How The Deaf Communicate— Manual Language

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INTRODUCTION

IT WILL be the aim of this part of the subject of HOW THE DEAF COMMUNICATE to show that the resort to manual means of conveying thought is a natural phenomenon firmly grounded in a deep inner urge, not merely to establish communication with one's fellow men but also to provide a channel by which the closer emotional complex of the human being's structure may find satisfying expression.

Historically, conversing by manual methods is not a new concept. Some writers go back to medieval times to remind us that it was common practice, especially in the monasteries and other religious orders, to employ some form of manual language as a means of communication, particularly on occasions of assembly or conclave. A vestigial remnant of the practice survives in the formularies that still accompany certain sacred rituals.

The finding of the ancient scrolls on the rim of the Dead Sea in the past decade has revealed that rules among the Biblical Jewish sect known as the Essenes prescribed the use of signs in conducting the affairs of the order, the intent having been to encourage silent or implicit speech, that is, thoughtful meditation. Certain groups among the Greeks given to philosophy were also known to favor gesture substitutes for speech as a means of furthering the business of their meetings.[1]

[1] An instance in point, probably finding its origin in Plutarch, relates that a certain individual offered himself as suppliant for membership in one of these groups devoted to philosophical learning. To indicate to him without waste of language that the group had filled its quota of membership, the presiding officer gestured for an attendant to bring in a vessel into which water was then poured from a flagon until it completely reached the brim, not another drop being possible. The candidate for admission, undismayed, replied in kind. Stooping to pick up a leaf from the ground, he lowered it gently onto the jar without so much as stirring a ripple. Whereupon he turned to the rostrum in silent expectation, indicating there was always place for one more. The episode is said to have closed in keeping with the theme, for from his dais the leader beckoned in turn to each of the assembled disciples of the order to express himself. Each one without uttering a word nodded approval, thus showing the candidate was worthy of joining those assembled in fellowship of meditation.

Even if the story has no more than legend for basis, it nonetheless points to the likelihood that pantomimic language or gesture can be effectively employed to portray thought among humans, and certainly with graphic force. Indeed, the late Sir Richard Paget, eminent British scientist, spent much study in rounding out the theory that gestures, that is, motor activity other than of the vocal apparatus,

There is further reason for this preliminary description of the ancient urge to fall back upon manual communication. In the first place, it is a natural phenomenon. It has its source far back in the history of the human race, and in a sense the early historic dependence upon a manual means of communicating is one of the signposts along the path of mankind's progress. Second, it provides an outlet for emotional as well as intellectual expression. In that sense the adult deaf find in it an unparalleled utility among themselves. One of the most effective usages of vocal speech is that it conveys not only thought but also delicate gradations in tone, the subtle variations of stress, accent and rhythm. Without these variations and modulations, speech, as it appears largely in lip-reading—if we may believe the testimony of those who must rely upon the latter mode of maintaining communication with their fellow men—is only the "pale shadow" of what it is to the hearing person, simply because it lacks the warming emotional tone that can ordinarily be carried in the spoken and singing voice.[2]

The point is well contained in this statement by the Ewings: "The two-year-old who can hear finds release for his emotions through speech. The two-year-old, who is deaf, is obliged also to find a way for the release of his emotions. He may do this through gesture and crying, and may seek to enforce his will by stamping and roaring when he feels frustrated or impotent." [3] The same writers summarize it well when they add, "The truth is this: that a deaf child must find an outlet for his emotions that will serve him in place of speech." Awaiting that day when the deaf will have succeeded in mastering speech to that degree of service which provides the necessary emotional outlet, there is warrant in the meantime in asserting that manual expression becomes a useful device.

We wish it made clear that however non-manualists regard it, it cannot be fairly denied that the deaf find in manual speech a mode of expression that serves as a vehicle for the affective within them. Without this, the affective side—the emotional—is bottled up. We would be so daring as to say that this is the essential reason, despite the very best effort on the part of present-day educators, that the great majority of the deaf out beyond the school years fall back upon the sure and facile method of conversing among themselves by manual means. We note it as common experience that many hearing persons when conversing with one another are prone to speak with impassive faces, often only a droning mumbling of the lips indicating that speech is being employed. Indeed, judging from the testimony, deaf persons themselves dread the effort to read the lips of speakers whose words come out of inanimate faces. They find it easier to read the lips of those who put spark into their speech.[4] On the other hand those who are ac-

provided the basic roots for the spoken speech of man today. See Paget, R., "Human Speech," Harcourt, Brace and Company, London, 1930, Ch. VII, The Origin and Development of Speech.

[2] See Chapter on Lipreading.

[3] See Ewing, I. R., and Ewing, A. W., "Opportunity and the Deaf Child," University of London Press, Ltd., London, 1947, pp. 63–64.

[4] See Chapter on Lipreading.

quainted with the deaf know how expressive their manual conversation usually is, how surely the fire of the eyes and the animation of the facial contour kindle with emotional warmth what they have to say. To justify any attempt to deprive them of this satisfying emotional experience, it may be argued that the deaf could just as well express themselves affectively if they would employ speech, but a realistic view of it would declare this to be only a begging of the issue. So then, we maintain manual language is a happy corollary to adequate living for the deaf.

Manual language has its place even on the advanced intellectual level. At Gallaudet College, the national college for the deaf, the staff members employ every means of communication in order to reach the student. That is, the instructors employ speech and the written word as well as the sign language and the manual alphabet, often two of these at the same time. In the chemistry or physics lecture and laboratory or in classes calling for precision grasp of a subject, lipreading and even amplified speech via the hearing aid cannot be relied upon for the necessary accuracy of reception, in which case the exactness of manual or letter-by-letter instruction is more reliable.

