THE DEAF AND DUMB

THEIR

EDUCATION AND SOCIAL POSITION

BY

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&c. &c.

SECOND EDITION REVISED & ENLARGED

"Whose hands are eloquent and fingers tongues"—CASSIODORUS

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TO THE COMMITTEE OF THE WEST OF ENGLAND
INSTITUTION FOR THE EDUCATION OF
THE DEAF AND DUMB.

GENTLEMEN,

I desire to dedicate this work to you for several reasons: first, as an expression of my high appreciation of your unwearied efforts in the cause of the deaf and dumb; secondly, as an acknowledgment of the kind and considerate assistance you have so constantly rendered to me during the thirty years I have had the honour of being the master of your Institution; and thirdly, as a record of my most grateful thanks for the many personal favours I have received at your hands.

I have the honour to remain,

Gentlemen,

Your faithful and obedient Servant,

W. R. SCOTT.

St. Leonard's, Exeter,
April 28th, 1870.

PREFACE.

Several circumstances have induced the writer of the following pages to believe that the public, generally, are far from being aware of the extent to which deafness prevails, or of the effects which it produces upon the moral and intellectual character of those who are its victims, and the desire of making the condition of the deaf and dumb more fully known, and the necessity of their instruction better understood, has prompted him to publish this work, under the conviction that a people, who contribute their thousands annually to instruct the heathen ignorance of other nations, would never permit similar ignorance to remain amongst themselves without the attempt to enlighten it, if they were but acquainted with its existence. In this country the education of the deaf and dumb depends entirely upon the efforts of benevolence, and it becomes, therefore, a duty incumbent upon those who are aware of the deprivations which they suffer to make their condition known—"to plead for those who cannot plead for themselves." Should the following pages be successful in extending the knowledge of their misfortune, and exciting a more general sympathy in their behalf, the objects of the writer will have been accomplished.

A brief sketch is given of the means employed in their instruction, and this course has been adopted for several reasons. In the first place, because it afforded a convenient opportunity for pointing out some of the peculiar disabilities

attached to the condition of the deaf and dumb. In the next place, it helped to shew more clearly that their education demands a special method of instruction, and that such persons only as have made that method their peculiar study can be entrusted with carrying it out with any prospect of success. And, thirdly, it will enable those persons who are connected with deaf-mutes to judge more correctly of the difficulties which children, so situated, have to contend against in their acquirement of knowledge, and hence to see how necessary it is that the time devoted to their education should not be unduly abridged. The writer would mention that on the subject of articulation the views he advocates differ from those held by some eminent teachers, especially in Germany, but against these authorities may be quoted those of others not less celebrated. Indeed, it will be seen that the chief arguments he has advanced upon this subject are taken from a distinguished American authority, and so fully did these agree, in every respect, with the views held by himself, that he did not hesitate to use them in preference to any observations of his own. He has also to acknowledge that he has used similar freedom with the same authority on one or two other points, but the quotations were not given as such, because they were not sufficiently literal.

A few remarks are added on the causes of deafness, and some practical hints are given for the early management of deaf and dumb children, which, it is hoped, will be found useful to those persons whose circumstances may require such information.

PREFACE TO THE SECOND EDITION.

The first impression of this work, which was published more than twenty years since, having been for some time exhausted, and much discussion having recently arisen as to the desirability of continuing the plan of instruction generally followed by English teachers, I have been induced to publish a Second Edition, in order that the question may be fairly examined, and so placed before the general reader, that he may have the opportunity of judging for himself. To enable me to do this satisfactorily the work has been entirely recast in its arrangement and considerably enlarged. It has been my desire to examine the different modes of instruction followed in the various countries of Europe and in America; and I have to acknowledge my obligations to those of my brother teachers of whose labours I have availed myself in the following pages. Whenever I have been able to adduce the sentiments of others in confirmation of my own, I have done so, as affording additional testimony on the point at issue, and the authorities have been generally given in the margin; where I have failed to refer to them, the omission has been an unwitting one on my part, as it has been my wish to establish the positions I have taken rather by the weight of evidence and of educated authority than by any dogmas of my own. On one question—the value of articulation—I would especially tender my thanks to my American brethren for the use I have made of their

labours; and I would here express my belief that the facts they have collected, and the discussions they have recently held and so ably conducted on this subject, must go far to set this *vexata quæstio* at rest. As regards those gentlemen from whose opinions I have had the misfortune to dissent I trust that my remarks have on all occasions been made with courtesy and respect; but if in any case I have failed in my intention, I have to express my regret and solicit their forgiveness.

In the preliminary chapter I have ventured to controvert the opinion of Professor Max Müller, on the subject of language. In doing so, I am aware that I have been guilty of great temerity; but I can only say, in my defence, that I believe him to be wrong. At the same time, I feel assured that he would be the last person to do intentional injustice to persons deprived like the deaf-mute of one of the most important means of education, by representing them as still lower in the scale of intelligence than, owing to such deprivation, they really are; for all who have the honour of his acquaintance regard him as being as distinguished for kindness of disposition as for sagacity of mind.

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CHAPTER I.

LANGUAGE, SPEECH AND REASON.

One of the great distinguishing features of man is his power of using spoken and written language. Without the power of communicating and recording his ideas, and of receiving the ideas of others, he never could have advanced beyond the narrow boundaries of his own limited experience. That experience also must have remained crude and unsatisfactory, for it never could have been corrected by the purifying process of passing through the minds of others. Without the means of communicating his thoughts, man must have roamed over the earth a solitary savage, with no power to develope those instincts of his nature which prompt him to become the being of social and civilized life. There might have existed in his soul the fountains of love, joy and hope, but he never could have mingled these feelings with those of his race; he might have possessed a soul capable of admiring the beauties of nature,

but he never could have sympathised in such emotions with others. His feelings must all have remained isolated within himself, never advancing beyond their original prison-house. How infinitely great, then, are the benefits which the power of communicating his ideas confers on man: all his mighty gifts of intellect would have been but a painful burden on his existence, had not language, or the means of communion with his fellow creatures, been the crowning gift of his benevolent Creator.

There are few surer tests of the extent to which a people may have become civilised than that of the power and accuracy of their language; and there is no more prominent accompaniment of barbarism than a feebleness and poverty of expression. As a people extend their researches into the mysteries of nature, new forms of speech are required; and as their mental operations become more refined and more subtle, it follows, as a necessary consequence, that their expressions of thought partake of a similar accuracy and precision.

"To be without language," remarks Dr. Brown, "spoken or written, is almost to be without thought." We must not think, in a speculative comparison of this sort, of mere savage life; for the rudest savages would be as much superior to a race of beings without

speech, as the most civilized nations at this moment are, compared with the half brutal wanderers of forests and deserts, whose ferocious ignorance seems to know little more than how to destroy and be destroyed. In our social intercourse language constitutes the chief delight, giving happiness to hours, the wearying heaviness of which must otherwise have rendered existence an insufferable burden. In its more important character, as fixed in the imperishable records which are transmitted in uninterrupted progression from the generation that passes away to the generation which succeeds, it gives the individual man the product of all the creative energies of mankind, extending even to the humblest intellect which can still mix itself with the illustrious dead that privilege which has been poetically allotted to the immortality of genius, of being "the citizen of every country and the contemporary of every age."

So close, indeed, is the relationship between language and thought, that, in some languages, to speak and to think are expressed by the same word, and there is no doubt but that the power of expressing clearly and exactly the intellectual operations is manifested to a great degree in proportion to the development of the intelligence itself.

