TWO SIGN LANGUAGES: A REPORT ON WORK IN PROGRESS

Interest in sign languages is not new to anthropology for Tylor (1865), Boas (1911) and Kroeber, amongst others, made seminal contributions in this area.[1] It was Tylor who realised that both speech and 'the gesture language'[2] are dependent upon human powers of symbolization and abstraction, Boas who recognised language as an artificial product of culture and that there could be no such thing as primitive language, and Kroeber who emphasized the arbitrary choices and artificial commitment between potential expressions and their meaning in a sign language. These men thus set the stage for later developments that might contribute to a more developed understanding, by anthropologists, of the values of literacy with regard to sign systems, and to ways in which the medium of human movement is structured into complex systems of meaning.

In tabular form, in Figure 1, I have devised a chronology of the literature about sign languages to which I will refer throughout the paper.[3] It begins with the Abbé de l'Épée and his successor, Abbé Sicard in France because they pioneered the use of signing in the formal education of the deaf, and documented their ideas and methods in 1776 and 1808 respectively, thus providing the earliest detailed records we appear to possess concerning a sign language. Since my study is concerned with two different signing systems, American Sign Language and Plains Indian Sign Language (hereafter referred to as ASL and PSL), and since the work of linguists and anthropologists are involved, the table represents a kind of map of the territory to which readers can refer, and an aid in keeping rather complex materials in order, because some new relations between these investigators from two different disciplines will be made. For example, it is interesting to note that both Tylor and Gallaudet (the first champion of sign language in the formal education of the deaf in the United States) were directly influenced by the work of Sicard.

The survey of literature has revealed several interesting facts: 1. The interest in sign languages during the late nineteenth century, which was dominated by evolutionary thought, led to speculations that sign languages were probably the predecessors to spoken language, cf. Maclean (1896), Webb (1931), Scott (1898). Anthropologists, however, did not seem quite so prone to this kind of thinking. Kroeber, for example, in discussion of the evidence on PSL, pointed out that "... what is characteristic of the sign language as an effective system of communication is precisely that it did not remain on a level of naturalness, spontaneity and full transparency" (1958:16, cited in Henson, 1974:19). 2. There is a noticeable gap regarding anthropological interest in sign languages between late nineteenth and early twentieth century writings and those which appeared in the late nineteen-fifties

Abbé de l'Epée (1712-1789) Paris
Abbé Sicard 'Theorie des Signes...'(1808),

1865
E.B. Tylor investigates
the 'gesture language'
in 'Research into the
Early History of Mankind'.

1816
Gallaudet and Clerc return to USA
and found the first school for the
deaf. They introduce pedagogical
use of signing based upon French
method.

1860
'Oral method' introduced and
signing discouraged.

1890
F. Boas includes
signs of N.W. coastal
Indians in ethno-
graphic materials.

North American Indian
Sign Languages.
Travellers, missionaries, army
captains: documentation and
collections e.g. Mallery (1881)
Clark (1885), Tomkins (1929)
et.al.

1934 Scott makes a film 'diction-
ary' of PSL signs (Smithsonian,
Washington D.C.).

1958
A.L. Kroeber., 'Sign Language
Inquiry' in Int. Journal of
American Linguistics. C.F.
Voegelin, 'Sign Language Analysis
on one level or two?' IJAL.

1960 La Mont West dissertation,
a linguistic analysis of PSL.

1968 M. Ljung '...Stratifica-
tional analysis of PSL'.

1978 Sebeok and Umiker-Sebeok
edit collection of past writings
on 'Aboriginal Sign Languages ...'

1976 -
Williams' semasiology: a theory
encompassing all structured human
movement systems including sign
languages, which theory makes
possible e.g. Hart- Johnson's
comparison of ASL with Graham
Technique and is the stimulus
for the present study of PSL and
ASL using Labanotation.

1957- 60
Stokoe begins linguistic research
on ASL.
1960 Publication of 'Sign Language
Structure'.
1966 Publication of dictionary of ASL.
1971 Linguistics research lab
established at Gallaudet College,
Washington D.C.

Ongoing research into ASL.

KEY	
——————— =	Direct influence.
— — — — — =	General line of development.

A GENEALOGY OF SIGN LANGUAGE RESEARCH RELEVANT TO THIS STUDY

Figure 1.

and early 'sixties; those of Kroeber (1958), Voegelin (1958), West (1960) and Ljung (1965). Sponsored by Kroeber and Voegelin, and encouraged by Sebeok,[4] La Mont West was the first (and possibly only) formally trained linguist to complete extensive fieldwork on North American Indian Sign Languages.

The literature contains many interesting discussions and raises many questions in the mind of the modern student concerning relationships between sign languages and spoken languages, between different kinds of sign languages, i.e. those which are a primary means of communication and those which are not, and between sign languages and other kinds of non-vocal systems. Examination of this historical background served as an encouragement to proceed with the study as it became apparent that detailed analysis of sign languages as semiotic systems in their own right, that is, as systems which structure the medium of movement in order to signify, have yet to be done. It also became apparent that a major problem hampering investigations to date has been the lack of an adequate system for the recording and transcription of signs although many authors (especially West, 1960) have tried.

At the present time, two advances have been made, the one theoretical, the other technical, which may enable the investigation into non-vocal semiotic systems to take a significant step forward. The theoretical advance to which I refer is the development of semasiological theory by Williams (1976). A linguistic analogy in the analysis of movement systems is used in this theory, but this is different from being tied, as West was, to using a linguistic model, because the theoretical structures of semasiology pertain specifically to human action.[5]

The technological advance to which I referred is that of the movement script Labanotation, whereby movement texts make analysis possible apart from the action itself, in the same manner that written texts of spoken language allow analysis and reflection separate from speech. According to the Sebeoks[6] "The search for such tools is of great semiotic interest in itself and deserves separate and detailed consideration"(1978:xxxi), which fact has led to some explorations into the notion of literacy in relation to movement symbols, and to make initial inroads into the development of a writing system for sign languages, particularly ASL.

The connection with sign languages of the deaf is an important aspect, because for deaf persons, sign language is a primary means of communication, in the sense of a 'native' language, and therefore, for deaf persons, language can be said to exist in the medium of movement, not sound. This raises rather large questions related to the human faculty for language separate from speech. What does it mean, for example, to think in relation to movement rather than in relation to sound, and what difference does it make not to have written symbols which relate directly to that movement, in a culture which is so deeply literate? It is hoped, therefore, that future research will be of interest to those in the field of education for the deaf also.

