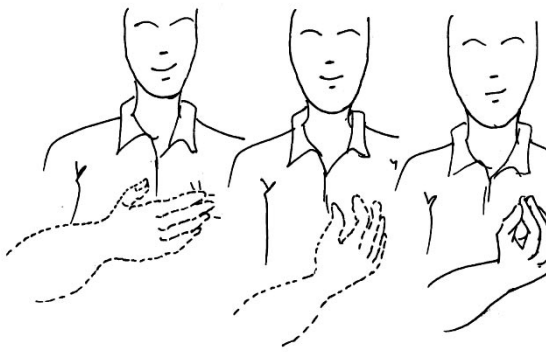
HEART
Touch the chest and then open
and close fingers pointing up to
show heartbeats
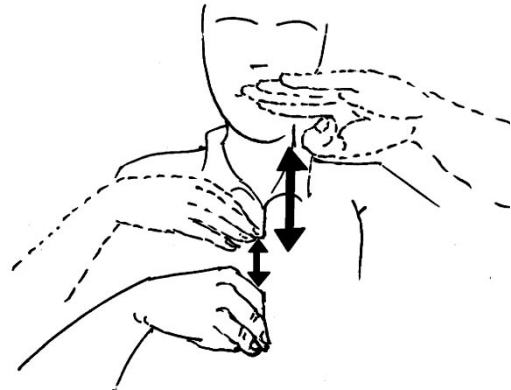
LUNG
Move both open hand up and
down at neck level then touch
the chest with right hand
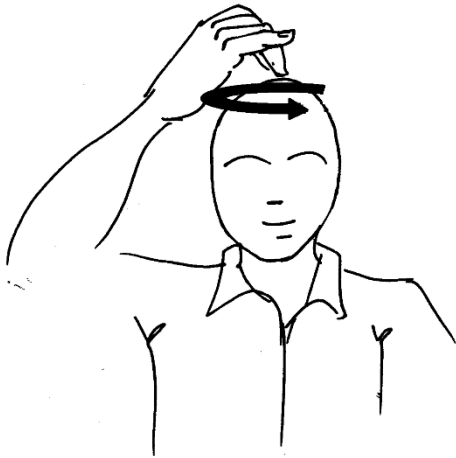
BRAIN
Make a circle round the head then tap the top of the head with index finger of the right hand

LEG
Run the right 'open' hand along the leg

KNEE
Point to the knee with the index
finger of the right hand

ANKLE
Point to the ankle with the right
hand index finger

HEEL
Point to the heel with the right
hand index finger

TOE

Point to the toes with the index
finger of the right hand
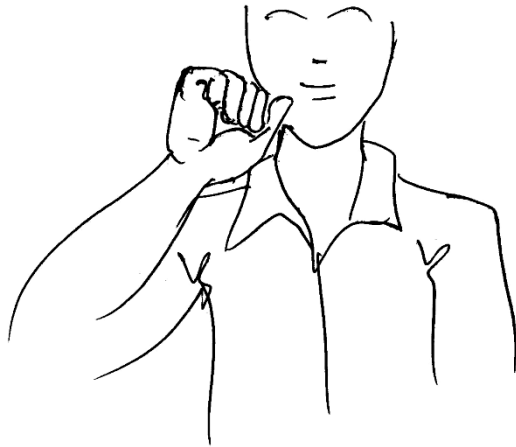
WATER
The tip of the thumb of the right 'thumbs-up' shaped hand touches the mouth
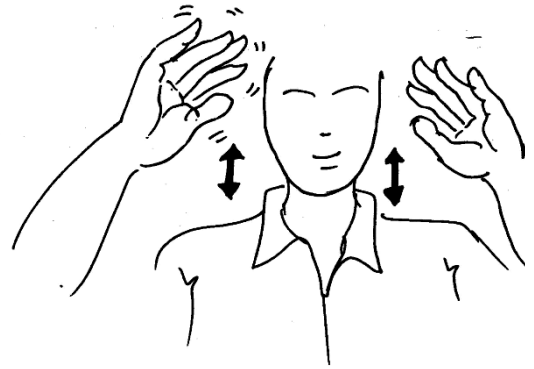
RAIN
Fingers of both hands, placed at head level, facing down and pointing in opposite directions, move up and down

FLAG

Place the right arm vertical, like a flag, than move only hand in and out

TREE

Place right arm, vertically, than open all fingers of right hand horizontally and shake it.