Let it not be said also that the language of gesture is always and forever a perfect and beautiful instrument. It has its flaws in use. As with penmanship it can become nonlegible when it is rendered carelessly, or when corrupted by indistinctness or a speed too swift for the eye or mind to grasp. But for that matter we have known speech to become slovenly, and not in too rare instances at that. It can well be the despair of the earnest lipreader when confronted with a dead-pan face speaking as if the effort is painful.

With these preliminary remarks we may now turn to examine the nature of manual language as employed by the deaf, and principally by the adult deaf.

Types of Manual Communication

As a language phenomenon manual communication falls into four categories.[5] These will be dealt with in the order in which they have attained language development, that is, grammatical organization.

The first of these may be termed simply pantomime, or the bodily acting out of a train of concepts. To a large degree this type of communication is along total lines, involving as it does the larger musculature in company with the finer linear movement of the facial and head muscles. There is nothing particularly conventional or standardized about this kind of communication since it follows no set grammatical sequence and though it can be highly expressive can claim no assurance of precision of meaning. Its purpose is mainly that of affording amusement although its value for instruction possibilities should not be minimized. Among the deaf it is widely used as a form of recreation.

[5] We do not here include the various signaling systems which have been devised for intercommunication purposes, such as naval flag flashing, railroad semaphore, or signals in sports.

The second type of manual language assumes the form of what may be termed natural gesture, illustrated for example in young infants before advent of verbal effort. To a large degree this manner of communicating one's wants is depended on by even adult deaf persons whose misfortune it is to have been denied the opportunity of schooling. This category should also include the gesture mannerisms often accompanying spoken speech, namely, the expressive movement of arms, hands, face and head to lend special emphasis and even shades of meaning to what is being said. Indeed, this manual practice may even be said to mark racial characteristic. Another aspect of the same thought is the use of gesture which familiarly goes with oratory, either unconsciously expressed or deliberately schooled. We have all witnessed the stentorian methods of flashing eyes, waving arms, pounding of fists to emphasize an argument. We hesitate to include these latter manifestations as natural gestures. At any rate they are natural in that they do not of their own accord form a language.

A third type of manual language is the so-called sign language. In the main it comprises movement of the arms and hands to convey a chain of ideas, more in the hieroglyphic sense. With the adoption of formalized symbols it has been possible to group manual signs around root ideas as will be made clear later on in this discussion. An approach to grammatical construction is assumed by these formalized symbols so that, for instance, past, present and future may be indicated for a single action sign. In the latter instance the root symbol is supported by the appropriate time or tense sign. The point to bear in mind is that the signs depict not words in verbal form but objects and pictorial representation of ideas. Thus, the term love is demonstrated by pressing both hands firmly to one's heart, or the sign for house is made by outlining with raised hands in the air the shape of one. They are therefore thought symbols, but not verbally so, and as the deaf use them they have the same ease of flow as speech.

Often signs follow in unconventional order, unheeding of the pattern a sentence takes in customary usage. Adjectives, adverbs, nouns and pronouns hold to no set sequence, a fact which may in great measure account for the scrambled nature of the written language among deaf persons. The thought processes are there, often in keen sense, but for this mode of expression they are not couched in customary form. Yet despite the seeming disarray of the sign symbols, they forge a satisfying means of communicating with one another. For the deaf this is of more than casual importance, since by this means they are able to fill in many gaps in their lives. It provides a ready, useful and adequate channel of social communication in their domestic lives, their associations, literary societies, recreational and athletic organizations, fraternal orders, and so enabling them to benefit from the normal socializing experiences so necessary for man. To one who has attended religious services for the deaf, the importance of the language they have contrived for themselves is readily apparent.

The fellowship and kinship of interest and feeling thus imparted

are well described by Best.[6] After showing how the deficiency in hearing plus the general inability to speak fluently and intelligibly bar the deaf person from participating in the usual social life of his neighbors and of his community, he states:

> Placed, however, with his deaf fellows, the deaf man discovers himself in a different situation. He soon learns that by the use of that language of signs so largely employed by other deaf, and of which he has in a short time become master—in fact probably from school days—he is able to converse with an ease and quickness fully as great as by that means of which he has been deprived. Hence he ceases in large measure to carry on his social intercourse with the hearing and turns to his deaf comrades; in them he builds up a quite congenial companionship and fellowship, and to them he looks largely for his means of social diversion. With them he feels a close bond of sympathy, and is moved to cooperate with them, and to stand with them when their mutual interests are concerned. In time associations, of rather formal nature, come to be organized among them. In such wise is realized the desire of the deaf as of all men to commune with their fellows.

We come now to the fourth dimension of manual communication common among the deaf, namely, the use of manual spelling, or dactylology as those who prefer a high-sounding name like to term it. It is no science. It is simply a means by which the fingers of the hand are fashioned into forms to represent the letters of the alphabet and the digits of our numerical system. By this device any word or succession of words may be spelled out, a sort of writing in the air. By this means deaf people have an accurate method of conversing with one another.

Sign Language as a Means of Communication

There is no need here for further consideration of manual communication by pantomime and natural gesture since in neither case is any special communicational development involved. We deal then with manual signs and with manual spelling which are the usual devices for daily communication with and among the deaf. It should be understood, however, that few among the deaf confine themselves to a single mode of manual communication. The general practice is rather to combine all four types of language by manual means. In truth, the skillful mingling movement from signs to manual spelling and back again, with occasional resort to some pantomimic action and natural gesture, usually proves most effective and is the prevailing practice.