Within this field of education, the pedagogical use of signing, introduced by Gallaudet and Clerc in 1816 (developed after the French method produced by Sicard and encouraged over a period of fifty years) was replaced by a strictly oral method and the practice of signing was actively discouraged if not prohibited, as described by Gannen (1981: 59-65). Seen in the context of prevailing social evolutionary explanations of the 'primitive' and 'mimetic' nature of signing, the emphasis on oral education can be understood, but the maintenance of such attitudes today is hardly justifiable given twenty years of linguistic research into ASL, and in any case, may have serious effects upon the language development and subsequent education of deaf children (Stevens, 1980:177-191).

As my study aims to use semasiological theory and method to build upon the linguistic and anthropological interests of the past, it is to the work of E.B. Tylor that we will first turn.

## E.B. Tylor and the 'Gesture Language'

In his book, 'Researches into the Early History of Mankind' (1865), Tylor devotes more than half the volume to concerns with language. This interest was unusual, for according to Henson, "Apart from Tylor, the most influential early anthropologists largely ignored the problem of language" (1974:39) and "... as a general rule, social anthropology and linguistics have had a history of separate development in Britain" (1974:124). Tylor, however, covers a wide range of topics related to language, including the relationship of language to thought, the nature of the capacity for language, and the manifestation of this capacity in 'spontaneous' gesture language.

It was nineteenth century concerns with origins which led Tylor to sign languages (or the 'gesture language', as he termed it, suggesting the possibility of universal elements), and his interests were therefore consistent with general nineteenth century evolutionary concerns. As is well known, it was thought at this time that certain races represented an earlier stage of human development and could be considered 'primitive'. Consequently, the languages which they spoke were also viewed as being simple and underdeveloped. The assumption was that languages were linked to the mental capacities of the races that used them and that language itself was therefore physically determined. As Henson points out, it was the inadequacy of sources of information about non-literate languages in the 1860's which permitted such speculations.

A phonetic notation adapted from that used to record European languages was used in attempts to transcribe these non-literate languages, and anthropologists never developed recording techniques which would have permitted them to describe a language in its own terms (1974:12). A remarkably parallel situation can be said to exist today in relation to the description and recording of sign languages in their own terms, that is, as languages which use the body moving in four dimensions of space/time and which are perceived visually, rather than as languages which follow the linear pattern of spoken languages and are perceived aurally.

According to Henson, nineteenth century philologists used the semantic and grammatical categories of the main European languages for comparisons and the lack of overlap was then explained by a failure on the part of the 'primitive' languages. That this was a totally ethnocentric approach is obvious to us today, when we realise that 'primitiveness' was thus determined by the extent to which these languages differed from European ones (1974:11). No less ethnocentric, however, is a view of sign languages that considers such systems primitive when judged by criteria belonging to spoken languages. For example, the arbitrary relationship between a linguistic sign and that which it represents, a principle emphasized by Saussure, does not seem to be as prevalent in sign languages. Many signs are deemed iconic,[7] that is, clearly resembling the object they represent either by shape or movement or both. An implicit assumption in much of the written material surveyed, including some of the most recent work (cf. Sebeok and West), is that the 'iconic' nature of the signs (sometimes called 'transparent' or 'pantomimic', cf. Taylor, 1975) removes or lessens any claim for their status as 'true' languages and therefore places sign languages in a more primitive category. Tylor himself posited that the high degree of iconicity revealed a natural element which made sign languages more primitive than spoken languages. He wished to prove that there was a past when the selection of linguistic signs was based upon reason and they were not at all arbitrary, thus he directed his attention to this language of apparently iconic gestures used by deaf persons. He claimed that the signs used were created by the deaf persons themselves and that the reason for their choice was always obvious. "The relation between sign and idea not only exists but is scarcely lost sight of for a moment" (1865:16).

The question of arbitrariness and iconicity in relation to sign languages is an issue which demands further consideration, and whilst detailed discussion could provide sufficient material for a study in its own right, I feel it is important to include at least the following three points. First, perhaps it is the case that the differences between a visual medium of expression and a vocal medium of expression have not been sufficiently considered. When we consider the differences between visual and vocal mediums of expression, it would seem perfectly logical to expect a language using a visual medium to utilise the shape and movements of objects in its naming of them. Most objects in the world do not have a sound, therefore, the vocal representation of them is necessarily arbitrary. Where they do have a sound, nouns and adjectives are often onomatopoeic (e.g. splash, meow, click, bang, etc.). In any case, we know that language is far more than a naming device (Lyons, 1968), and in sign languages, concepts without shape or form in the external world are also represented by completely arbitrary signs, although they may be located next to a body part associated with the idea. For example, in ASL, signs in any way relating to thought, mind and intelligence are located around the head, whereas signs concerning emotions and feelings are centred around the heart and chest, thus reflecting the spatial and bodily location of these things in our culture (see Fig. 2).[8] The 'valeur', in the Saussurian sense, of the semantics attached to these body parts in our culture are clearly demonstrated by the sign language, but such location is by no means universal.[9] Fig. 3 shows how in PSL, signs translated to mean 'know' and 'think' are located around the heart, and 'doubt' in a literal translation is 'two hearts'. In Fig. 4 the bodily locations of the
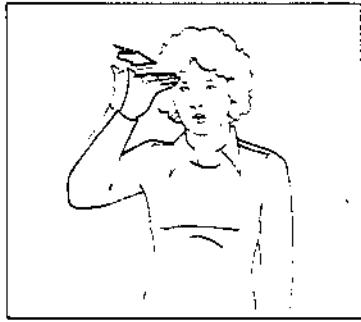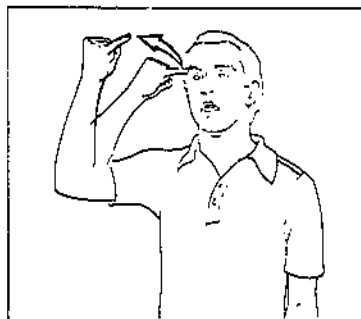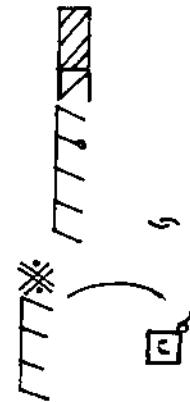
KNOW, aware, conscious
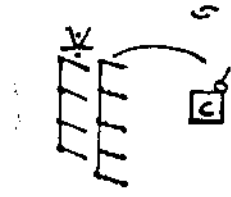
THINK
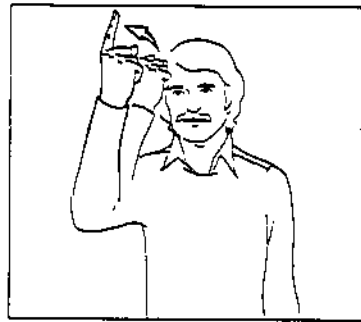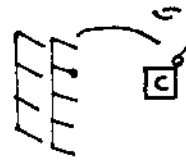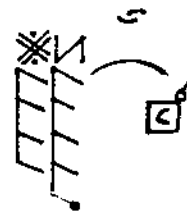
UNDERSTAND, comprehend