It has been said that language is the strong

line of demarcation between man and the lower animals; but though the mighty power that speech bestows on man places him above all other creatures, still it must be admitted that, to some extent, animals share this gift of language with him. Speech and language are not synonymous terms, though they are often employed as words of the same meaning. Speech is a language articulated by the vocal organs, language may be considered as any means of communication between two intellects. Speech is therefore one kind of language, but it is not the only one. Were it so, we could not instruct the deaf-mute, as we should be shut out from communicating with him.

Gesture, or sign language, as it is designated by teachers of the deaf, is a language, and the one by means of which we are first able to hold communication with the deaf-mute. We know, further, that different animals have the means of communicating with each other, and in most instances modifications of sound are used for this purpose. It may, indeed, be that these are natural and instinctive sounds, as crying and laughter are with us, and differ from human speech as not being the result of conventional agreement.

But if we examine further, it will be found that the means of expressing thought bears

always a striking correspondence to the amount of intelligence to be expressed. If we take a race of people possessing a low amount of intelligence, we find a limited language. The Veddahs, of Ceylon, are amongst the lowest of human beings, and Tennant informs us that "their language is limited to a very few words, and in some cases they are so degraded that it appears doubtful if they have any language whatever, and that they communicate with each other by means of signs, grimaces, and guttural sounds, which bear little or no resemblance to distinct words or systemized language, while they are unable to count beyond five on their fingers."* If, therefore, we compare the language of animals with the speech of civilized man, then, indeed, the difference is vast, and the distinction wide. But this distinction is considerably reduced by taking this lower development as found amongst the Veddahs. Here we find that five is the extent to which they can count, while according to White of Selborne birds can count to three.†

We see, then, that the amount of intelligence and power of language bear a corresponding relation to each other; but it is not to be inferred from this that it is the want of language that produces the want of intelligence. Indeed,

* Tennant's *Ceylon*.

† White's *Selborne*.

when a people have got anything to say, they will find the means of saying it. Nor does it follow on the other hand that because speech is possessed high intelligence is the result. It is true that high intelligence cannot be manifested without a highly cultivated language, but intelligence must be possessed before it is manifested. The Veddahs have speech, the most perfect form of language, but they have not a high intelligence, and of what use would it be to add to their stock of words, if they could not comprehend their meaning ?

The deaf and dumb, on the contrary, have not speech, but an inferior language, yet they can manifest intelligence far beyond that shewn in the case of the Veddahs ; and this brings us to a consideration of Mr. Max Müller's somewhat startling proposition, viz., that *without speech no reason,* and *without reason no speech.*

In arguing out this proposition, he says, that the uninstructed deaf and dumb have never given any signs of reason in the true sense of the word. Everthing written by Mr. Max Müller receives, as it deserves, the most respectful consideration, and it is because we believe that the view here taken of the deaf and dumb mind is erroneous, and has led in some cases to serious practical errors in their education. that we have been led into this consideration of language,

speech, and reason, and of the relation which they bear to each other.

Now, though it cannot be denied that the want of speech depresses the reasoning faculty of the deaf-mute, and that when uninstructed they will remain with minds more or less child-like, greatly uninformed, and full of false notions, still they reason correctly on subjects which they know, and draw inferences as logically as other persons. Mr. Max Müller admits that after education they are able to think the thoughts of others, but appears to deny that they can at all draw an original conclusion. A clearer acquaintance with the deaf-mute would have considerably modified Mr. Max Müller's opinion of their intelligence. Probably his estimate of their condition has been formed, in some degree, from the practice of the German instructors in attempting in all cases to teach articulation to the deaf-mute, and in considering that as the great end of instruction.

Two distinct modes of proceeding have prevailed in deaf-mute instruction. In that followed in Germany, articulation is made a chief object, while in the other, articulation has not been followed, and the written form of language has been chiefly attended to. In England, a mixture of both methods has been employed, but in America, where articulation has never been

taught, they have produced excellent deaf-mute scholars, a practical answer as far as the deaf and dumb are concerned, to the unsoundness of the position taken by Mr. Max Müller, that "without speech, no reason." All those who have been brought into association with the deaf and dumb know that they reason from infancy like other children, in a more limited manner, it may be, from a more limited knowledge of facts, but still they manifest no difference except of degree.

We need not at present here discuss the question whether or not man can reason without the use of some signs or language, or by means of ideas only. What is here maintained is that phonetic embodiments or exponents of his ideas, and which we call speech, are not necessary, and that this is proved by the case of deaf-mutes, who reason both before and after instruction, and who do not employ speech at all They are not, however, without a language. Before instruction, they have the language of gesture; and, after instruction, they have in addition to this, written language.

There is a kind of notion amongst the advocates of articulation, that the power of speaking is necessary to the full conception and realization of the value of words. But it requires very little reflection to perceive that whatever may be the power of the living voice in making language

clear and impressive to those who hear, it is utterly lost to the deaf and dumb, for whom articulated words are, and can never be, more than mere movements and positions of the lips and other vocal organs—a kind of *Lipology* (if we may use such a term) of syllables, as the fingers form a Dactylology of letters.

This subject of speech is one of some importance in the question of deaf and dumb teaching, since it has been held by some that unless the deaf and dumb are taught articulation, they are not properly educated, inasmuch as without speech they cannot reason.

When man was formed, he was not left without a language. But we have no evidence to shew that this language was phonetic. His first means of communicating might have been gesticular, combined with those spontaneous sounds, —ejaculations—which he naturally makes.

Man possesses five means of acquiring knowledge, viz. the five senses ; and to some of these must be referred all his conceptions of the things beyond himself. Now, it is possible that through nearly all of these senses he might have formed a language, *i.e.*, a language of sight, a language of sound, a language of touch. A language of sound, a language of sight, and a language of touch, all exist, but it does not appear that either of the other two senses has

been so employed, and it is difficult to see how they could. The senses of smell and taste now seem only to administer to our least intellectual wants, or to our most sensuous enjoyments, but it is quite possible that in a state of high civilization, the functions of both, as far as they minister to our preservation, may in some measure have been lost. We have frequently noticed in children of an imbecile grade, that they do not eat any new thing without first smelling it, and in one case, we knew a boy who never began to eat before smelling his food. We are told of James Mitchell, the deaf, dumb, and blind boy, that in most cases "he satisfies his curiosity by the use of his feeling and smell, this latter sense being wonderfully acute; he is frequently offended through it, when other persons near him smell nothing unpleasant. His taste seems also to be exquisite, and he expresses much pleasure by laughing and smacking his lips when any savoury victuals are placed before him."

The language of gesture, from its more robust forms, and from its expression having a natural force, probably continued for ages associated with the earlier forms of vocalization, and gave to these an energy and a force, which, as mere arbitrary sounds, they did not possess; and even now in the highly civilized nations of our own time the

orator, when he wants to move the feelings of the people, has recourse to gesticulatory as well as phonetic language. The aborigines of North America speak different languages; but one gestural language, which they all perfectly understand, prevails throughout the whole continent, and by its means they can make themselves understood by each other.* Murray, in the introduction to his *Handbook of Southern Italy*, says: "At Naples we find the mimica of the Greeks still in use as the unspoken but expressive language of the great mass of the people."

Dactylology and lip reading shew us that a kind of visible muscular language might have been carried far into conventional forms, had it happened that human language in its early development had taken a visual rather than an oral form. It is quite possible that in the beginnings of human intercourse, many arbitrary forms did spring out of natural gestures just as hieroglyphics sprang out of picture writing,

* Major Long's *Expedition to the Rocky Mountains*. This work contains an account of a number of these signs, and many of them are almost identical with those used by the deaf and dumb, while in those that differ there is yet such a general resemblance as to shew that they were only variations produced by the different circumstances of the two classes of persons. See Appendix, No. 1.

and vanished when sound instead of form became the basis of human language. It is also possible that in some tribes of animals, other senses than those of sight and hearing may be employed as a means of communication. Some distinguished naturalists believe that a language of touch does exist amongst some classes of insects, while with the blind we know that the sense of touch is employed for the purpose of reading.