DIFFERENT
Both 'V' hands, facing in at chest level, twirl out
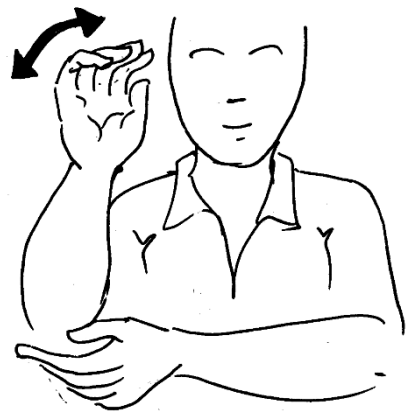
SNAKE
Place the right bend hand, facing out, near the right shoulder

COUNT

Place the right open hand facing in at chest level, and touch the thumb with each finger one by one, starting with the little finger.

MADRAS

Place three fingers on the forehead and then move it from left to right

Bibliography of Indian Sign Language and Indian Deaf Studies

Compiled by

Samar Sinha

Aboh, Enoch, et al. 2005. When a wh-word is not a wh-word: The case of Indian Sign Language. In Rajendra Singh & Tanmoy Bhattacharya (eds.), *The Yearbook of South Asian Languages & Linguistics.* 11-43. Berlin, New York: Mouton de Gruyter.

Azad, Yasmin A. 2004. Education of hearing and speech impaired. In J. S. Rajput (ed.), *Encyclopedia of Indian Education 1:* 772-778. New Delhi: NCERT.

Cross, J. 1977. Toward a standardized sign language in India. *Gallaudet Today* 8: 26-29.

Culshaw, Murray. 1983. *It will soon be Dark...The Situation of the Disabled in India.* New Delhi: Lithouse Publications.

Dasgupta, Mausomi. 1988. A Psycholinguistic Study of the Expressive Vocabulary of Hearing Impaired Children between the Ages of 5 to 8 Years. Unpublished M. Phil. Dissertation. University of Delhi.

Deshmukh, Dilip (ed.). 1997. *Sign Language and Bilingualism in Deaf Education.* Ichalkaranji, India: Deaf Foundation.

Deshmukh, Dilip. 1994. The status of sign language in deaf education in India. *Signpost* 7.1: 49-52.

Gopalakrishnan, V. 1998. Sign Language: A deaf person's hope and vision for the future. In P. Immanuel, et al. (eds.), *Listening to Sounds and Signs.* 81-86. Bangalore: Books For Change.

Hidam, Gourshyam. 2010. Incorporation in IPSL. Unpublished M.Phil. diss. University of Delhi.

Indian Sign Language Dictionary. 2001. Coimbatore: Sri Ramakrishna Mission Vidyalaya Printing Press.

Jepson, Jill. 1991a. Two sign languages in a single village in India. *Sign Language Studies* 20.70: 47-59.

Jepson, Jill. 1991b. Urban and rural sign language in India. *Language in Society* 20: 37-57.

Jepson, Jill. 1991c. Some aspects of deaf experience in India. *Sign Language Studies* 20.73: 453-459.

Julka, Anita & Sabu M., Gibu. (to appear). Identity or Impasse: Access to quality education for children with hearing impairments. NCERT, New Delhi. (ms.).

Mathew, Rosmin & Sinha, Samar. 2005. *Agree in Indian Sign Language.* A paper presented at V Asian GLOW Conference, New Delhi.

Mazumdar, Nirmalaya Kumar. 1972. A preliminary study on consanguinity and deafness. *Indian Journal of Medical Association* 88.3: 78-83.

Narang, Vaishna. 2004. Sign language: Issues and challenges Ahead. *JSL,* Spring 2004: 47-157.

Richa. 2003. Reflexives in Hindi-Urdu and Indian Sign Language. Unpublished M.Phil. dissertation submitted to Jawaharlal Nehru University.

Sharma, Onkar. 1995. Sign language - controversy - status. *All India Federation of the Deaf Newsletter* Dec. 1995. 2. New Delhi.

Sinha, Samar (ms). *Index in Sign Language: An interface requirement in search of features*. Sikkim University.

Sinha, Samar (ms). Review of *Sign Language in Indo-Pakistan: A Description of a Signed Language* (Ulrike Zeshan). Jawaharlal Nehru University.