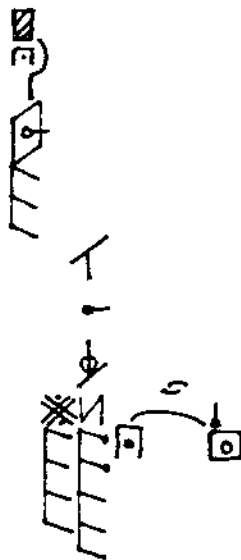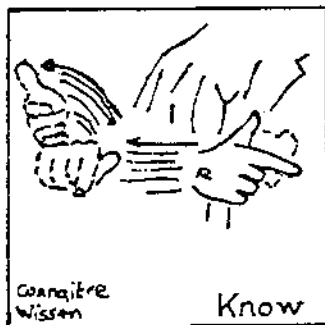IDEA   Fig. 2

KNOW. Hold right hand, back up
close to left breast, sweep
hand outwards and slightly
upwards turning hand by wrist
action until palm nearly up:
thumb and index extended, other
fingers closed, thumb and index
horizontal, index pointing
nearly to left, thumb pointing
to front. (Tomkins, 1931)
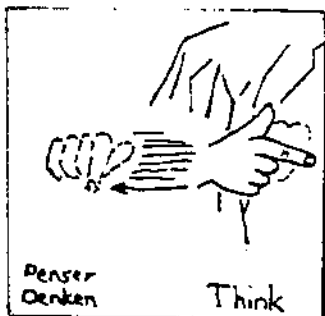
THINK. (Meaning drawn from
the heart.) Hold the right hand
back up, against the breast, index
extended and pointing to left:
move hand horizontally outwards
eight or ten inches, turning
palm downward.

UNDERSTAND. Make the sign for
KNOW.

(The conventional Labanotation staff is not used in the examples shown.
A central dividing line distinguishes left/right sides of the body where
necessary. Further developments of the Labanotation system for the
writing of sign languages are in progress.)

Fig. 3

ASL

REMEMBER
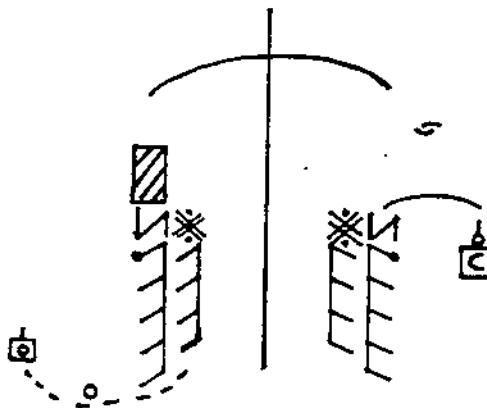
PSL

MEMORY. Make the signs for HEART and KNOW.
(Tomkins, 1931)

Memoire
Gedächtnis

Memory

Coeur
Herz

Heart
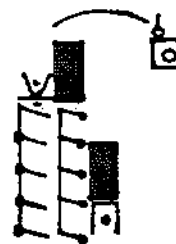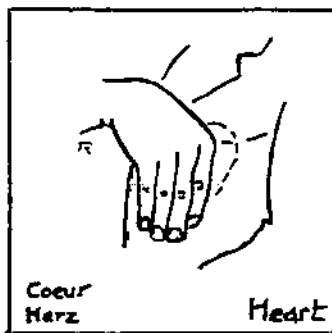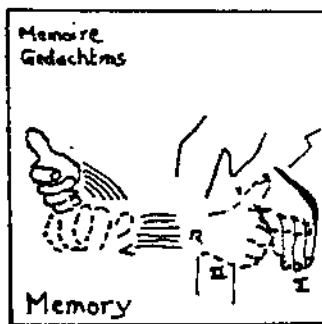
(It is interesting to note that Tomkins chose to add word glosses in French and German to his diagrams, but no Indian spoken language(s).)

Fig. 4

concept of memory and remembering in ASL and PSL are compared. In ASL, as in American culture generally, we remember with our brains or minds, whereas in PSL the sign is located over the heart and is a composite sign made up of the signs for 'heart' and 'know'. Feelings and emotions in PSL also appear to be located upon the chest, however, suggesting cultural differences perhaps in the separation of the concepts of knowing and feeling.[10]

Second, the iconicity appears to be conventional and system specific anyway. The choice of how to represent an object iconically still involves convention and what is selected differs between different sign languages in different cultures. For example, 'cat' in ASL and PSL appears as follows:

PSL   ASL

Cat (meaning flat nose) with right thumb and index touching nose, tilt same slightly upwards, also indicate size of animal (Tomkins, 1931:19).

'Dance' in PSL refers to a hopping action, whereas in ASL the sign for 'dance' also means party and is a totally different sign (see Fig. 5).

PSL ASL

DANCE, party

Dance (meaning a hopping action) place both 5 hands in front of breast, pointing up, palms 6" apart, move up and down 3" for 2 or 3 times (Tomkins, 1931:23).

(? One cannot tell from either the diagram or the word-description of this sign whether the two hands move symmetrically or in opposition. Therefore movement of the left hand has not been written.)

Fig. 5

The so-called iconic representation of a tree differs enormously in ASL, Danish and Chinese Sign Languages, and PSL, (See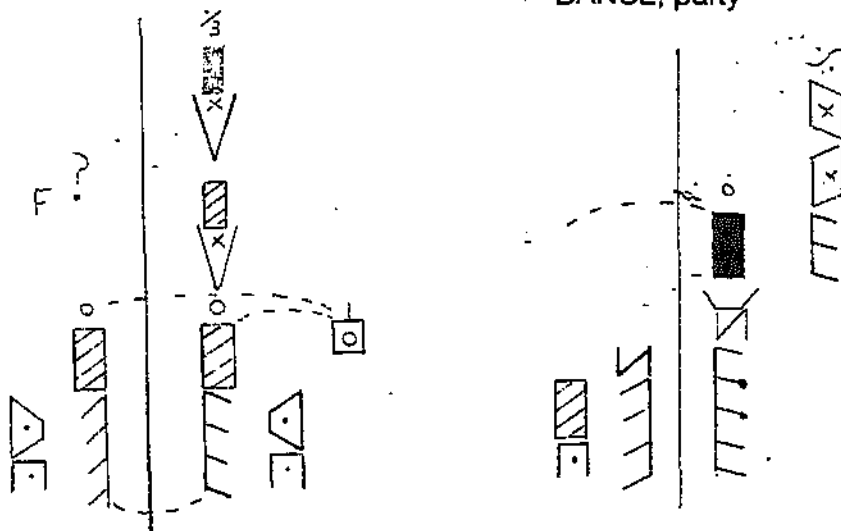 Fig. 6). The concept of 'tree-ness' is just not the same thing in different cultures. Experiments in ASL have shown that most ASL signs are not iconic enough to be understood without being told their meanings (Hoemann, 1975, and Klima and Bellugi, 1979, cited in Baker and Cokely, 1980:39). If someone is told the meaning of a sign, however, then an iconic relationship between the form of the sign and its meaning can often be seen.