To examine the forms of the earliest alphabetical language, in the belief that they will assist us to discover the beginnings of human language, is like looking amongst the antiquities of Nineveh to discover the beginnings of creation.

It is possible that the great principle of associating an arbitrary form with a thought no-way naturally connected with it, may have arisen from a contracted gesticulatory action taking the place of a natural one. This contracting of natural gestures into much shorter gestures than the natural expression requires is very common amongst the deaf and dumb. This contracted gesture is frequently so shortened as nearly to lose all semblance of the natural one, but to the deaf and dumb who use it, it still has the force of the original expression. When once it was seen that an arbitrary form might call up an idea of which it was in no way naturally representative, the great prin-

ciple of human language was discovered, and it would be no great stride in advance to apply this principle to modifications of vocalization. The natural sounds produced in ejaculations, the sounds heard in the operations of nature, from the hum of the bee to the roar of the cataract, would all help in forming a language of sound, so that probably both the "bow-wow" and the "pooh-pooh" principles had their share in the formation of speech. Mr. Max Müller doubts the influence of the "bow-wow" theory upon language. He says "most of these onomatopoieias vanish as soon as we trace our own names back to Anglo-Saxon and Gothic, or compare them with their cognates in Greek, Latin, or Sanskrit, &c."* Yet, in a note on this passage, he says, "In Chinese, the number of imitative sounds is very considerable," and he gives examples of several. Now, is there not some inconsistency in these two statements, since the Chinese language is, doubtless, one of the oldest languages extant, and though the words in some degree may have been altered by an attrition amongst themselves, they probably yet retain more of the character of an original phonetic language than any other that is left to us. If this view of the origin of language be correct, viz., that the first form was gesture-language fully expressed, followed by contracted gestures, and these again by arbitrary signs,

* *Science of Language*, p. 351.

gestural and phonetic, then there would appear to be a striking analogy between the development of spoken language and alphabetic writing. In writing there is—

First. *Picture writing*, where the events themselves are fully depicted, as illustrated in the picture writing of Mexico, and which corresponds to our full natural signs—the first stage of language.

Second. *Hieroglyphics*, as found in Egypt and China, which are partly curtailments of the forms of picture writing, and as such correspond with our shortened natural signs, and the second stage of language, where the signs are abbreviations of those that are natural.

Third. *Alphabetic writing*, the purest conventional form of writing, only expressive of ideas by previous agreement, and agreeing with language in its pure conventional character. Thus it would appear that both the written form of thought and the spoken form of thought ran a kind of parallel course in their development, and that both sprang from a common source of natural expression, viz., gesture.

Those interested in this subject may consult the able work of Mr. Tylor, "*Researches into the Early History of Mankind*," and M. Lenormant's "*Introduction à un Memoire sur la Propagation de l'Alphabet Phenicien dans l'ancien*

monde." In this latter work the author has traced the manner in which the early full pictorial forms have passed through their various changes, till at last the alphabet was evolved, and we cannot help feeling that they very much correspond with the view of the subject which we have been led to form from a somewhat different stand-point. The illustrations he gives of the mode of depicting objects by metonymy, are made much on the same principle as is used by the deaf-mute in such cases, *e.g.*, *Light*, expressed by the combination of the figures of the sun and the moon; *Song*, by the ear and a bird; *Honey*, by a bee and a jar; *Night*, by the heavens and a star; *Tears*, by the eye and water.* All these metonymies the deaf-mute would understand, and, in fact, it is on the same principle that he expresses such words himself. It is worthy of remark, though not alluded to by Lenormant, how peculiar conditions modify the signs or pictures for the same object, and which might ultimately produce forms very different, though descended from the same source. In Chinese the character by which mountain is expressed is like three inverted V's, something in this form, ΛΛΛ, indicative of the mountain peaks of that country, while in Egypt, a somewhat different figure, thus  is used,

* *Lenormant's Introduction*, pp. 24 and 25.

indicating the high lands bounding each side the Nile valley. Similar kinds of modification are found in the gesture-language of the deaf and dumb, constituting, as it were, different dialects, but these never vary so much as to prevent their being generally understood.*

The path, then, that written language has followed in its development is, first, pictures of the objects themselves, alone and in combination; next, parts or contractions of these figures; next syllables; and lastly, alphabetic writing.

The question, however, remains as to what were the different stages in ordinary communication, whether gesture-language was used, or in all cases speech. We believe that in the first case gesture-language, full and curtailed, was used, and continued to be used for some time, associated with ejaculations. As time went on, phonetic language crept in, till spoken language became chiefly employed, as at present. Of course, we offer these remarks merely as conjectural; but we have often thought that though Dr. Reid and others have believed that man must have originally used gesture-language, the subject has never had the attention paid to it that it deserves, and believing that a long and continuous intercourse with the

* For a short *resumé* of Lenormant's Introduction, see Appendix No. 2.

deaf and dumb has afforded opportunities for the study of this language that nothing else gives, we have ventured to introduce these observations here.

Gesture, as a means of communication, has seldom been fully estimated.* Those who have been associated with the deaf and dumb feel but little difficulty in holding communication with them in this language on all the ordinary affairs of life, and it is by its means more than any other, in all the earlier years of instruction, that information is given to them, and on it we mainly depend for enlightening and developing their minds. It is wholly contrary to fact to say that they cannot think or reason in it. Henicke, the early deaf-mute instructor of Germany, we know, maintained that the deaf and dumb could only think when they knew words, and that without spoken language their minds did not run beyond those of the brutes. But this false notion has been long exploded amongst all those who

* "To-day Big Axe came to my tent and sat by me a long time. Never did I so much wish to converse with any man and tell him about the Saviour; and from the expression of his countenance I thought he felt the same. But the gift of tongues was not imparted to me, and we could only converse by the *language of signs*, which can be used far better, however, than I anticipated."—*A Journey beyond the Rocky Mountains, by the Rev. S. Parker, M.A.*

have carefully watched the operations of the mind in the deaf-mute. Bébian believed that they think neither in words nor signs, but only in images and ideas. In our own attempts to arrive at a conclusion on this subject, we are led to believe that in some conceptions the mind has only the images of the things themselves before it, thus thinking of objects and their relations in the things themselves, while in other cases pantomimic signs are the thinking medium, and in others, words—the latter being more and more employed as a knowledge of them becomes more and more developed. The great mass of pupils, however, probably think for a long time in signs, and follow that order of thought which signs engender. A strong evidence of this is to be found in their written compositions, which give us all the peculiarity of sign idiom, as if their written language was a translation from the language of signs. We are told of James Mitchell "that when he is hungry he approaches his mother or sister, touches them in an expressive manner, and points toward the apartment where the victuals are kept. If he wants dry stockings he points to his legs, and in a similar way intimates his wishes upon other occasions. A pair of shoes was brought to him, and on putting them on he found them too small; his mother then took them and put

them into a small closet. Soon after, a thought seemed to strike him. He got the key of the closet, opened the door, took the shoes, put them upon the feet of a young lad who attends him, and whom they suited exactly." In what language did Mitchell think?