As has been stated, the language of signs comprises a mixed variety of manual gestures of natural and conventional or artificial character. These were first formalized for purposes of instructing deaf children by Charles Michel Abbé de l'Épée, founder of the

[6] Best, H., "Deafness and the Deaf in the United States," The Macmillan Company, New York, 1943, p. 351–2.

first permanent school for them, in France, in 1755. The use of this language of signs was described in a number of textbooks written by the same pioneer. In later years when Thomas Hopkins Gallaudet journeyed to France to study methods in the school established by de l'Épée near Paris, he became acquainted with that sign language, and on his return to his native land he introduced it into the framework of the program of the school for deaf children he established in Hartford, in 1817. It was by that means that the sign language gained its foothold among the deaf of this country.

How the use of signs performs the function of a language is described by Best.[7] As has been intimated, signs are very much a pictorial or ideographic representation through gesture and movement of body, face, head, arms and hands. These movements, mainly muscular in character, may be natural or an approximation in outline of the appearance or shape of the object depicted or a suggestion in motion of an idea, abstraction or action. Where an object or act or idea is not readily represented by muscular movement, the sign is an arbitrary one, that is, by common consent confirmed by usage. The following "definitions" will illustrate this difference between natural (or suggestive) and arbitrary (or conventional) signs. *Gold* is indicated in this wise: "Pinch the lobe of the right ear with the thumb and forefinger, then bring the 'Y' hand out to the front and give it a shaking motion several times." [8] One may wonder at first by what manner this definition is suggestive or natural for the term, but the explanation really is plausible. Pinching the ear is merely reference to the fact that there is the area where earrings are worn and, for time long since, such objects were made of gold, suggested further by the "Y-hand," meaning "yellow," so there we have it. What would be more natural? Then, to give snap to the meaning, we bring the "Y" hand forward and flip it a few times, thus indicating the shimmering glitter of the metal. By indirect derivation and to clothe the suggestion with even finer meaning, the very same sign also stands for *California*, the sense being that was the region where the precious stuff was found in such abundance in this country. So far the gesture has a background substantiation, and in the main a very large proportion of the signs that make up the language have such a grounding. At times, however, it is necessary to improvise a sign that is only remotely rooted in the idea it represents. Thus, *name* is shown by having the right index and middle fingers rest on the left index and middle fingers, crosswise, right palm facing left and left palm facing right, the assumption probably being that thus is indicated the act of signing one's name, or as Higgins explains it, "Referring to the mark '*X*' used by persons who cannot write their own names." [9]

[7] *Ibid.*, pp. 351–2.
[8] Long, J. S., "The Sign Language," Athens Press, Iowa City, 1944, Reprint of Second Edition, p. 158.
[9] Higgins, D. D., "How to Talk to the Deaf," J. S. Paluch Co., Chicago, 1942, p. 47.

Juxtaposition, that is the combining of two (or more) signs to make a third, is common practice. Thus, *coal* is simply *rock* plus *black*.

Signs are used on three levels—the formal (for platform, elegant, or literary usage), the informal (for intimate, homey use), and the everyday conversational. The distinction may be illustrated by the sign for *father*. The formal, as defined by Long, is "With fingers closed and thumb extended, place thumb at the right side of the forehead and at right angles to it; with a slightly twisting motion, bring hand away, opening fingers and turning palm upward; at the same time bring the left hand up similarly and place parallel to the right as if lifting up a babe." [10] Informally, a deaf youngster referring to his dad would likely raise a spread-out hand to his forehead, touching it with the tip of the thumb, only a rough but expressive contraction of the formal picture. In ordinary conversation the meaning would be convincingly conveyed by a quick opening of the closed hand swung outward in the vicinity of the forehead.

These three distinctions in the levels of signing are suggestive of the way people carry on spoken conversation. Ordinarily we do not maintain one level of force in our speech. In accordance with the demand of the moment we talk loudly, moderately, or in whisper. Similarly modulation is effectively produced in sign conversation by the degree of vigor and extent of arm and hand movement. Large sweeping forceful motion would correspond to "loud" signing, moderate action would be ordinary discourse, while abbreviation in gesture could be termed "whispering." The environmental circumstances of course would determine the appropriate type of signing to employ. Thus, at the dining table gross gesture would not be necessary; in fact, by abbreviation it could be reduced in large part to a slight nodding of one's head, with barely perceived pursing of the lips and wrinkling of face, and only slight movement of arms and hands. This is but a parallel to the practice by which spoken conversation often becomes a mixture of grunting, "uh-hu's," "mmm's" and similar sub-threshold exclamation.

Last night in the city we came upon two deaf persons seated in a restaurant and conversing in greatly exaggerated—that is "loud"—signs, completely undisturbed by the fact that the place was very crowded. In public this is as much out of place as excessively loud conversation.

In a real sense the sign language when used for discourse assumes the character, not of sequential, grammatically ordered sentence structure, but more that of a chain of discrete symbols, devoid in the main of subordinate clause distinction, syntax, inflection, infinitives, and the many other refinements of an organized language. Synonym effect, the substitution of one word for another with ever so slightly variant shade of meaning, is hard to produce with signs, and thus is lost one of the strengths of developed

[10] Long, J. S., *op. cit.*, p. 36.

language. The vocabulary of formal signs is relatively meager, and if it were not for resort to manual spelling to fill in gaps, the lexicon of signs would be a shallow reservoir upon which to draw for variety in expression. On the other hand, graphic change in emphasis, in effect a form of simile, is obtained by varying the degree of force in rendering signs. For instance, the idea of hunger can be shown by a moderate clawing motion of the hand down from one's chest, but indication of an increasing intensity of this sensation can be shown to any degree desired by having the hand sign accompanied by a racking movement of shoulders and body and a facial expression of suffering.