Third, it is reasonable to assert that whether or not the sign is arbitrary, a linguistic sign gains meaning from its place in a system of signs, in other words, once in a linguistic context the degree of iconicity or arbitrariness becomes a feature which is interesting, but irrelevant as a criterion for what counts as a 'real' language.

According to Frishberg (1975), signs in ASL have become less iconic over time, but perhaps the reasons are most productively viewed if they are considered to be changes that have occurred in the interests of brevity and speed of production and to accommodate a smaller, focused visual field than viewed as an evolution into a 'real' language from a more primitive form.

18

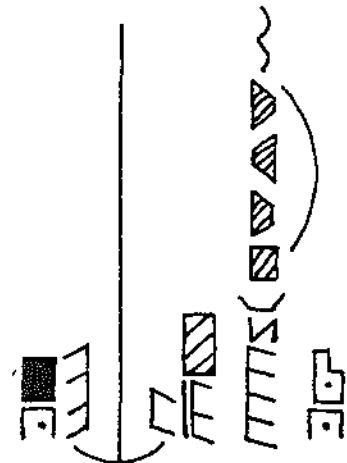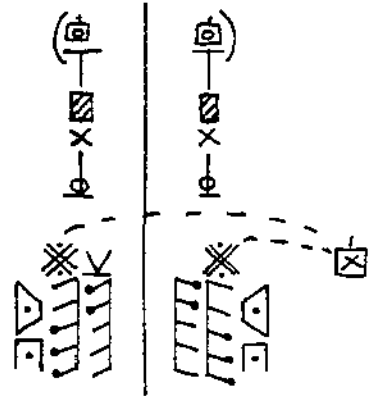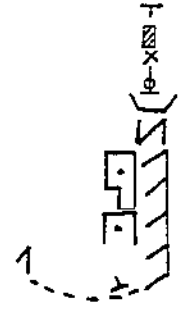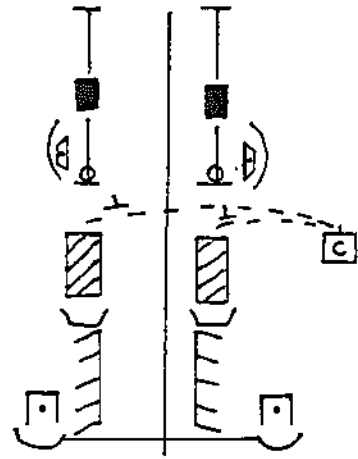Danish Sign Language
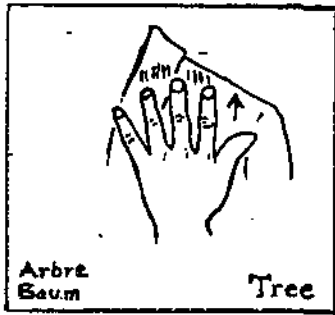
Arbre
Baum   Tree
Pleins Indian Sign Language

Chinese Sign Language

American Sign Language

The signs for 'tree' in Danish, Plains Indian, Chinese and American Sign Languages.

Fig. 6

Tylor was strongly influenced by the writing of Abbé Sicard (1808), who considered the language of the deaf to be without grammar and therefore closer to thought than speech. As it was deemed to be more natural, its elements were also expected to be universally recognisable, another reason why Tylor investigated the gesture language so thoroughly. He recorded the language used in the Berlin Deaf and Dumb Institute and compared it with a similar system in England.[11] Comparisons with data about North American Indian Sign Languages reinforced his notion of universal elements, and Tylor therefore felt that he was close to discovering the original sign-making faculty in humans which once produced spoken language (Henson, 1974:18).

Tylor, unlike others (e.g. Sayce, 1880), never claimed that the gesture language had preceded speech or given rise to it although he thought it possible. His search for a natural relation between signifier and signified led him away from the abstract nature of language and from the fact that the language of gesture, like spoken language, was a system of mutually agreed upon and therefore artificial signs. He investigated several reports that primitive spoken languages were more dependent upon gesture than his own, but he found these non-convincing, concluding (quite accurately from a modern standpoint) that given any spoken language context when two persons do not speak the same language, a mixture of gesticulation accompanied by unusually loud and simple talking usually occurs. It may seem obvious to us today that this does not indicate any deficiency in the spoken language of the people concerned, yet travellers' reports of such situations led to a myth which became well established in anthropology that savages were dependent upon gesture (Henson, 1974: 18).[12]

Several statements present us with remarkable foresight and demonstrate how far ahead of his time Tylor's thinking was, regarding the nature of language. Already he presents the idea that language is not only vocal.

It seems more likely than not that there may be a similarity between the process by which the human mind first uttered itself in speech and that by which the same mind still utters itself in gestures (1965:76).

He considered that "... we must take the word 'utterance' in its larger sense to include not speech alone ... but all ways in which man can express his thoughts. Man is essentially ... not 'the speaker', but he who thinks, he who means" (1865:9, underline supplied). Such a statement could be considered axiomatic to recent developments in social, particularly semantic, anthropology and semiotic studies.

Applying this specifically to sign languages used by the deaf, Tylor says,

... the deaf and dumb man is the living refutation of the proposition that man cannot think without speech unless we allow the understood notion of speech as the utterance of thought by articulation of sounds to be too narrow (1865:9).

Here, too, he appears to be anticipating Saussure's later statements regarding the notion of 'language' being separate from 'speech', and also that spoken language is only one kind of utterance. He would perhaps have agreed with Saussure's vision of a general study of signs, of which spoken language would be one part (Saussure, 1959:16).

Tylor saw that using sign language instead of speech was "... persons accompanying their thoughts with the utterance which is most convenient to them" and that "... this shows how to a great degree thought is 'talking to oneself'".

> The deaf and dumb gesticulate as they think. Laura Bridgeman's fingers worked, making the initial movements for letters of the finger alphabet, not only during her waking thought, but even in her dreams (1865:9).[13]

Tylor thus expresses his doubts as to the ability of the human mind to think at all without some means of expression.