That gesture, either as a means of expression or as a vehicle for reasoning, is equal to speech or writing, is not maintained any more than we would affirm that the monosyllabic language of the Chinese is as perfect as our own; but what is affirmed is, that it is sufficiently copious and exact to enable the deaf and dumb to carry on ordinary conversation, and follow out ordinary reasoning as the Chinese do, and that by its means the minds of the deaf and dumb can be taught much knowledge, and their reasoning powers greatly strengthened. It is not therefore on the deaf-mute's being taught to articulate that his capability to reason depends, but on his being a member of the great family of human beings who have minds capable of reasoning. Were he never to become acquainted with language in either its written or spoken form, but to be dependent wholly on signs as used in an Institution, he would be a rational being, and might still become possessed of an extended and varied knowledge. We have known several instances where but a scanty acquirement of

words has been obtained, that children have still made advancement in other branches of knowledge, such as figures, drawing, geography, religion, and history, on all of which subjects they could express themselves by means of signs. This is one reason why those schools, which depend so much on articulation and discountenance the use of signs, make so great a mistake. The minds of the pupils are not so well cultivated as they would otherwise be, and one of the great ends of instruction—the moral and mental improvement of the children—is sacrificed for the doubtful accomplishment of saying certain sentences by means of "mechanical speech."

It must not be supposed from what has been here stated, that it is our great object to *teach* our pupils the language of signs; that would be an entire misapprehension of our position. They would possess this language without our teaching, and indeed would learn it in opposition to our wishes. We find it amongst them, and to some degree we perfect it, and we employ it because it possesses for the deaf and dumb a clearness, a comprehensiveness, and an impressiveness far beyond anything that can be obtained for a long time by words, and because it gives to our lessons a degree of life and force which ordinary pupils find in the earnest and

modulated tones of the living voice ; but we retain it no longer than it is useful for assisting us to impart to them the power of using the more perfect language of speech under its written form.

Signs, therefore, are a means, but never the end of a deaf-mute's instruction.

CHAPTER II.

STATISTICS OF THE DEAF AND DUMB, AND CAUSES OF DEAFNESS.

Investigations into a disease, which produces such important intellectual, moral, and social results as that of deaf-dumbness, must always have many points of interest both for the philosopher and the philanthropist. In our statistical enquiries we shall consider, first, the numbers of persons suffering from this affliction; secondly, the distribution of those so suffering; and thirdly, the causes of the disease.

Until the census of 1851, little accurate information had been obtained as to the exact numbers of deaf and dumb persons in the United Kingdom. Gentlemen interested in the formation of institutions for their education had previously — chiefly through the clergy — made, in some localities, attempts to collect statistical information on the subject, and, to some extent, succeeded; yet, still the information was vague, and it was felt that no great reliance could be

placed upon inquiries conducted so loosely as these must necessarily have been ; so that, until the period before named, our statistical facts connected with this disease were few and uncertain.

Tables exhibiting the numerical proportion of the deaf and dumb to other persons had been published previously to this in different countries of Europe ; and in Belgium, Dr. Sauveur, so early as 1835, began to investigate the subject, the results of which investigations he published in 1847.

In the census of 1851 we got a considerable amount of information ; but the best account this country has yet produced is that published by the Commissioners in their report of the status of disease in Ireland. In this report, written by Professor Wilde, under whose direction the inquiries had been chiefly conducted, we have very elaborate and carefully collected information, and in no country has the subject been more effectually treated than it is here. These reports show that the proportion of those afflicted are :

In all Europe	1 in 1,593
In England and Wales ..	1 in 1,738
In Scotland	1 in 1,340
In Ireland	1 in 1,307

We see from this table, that, taken generally,

the deaf and dumb average throughout Europe about one deaf mute to every 1,600 persons nearly—a much larger number than is generally supposed. With regard to the sexes, the males are found to predominate over the females. The proportion of the sexes are :

In England and Wales ..	121 males to 100 females
In Scotland	125 males to 100 females
Islands of British Seas ..	121 males to 100 females
In Ireland	100 males to 76 females

In Great Britain, 12,553 persons have been returned as deaf and dumb, viz., 6,884 males and 5,669 females. Of this number, 10,314 are in England ; 2,155 in Scotland ; and 84 in the Islands of the British Seas. The whole number of deaf and dumb in Europe is estimated at 250,000.

In considering our next division of the subject, viz., the distribution of the disease, we are made acquainted with some remarkable facts.

It would only be reasonable to suppose, *a priori*, that this complaint was spread over the country pretty equally, and that, if there were places where it predominated most, we should find these to be the narrow alleys and crowded streets of large and populous towns. The fact, however, is diametrically opposite. It is not equally distributed over the country, and it prevails most in agricultural and pastoral

districts. It will be seen that Scotland and Ireland suffer more from the disease than our own country. While, if we descend to a more detailed examination of its distribution in England, we find the same principle prevails, viz., that in the less populous districts the deaf and dumb are the most. The proportion in different parts of England and Scotland is :

ENGLAND.	
Northern Counties ..	1 in 2058
North Western ,, ..	1 in 2014
South Eastern ,, ..	1 in 1948
South Midland ,, ..	1 in 1902
In London	1 in 1783
North Midland Counties ..	1 in 1750
Yorkshire	1 in 1717
Eastern ,, ..	1 in 1665
West Midland ,, ..	1 in 1610
Welsh ,, ..	1 in 1542
South Western ,, ..	1 in 1393
SCOTLAND.	
Southern Counties ..	1 in 1480
Northern Counties ..	1 in 1156

In the parishes contained by the Union of Crediton, a very rural district, in the rural county of Devon, the proportion is one in 1,142 persons; while again in the Scilly Islands, of 2,677 persons there are six deaf and dumb, or one in about 446. This variation in the prevalency of this disease in different localities is

not confined to Britain; it prevails over the continent of Europe.

We next come to the consideration of the causes of this disease. Recently the subject has been invested with new interest. In a Paper read at a late Social Science Meeting, a French physician attributes much, or all of it, to marriages of consanguinity. Many of our newspapers have taken up the question, as if the fact of marriages of consanguinity having a tendency to produce deaf-dumbness was a new discovery. This is not the case. In the first edition of this work published in 1842 the subject was fully entered into, and it was even then far from being a new idea. Dr. Baudin, however, has gone further into statistical inquiries in this direction than any one who had previously written on the subject, since he examines into the prevalency of the disease amongst different religious bodies, &c., which had not before been attempted.

Deafness is a disease that has been less successfully investigated than most others, and medical treatment has seldom been advantageously employed in its cure. There is no doubt that it is produced by various causes; sometimes being congenital, sometimes arising from disease in the ear taking place soon after birth, and it not unfrequently remains after

small-pox, fever, measles, &c. If deafness happen before the fifth or sixth year, dumbness will follow, and even at a much later age the child will manifest a great disinclination to use speech should it become deaf. We would here remark, by the way, that in such cases a parent will early see the necessity of enforcing the use of the language which has been learned, and the child, after a little practice in speaking without hearing himself do so, will feel less averse to it.

The causes of congenital deafness are often difficult to trace, and the facts collected upon the subject have not, until recently, been sufficiently extensive, nor accurately ascertained, to allow much explanation of its production. It had been often observed that cases of congenital deafness were frequently found amongst persons of a strumous habit, and that the disease has a tendency to appear where marriages of consanguinity have taken place. Probably there is no institution for the instruction of deaf-mutes that does not contain several pupils who are the offspring of cousins, and in the Irish report there are no less than 170 cases recorded where the parents were related in the degrees of either first, second, or third cousins.