Sinha, Samar (ms). *Sublexical Structure of Indian Sign Language.* Jawaharlal Nehru University

Sinha, Samar & Richa. 2006. The Manner of incorporation of incorporation of manner in Indian Sign Language. A paper presented at the *First SCONLI*, CIEFL, Hyderabad.

Sinha, Samar. 2003. A Skeletal Grammar of Indian Sign Language. M. Phil. Dissertation, Jawaharlal Nehru University, New Delhi, India.

Sinha, Samar. 2005. Classifiers in Indian Sign Language. Jawaharlal Nehru University. (ms.).

Sinha, Samar. 2006. Pronoun does not climb trees. A paper presented at *National Seminar on Language and Interfaces*, University of Delhi.

Sinha, Samar. 2006. Towards Empowering Indian Sign Language. A paper presented at 28th *All India Conference of Linguists*, Banaras Hindu University, Varanasi, India.

Sinha, Samar. 2008. A Grammar of Indian Sign Language.Ph. D. Thesis, Jawaharlal Nehru University, New Delhi, India.

Sinha, Samar. 2010. *Classifier Doubling in Indian Sign Language,* a poster presentation at Conference on Sign Linguistics and Deaf Education in Asia, Chinese University of Hong Kong.

Sinha, Samar. 2011 . *P in Indian Sign Language*, a poster presentation at the FEAST Colloquium, Venice at the University of Venice, Italy.

Sinha, Samar. 2013. *Phonetics of Sonority in Indian Sign Language,* a poster presentation at Conference on Sign Linguistics and Deaf Education in Asia, Chinese University of Hong Kong.

Vasishta, M., Woodward, J. & Wilson, K.1978. Sign language in India: Regional variation within the deaf population. *Indian Journal of Linguistics* 4. 2: 66-74.

Vasishta, Madan & Meher Sethna. 1994. Clubs for deaf people in India. In Carol J. Erting, et al. (eds.), *The Deaf Way: Perspectives from the International Conference on Deaf Culture.* 532-4. Washington, DC: Gallaudet University Press.

Vasishta, Madan, Woodward, James & deSantis, Susan. 1981. *An Introduction to Indian Sign Language (Focus on Delhi)*. New Delhi: All India Federation of the Deaf.

Vasishta, Madan, Woodward, James & deSantis, Susan. 1985. *An Introduction to the Bangalore Variety of Indian Sign Language.* Washington, D.C.: Gallaudet University Press (Gallaudet Research Institute Monograph, No. 4).

Vasishta, Madan, Woodward, James & deSantis, Susan. 1986. *An Introduction to the Bombay Variety of Indian Sign Language.* Washington, D.C.: Gallaudet University Press (Gallaudet Research Institute Monograph, No. 4).

Vasishta, Madan, Woodward, James & deSantis, Susan. 1987. *An Introduction to the Calcutta Variety of Indian Sign Language.* Washington, D.C.: Gallaudet University Press (Gallaudet Research Institute Monograph, No. 4).

Vasishta, Madan, Woodward, James & deSantis, Susan. 1987b. Indian Sign Language. In J. V. van Cleve (ed.), *Gallaudet Encyclopedia of Deaf People and Deafness 3.* 79-81. New York: McGraw-Hill Book Company.

Vasta, Rajendra Singh. 1972. History of the education and training of the Deaf-Mutes in India 1884-1915. *Teacher Education* 6.4: 23-36.

Victor, P. 1982. Pre-school education and parent counselling for integration in India. In Herber Feuchte, et al. (eds.), *Proceedings of the International Congress on Education of the Deaf in Hamburg 1980,* 2: 152-66. Heidelberg: Groos.

Woodward, J. C. 1993. The relationship of sign language varieties in India, Pakistan, & Nepal. *Sign Language Studies* 78: 15-22.

Zeshan (ms.). Functions of the index in IPSL. University of Central Lancashire.

Zeshan, U. 2002. Towards a notion of 'word' in sign languages. In Dixon, R.M.W. & A.Y. Aikhenvald (eds.), *Word. A cross-linguistic typology.* 153-179. Cambridge: Cambridge University Press.

Zeshan, Ulrike, Vasishta, Madan M. & Sethna, Meher. 2005. Developmental articles implementation of Indian Sign Language in educational settings. *Asia Pacific Disability Rehabilitation Journal* 6. 16: 1 2005

Zeshan, Ulrike. 2000. *Sign Language in Indo-Pakistan: A Description of a Signed Language.* Philadelphia/Amsterdam: John Benjamins Publishing Company.