Tylor also referred to what we now know to be the importance of hearing <u>oneself</u> speak in the process of spoken language learning:

> ... that wonderful process by which a man by some bodily action can not only make other men's minds reproduce more or less exactly the workings of his own, but can <u>receive back from himself the outward sign, an impression similar to theirs as though not he himself, but someone else had made it</u> (1865:10, underline supplied).

Interestingly, the 'bodily action' he refers to here can be interpreted as the <u>physical</u> act of speaking <u>or</u> that involved in signing. This statement by Tylor raises the question as to whether in a visual mode of communication it is of the same importance as hearing oneself speak, to kinaesthetically feel and see oneself signing.[14]

Once again Tylor's statement can be viewed as anticipatory of Saussurian ideas regarding the importance of a 'sound image' in relation to a spoken linguistic sign. The development of this Saussurian idea by Williams (1979) in relation to the medium of movement involves the notion of a 'movement image' in relation to an 'action sign'. The implications of this in relation to the use of sign languages by deaf persons are important but cannot detain us here.

North American Indian Sign Languages

Tylor was able to draw upon data about North American Sign Languages because a fairly extensive body of data was collected and documented during a period from the 1850's to the 1930's.[15]

North American Indian Sign Languages are known to have been widely used during the nineteenth century by Indian tribes of the Pacific Northwest, as well as by tribes of the central Plains. Boas provides us with some detailed documentation about the sign language used by Indians of the Pacific Northwest in two articles, one written in 1890 and the other not dated in the Sebeok volume (1978:19-25). He lists a group of fifty signs and describes them in English. Some of them were used to accompany oral expression, whereas others were substitutes in situations such as story-telling, the arrangement of romantic assignations, or as signals in hunting and fishing. On the British Columbian coast, Boas notes that the use of a sign language had been largely superceded by the use of the Chinook jargon, a spoken lingua franca, except in story-telling, although he is in no doubt that it was in use in former times. In the interior of the province, however, the sign language was still used extensively, and Boas lists fifty signs which were current amongst the Shuswap Indians. Teit (1930) also reports upon the use of sign language by the Salishan tribes (Shuswap and Thompson tribes) of the western plateaus around the Columbian and Frazer rivers. He describes (also in English words) 125 signs then in use, including a list of thirty sign names for different tribes. He tells us that the sign language was used in situations of trading and hunting, in talking with strangers and as gestures accompanying speech.

The majority of the documentation, however, concerns the sign language of the Plains Indians, and so it is to this area that I have largely confined my attention. I have chosen to organise points drawn from these rather complex materials into three loosely defined categories; a) 'popular' collections and traveller's tales, b) detailed descriptions and collections of signs, and c) investigations by linguists and anthropologists, of which only the first two can be dealt with, given the confines of this paper.

The Plains Sign Language is generally considered to have been a lingua franca among tribes who spoke different languages, but who regularly came into contact with each other. A considerable body of material about these peoples and their sign language was collected by travellers, army captains and missionaries as European immigrants moved west, and their writings provide data for my first category.

Curiosity about the Indians abounded at this time; that is, between the 1850's and 1930's, and probably no other aspect of Indian culture proved so interesting to the American public at large as sign languages (Harrington, 1930). Numerous volumes were written with the adult population in mind (e.g. Clark, 1885, Hadley, 1893, Tomkins, 1926, Cody, 1952, Hofsinde, 1941). As every American boy scout knows, a simplified version of PSL was adopted as an outdoor code of communication and has long been a part of boy scout tradition.

PSL was also utilised as a means to 'civilise the savages', a phrase which seems to have meant teaching the Indians the social habits and customs of the white man, including his Christian religion. The fact that as far as the Indians were concerned, their own way of life was perfectly civilised, and that from their own point point of view, it was

the white man's ways which were barbaric, seems to have been beyond the comprehension of popular opinion at this time (and largely since). However altruistically motivated this attitude was, it is extremely ethnocentric. One very interesting article, the title of which illustrates the kinds of concerns at this time, was 'The Indian Sign Language and the Invention of Lewis F. Hadley as Applied to the Speedy Christian Civilisation and Education of the Wild Adult Indians' (Axtell, 1891). Mr. Hadley was a stenographer who created drawings of signs and a method of using the pictures to teach English and religious instruction to the Indians.

As Sebeok and Umiker-Sebeok note (1978:xvi), perhaps the imagination of the non-scientific world was captured because it seemed as if sign languages, and in particular PSL, held out the promise of an escape from what Nietzsche called 'our prison house of language'. It seemed to offer a graceful and dignified form of communication ideally suited to serve as a universal lingua franca, a bridge between mutually incomprehensible tongues. In this way at least it seemed superior to spoken language.[16]

Reprintings and new editions of these popular works continue to appear (e.g. Cody, 1970; Tomkins, 1978; Clark, 1982) and PSL is presented as a practical system for communication in certain outdoor activities where spoken language is undesirable. The Sebeoks suggest that what sells such books today is probably an ongoing romantic and almost mystical view of the sign language. They quote the following passage from the back cover of Cody, 1952, reprinted in 1970:

> "For many centuries countless warriors, traders and travellers
> have refined and developed this beautiful silent language of the
> hands until almost any common meaning can be expressed. It is a
> language that is part of nature itself, the fluttering of aspen
> leaves under the touch of the wind, a hawk soaring in the sky,
> the ponderous movement of the buffalo herds, the gestures of wise
> old Indians of the great warrior days who were at one with earth
> and heaven, the rhythm of waterfalls pouring over cliffs or of
> clouds drifting over the sacred circle of the blue above us" (cited
> in Sebeoks, 1978:xvi).

Such a picturesque and romantic view unfortunately lulls the reader into the notion that somehow PSL is a 'part of nature itself'. The implicit assumption is that this offers us an escape from our conscious human condition which necessarily separates us from the rest of nature. The fact that a sign language, like any spoken language, is a product of human culture is swept aside for a romantic view which offers PSL as a means to a return to a oneness with the earth and cosmos (which apparently the wise old Indians enjoyed).

We are also presented with yet another example of a fairly common, but gross misconception about 'movement' generally. As Best (1978) so clearly points out, the myth is that somehow the fluttering of leaves, the rhythms of waterfalls and human gestures all constitute the same thing. Would anyone seriously consider talking of the sounds of falling water or the rustling of leaves and human spoken languages as if they were all one entity because they share the medium of sound? We can be

reasonably certain that they would not. Human languages would be separated from the rest probably on the grounds that they are specifically human and therefore _cultural_ phenomena rather than natural ones. In relation to 'movement' however, it is unfortunately the case that the lack of serious investigation into human movement systems to date has allowed these kinds of conceptual confusions to continue with regard to human actions.[17] Semasiologists would want to assert that structured systems of human movement are specifically _human_ uses of body movement which are as complex as the systems which use human vocal sounds to produce spoken languages.