Nevertheless, it cannot be denied that there are many instances of families where intermarriages have taken place without deafness

having appeared. The proportion which children born deaf and dumb bear to those who become so after birth, is not very accurately known, and there is much difficulty in the way of ascertaining this proportion with precision. It rarely happens that parents have observed any defect in the hearing of their children until they are expected to articulate. It is not improbable, therefore, that in many instances where the disease is thought to be congenital, it may have commenced after birth, and the time of its commencement escaped the notice of the parents.

The statistics which have been published by different institutions on the comparative numbers of those born deaf and dumb, and those who have become so afterwards, vary considerably. In a circular issued from the Dublin Institution, it is stated that in 489 deaf and dumb children, 423 were born so, the remaining sixty-six losing their hearing after birth, from various accidents and diseases. In the thirteenth Report of the Hartford (America) Asylum, it is said, that out of 279 pupils, 117 were born deaf and dumb, 135 lost their hearing in infancy, and 28 were doubtful. These two statements differ considerably in the proportion which the two classes bear to each other, and though the induction, in both instances, is too limited to allow us to draw any general conclusion, still it is probable that

the difference between them results from that liability to error which we have referred to above —a want of accurate observation on the part of the parent; and it may not be too much to say, that when the statistics of deafness are more accurately obtained, congenital deafness will bear a less proportion than it appears now to do amongst the unfortunate subjects of this disease.

Congenital disease may be considered as arising from two causes—hereditary tendency, and accidental interruptions of the fætal development at some period during gestation. Hereditary diseases, in general, are involved in considerable obscurity; and deafness offers no exception to this absence of information. In looking at instances where deaf and dumb persons have married, we do not find that the offspring generally are deaf. Out of several cases which have come within our personal knowledge, where either one or both of the parents were deaf and dumb, only one instance occurred where any of the children were afflicted with this disease. In this instance the father only was deaf and dumb. This absence of anything like regularity in the transmission of the disease has led some to deny its being hereditary.* We have already observed that little is known

* If the deafness of the parent occurred *after birth*, we should not anticipate the transmission of the disease.

about the transmission of disease from one generation to another, but that such a law exists in nature cannot be denied. With regard to deafness, the cases we have mentioned show that it is not invariably transmitted, nor, indeed, generally: can it, therefore, be said to be an hereditary disease? Perhaps, in one sense, deafness cannot be considered as hereditary, while in another it may be. We may suppose an hereditary tendency to exist to a peculiarity of constitution, and that this constitutional taint is liable to a certain class of diseases, of which deafness is one. So while a diseased constitution, where deafness has a tendency to appear, is transmissible, the particular form of that disease is not invariably so, but may or may not appear, according to modifying circumstances. If it be ascertained that deafness is often found accompanying scrofulous affections, and that there is a tendency in such persons as have a strumous taint to have the organs of hearing diseased, then we may look upon deafness as most likely to appear in the children of scrofulous parents. But since the diseases incident to this peculiar constitutional taint vary in appearance, the organ affected in the parent may not be the one affected in the offspring; and so while the parent may be deaf, the child may not be so: and while the parent was free from deafness, the child may

have the organs of hearing diseased. Eleven cases have been admitted into the West of England Institution, where uncles, aunts, or cousins have been deaf and dumb, and one case where the children were alternately born deaf and dumb. We have heard mothers of deaf and dumb children frequently attribute the infirmity of their child to strong and disagreeable mental impressions received by them during pregnancy, and we know there are many kinds of disease such as hare-lip, club-foot, idiocy, &c., which have been said to be produced by fright or strong and sudden mental emotion in the mother. Whether an interruption of the fœtal development takes place in such cases or not, it would be very difficult to ascertain with certainty; but that strong impressions have an influence on the child at this period, a variety of observations would lead us to believe. Out of 300 cases admitted into the West of England Institution, no less than twenty mothers have attributed their child's disease to fright during pregnancy. During such time, therefore, mothers ought to avoid everything likely to startle or give them unpleasant trains of thought, and such injurious impressions are more especially to be guarded against in the earlier stages of pregnancy, as the "fright" is usually said to have happened about the third or fourth month—a time when least

attention is generally paid to such precautionary measures. That deafness often arises in early infancy from a want of careful management on the part of the mother, is very probable. It is well known that the proper management of infants has been, and, indeed, now is, deplorably neglected, and not unfrequently altogether perverted. The high rate of mortality that prevails in infancy, and which has been fully shown to be greatly influenced by improper treatment, renders it likely that this is also the season when many diseases are sown in the constitution, which only become visible as they ripen with the development of the body; and that we must attribute to our bad infant treatment not only the death of about one in five of our infant population, but also the same proportion of misery which awaits us in our riper years in the form of disease.*

*The following is an extract from Mons. Quetelet's *Treatise on Man, and the Development of His Faculties*, a work which all interested in the physical and moral improvement of man must consider of the highest importance. Mons. Quetelet remarks, "What first occupies our attention is the great mortality of children after birth. To have an accurate idea of this, it is sufficient to consider that, in town as well as country, four times as many children die in the first month as in the second, almost as many as during the second and third years, although the mortality then is very great. Indeed, the Table of Mortality shews that one-tenth die in the first month after birth." . . . . "The

In Mons. Quetelet's *Treatise on Man*, he has shewn how remarkably even slight influences operate in modifying physical development; and every page of his work abounds with facts which are calculated to impress the most serious lesson on the mind of a mother, if she would ensure for her offspring a constitution free from disease. To do this, she must begin to consider the welfare of her child in the earliest stage of gestation, since her state of health, both of body and mind, during this period, operates strongly for good or for evil on her future offspring. It ought, therefore, to be considered a sacred duty in a mother to avoid, during such time, everything likely to injure her child. There are certain laws which the Creator has established to govern the habits at this period, and these cannot be neglected with impunity. How often does a sorrowing mother lament over her suffering deaf and dumb child, forgetting that she forms no exception to the general ordination of Providence, and that her affliction is only a necessary effect of some disobedience to an established fiat of Almighty will. She may have sinned ignorantly, but not

mortality is so great, especially for male children, that, from the first year after birth, the number is already reduced one-fourth. The loss of boys in towns is such, that, at the fifth year, out of 10,000, there are only 5,738 remaining." Chap. V.

the less on this account is her disobedience punished.

A too close consanguinity of parents has already been noticed as a predisposing cause of mutism in the offspring, and it appears to be in this direction that we must look for an explanation of the remarkable results already alluded to in the difference of the prevalency of the disease in the different localities. After some thought, and a careful examination of the subject, we are inclined to think, that one of the main features of difference amongst the inhabitants of such places is, that in districts where the deaf and dumb prevail most, there is little movement or change amongst the inhabitants; while in districts where such persons are fewest, we find a population of a migratory character. In the former case, breeding in and in goes on for generation after generation; while in the other it does not, new blood being supplied by the frequent changes taking place among the inhabitants. All who are acquainted with agricultural parishes can at once point to certain names which predominate there, and which have predominated there for generations. But this is not the case in large manufacturing towns, many of which, indeed, have only risen up into existence within the last century, and have been peopled with persons coming from

every corner of the island; not to mention others, and these are not a few, who might write their birthplace at any point between the Elbe and the Archipelago.

We have given some attention to the investigation of this subject, and have endeavoured to discover differences in soil, climate, and other such like modifiers of human health and disease, but have failed to find any cause that would appear to be so constant in acting upon places freed from this disease as that of frequent changes amongst the population; and, on the other hand, where the disease most developes itself, we find a population little liable to change or fluctuation.