Zeshan, Ulrike. 2001. Mouthing in Indopakistani Sign Language: Regularities and variation. In P. Boyes-Braem & R. Sutton-Spence (eds.), *The Hand is the Mouth: The Mouth as Articulator in Sign Language.* Hamburg: Signum.

Zeshan, Ulrike. 2003a. 'Classificatory' constructions in Indo-Pakistani Sign Language: Grammaticalization and lexicalisation processes. In K. Emmorey (ed.), *Perspectives on Classifier Constructions in Sign Languages.* 113-141. Mahwah, New Jersey & London: Lawrence Erlbaum Associates.

Zeshan, Ulrike. 2003b. Indo-Pakistani Sign Language Grammar: A typological outline. *Sign Language Studies* 3.2: 157-212.

Zeshan, Ulrike. 2004a. Interrogative constructions in signed languages: Crosslinguistic Perspectives. *Language* 80.1: 7-39.

Zeshan, Ulrike. 2004b. Hand, head, and face: Negative constructions in sign languages. *Linguistic Typology* 8: 1-58.

Sign Language and Deaf Studies

Andersson, Yerker. 1994. Deaf people as a linguistic minority. In Ingram Ahlgren & Hyltenstam (eds.), *Bilingualism in Deaf Education.* 9-13. Hamburg: Signum-Verl.

Baker-Shenk, C. & Cokely, D.1980. *American Sign Language: A teacher's resource text on grammar and culture.* Washington DC: Gallaudet University Press.

Branson, Jan & Miller, Don. 1997. Research methods for studying the language of the signing deaf. In N.H. Hornberger & David Corson (eds.), *Encyclopaedia of Language and Education Vol. 8. Research Methods in Language and Education.* Dorchrect/Boston/London: Kluwer Academic Publishers.

Carstairs-McCarthy, Andrew. 1999. *The Origins of Complex Language: An inquiry into the evolutionary beginning of sentences, syllables, and truth.* New York: Oxford.

Carstairs-McCarthy, Andrew. 2001. ASL syllables and language evolution: A response to Uriagereka. *Language* 77.2: 343-349.

Casey, Shanon. 1999. The continuity of "Agreement": From pre-linguistic action gestures to ASL verbs. *High Desert Linguistic Society* 2.1:1-13.

Cogill-Koez, D. 2000. Do Athapaskan languages provide a precedent for signed language 'classifier predicates'? *Sign Language & Linguistics* 3 .2: 257-259.

Conlin, F., Hagstrom, P. & Neidle, C. 2004. A particle of indefiniteness in American Sign Language. *Linguistic Discovery*. 2.1. 1-29.

Corballis, Michael. 2002. Did language evolve from manual gestures? In Alison Ray (ed.), *The Transition to Language.* 161-179. Oxford: Oxford University Press.

Corina, David & Sandler, Wendy. 1993. On the nature of phonological structure in sign language. *Phonology* 10.2: 155-207.

Corina, David, Bellugi, Ursula, Kritchevsky, M., O'Grady-Batch, L., Norman, F. 1990. Spatial relations in signed vs. spoken language: Clues to right parietal functions. A paper presented at the *Academy of Aphasia*, Baltimore.

Corina, David. 1990. Reassessing the role of sonority in syllable structure: Evidence from a visual-gestural language. In *Papers from the Twenty-Sixth Regional Meeting,*

Chicago Linguistic Society 2. Chicago: Chicago Linguistic Society, University of Chicago.

Crasborn, Onno. 2001. Phonetic Implementation of Phonological Categories in Sign Languages of the Netherlands. Ph.D. Dissertation. Leiden University.

DeMatteo, Asa. 1977. Visual imagery and visual analogues in American Sign Language. In Lynn Friedman (ed.), *On the Other Hand: New Perspectives on American Sign Language.* 109-136. New York/San Francisco/London: Academic Press.

Duncan, Susan. 2005. Gesturing in signing: A case study from Taiwan Sign Language. *Language and Linguistics* 6.2: 279-318.

Emmorey, Karen. 1999. Do signers gesture? In L.S. Messing & Ruth Cambell (eds.), *Gesture, Speech, and Sign.* 133-159. New York: Oxford University Press.

Emmorey, Karen.1996. The confluence of space and language in signed languages. In Paul Bloom, et al. (eds.), *Language and Space.* 171-209. Cambridge, MA: MIT Press.