The pattern of signing, either in platform delivery or in conversation, does not parallel the same components in ordinary language, the main difference usually being the order in which signs follow each other in the same "sentence", and in addition link symbols may be missing. For instance, the remark in ordinary English might be, "The football game on TV this afternoon was a thriller," but in signs the same observation could well take the following form and order, "TV afternoon football exciting." Note what has been omitted. The contraction has lost a definite and an indefinite article, an adjective has become a sign "noun," a noun and a preposition have been abandoned, and so have an adjective and a verb, while since there is no specified sign for "thriller" it was necessary to substitute a milder form of the idea. In ordinary English the remark is carried by ordered syntax; in signs the same message is conveyed in a more or less inverted and fragmented manner. There are purists who would have the signs occur literally in ordinary sentence structure. But this could not be adequately effected, *viz.*:

The. There is no immediate counterpart in signs for this part of speech, hence it must ordinarily be omitted.
football. This word has its specific sign.
game. Omitted, unless one would desire to employ the sign for *play*, a rather tame substitute.
on. Omitted as quite superfluous.
TV. Spelled out.
this. Unnecessary and omitted; besides, there is no real sign for the qualifying word in this sense.
afternoon. Signed.
was. No specific sign.
a. No sign available.
thriller. No immediate sign available.

So then, because there are not enough signs in the manuals to go around, the effort to sign in straight language would be thwarted, and again there would have to be broken and inverted treatment. But it should be noted that the chain of ideas can nevertheless run with graphic, forceful expression. Moreover, the signer can swing over into manual spelling whenever the need arises. That is, if no specific sign-word is known, or if the desired idea defies transfer into gesture, spelling it out on the hand resolves the difficulty. In

truth, this becomes a necessity when proper names, or terms of a technical or specialized nature come up. Hand spelling thus serves as a convenient ally. Further, the manual alphabet provides a convenient method of abbreviation. For instance, terms and names in common usage are taken care of with simply the initial letters, *viz.*,

Lincoln. The "L" hand touching the forehead.
Washington. The "W" hand waving slightly above the shoulder, referring to General Washington's epaulets.
Merry Christmas. M. C.
Happy New Year. H. N. Y.
S. F., or *L. A.* The two cities of California.

Another handy manual device is adoption of a gesture-symbol to identify an individual known to a large circle of people. Thus, such a person with a prominent chin could be referred to by the signer by placing the hand formed with the first letter of the individual's last name across his (the signer's) chin.

It is not within the province of this discussion to consider the pros and cons of manual language as they relate to the problem of education of the deaf. It is the purpose here merely to offer a descriptive presentation of what it is as a form of communication when employed by the deaf. The trust here is that we may thus impart a sense of what it is like from the inside. A grasp of this kind, it would seem, would mean a more certain insight into what the world of the deaf person is like.

We may proceed then to a closer analysis of the inner structure of the sign language. To return to an idea already considered, the use of signs as a means of communication is really a manner of thinking rather than a formal grammatically ordered mode of expression. To attempt to express oneself by signs in the sequential order that one employs in ordinary sentence usage would be a cumbersome stumbling effort.

Most manual signs are gesture translations of ideas by either direct or remote representation. This concept can be made clear by contrast. If the letters *h-o-u-s-e* appearing in that order formed a word we had never seen or heard before, then it is safe to say that the word in no possible way would be a representation to us of the material object. On the other hand, the sign for *house* is a facsimile (in motion) of such an object. The word *monkey* does not by any apparent logic account for the name we give to that animal, but the graphic sign for it, *viz.*,

> Strike the hands against the front of the body, near the side, so the ends of the fingers scratch upward, turning them inward as the hands rise against the body; repeat the scratching motion and at the same time put the end of the tongue between the lower front teeth and the lip, pushing it outward to indicate the shape of the monkey's chin [11]

[11] Long, J. S., *op. cit.*, p. 150.

is an expressive configuration of the creature. That is, the sign is a reasoned representation. The sign language to a very large degree is made up of just such representations. *It is not an aimless waving of the hands and arms.* It is, on the contrary, freighted with ideation, which makes discourse with it for those who are versed in it a nimble vehicle of communication.

The sign language of the Indians of the Western Plains is structured very much on the same principle. Since their tribes were many, a means of communication with a common base of logical representation had to be devised. An example or two should make this clear. Thus, quoting Tomkins:[12]

> *Beautiful.* The preference seems to be to pass right flat hand downwards over face, then make sign for *Good*—some tribes hold up left hand and look into it as into a mirror.
>
> *Good* (meaning: level with the heart). Hold the flat right hand, back up, in front of and close to left breast, pointing to left; move hand briskly well to front and to right, keeping it in a horizontal plane.

or

> *Goat* (meaning: horns, and whiskers under chin). Bring hands alongside of head, pointing upwards, hand held just over ears; then place back of right wrist against under side of chin, hand compressed and pointing downward.

Because of the similarity between the signs of the deaf and those of the Indians, it might be suspected either they have a common origin or one is an offshoot of the other. The former is in the main an importation from European, and particularly French, sources, so that theory is hardly a likely one. Rather, like the figures of the traditional Chinese written symbols and the ancient hieroglyphs it rests only on a similar concept of ideographic interpretation. That is, the sign language of the deaf is, in its own right, a carrier of ideas in the effort to convey meaning from one person to another.