There appears, at first sight, to be a kind of general correspondence between the humidity of a district and its amount of deafness, but when examined by the amount of rainfall that takes place the correspondence does not hold good. The places where deafness most prevails also appear as the places where the Celtic race is supposed most to prevail in the population, but this is perhaps only tantamount to saying, what has already been stated, that it prevails most in localities where there is little change amongst the inhabitants.

In one district, extending over the four counties of Devon, Cornwall, Somerset, and

Dorset, we even examined the occupations of life to which the parents of deaf and dumb children have been accustomed, thinking it possible such causes might, in some degree, operate in producing the disease; but we failed to find any appreciable difference in this direction, each trade only giving its proportion of deaf and dumb to the proportion of persons employed in it. The tendency of the disease to run in families is shown by the frequency of two or three children so afflicted occurring in the same family.

The experience of the West of England Institution is, that they have had

243 cases with 1 in the family
30 cases with 2 in the family
13 cases with 3 in the family
4 cases with 4 in the family
1 case with 5 in the family

The experience of the same Institution on the diseases which most generally affect the hearing is:

After Typhus and Scarlet Fever there have been	31	cases.
„ Teething	8	„
„ Measles	4	„
„ Convulsions	3	„
„ Hooping Cough	2	„
„ Hydrocephalus	2	„
„ Inflammation of Brain	1	„
From doubtful causes	41	„

The experience afforded by other Institutions gives nearly similar results. In one point, however, there is a difference not unworthy of record between the European and American Institutions, viz., in respect to the proportions ascribed to certain kinds of fevers. In the European tables of 1,630 cases, 283 were ascribed to non-eruptive fevers, and 128 to scarlatina; while in the American tables, out of 1,527 cases, 345 were ascribed to scarlet fever and only 131 to non-eruptive fevers. More experience is, however, required before we can place any great stress upon this fact, as the classification of diseases in our various Institutions from which these statistics have been mainly obtained is not very accurate or defined.

CHAPTER III.

IS DEAFNESS CURABLE.

When a mother discovers that her child differs from ordinary children, that it does not attempt to repeat sounds which she supposes it to hear, and that it allows her words of affection to pass heedlessly by, she becomes alarmed, and finds at last, though very unwillingly, that it is deaf, and consequently dumb. Children, generally, about the fifth or sixth month after birth, begin to take notice of sounds ; but with a deaf child, a mother seldom becomes very anxious till after a much longer time. Her first care, of course, after she becomes alive to the truth of her child's condition, is to consult some medical practitioner. In this, she should use prudence, if she would avoid giving her child unnecessary suffering. There are always men to be found, if we are to believe their own statements, who have remedies for all diseases. Let such practitioners be doubted, and let the person whom she consults be a regularly admitted practitioner, a man who has a reputa-

tion of talent and integrity at stake. One having directed particular attention to aural cases may naturally be expected to be more conversant with such diseases than one who has not paid them special attention, and to such a one she will naturally give a preference.

With what success the disease of deafness has been treated, we shall now enquire. Many eminent medical practitioners of different countries have directed their attention to diseases of the ear, and many extensive and learned treatises have appeared on the subject. There are many diseases where the ear is considerably affected in different ways, and partial deafness is the result. These various affections have been studied and classified, and are in many cases relieved, if not altogether cured. But it is not with deafness generally that we mean at present to deal, but with those who are congenitally deaf, or who have become so from so early an age as never to have learned to speak. Sir W. Wilde says, "I do not believe that the true congenital deaf-mute was ever made to hear," and he believes the same of those who lose their hearing in childhood. But there are cases on record, though these are indeed few, somewhat at variance with this opinion, and no mother would be pursuing a course satisfactory to her after comfort, if she did not, in all cases, submit her child to some

respectable and trustworthy medical practitioner. True, it is, that experience holds out but little prospect of her child's recovery, still to have left no legitimate chance untried must always offer her a comfort and a consolation, in one of the greatest trials that can befall a mother. The most recent men, whose writings take the highest place in aural surgery, are Sir W. Wilde, of Dublin ; Dr. Schmalze, of Dresden ; Dr. Kramer, of Berlin ; but it does not appear that any of these have ever been successful in curing deaf-dumbness.

"Sir Astley Cooper and Mr. Cleland in England, Drs. Itard and Deleau in France, Hendreskz and Guyot in Holland, and Hymly in Germany, may also be mentioned as taking most extraordinary pains to ensure success in curing this disease. Perhaps Dr. Itard, of Paris, accomplished more in throwing light upon the subject than any other. His opinion was that deafness, when so total as to occasion dumbness, was invariably the consequence of paralysis of the auditory nerve. Farther observation, however, enabled him to discover, in some cases, palpable causes for this defect. In two cases he found chalky concretions in the cavity of the tympanum; in two others he found fungous excrescences. The fifth case presented a mass of gelatinous matter, which filled the cavity of the tympanum and the

auditory passage. In another, who died of malignant fever, the auditory nerve was of no greater consistence than mucus. Itard has recorded, in his *Treatise on the Maladies of the Ear*, all the cases of cure previous to the time of himself and his contemporaries: these are few, and worthy of being known. Amatus, of Portugal, informs us of a child dumb till twelve years of age, who, at the end of that time, began to talk easily and plainly. He says the cure was owing to a seton which was applied to the back of her neck, which dried up certain feculent humours with which the head was filled. He makes no mention of deafness, but it is impossible to attribute her dumbness to any other cause. Besides, he relates this fact in connection with the cure of a case of acquired deafness. Desgrands Prés, a physician of Grenoble, communicated to Lazarus Rivière another case. A wandering beggar arrived by night at Pousenac, with his sick deaf and dumb child, who was suffering from fever. For several days they were charitably provided for; at length the father, thinking the child would die, abandoned him and left the place. The patient was, however, cured, and on his recovery was employed to take care of some sheep. Some years after he received a blow on the occiput, which fractured it, but, under the care of an able surgeon, it was healed,

and, as the cure advanced, the sense of hearing recovered its functions; the man began to mutter a few words, and in time he was able to hear and speak distinctly. This power he retained to the end of his life.

The third case recorded by Itard is more generally known. It is that of a young man who had been born deaf and dumb, the son of a labourer at Chartres. At the age of 21 he suddenly began to speak, to the great astonishment of all who knew him. It was ascertained from him that three or four months previously he had heard the sound of the bells, to his great surprise, for this was to him a new sensation. Subsequently a watery discharge had taken place in his left ear, after which he heard perfectly with both. For three or four months he listened without speaking, and he spent this time in repeating to himself the words which he heard, and in becoming acquainted with words and the ideas attached to them. Then, believing himself sufficiently acquainted with language, he broke silence, though his speech was for some time imperfect.

M. Varroine, a French physician, mentions an instance in which the application of the moxa was successful. (This is a lanuginous or cottony substance, which is burnt slowly, in contact with the skin, for the purpose of producing cauterisa-

tion). The patient was a young lady of Malaga, who was born deaf, and was then twenty years of age. The tongue of the patient appeared to M. Varroine a little thicker than usual, and, as he regarded the case as presenting a simultaneous paralysis of the ear and tongue, he applied two moxas—one on the back of the neck, and the other under the chin, as near as possible to the root of the tongue. Each of the moxas was about the diameter of a crown, and produced a considerable inflammation in about seven days. There was a large swelling on the anterior part of the neck, which extended down to the breasts; it was accompanied with a violent fever of twenty-four hours, and ended in a copious perspiration. On the twelfth or fourteenth day the scabs fell off, and their loss was followed by considerable suppuration. The operator remarks that at this period the tongue was free in its movements, and diminished in thickness. In a little more than two months after the application of the moxas, the young lady began to hear the ringing of bells. Her hearing continued to improve, and in a short time her deafness was completely dissipated. She afterwards began to articulate words. Dr. Itard remarks on this case, very justly, that the operator probably deceived himself as to there being paralysis of the tongue, as this never

causes total dumbness. The cure of the deafness was sufficient to call forth the functions of the vocal organs.