Fernald, T.B. & D.J. Napoli. 2000. Exploitation of morphological possibilities in signed languages: Comparison of American Sign Language with English. *Sign Language & Linguistics* 3 .1: 3-58.

Fisher, S & Gough, B. 1978. Verbs in American Sign Language. *Sign Language Studies* 18: 17-48.

Fisher, Susan & Janis, Wynne. 1990. Verb sandwiches in American Sign Language. In Siegmund Prillwitz & Tomas Vollhaber (eds.), *Current Trends in European Sign Language Research: Proceedings of the Third European Congress on Sign Language Research.* 279-294. Hamburg: Signum.

Fisher, Susan D. 1996. The role of agreement and auxiliaries in sign language. *Lingua* 98: 103-119.

Friedman, Lynn A. 1975. Space, time & person reference in American Sign Language. *Language* 51: 940-961.

Friedman, Lynn.1977. Formational properties of American Sign Language. In Lynn Friedman (ed.), *On the Other Hand: New Perspectives on American Sign Language.* 57-107. New York/San Francisco/London: Academic Press.

Glück, S. & R. Pfau. 1998. On classifying classification as a class of inflection in German Sign Language. In Cambier-Langeveld, T., A. Lipták & M. Redford .(eds.), *Proceedings of ConSole 6.* 59-74. Leiden: SOLE.

Goldin-Meadow, Susan. 1999. When does gesture become language? A study of gesture used as a primary communication system by deaf children of hearing parents. In Kathleen R. Gibson, et al. (eds.), *Tools, Language and Cognition in Human Evolution.* 63-85. Cambridge, England UK: Cambridge University Press.

Groce, N. E. 1985. *Everyone Here Spoke Sign Language: Hereditary Deafness on Martha's Vineyard.* Cambridge: Harvard University Press.

Hansen, Kathryn Lynn. 2006. Recombinant Features for the Movements of American Sign Language. Ph.D. Dissertation. Purdue University.

Hickok, G. et al. 1996. The role of the left frontal operculum in sign language aphasia. *Neurocase* 2: 373–380.

Hickok, G., et al. 1999. Discourse deficits following right hemisphere damage in deaf signers. *Brain and Language* 66: 233-248.

Hickok, G., Klima, E., Kritchevsky, M. & Bellugi, U. 1995. A case of ''sign blindness'' following left occipital damage in a deaf signer. *Neuropsychologia* 33: 1597–1606.

Hulst, H. van der. 1996. On the other hand. *Lingua* 98: 121-143.

Janis, W. 1995. A crosslinguistic perspective on ASL verb agreement. In K. Emmorey & J. Reilly (eds.), *Language, Gesture and Space.* 195-224. Hillsdale, NJ: Lawrence Erlbaum.

Johnston, T. & Schembri, A. 1999. On defining lexeme in a sign language. *Sign Language & Linguistics 2:* 115–185.

Kegl, J.A. 1986. Clitics in American Sign Language. In E. Swan (ed.), *Syntax and Semantics 19.* New York: Academic Press.

Klima, E. & Bellugi, U. 1979. *The Signs of Language.* Cambridge, MA: Harvard University Press.

Lane, Harlan. 1995. Constructions of deafness. *Disability and Society* 10.2: 171-189.

Lane, Harlan. 2002. Do Deaf people have a disability? *Sign Language Studies* 2.4: 356-379. Liddell, Scott K. & Metzger, M. 1998. Gesture in sign language discourse. *Journal of Pragmatics 30:* 657-697.

Liddell, Scott K. 1995. Real, surrogate and token space: Grammatical consequences in ASL. In K. Emmorey & J. Reilly (eds.), *Language, Gesture and Space.* 19-41. Hillsdale, NJ: Lawrence Erlbaum.

Liddell, Scott K. 2000. Blended spaces and deixis in sign language discourse. In D. McNeill (ed.), *Language and Gesture.* 331-357. Cambridge, UK: Cambridge University Press.

Lillo-Martin, D. 1986. Two kinds of null arguments in American Sign Language. *Natural Language and Linguistic Theory 4*: 415-444.

Lillo-Martin, Diane & Klima, Edward. 1990. Pointing out differences: ASL pronouns in syntactic theory. In S. Fisher & P. Siple (eds.), *Theoretical Issues in Sign Language Research 1:* 191-210. Chicago: University of Chicago Press.