It is also important to note that these romantic notions about PSL do not carry over to the general view of sign languages used by deaf persons. As members of our own modern western societies, they cannot be classified as 'primitives', but the notion of 'handicap' intrudes itself, and an entirely different set of emotional responses ensue that nevertheless deny to the deaf any status as whole persons on the grounds that they do not have a 'real' language. These kinds of popular views thus result in a contradiction; ASL is viewed as a symptom of deficiency, whereas PSL is a means to transcend our human condition.

A second category of documentation was collected almost entirely by army officers (e.g. Col. Dodge, Capt. Scott, Col. Mallery, Capt. Clark), and the centre of interest appears to have been in the compilation of dictionary-like classifications. Extensive collections of signs with English word translations were made by Mallery (1881), Clark (1885) and Scott (1898) which were then housed in the American Bureau of Ethnology in Washington, D.C.

In line with a nineteenth century evolutionary viewpoint, these writers generally held a view of sign language as 'natural', 'pantomimic', 'expressive' and closer to primitive man than spoken language. Kohl (1860:34) describes PSL as "natural, characteristic, and easy of comprehension". Webb (1931 in Sebeoks, 1978, vol.2:92) considers it to be universal and the "mother utterance of nature". Dodge presents us with a viewpoint typical of this period, but disturbingly common in relation to the arts generally, as well as sign languages even today. "Speech, it is generally agreed, is entirely arbitrary and conventional but signs have their origin in feelings and emotions which are common to all mankind" (Dodge, 1882 in Sebeok, 1978:5).

The misconception is that sign languages or dances, music, and the visual arts achieve some kind of universal understanding which crosses the kinds of cultural barriers established particularly by spoken languages. The confusion arises because there is a conflation between _aesthetic appreciation_ of the dances, music or art of another culture and _understanding_ those arts in relation to the culture of which they are an integral part. We are certainly able to enjoy and appreciate the art forms of another culture, just as we may enjoy listening to the lilt of French or the flow of Spanish, but without further study of the culture and _translation_, we can only appreciate them from the standpoint of our own cultural values and the attitudes our own culture attaches to such things as rhythm, melody, tone, or colour, shape and design, or the human body itself. We cannot be said to understand them in the _same_

way that members from within the other culture would understand them.
There are just reasons to believe that structured movement systems are
as culture specific as spoken languages (Williams, 1982). For example,
in the case of human movement, the values (in the Saussurian sense of
valeur) attached to the spatial dimensions of up/down, right/left,
forward/back and inside/outside vary according to culture and system,
as do the values attached to various parts of the body (Williams, 1980).
Great caution must be employed therefore in discussions about what may
seem to be the 'same' movement. An analogy to spoken language helps
clarify the point, for in spoken languages there are many sounds which
can be said to be the 'same' sound, but once in a linguistic context,
they do not have the same meaning if part of another language. The
same situation exists in relation to human movement, whether in structured
systems such as sign languages and dances or in less formal systems
of the kind which accompany or substitute for speech.18 As well as
this stress on universalism in the materials under consideration, there
appears to be a general consensus in terms of the primitive nature of
gesture. Perhaps this attitude carried over into Victorian social
manners generally, for a stress upon bodily stillness was emphasized
as a civilised way to conduct conversation, as indicated in this state-
ment from Dodge:

> All people use more or less gesture, but among the highly cultivated,
> these are only used as adjectives, adverbs and interjections, to
> give emphasis and point to oral speech (1882 in Sebeok, 1978:5).

Thus sign language was of great interest, but on the whole it was seen
as a primitive stage in the development of language, as primitive as the
Indians of the Plains themselves.

By far the most detailed amount of useful documentation in this
category was compiled by Captain Garrick Mallery, who provides us with
the only attempt at comparative work which appears to have been done
apart from Tylor's early work. Mallery mentions the "admirable chapters
of gesture speech by E.B. Tylor" and the degree to which Tylor's work
gave impetus to his own enquiries (1881:323), thus providing us with
interesting historical continuity. He reveals Tylor's influence upon
his work in the following statement:

> In a lecture delivered before the British Association in 1878 it
> was declared that "animal intelligence is unable to elaborate
> that class of abstract ideas the formulation of which depends upon
> the faculty of speech". If instead of 'speech' the word 'utterance'
> had been used as including all possible modes of intelligent
> communication, the statement might pass without criticism. But
> it may be doubted if there is any more necessary connection between
> abstract ideas and sounds, the mere signs of thought, that strike
> the ear, than there is between the same ideas and signs addressed
> only to the eye (1881:274 - underline supplied).

As an amateur scientist, Mallery approached the subject from a
broad comparative point of view rather than presenting us with a
detailed and systematic analysis, but he nevertheless made a significant
contribution. He compared the sign language used by American deaf

persons with PSL and with the gesture system used by Neopolitan peoples
in Italy. He was also aware of the sign systems used by Cistercian monks
and even traced the use of signs in Greek oratory and theatre. As well
as his own personal experience with PSL and ASL, he corresponded with
many people in other parts of the world in order to gather material from
all available sources.

He unearthed two documents about the subject written in 1660 and
1680 by one George Dalgarno of Aberdeen which were amazingly enlightened
for the period, but which seemed to have passed into oblivion. Mallery
was convinced that Dalgarno's ideas must have influenced even Sicard,
although there is no evidence to support this. Dalgarno's work is worth
citing briefly, because he presented a rather interesting classificatory
schema for all human signs. He separates symptoms of emotional states
from other kinds of signs because we share these with animals and because
they do not go far enough "... to serve the rational soul". This being
the case, "... man has invented Sematology" (Dalgarno in Mallery,
1881:288). Perhaps it was this statement which led to Mallery's use of
the term 'semiotic' in his writings, for as the Sebeoks mention, Mallery's
use of the term seems to be one of the earliest, but the source of his
terminology remains a puzzle (1978:xxii). Mallery tells us that Dalgarno
divided sematology into "... Pneumatology, the interpretation of sounds
conveyed through the ear; Schematology, by figures to the eye, and
Haptology, by mutual contact, skin to skin. Schematology is divided
into typology or grammatology, and cheirology or dactylology" (Mallery,
1881:228). Dalgarno considered that "the latter embraces the transient
motion of the fingers, which of all other ways of interpretation comes
nearest to that of the tongue" (cited in Mallery, 1881:288). Indeed
these are remarkably enlightened statements to have been made during
the latter half of the 17th century, and Mallery's enthusiasm for his
discovery of the documents is understandable.