Another striking characteristic of the sign language of the deaf, illustrating again the logical base on which it stands, is the tendency to develop "families," or clusters, of signs that have a common root meaning. For instance, signs that have something to do with the concept of mind have their locus on or about the forehead, *i.e.*, *think, forget, understand, remember, insane, wise, stupid, feeble-minded, imagine, dream, idea.* It is helpful to an understanding of the way the deaf use the sign language to note this point. For example, pondering over the philology of it, one would be hard pressed to explain why the six letters, *d, r, e, a, m,* when joined together in just that order should mean what they do in English, or for that matter *r, ê, v, e* in French, and so on across the gamut of the languages of the world. But there is no mistaking the basic meaning of the same idea in the language of signs, *i.e.*, "Place the end of the forefinger upon the forehead as in 'think', then draw it away and upward,

[12] Tomkins, William, "Universal Indian Sign Language," San Diego, California, pp. 15, 31.

giving the forefinger a wiggling motion (bending and straightening alternately)." [13]

The meaning we wish to denote with this is that the sign language grows out of a fundamental and logical ideationality, really universal in character.[14]

Indeed, the universal nature of the sign language is one of its striking qualities. Deaf persons traveling abroad are said to experience little difficulty in ready conversation with the deaf of other countries. This however was not the experience of Dr. B. B. Burnes who, as president of the National Association of the Deaf, was a delegate to a meeting of the World Federation of the Deaf this past summer in Rome. There he found interpretation of the proceedings by signs limited to use of a kind of natural gesturing reenforced by a sprinkling of some conventional signs and occasional resort to exaggerated mouthing of expressions that defied rendition by gesture, much of it unintelligible to deaf representatives of non-European countries.[15]

For assembly purposes, mainly, an oral address by a speaker is "interpreted" for deaf persons by a hearing person acquainted with sign language. The interpreter, standing on the same platform, translates simultaneously with the spoken word, and usually is able to keep pace. Such interpretation varies in procedure. Thus in some cases the practice is to render the general meaning of the speaker, without much regard for the precise literal structure; in others there is effort to approximate as closely as possible the text of the speaker's remarks.

Since, as has been repeatedly noted, signing does not hold to the customary verbal pattern, the task of translating from signs into ordinary oral communication is a difficult one, and is done adequately only by skilled interpreters. An incident to illustrate is contained in the report by Dr. Burnes, previously referred to, to wit:

> I spoke in our American sign language and I was aware that few in the meeting could understand me. However, Mrs. Williams interpreted my remarks orally and they went through the sound system in the three languages. Then the Italian interpreter translated them again into the sign language as used at the meeting, so he and I were speaking in signs at the same time in different languages. Later the British delegate showed me

[13] Long, J. S., *op. cit.*, p. 54.

[14] The semantics of communication cannot always account for a peculiar phenomenon in the way words pick up gender. The German equivalent of *dream*, that is, *Traum* (from which we get our suggestive *traumatic* in English) is masculine, as are the French words *rêve* and *songe*, the Spanish *sueño*, and the Italian *sogno*, though why this should be so is not clear. We do not find such oddities in the sign language. There *dream* is neither masculine nor feminine; it is depicted by a motion of the hand and arm that is a close approximation of what a dream really is, a sort of wandering off into space from the mind. It should be noted we are hammering away at the theme that the sign language, far from being an indiscriminate improvisation, is actually a system of communication grounded on reality.

[15] Burnes, B. B., "N. A. D. Joins World Federation of Deaf", *The Silent Worker*, September 1957, vol. 9, no. 13, p. 22.

> his notes as he heard Mrs. Williams' translation of my remarks through the earphones and I was surprised to find that he had quoted me almost verbatim, word for word. This was high tribute to Mrs. Williams' skill at the difficult task of translating the sign language into oral communication.

Gaining skill in the use of sign language is very much a matter not alone of acquaintance with the relatively limited sign "vocabulary", but also of the adroitness with which the signs are employed. The same sign can take on varied hues of meaning simply by a clever adaptation of facial expression or bodily mime. In this way the mood and feeling of the "speaker" may be conveyed. For instance, as Long has it,

> One may express the idea of quietness by simply laying the fingers on the lips. But when the same finger is thrown violently against the lips with a rebuke expressed in the face, it becomes "Keep still!" while with an impudent or threatening look it may express "Shut up!" The facial grimaces, however, and the "mouthing" affected by some are in no way a part of the sign and the habit is to be strongly condemned.[16]

How do our deaf people acquire acquaintance with, and use of, the sign language so it may serve as a means of intercommunication? We know of no school for the deaf in our country which *teaches* it. Yet it persists with virile force among the deaf. There are elements in education that would seek to excommunicate it from the life of these people, and the deaf themselves resist such efforts with strong resentment, feeling they are attempts to circumscribe their lives. Since signs, as we have here indicated, stem from universal and basic concepts, and since the deaf must of necessity depend upon visual, tactile and kinesthetic experience, the language of gesture comes *naturally* to them. It is no special art that has to be taught them by labored effort. We have seen tiny deaf children, outside of the school quarters, using their arms and hands in the most expressive manner of gesture communication. The language of *words* is for them still a conquest of the future. For the time their expressive language is highly charged with an emotional accompaniment. To attempt to tie up these arms and hands until such time as these children will have learned the visible forms of words, via the written or printed device or via speech or on the lips of a speaker is a task that would tax the limits of reason. These may be strong words, but we feel they are warranted. To our way of thinking, this would be an effort in bottling up emotional expression, and it can hardly be argued that that is a wholesome principle.