Lillo-Martin, Diane. 1990. Parameters for questions: Evidence from WH-movement in American Sign Language. In Ceil Lucas (ed.), *Sign Language Research: Theoretical Issues.* 211-222. Washington, DC: Gallaudet University Press.

Lillo-Martin, Diane. 1991. *Universal Grammar and American Sign Language: Setting the Null Argument Parameters.* Dordrecht: Kluwer.

Lillo-Martin, Diane. 2002. Where are all the modality effects? In Richard P. Meier, et al. (eds.), *Modality and Structure in Signed and Spoken Languages.* 241-262. Cambridge: Cambridge University Press.

MacLaughlin, D. 1997. The Structure of Determiner Phrase: Evidence from American Sign Language. Ph.D. Thesis. Boston University.

Maher, Jane. 1996. *Seeing Language in Sign: The Work of William C. Stokoe*. Washington DC: Gallaudet University Press.

Mandell, M. 1977. Iconic devices in American Sign Language. In Lynn A. Friedman (ed.), *On the Other Hand: New Perspectives on American Sign Language.* 57-107. New York/San Francisco/London: Academic Press.

Marsaja, G. 2008. *Desa Kolok – A deaf village and its sign language in Bali, Indonesia.* Nijmegen: Ishara Press.

Mathur, G. and C. Rathmann. 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.

Mathur, Gaurav. 2000. *Verb agreement as alignment in signed languages*. Ph.D. Dissertation. MIT Press.

McNeill, David. 1992. *Hand and Mind: What Gestures Reveals about Thought.* Chicago: University of Chicago Press.

Meir, I. 2001. Verb classifiers as noun incorporation in Israeli Sign Language. In Booij, G. & J. van Marle (eds.), *Yearbook of Morphology 1999.* 299-319. Dordrecht: Kluwer.

Meir, Irit. 2002. A cross modality perspective on verb agreement. *Natural Language & Linguistic Theory* 20: 413-450.

Mühlhäusler, Peter & Harré, Rom. 1990. *Pronouns and People: The Linguistic Construction of Social and Personal Identity*. Oxford: Basil Blackwell.

Napier, Jemina. 2002. The D/deaf -H/hearing debate. *Sign Language Studies* 2.2: 141-149.

Neidle, C. et al. 2000. *The Syntax of American Sign Language: Functional categories and hierarchical structure.* Cambridge: MIT Press.

Nonaka, Angela M. 2004. The forgotten endangered languages: Lessons on the importance of remembering from Thailand's Ban Khor Sign Language. *Language in Society* 33. 737-767.

Nyst, V. 2007. *A descriptive analysis of Adamorobe Sign Language (Ghana).* Utrecht: LOT.

Okrent, Arika. 2002. A modality-free notion of gesture and how it can help us with the morpheme vs. gesture question in sign language linguistics (or at least give us some criteria to work with). In Richard P. Meier, Kearsy Cormier, & David Quinto-Pozos (eds.), *Modality and structure in signed and spoken language.* 175–198. Cambridge: Cambridge University Press.

Oliver, Mike. 1990. *The Politics of Disablement.* Basingstko: MacMillan.

Padden, C.A. 1988. Grammatical theory and signed languages. In F. Newmeyer (ed.), *Linguistics: The Cambridge Survey II.* Cambridge: Cambridge University Press.

Perlmutter, David M. 1986. No nearer to the soul. *Natural Language and Linguistic Theory*

Padden, C.1980. The deaf community and the culture of deaf people. In C. Baker & R. Battison (eds.), *Sign Language and the Deaf Community: Essays in honor of William C. Stokoe.* 186-203. Silver Spring MD: NAD.

Perlmutter, David M. 1992. Sonority & syllable structure in American Sign Language. *Linguistic Inquiry* 23: 407-42.

Petitto, Laura Ann and. Marentette, Paula F. 1991. Babbling in the manual mode: Evidence for the ontogeny of language. *Science* 251: 1483.

Perlmutter, David M. 1992. Sonority & syllable structure in American Sign Language. *Linguistic Inquiry* 23: 407-42.

Petitto, Laura Ann and. Marentette, Paula F. 1991. Babbling in the manual mode: Evidence for the ontogeny of language. *Science* 251: 1483.

Petronio, Karen. 1993. Clause Structure in American Sign Language. Ph.D. Dissertation. University of Washington.

Pfau, Roland & Steinbach, Markus. 2006. Pluralization in sign and in speech: A cross-modal typological study. *Linguistic Typology* 10: 135-182.