Mallery also reports upon an interesting incident which took place
in 1881 when he took seven members of the Ute tribe to the National
Deaf-mute college in Washington (1881:322). Gallaudet, who was then
president, allowed a "thorough test" to take place between the Indians
and seven deaf pupils. The test consisted of each telling narratives in
signs, which were then interpreted by college officers and a Ute
interpreter. The situation was complex. Misunderstandings occurred
because of vocabulary differences; for example, the Ute had no sign
for 'squirrel' as the animal is not found in their region, and the ASL
sign for 'dog' was similar to the sign for 'bear' in Ute signing. What
mutual understanding was achieved in such a situation was perhaps more
likely to have been the results of trial and error gesticulation and
miming, plus the fact that the Indians were known to be very adept at
'politely' adapting their own signs to accommodate a stranger's own
attempts at signing (a factor which West found confusing in his fieldwork,
especially in his dialect analysis work when trying to verify correct
'pronunciation' (West, 1960, Vol.2:5). Mallery concluded from this
experiment, however, that signing represented the direct expression of
thought which seldom failed to communicate because it was without the
"... mental confusion of conventional sounds". He felt that the results
of his studies so far indicated that "... the gesture systems of deaf-
mutes and of all peoples constitute together one language - the gesture
speech of mankind - of which each system is a dialect" (1881:323).

Mallery's interest in different kinds of sign languages enabled him to make two important statements, both of which were later to be emphasized by Stokoe. He first of all stressed the fact that signs in PSL are not simple representations of words.

> So far from the signs representing words as logographs they do not in their presentation of the ideas of actions, objects and · events under physical forms even suggest words (Mallery, cited in Sebeoks, Vol.2:xxiii).

It was ninety years later when Stokoe (in his efforts to persuade educators of the deaf) cautioned that the sign languages of the deaf also cannot be relegated to simple "... code representations either as speech surrogates (one sign = one word) or of alphabetic symbols (1972:118). Mallery also appears to have anticipated Stokoe's distinction between sign languages of the deaf and other sign languages on the grounds that for the deaf, sign language is a primary system of communication, a 'native language' as it were, whereas in other cases the sign language is a speech surrogate (1881, in Sebeoks, 1978, Vol.1:61).

More general considerations of the links that exist between sign languages and spoken languages is included at this point in order to emphasize the importance of viewing action sign systems within the context of their particular system as a whole and within a cultural context. It may be that the structure of sign languages of the deaf differs substantially from the structure of 'substitute' systems. PSL, Australian Aboriginal sign languages, Neopolitan sign systems, and the sign systems of persons under a vow of religious silence (e.g. Cistercian monks -- see Barakat, 1975, and Barley on Benedictines, 1974) are using forms of gestural communication that are <u>substitutes</u> for spoken languages <u>in special contexts</u>. For all these groups, their first and 'native' language is in the medium of sound, and the gestural communication is not likely to replace spoken language as their primary system of communication and thought. The sign languages of the deaf communities in many parts of the world, however, use movement as the primary medium of communication. Preliminary fieldwork with deaf adults suggests that deaf persons do indeed think in the medium of movement. Just as we clarify thought by 'talking' to ourselves, silently using language 'in our heads', so it would appear that deaf persons 'sign' to themselves, mentally using their own language to <u>think with</u>, just as hearing persons do. Thought itself, then, would seem to take place in relation to both sound images and movement images. In the case of deaf persons, however, thought can only relate to 'movement images', as there cannot be 'sound images' to think with. The structure of sign languages of the deaf may indeed be substantially different from the structure of substitute systems previously mentioned.

The point is that each action sign system cannot be divorced from the context in which it finds itself. The connections with spoken languages will be varied and many, and are most profitably considered in detail with regard to each system before valid comparisons can be made. At the level of <u>la parole</u> it is possible to make endless comparisons of gestures and word-gloss translations. If however we are interested at the level of <u>la langue</u>, it is with the structure of each individual system and the logic of the system itself we are concerned with, and

the question of context necessarily plays an important part. As Saussure pointed out, "Language is a system of interdependent terms in which the value of each term results solely from the simultaneous presence of the others" (Saussure, 1966:114).

Barley (1974) also draws our attention to the importance of context in his comparison of an Anglo-Saxon signed counting system, and a sign system used by Benedictine monks.[19] In the counting system, the signs only attain significance through relationships of mutual opposition and exclusion. In the signs used by the Benedictines, however, there is an air of 'bricolage', where anything from the cultural system of the users may be seized upon to convey information. The purposes of the system as an integral part of 'context' must also be taken into account.

To return to PSL, it seems that the evidence and the interpretations regarding the effects of spoken language on PSL are contradictory. Harrington (1938) writes "... the signs are everywhere based on spoken language and reflect it at every turn", whereas West (1960:(1)97) concludes that, "... there is no evidence that Amerindian sign language is in any sense derivative of spoken language". Kroeber thought PSL heavily indebted to spoken language. As a substitute for speech, he considered it analogous to the use of writing in our society, simply a secondary medium rather than an independent or original method of communication (Kroeber, 1958:13).

Whether or not the concepts communicated by PSL are already developed in speech and then translated into a non-spoken medium cannot be verified unless further work is done relating the two modes of expression. If hearing users of PSL think in their spoken language and translate in order to sign, such translation may be reflected in the syntax and structure of PSL itself. It may be, however, that the medium itself, that of movement, has a greater effect upon the syntax and PSL is in fact closer in structure to other sign languages than to the spoken languages of the Plains Indians.

The kinds of links between ASL and spoken and written English also invite investigation, and may be of an entirely different kind. Deaf communities are sub-cultures within larger hearing populations, and educational practices and a literate larger culture all influence the sign language itself.[20] Fundamental to such research would be the technology of Labanotation, now available to create written texts of signing for comparison with written texts of the spoken languages concerned. The availability of written stretches of sign languages makes possible the kinds of in-depth analysis that spoken languages have enjoyed for many years. The basic units, their combinations and thus the syntactical structure can be identified and compared with written stretches of spoken language units and syntactical structure, whether the investigation is with PSL in relation to Plains Indian spoken languages or ASL in relation to American English. Without movement texts this level of analysis is impossible.