The late Sir Richard Paget, the eminent British scientist to whom we have already alluded, saw in this natural tendency to gesture a means by which educators could build a sound floor of language understanding in deaf children. Rather than stifle it he would turn it to good advantage. He advocated the experimental use of a systematic sign language in which every sign is the equivalent of a

[16] Long, J. S., *op. cit.*, pp. 18–19.

spoken word. It was his thought such a procedure would help the totally deaf (from birth or prior to acquisition of language) to overcome the language deficiency so marked in young deaf persons. He would have deaf children start their schooling by building a fund of natural signs, each standing for a word and used in the same grammatical sequence with which language is ordinarily employed. A plausible theory of language development as an anthropological likelihood, he held, is that "in a large number of unrelated languages, the great majority of their root words are due to pantomimic mouth-gestures. So whether we express our meaning by hand or mouth, the mental processes involved are probably much the same."

That is, since speech and language thus rest on a pantomimic or gesture foundation, it should be sound procedure to have deaf children initiate language acquirement by basic gestures each of which has its natural word-label or counterpart. In this manner young deaf children might early gain a vocabulary growth approximately equal to that of hearing children of the same age levels, each word riding on its gesture equivalent and used grammatically as hearing people ordinarily do. The presumption is that signs would be naturally absorbed by deaf children in any account but, as Paget would have it, clinging to these signs would be the words needed for the formulation of ordinary and correct language usage.[17]

To this suggestion, Mr. E. S. Greenaway, headmaster of the Yorkshire Residential School for the Deaf, would add a third dimension, namely, that while the gesture-word combination was being taught it be joined by the *spoken* form to reenforce the social value of the language process. Pursuing the theme outlined by Paget, Mr. Greenaway contended further, in a report in the *British Deaf Times*, that teaching lipreading to very young deaf children who otherwise have no language groundwork is in reality teaching them only mouth gestures. In that case it would seem the better part of logic, since "signs" as presently used by deaf children "hinder the development of language" that

> there might be a different story to tell if the development of sign language was helped by understanding teachers and if the sign language was controlled and assisted in its development so that it became a completely grammatical language. And let it be understood there can be a sign language which is completely identical with normal written language. There is much room for research both into the limitations of speech reading and in the educational applications of grammatical sign language. It is also possible for deaf children to be bi-lingual, *i.e.*, to use a sign language amongst themselves and to be completely oral when with hearing people.[18]

[17] Paget, Sir Richard, Bt., "Education of the Totally Deaf", *The Advancement of Science*, British Association for the Advancement of Science, Burlington, London V. 1, vol. 9, no. 36, March 1953, pp. 437–44).

[18] "Quoted from publication of the Western Canadian Association of the Deaf, October 1, 1949.

These suggestions have materialized to the extent of setting a basic vocabulary and the making of a motion picture film to illustrate the work of Paget and collaborators.

It has already been noted how through the sign language the deaf may find recreational and literary enjoyment. With it also they may participate in religious services and benefit from programs of itellectual merit. Shakespeare's *Macbeth* has been superbly presented on the manual stage. In its long course as a production *Arsenic and Old Lace* drew no larger house than the one that packed the theater on Broadway when it was staged there in the sign language by a troupe of Gallaudet College players. In truth the Jonathan of the play never was so villainous and its two gentle old ladies never so whimsical as when portrayed by these same deaf actors employing the language of signs. We have heard "Casey at the Bat" given on the spoken stage by accomplished actors, but never with such penetrating pathos as when acted out to the accompaniment of manual language. It may raise an eyebrow in surprise that Gilbert and Sullivan have had their day also in the sign language, with deaf actors, the rhythmic effect carrying the beat of true music. On that score, although we have listened to many a fluttering Titwillow Song from the *Mikado,* we still feel none demonstrated a more appealing duet than the one we saw PoBo and Katisha render in the sign language.

As lovers of pantomime art know, the "dumb show" was a favored item in the drama of olden days, as witness Shakespeare's *Hamlet.* The circus clown carries something of the tradition into modern times. It will be understood then why the sign language lends itself so readily to this form of entertainment. This also has its moments of humorous relief, and a few examples will illustrate. Ordinarily, the gesture for *feeling* is made by drawing the midfinger of the right hand up over the heart, but we recall a sign maker who was left-handed execute that sign, in the course of a sermon, over an imaginary heart on his right side. Again, in a play in manual language there was a point in one of the scenes when there came a knock at the door, whereupon one of the actors turned and spelled out on his hand, "Come in!" and by a sort of visual "legerdemain" the door opened and a visitor entered. Comedy of a bizarre sort may be seen in another incident. When a hearing speaker appears before an audience of deaf persons, it is customary to have someone "interpret", that is, render into signs simultaneously the words of the one who is speaking. An authenticated story has it that in one of the schools for the deaf, for negro children, in the South a preacher of the evangelical persuasion had been invited to give the Sunday sermon, the principal of the school acting as interpreter. The speaker launched upon an eloquent discourse, but unfortunately it had too much depth to be easily understood. The interpreter waited for a cue on which he could begin, all the while with a host of white eyeballs fixed expectantly upon him. Seized by an inspiration, he started on a sermon all of his own, in wholesome down-to-earth signs. There they were, one sermon coming from the speaker, and an entirely different one from the hands of the interpreter. Both

in unison reached time for prayer, after which the children marched out of the hall, an enlightened if not wiser lot.[19]

The Manual Alphabet

As has already been stated, communication by manual means is made precise with use of the manual alphabet, the fingers and the hand forming the letters quite like the act of writing with pen or pencil. There is a difference of course in the fact that manual writing is fleeting, remaining before the eyes of the reader (and in the palm of the hand in the case of the deaf-blind) only momentarily.