Pfau, Roland. 2002. Applying morphosyntactic and phonological readjustment rules in natural language negation. In Meier, R.P., K.A. Cormier & D.G. Quinto-Pozos (eds.), *Modality and structure in signed and spoken languages.* 263-295. Cambridge: Cambridge University Press.

Poizner, H., Klima, E. & Bellugi, U. 1987. What the Hands Reveal about the Brain. Cambridge: MIT Press.

Ragir, Sonia. 2002. Constraints on Communities with Indigenous Sign Languages: Clues to the Dynamics of Language Genesis. In Alison Wray (ed.), *The Transition to Language.* Oxford: Oxford University Press.

Rathmann, C. 2005. Event structure in American Sign Language. Ph.D. dissertation, University of Texas at Austin.

Rathmann, Christian & Mathur, Gaurav. 2002. Is verb agreement the same cross modally? In R. P. Meier, et al. (eds.), *Modality and Structure in Signed and Spoken Languages.* Cambridge: Cambridge University Press.

Rathmann, Christian & Mathur, Gaurav. 2005. Unexpressed features of verb agreement in signed languages. In G. Booij et al. (eds.), *Morphology and Linguistic Typology, On-line Proceedings of the Fourth Mediterranean Morphology Meeting (MMM4).* 235-250. Catania, University of Bologana.

Rathmann, Christian. 2000. The optionality of agreement phrase: Evidence from signed languages. MA Report. University of Texas.

Reagan, Timothy. 1995. A Sociocultural understanding of deafness: American Sign Language and the Culture of Deaf people. *International Journal of Intercultural Religion* 19.2: 239-251.

Sacks, Oliver. 1991. *Seeing Voices: A Journey into the World of Deaf.* London: Pan Books.

Schembri, A. 2003. Rethinking 'Classifiers' in Signed Languages. In K. Emmorey (ed.), *Perspectives on Classifier Constructions in Sign Languages.* 3-34. Mahwah, New Jersey & London: Lawrence Erlbaum Associates Publishers.

Seigel, Jules Paul. 1969. The enlightenment and the evolution of a language of signs in France and England. *Journal of History of Ideas* 30.1: 96-115.

Senghas, Anne. 1995. *Children's Contribution to the Birth of Nicaraguan Sign Language.* Cambridge: MIT Press.

Sexton, A.L. 1999. Grammaticalization in American Sign Language. *Language Sciences* 21: 105-141.

Shakespeare, T. 1997. Cultural representation of disabled people: dustbins or disapproval? In L. Barton & M. Oliver (eds.), *Disability Studies: Past, Present and Future.* Leeds: Disability Press.

Skutnabb-Kangas, T. 2000. Sign Languages- How the deaf (and other sign language users) are deprived of their Linguistic Human Rights. In Skutnabb-Kangas (ed.), *Linguistic Genocide in Education.* Mahwah, NJ & London: Lawrence Erlbaum Associates.

Skutnabb-Kangas, Tove & Phillipson, Robert.1994. *Linguistic Human Rights: Overcoming Linguistic Discrimination.* Berlin, New York: Mouton de Gruyter. Smith, Wayne. 1990. Evidence for auxiliaries in Taiwan Sign Language. In S. D.

Fisher, & P. Siple (eds.), *Theoretical Issues in Sign Language Research I:* 211-228. Chicago: The University of Chicago Press.

Steinbach, M. & R. Pfau. 2007. Grammaticalization of auxiliaries in sign languages. In Perniss, P., R. Pfau & M. Steinbach (eds.), *Visible variation: Cross-linguisticstudies on sign language structure.* 303-339. Berlin: Mouton de Gruyter.

Stokoe & Marschak. 1999. Signs, gestures, and signs. In L.S. Messing & Ruth Cambell (eds.), *Gesture, Speech, and Sign.* 161-181. New York: Oxford University Press.

Stokoe, W. C. 1974. Classification and description of sign languages. In T. A. Seboek (ed.), *Current Trends in Linguistics 12:* 345-371. The Hague & Paris: Mouton.

Stokoe, W. C. 1980. *Sign and Culture: A Reader for Students of ASL.* Silver Spring, MD: Linstok Press. Stokoe, W., Casterline, Dorothy, Carl Croneberg. 1965. *The Dictionary of American Sign Language on Linguistic Principles.* Silver Spring, MD: Linstok Press.