It is expected that future research along semasiological lines will bring to light the many and varied links that exist between action sign systems and the spoken languages of those that use them. Williams has already drawn our attention to the importance of taxonomies of the body and to the use of French in classical ballet in contrast to everyday spoken French (1980). Puri (1983) describes the difficulties involved with the use of word-glosses for the hasta mudra hand gestures of Bharatanatyam, when all too easily the misconception arises that one sign = one word. The word glosses hardly suffice to portray the many subtle and intricate meanings embedded in each hasta. The meanings vary enormously given different contexts within stretches of danced movement and cannot adequately be dealt with outside the context of a particular dance, nor outside Indian culture as a whole. It would be a gross misconception to expect the syntax of a danced idiom such as Bharatanatyam, for example, to follow the grammatical rules of the spoken language simply because word-glosses are possible, or because a narrative tale may be portrayed by the dance. This would be to misunderstand the kinds of links with spoken languages that semasiology is concerned with, as well as what is meant by the term body language. Williams clearly states what is meant by the syntax of a body language in the following statement:

> "It is an axiom of semasiology that the medium of movement in the human realm is as profoundly rule-based as is the medium of sound as it is used in human speech ... At an observational level, we know that a body language, or any subset thereof, will have a grammar of positional elements that are used over and over in a variety of ways that identify it as that particular body language (or 'code') and no other. It will have rules for deletion, inclusion and spatial manipulation that are distinctive features of it as an identifiable idiom of structured, meaningful movements" (1982: 164 and 165).

The linguistic analogy that semasiology makes use of is concerned then, with the notions of rule governed combinations of elements and with structured meaning. One is not, by engaging a linguistic approach to the study of human action saying that movement is the same as sound, or that body languages are the same as spoken languages, but that certain analogies from the discipline of linguistics provide very productive ways to think and talk about movement.

Brenda Farnell

NOTES

1. The following paper presents some aspects of work in progress on
   North American Plains Indian Sign Language and serves to place the
   current investigation in historical perspective. The work presented
   here is basically the second chapter of a Master's degree thesis
   in the Anthropology of Human Movement. Other concerns of this
   thesis are with the problem of recording sign languages, the notion
   of literacy in relation to movement, and the adaptation of the
   script Labanotation to the writing of sign languages.

2. Tylor, in his search for universal features, referred to sign
   languages as 'the gesture language'.

3. This survey of the literature does not claim to be an exhaustive
   one, but has aimed to cover most relevant and available materials
   from library sources.

4. Personal communication, November, 1983.

5. See Kaeppler (1983) for discussion concerning the use of models
   in contrast to analogies.

6. I refer several times to the excellent volume edited by Thomas
   Sebeok and Jean Umiker-Sebeok. In the interests of brevity they
   are referred to as 'the Sebeoks' rather than the somewhat cumbersome
   'Sebeok and Umiker-Sebeok'. It is hoped this does not offend.

7. The word iconicity is used here to indicate signs that have an
   obvious visual connection to their signifieds. Consideration of
   Peirce's complex categories of sign types and his notion of
   iconicity are not pertinent to this paper.

8. The pictorial representations in figures 1-6 are taken from current
   ASL texts by Humphries, et al (1980) and Baker and Cokely (1980),
   and from Tomkins, 'Indian Sign Language' (1931).

9. See Williams' exegesis (1982) of Pouwer's discussion of the concept
   of 'Ipu', a kind of 'soul' located in bodily joints amongst the
   Mimika of New Guinea, and Ardener (1982) for discussion of the Ibo
   concept of 'handshake'. Semantic concerns related particularly to
   the ears and hearing are to be found. Seeger (1975) presents
   interesting data in relation to the importance of the ears amongst
   the Suyá of Brazil. Cultural wisdom is acquired through the ears
   and the more ornamentation on the ears, the greater the wisdom
   that has been acquired and thus standing within the community.
   A similar concept in relation to whole body scarification exists
   amongst the Orakiba of New Guinea (Iteanu, 1984). The Walbiri of
   Central Australia, whose women use a sign language extensively
   at certain periods when spoken language is forbidden, have a lexical
   term which translates as 'deaf' but also as 'madness' and 'senility'
   ('warunga'). The word for 'wisdom', however, translates as 'hear
   with your ears' (Wafer, personal communication, 1984).

10. Definitive statements could not be made about this without extensive fieldwork. One of the limitations of the present study is that all PSL data is taken from written sources and thus requires verification from informants if possible. It is envisaged that fieldwork amongst groups of Plains Indians will be undertaken as part of Ph.D. studies at Indiana University commencing Fall, 1984.

11. Tylor described the signs using words; e.g. "When I hold my right hand flat with the palm down at the level of my waist and raise it to the shoulder, that signifies 'great'" (Tylor,1865:15).

12. This kind of stigma, that there is a dependency upon gesture because of an inability in vocal expression is still attached not only to signing amongst deaf persons or others, but to the dance and the dancer in Western culture. The misconception, often rather romantically conceived of, is that people dance _because_ they cannot put things into words. This leads to a view that concerns in the medium of human movement necessarily mean the users are non-intelligent because they are dealing with the 'physical'. Langer's rejection of the positivist position is relevant to this, for she was attacking their insistence that anything non-vocal was 'feeling' and 'emotion' (See Langer, 1948).

13. Laura Bridgeman was born in Hanover, New Hampshire (1829-1889), and deafened and blinded by scarlet fever at the age of two. She was the first deaf/blind person to be formally educated using the alphabet/fingerspelling method. Charles Dickens wrote of his visit to see her in his 'Notes to America' (1842). This may or may not have been Tylor's source.

14. This notion leads into deep philosophical questions regarding the metaphysics of 'self' which are beyond the limits of the current work.

15. Much of this material has been drawn together and reprinted in an extremely useful two volume collection edited by Sebeok and Umiker-Sebeok, upon which I draw heavily in this section. Volume 1 of this collection contains all of Mallery's writings and Volume 2 contains articles written about North American Sign Languages in chronological order from 1882-1975, plus one report on Uruba sign language in Brazil and several articles about Australian aboriginal sign languages.

16. One wonders in how far attempts by ethnologists to teach ASL to non-human primates are in fact extensions of this same romantic notion; the desire to communicate with the animal kingdom as well as with all other human beings, cf. Gardener and Gardener, (1969).

17. See Williams' 'Theories of the Dance' (1981) for discussion of 'emotional' explanations of the dance and 'universalism' in relation to dance and dancers.

18. See Williams, 1982, for discussion of gestures such as 'hitch-hiking' and the act of 'kneeling', for example, and 1983 for discussion of the visible and invisible in movement systems.

19. The counting system is known as Bede's <u>De Indigatione</u> or <u>Del computo vel loquela digitorum</u>. The monastic sign language was for use in Benedictine monasteries during periods of enforced silence. See Barley, 1974, and Williams, 1977, for a semasiological analysis of the counting system.

20. See Battison, 1978.

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