In ordinary writing with pen the skill as a rule is concentrated in one hand which, except for the few who are ambidexterous, is transferred to the other hand only with great difficulty. In manual spelling, on the other hand, either hand swings into it with equal ease and with barely any added practice needed.

In the United States and in almost every other land a single-handed alphabet is the custom, though the manner of forming the individual letters may vary. In the British Isles, except Ireland, a double-handed alphabet is used. The two-handed system is said to be a slower method, relying largely on a positioning of the fingers of one hand superimposed on the other. Thus the five vowels are indicated by touching the tip of the fingers on one hand in turn, beginning with the thumb. The remaining letters, the consonants, assume in a number of cases a form that approximates the shape of the letter as it appears in print or writing. Should one arm be temporarily, or otherwise, inactive, the person would be hard put to it for manual conversation.

It seems a manual representation of the letters of the alphabet, regardless of the language used, gained usage in past centuries, particularly in the instance of religious orders which adopted rules of disciplined silence. The Venerable Bede speaks of such a practice in his "De Loquela per Gestum Digitorum," thirteen hundred years ago. Early medieval Bibles showed pictures of finger letters. Our interest centers on the fact that both historically and geographically the manual alphabet we use today had its parentage in the late medieval centuries, passing from Italy to Spain and thence to France from which it was eventually brought to the United States. In the course of that passage it was seized upon as a device in teaching deaf children.[20]

In ordinary usage the manual speller does not pause for punctuation or capitalization. Words run together, without space between them, just as was the practice in the manuscript copying by the monks of old. So

thisisthewaythissentencewouldlookifspelledmanually.

A number of simple rules will help in gaining facility and intelligibility in use. The fingers should not be tensed, the arm should be fairly fixed without undue gross movement, moderately extended

[19] Interpretation Into Signs," *American Annals of the Deaf*, vol. 56, no. 2, March 1911, p. 232.
[20] Best, H., *op. cit.*, pp. 518–519.

and raised so as to bring the hand clearly into the field of vision. The letters should be formed distinctly, crisply. The hand and fingers should have an easy fluid motion, the wrist, however, remaining in a relatively stationary position. A hesitant, sprawling, staccatic breaking movement of the hand should be avoided. The form of each letter should be distinct, yet merge imperceptibly (that is, without a jerking-like pause) with the letter that follows. Consider what it would mean if we had to do our reading

o-f a s-e-n-t-e-n-c-e t-h-i-s w-a-y

For greater effectiveness the general rule in manual spelling is to hold the hand with palm toward the person or persons being addressed. If this is reversed, the tendency is to obscure for the observer the position and movemnt of the fingers.

On occasion the question is asked, "How rapid is finger spelling?" "Since it is a manner of writing in the air, how does it compare with ordinary writing?" We put this to a test with a group of twelve men and women who use manual spelling with natural ease. Each was given the same paragraph first to write out and then to spell manually. The passage contained 39 words, with a total of 178 letters. The mean time for the pencil-and-paper test was 77.4 seconds; for the manual spelling it was 38.4 seconds. This indicated it required only half the time for finger spelling as for ordinary handwriting. In the latter, 2.3 letters were completed per second; by finger spelling 4.6 letters per second.

From the fact that speech, in English at least, cuts through double consonants and vowels (oc[c]asion, re[e]f, pul[l]) and slices off the superfluous in word forms (rough = ruf), together with elisions and combinations by which sound elements lose partials in their characteristics, (i.e., asked = askt, writing = riting), speech obviously must be much faster than either hand spelling or writing, since in the latter two every letter is given.

Guide Books of Manual Language

For those who work with the deaf, in the fields of education, rehabilitation, social work or religious direction, it would be helpful to consider a number of sources or manuals for guidance in acquiring the fundamentals of manual communication, some of these having already been referred to in this discussion. Two, perhaps the most widely used, are the following.

1. J. Schyler Long, "The Sign Language, A Manual of Signs."

This book was first privately published by the author at the Athens Press of Iowa City in 1918. It has since been issued by members of his family in a Second Edition which added a special appendix of religious signs, and subsequently a 1944 reprint of the Second Edition. The value of Dr. Long's book lies in its descriptive definitions, many of them derived from the teachings of the early school masters of the sign language, and so is an effort to preserve something of its formal dignity. The definitions are carefully illustrated with photograph cuts. The cost of the book, cloth

bound, is $4.00. Recently the remaining supply of copies of the book, together with the original plates, has been left with Gallaudet College, in Washington, D. C., from which source it may still be ordered.

2. Dan D. Higgins, "How to Talk to the Deaf."

This work by Father Higgins was published by J. S. Paluch Company, Inc., 2712 N. Ashland Avenue, Chicago 14, Illinois. Its subtitle gives word of its breadth, "The Language of Gestures, Expression, Impersonation, Pantomime, or Acting Used by All Peoples in All Ages and Everywhere." It also, like Dr. Long's book, has the double utility of definitions and illustration by photo-cuts, and includes a supplement of special religious sign sequences, such as The Our Father, and The Hail Mary. Again like the Long text, the one by Father Higgins gives an excellent explanatory introduction and a handy concluding Index of Signs.

A brief, but descriptive and useful, treatment is contained in a leaflet prepared by Stanley D. Roth, superintendent of the Kansas School for the Deaf. This is now out of print.