In the year 1786 a botanical physician, as he styled himself, named Felix Merle, commenced a course of treatment for deafness on all the pupils in the Institution for the Deaf and Dumb at Bordeaux. The number amounted to twenty-six or twenty-seven. His treatment consisted in introducing, morning and evening, into each ear a drop of a certain liquid, which was kept there by a bit of cotton. This treatment was continued for a month, and had no effect but in two instances. The first was the case of a boy, eight or nine years of age, who had become deaf when young, but who yet heard a little with one ear. After the treatment had been continued twenty-three or twenty-four days, he experienced great pain in both ears, and the introduction of the liquid became insupportable. Some days after a purulent discharge took place from both ears, the child began to hear more distinctly, and, though not perfectly, he learned to speak and make use of language, which power he has since retained, though he has never heard nor spoken so well as other persons.

The second case in which the treatment of Merle was successful, was that of a girl, sixteen years of age, who was born with the sense of

hearing quite perfect, and who began to talk at fifteen or sixteen months old. This child caught cold, from being placed on the grass in a vineyard where her mother was employed. She experienced similar sensations on the application of the liquid, to those of the boy already spoken of, and about the same time after the treatment had commenced. On the twenty-eighth day she felt an inclination to sneeze, which was followed by a copious discharge of purulent matter from both ears. Soon after perfect hearing was re-established, and she learned to speak rapidly.

These are all the well-authenticated instances previous to more recent efforts. Of the six cases, one was spontaneous, and five were produced by extreme irritation of certain parts.

The two extraordinary cures effected at Bordeaux attracted the attention of Itard, and he endeavoured to ascertain the composition of the liquid employed. The Professor refused to disclose the secret. He, however, sent Itard a small quantity, which was tried on three deaf and dumb persons without any result. He offered to purchase the secret, but was refused, on the ground that the Government only could afford a sufficient recompense. On the death of the inventor, however, his wife communicated the remedy to Dr. Itard, which is here given :—

R. Pulverised Asarabacca	..	Two Drachms
Rose Leaves	.. ..	One Pinch
Horse Radish	.. ..	One Drachm
Parsley Pert	.. ..	One Pinch
White Wine	.. ..	Eight Ounces

Boil to one-half, strain, and add Sea Salt, two drachms.

Several of these ingredients had at that time a reputation of utility in cases of deafness, and the liquid was tried on all the pupils in the Paris Institution who had lost the power of hearing in infancy. The hopes that had been formed were however wholly frustrated, since none of the effects which had followed the treatment at Bordeaux took place. Subsequently it was employed in a number of other cases, but with the same lack of success, with one slight exception.

M. Itard applied the moxa to nine or ten pupils in the Institution situate at Paris. He states that several of the pupils in that Institution had formerly been subjected to the same treatment, but in all cases without success. He then employed the actual cautery, a remedy similar to the moxa, and it was attended with better results. The patient was a child of four and a half years, with a good constitution, and in perfect health, but quite destitute of hearing and speech. The cautery was applied on each of the mastoid processes, with an iron, heated

white; it was followed with abundant suppuration, and an eruption of purulent matter. Signs of hearing were shortly afterwards observed, and, as this power increased, the child began to repeat a few words, though it was necessary to pronounce them with an elevated voice. Eighteen months after, the child pronounced words with tolerable distinctness, but his deafness was not wholly removed. The result of this treatment was enough to inspire hope, and it was employed in three other cases of congenital deafness, but without the slightest success.

M. Itard still persevered in spite of continued failures. He employed a new experiment in his next case, a child of three or four years old, whose deafness was attributed to convulsions at the time of dentition. This new treatment consisted chiefly in the application of blisters. It was successful, but in forty other cases in which it was afterwards employed no similar success followed.

The next course of experiments to which the deaf and dumb were subjected, on the failure of the stimulating means which have been detailed, had for their object the removal of those material causes in the ear which prevent or obstruct the admission or circulation of sound. The two principal operations to effect this were perfora-

tion of the tympanum and injection of the eustachian tube. If this tube be obstructed, so that no air can pass through it into the tympanum, or if the tympanum itself be filled with mucus, or any other material substance, or if its membrane become ossified, or so thick that it cannot communicate the vibrations of sound, the hearing will inevitably be destroyed. Such accidents often occur, and are a frequent source of total deafness.

Sir Astley Cooper, in the year 1800, performed the operation of perforating the tympanum on many deaf persons. His success for a time appeared promising, and the same operation was immediately practised in France and Germany. Not only simple perforation of the tympanum, but the removal of a portion of the membrane, with an instrument shaped like a punch, was practised in some instances; but no efforts could prevent the aperture from closing and becoming healed. Hymly, a German physician, performed this operation four times on one individual without being able to preserve the opening. Itard endeavoured to modify this system of practice, and certainly improved it, but he acknowledges that his success was completely temporary, and he renounced this operation as a method of cure. It was, however, taken up by M. Deleau: he contrived an

instrument of more complicated structure than any that had been hitherto employed, which would render impossible the obliteration of the aperture; and he published, in 1822, a memoir on the results of twenty-five of his experiments. A reviewer of the pamphlet says, "In reading this essay, it is difficult to avoid the conviction, notwithstanding the constant effort he makes to show the remarkable success he has met with, that, even if truly related, it is scarcely worth mentioning. In some cases, to his great disappointment, the aperture closes; in others a promising subject, when just about to demonstrate the complete success of his operation, is afflicted with a cold, or some form of disease, and again plunged into his original state of deafness; sometimes the parents are perverse enough to deny that the hearing of their children is improved, and sometimes the children hear well enough, but utterly refuse to talk. To judge from the cases before us, he seems to have succeeded in everything except restoring his patients to the full and permanent use of the sense of hearing. In this, it is perfectly evident, that he met with no success. He has not recorded a single instance in which a patient was so far restored to hearing as actually to have acquired the use of language. He has abandoned the use of his instrument, and, in his latter

writings, scarcely makes mention of the operation, which is conclusive as to his opinion respecting it."

At the Institution at Gronigen, in Holland, the operation was performed on eighty-one individuals. Of these, only seventeen had their hearing in the least improved, and of these, *fourteen* relapsed into their original state of deafness in less than nine months. The remaining *three* preserved theirs, but not to such an extent as to be of any use to them in the acquisition of language.

All late writers on deafness unite in condemning the perforation of the membrane of the tympanum; among these may be mentioned Dr. Wright, the author of one of the most practical works on deafness that has yet appeared, Professor Dubois, M. Richerand, M. Saissy, M. Berjand, and M. Itard.

A new mode of operation was devised by Itard, with some promise of success. Having found in two mutes, who died within a few months of each other, chalky concretions in one, and mucus concretion in the other, obstructing the internal ear, he injected the cavity of the tympanum through the membrane, to expel the concretions through the eustachian tube. The first deaf and dumb boy on whom he operated was of that small number who owe their defect

to this cause. He was twelve years of age, and deaf from birth. His power of hearing was established, and, had he lived, he would probably have acquired the use of speech; but he was attacked with a disease which baffled skill, and died a few months after the operation. Itard was encouraged to repeat his experiment on twelve other deaf-mutes, but no further evidence of its utility appeared, and he abandoned it in despair.