Stokoe, William C. 1960. *Sign Language Structure: An outline of the visual communication system of the American deaf.* Studies in Linguistics, Occasional Papers 8. New York: University of Buffalo.

Supalla, T. 1986. The Classifier system in American Sign Language. In C. Craig (ed.), *Noun Classes and Categorisation.* 181-214. Amsterdam: John Benjamins.

Supalla, Ted & Newport, Elissa. 1978. How many seats in a chair? In P. Siple (ed.), *Understanding Language through Sign Language Research.* 91-214. New York: Academic Press.

Sutton-Spence, Rachel & Woll, Bencie. 1999. *The Linguistics of British Sign Language.* Cambridge: Cambridge University Press.

Talmy, Leonard. 1983. How language structures space. In H. Pick, & L. Acredolo, (eds.), *Spatial Orientation: Theory, Research, and Application.* New York: Plenum Press.

Tang, G. 2003. Verbs of motion and location in Hong Kong Sign Language: Conflation and lexicalization. In K. Emmorey (ed.), *Perspectives on Classifier Constructions in Sign Languages.* 143-165. Mahwah, New Jersey & London: Lawrence Erlbaum Associates, Publishers.

Tervoort, B.T. 1968. You me downtown movie fun? *Lingua* 21: 455-465.

Terzi, Lorella. 2004. The Social model of disability: A philosophical critique. *Journal of Applied Philosophy* 21.2: 141-156.

Thomas, C. 2002. Disability theory: Key ideas, issues and thinkers. In C. Barenes, M. Oliver, & L. Barton (eds.), *Disability Studies Today*. 38-57. Cambridge: Polity Press.

Thompson, R., K. Emmorey & R. Kluender. 2006. The relationship between eye gaze and verb agreement in American Sign Language: an eye-tracking study. *Natural Language & Linguistic Theory* 24: 571-604.

Thompson, Robin; Emmorey, Karen. 2003: The relationship between eye gaze and verb agreement in American Sign Language: An eye-tracking study. A paper presented at the *Linguistic Society of America Annual Meeting*.

Tversky, Barbara, Kim, Joseph & Cohen, Andrew (to appear). Mental models of spatial relations and transformations from language. In Christopher Habel & Gert Rickheit (eds.), *Models in Discourse Processing and Reasoning*. North-Holland Publishing Company.

Uriagereka, Juan. 2001. Review of Carstairs-McCarthy: *The Origins of Complex Language: An Inquiry into the Evolutionary Beginning of Sentences, Syllables, and Truth. Language* 77.2: 368- 342.

Uyechi, Linda. 1996. *The Geometry of Visual Phonology.* Standford, CA: CLSI Publications. Valli, Clayton & Lucas, Ceil. 1992. *Linguistics of American Sign Language: A Resource Text for ASL Users.* Washington, DC: Gallaudet University Press.

Van Cleve, J. V., & Crouch, B. A.1989. *A Place of their Own: Creating the Deaf Community in America.* Washington, D.C: Gallaudet University Press.

Vermeerbergen, Myriam. 2006. Past and current trends in sign language research. *Language & Communication* 26: 168-192.

Wilbur, R.B. 2005. A reanalysis of reduplication in American Sign Language. In Hurch, B. (ed.), *Studies on reduplication.* 595-623. Berlin: Mouton de Gruyter.

Wilcox, S. 1992. *The phonetics of fingerspelling*. Amsterdam: Benjamins.

Woll, B. & P. Ladd. 2003. Deaf communities. In Marschark, M. & P.E. Spencer (eds.), *Oxford handbook of deaf studies, language, and education.* 151-163. Oxford: Oxford University Press.

Woll, Bencie. 1983. The semantics of British Sign Language signs. In J. Kyle, & B. Woll (eds.), *Language in Sign: An International Perspective on Sign Language.* Beckenham: Croom Helm.

Woodward, J. C. 1972. Implications for sociolinguistics research among the deaf. *Sign Language Studies 1: 1-7.*

Woodward, James C. 1978. Historical bases of American Sign Language. In P. Siple (ed.)*, Understanding Language through Sign Language Research.* 333-348. New York: Academic Press.

Zwitserlood, Inge. 1996. Classifying Hand Configurations in Nederlandese Gebarentaal (Sign Languages of the Netherlands). Ph.D. Dissertation. University of Utrecht.

Zhang, N.N. 2007. Universal 20 and Taiwan Sign Language. *Sign Language & Linguistics* 10.1: 55-81.