Members of the staff of Gallaudet College have long used a mimeographed set of definitions in teaching classes in the sign language. The same institution is now undertaking a special study with the intention of developing a derivative lexicon of signs. Cooperating with the college in this project are a number of organizations, namely, the National Association of the Deaf, the Convention of American Instructors of the Deaf, and the Alumni Association of Gallaudet College.

The Silent Worker has recently published a series of articles which analyze possible methods by which the sign vocabulary can be expanded and adapted to colloquial language use.

A manual that has had considerable use is one prepared by the late J. W. Michaels, a missionary to the deaf. It is "A Handbook of the Sign Language of the Deaf," published by the Home Mission Board of the Southern Baptist Convention, Atlanta, Georgia (Foote and Davies Co., Printers), 1923. Unfortunately it is not listed as being in print at the present time, although it may be found in a number of libraries.

The National Institute for the Deaf, 105 Gower Street, London, W. C. 1, England, has published a booklet, No. 491, "Conversation With the Deaf," price 2s-6d. This contains some twenty pages of clear illustrations of the major or basic signs. It makes much of the act of pointing, expressions of the face, charade, movements simulating customary use of tool or object, indication of an outstanding characteristic of an object, and pointing to part of an object to indicate a quality it possesses, i.e., pointing to the lips to mean *red*. Although this quality of "naturalness" has a virtue about it, a glance through the manual reveals many signs that would puzzle a deaf person here.

"Underwater Sign Language", a brief manual prepared by Valentine A. Becker and published by U. S. Divers Corporation, is a 32-page booklet which classifies definitions of basic signs under

the separate headings of The Manual Alphabet, Numbers, Signs, People, Things, Action, Underwater Life, Colors, Place and Direction, Time, and Miscellaneous. A copy may be obtained for $1.50 by writing the author, 13941 La Maida, Sherman Oaks, California. While intended to serve a specialized need, this booklet contains basic principles helpful to an understanding of the language of signs used by the deaf.

The book by William Tomkins, "Universal Indian Sign Language," has been privately published by the author, address 3044 Lawrence Street, San Diego, California. Its cost is one dollar. This text provides excellent supplementary material for students of the subject. It is the result of painstaking study of the use of manual communication among the plains Indians of North America. By diagram and definition it describes their pictographic and ideographic symbology. In many ways it reflects a basic similarity with the language employed by the deaf. The latter, sometimes called the American system of signs, is a development after having been brought to this country by Dr. Thomas Hopkins Gallaudet and the deaf teacher, Laurent Clerc, from France in 1817. The treatise by Tomkins makes clear the underlying nature of manual language. Even the differences give emphasis to the principle that signs cluster about characteristic concepts. For instance, as has been stated, in the language of the deaf, symbols having to do with thought spring from the forehead, the seat of learning; in the Indian signs the original idea was that "thinking or understanding was done with the heart," and so made the sign "drawn from the heart," *i.e.*

> Hold right hand, back up, against left breast, index extended and pointing to left; move hand horizontally outwards eight or ten inches, turning palm downward.

For those who wish a scholarly, yet easily read, discussion of the use of language by nonverbal devices, a book by Jurgen Ruesch and Weldon Kees may be recommended. This work, "Nonverbal Communication", gives a broad survey of practices that have been developed in the visual perception of human relations. In addition to exposition of the theory, it is profusely illustrated with striking photographs. It is published by the University of California Press, Berkeley, 1956.

Summary

Manual language is more than a means of communication. It is an expression of emotional content within the individual.

Conversing by manual methods is long rooted in human history.

Manual means of communication is a natural phenomenon.

For the deaf communicating with one another manually is a sure and facile method and, further, carries the emotional warmth for them that speech does for hearing persons.

Manual language can serve well as a vehicle for intellectual attainment, as witness the program at Gallaudet College.

There are four types of manual communication: Pantomime, natural gesture, pictographic symbols formed manually, and finger

spelling. In ordinary usage these are employed together, re-enforcing one another.

The sign language as used by the deaf does not lend itself to the sequential use of grammatical discourse. Thus it is not straight language as customarily employed.

Sign symbols are founded on logical underlying concepts. There is a reason for almost all of them, that is, they are near correct illustrations in motion of both material objects and abstract ideas.

The language of signs establishes a bond of sympathy among the deaf, providing the means of meeting important social needs among themselves.

The same signs may assume three different patterns, namely, the formal for dignified use, the colloquial for ordinary discourse, and the familiar or greatly abbreviated for home and family use.

Relatively, the store of sign-vocabulary is a limited one.

Basically, the use of signs sets up a mode of thinking with the contour of ideas rather than of word-symbols. In this sense thought process has abstract quality.

The sign language of the deaf suggests a philological similarity with other languages, *viz*, that of the American Indians and other peoples.

Clustering about common roots is a characteristic of sign-symbols.

In a large sense the system of gesture usage is grounded on reality. It is not subject to vagueness of derivation. For this reason it is universal in character.

Variants in shades of meaning can be obtained by adroit adaptations of facial expression and mime.

The deaf acquire their manual language naturally. It is no special art requiring labored effort of learning. To attempt to block off this outlet of expression will tend to create emotional thwarting.

It has been proposed by some that it may be possible to employ the sign language to advantage in educational processes for young totally deaf children. This suggestion embodies the conversion of gestures to a grammatically ordered system, each sign having a word counterpart, both to be taught with the corresponding speech symbols.

Signs serve as an effective medium in providing recreation and entertainment for the deaf.

The deaf of most nations employ single-handed manual alphabets. An exception is the two-handed method in use in the British Isles.

Finger spelling is probably twice as rapid as handwriting. In turn, it is slower than speech.

A number of manuals of sign language have been published.