Attention was next directed to the injection of the eustachian tube, in order to allow of a free admission of air into the cavity of the tympanum. This injection was performed through the mouth, the instrument being applied to the extremity of the passage to be injected. The idea was abandoned for some time, from a distrust of its efficacy, though in one case it had been found useful. An English surgeon, Mr. Cleland, suggested an improvement in the instrument, and that it should be directed by the eustachian tube, *through the nose*. The operation was performed by a great number of individuals both here and abroad, but it was considered to have demonstrated nothing more than the practicability of injecting the eustachian tube. Deleau undertook a new series of experiments, and satisfied *himself*, but only himself, that the deaf might be made to hear, and the dumb to

speak. The case on which he claims his greatest credit is the well-known one of Claude Honoré Frézel. The details of this case form the subject of one of Deleau's pamphlets. It is enough, perhaps, to say, that, at the end of six years after the operation, he had "learned to talk and to read juvenile books." Itard and Berjaud are of opinion, and in this opinion all intelligent persons of experience among the deaf and dumb coincide, that this alleged cure was simply a successful instance of instruction in artificial articulation. The hearing might have been slightly improved, and this would facilitate the acquisition of speech. Dr. Itard was employed by the Paris Institution, in consequence of the partial success of Deleau, to report on the various remedies employed in the physical treatment of the deaf; and, in consequence of his report, it was decided that a certain number of the pupils should be subjected to medical treatment. He made a thorough experiment on the utility of injecting the eustachian tube, and performed the operation in one hundred and twenty cases, the results of which were, to use his own language, "just nothing, with regard to hearing, in the great majority of the mutes, and in the rest temporary and of little advantage."

It is now universally believed, among those who have given the most impartial and dis-

interested attention to the subject, that there is nothing sufficiently encouraging in all that has been done to warrant the conclusion that deafness can be removed, though it may be alleviated in some cases in a slight degree; and that the very few instances of its removal must be regarded as isolated exceptions which do not destroy the general principle." *

Amongst those who have more recently appeared as holding out most strongly to mothers the hope of restoring their deaf and dumb children to hearing and speech is Dr. A. Turnbull. This gentleman made his pretensions widely known, and several journalists were fonnd to laud his discoveries in no measured terms, while, at the same time, those teachers of the deaf and dumb, who thought it necessary to guard parents against the Doctor's pretensions, fell in for no small share of obloquy and blame. We have, however, never met with a single case of Dr. Turnbull's success. According to Dr. Menieret his general practice was to drop

* These cases are chiefly taken from *Silliman's Journal*, 1836, and appeared in the appendix of the First Edition of this work, as quoted from a letter of C. Baker, Esq.

† Dr. Meniere was for many years Physician to the Deaf and Dumb Institution in Paris, and gave considerable attention to the cures of deafness. His testimony only adds to that of all other persons who have studied the

into the ears a stimulating liquid, which Dr. Turnbull himself called *alkaloid veratriæ*. This appears, in some instances, to have had for the moment some stimulating effect; but whenever subsequent enquiry was made for those deaf-mutes said to be restored to hearing, it was found that they had relapsed into their former condition.

Sir W. Wilde states that in some cases where the Doctor operated in Scotland, a medical man was present who gave him the following certificate:- "After repeated examinations of many of the objects under your care, I satisfied myself that they were both deaf and dumb. I have witnessed the application of your remedy to the ears, and bear testimony to their having, in my presence, obtained the sense of hearing, and, by my tuition, *in a few minutes afterwards, acquired the power of speech.*" "I wonder," humourously enquires Dr. Wilde," if it was broad Scotch they spoke?" We need hardly remark that if even hearing had been restored, speech would not at once follow, but would have to be slowly and laboriously learnt.

There are several popular remedies for the cure of deafness in which many people have great faith, such as the application of eel oil,

subject—that no success has attended the efforts for the permanent cure of the deaf.

raw bacon, roasted onions, or cotton dipped into various oils, and one very popular application recorded by Sir W. Wilde is "a bit of wool taken at a certain time, and under particular circumstances, from the left fore leg of a six year old black ram." This, Dr Wilde remarks, is just as rational as many others supplied. It will be seen from what has been said, that the chances of curing deaf-dumbness are but small, and that, however painful it may be to those suffering from this malady to think that it is so, we must declare with Itard "that the ears in such cases are dead, and medical means have no effect on the dead."

CHAPTER IV.

THE SOCIAL DEPRIVATIONS OF THE DEAF-MUTE.

The deaf-mute, being without the power of speech, is debarred from entering by the usual means into communion with his fellow-men, and so loses one of the greatest charms of social life. Placed in this position, he is obliged to fall back on some other method of intercourse, or remain entirely shut out from society. Nor can he obtain instruction by the mode usually employed; hence, some plan must be devised, fitted for his peculiar condition, if he is to be restored to society or receive the benefits of education.

Situated in the isolation we have described, the deaf-mute does make an effort to get into communication with others, and to some extent he succeeds. He falls back upon a language which may be termed universal, but which has been almost entirely lost amongst civilized

peoples, though still used to a considerable extent amongst savage tribes. This language is the language of signs, or pantomime.

By this language we are first enabled to reach the mind of the deaf-mute, and to place him in a condition to acquire other means of communicating with his fellow-men, and so, step by step, we are able to make him comprehend his duties here as a citizen, and as a Christian, and to elevate his mind to the contemplation of that better land, of which, but for this special instruction, he could never have had the faintest glimpse.

Though Dr. Johnson denominates this disease as "the most desperate of human calamities;" yet, desperate as it appears, it has attracted comparatively little of the attention either of the philanthropist or the philosopher.* This may arise from many causes, one of which, doubtless, is that deafness does not obtrude itself upon our notice like various other forms of disease. There is nothing in it that shocks our sight or immediately appeals to our observation. When a deaf-mute presents himself before us there is nothing to excite particular attention, and he passes unnoticed amid the crowds that surround

* This can scarcely be said now with the same force as it was in 1842, when the first edition of this work was published.

us. How different is it with the blind! His affliction is often painfully prominent, and even should that escape our notice, he still possesses the power of arresting our attention by his voice. This is not the case with the deaf and dumb; he neither attracts our notice by his misfortune, nor can he excite our pity by his tale of woe—his is a voiceless misery that passes generally unheeded, because unobserved. But even when the existence of this calamity is known, its nature has frequently been misunderstood, and the position of the deaf-mute in society consequently falsely estimated. Some have ranked him amongst the idiotic and insane; others have considered him endowed with supernatural powers; and, as he presents no apparent distinctions to ordinary persons, many imagine that no peculiarities are attached to his condition. From all these opinions he has suffered an additional burden of sorrow to that already allotted him by Nature. Even in the present day we have often seen persons desirous of investing him with supernatural powers, and a mysterious agency, and so strong is the prejudice of ignorance that generally they are not willing to be undeceived.

The deaf and dumb were, by the Romans, considered as idiots, and it is only in comparatively recent times that they have been generally recognised as worthy of being placed on an equality

in civil rights with their more fortunate brethren. They were also considered by the ancients as incapable of learning a written or spoken language, so that it is to modern times, and more especially to Christian influence, that the deaf and dumb owe their education.

Dumbness arises from other causes than that of deafness. It may arise from an imperfect formation of the organs of the voice; and children who are so imbecile from mental weakness as to be unable to acquire a knowledge of articulate sound will remain dumb; but this dumbness must be carefully discriminated from that produced by deafness. Moreover, the idiotic-mute has no thoughts to communicate, but the deaf-mute may have thoughts, and want only the means of communicating them. A deaf-mute is dumb simply because he cannot hear sound, and therefore cannot be expected to use that of which he has no conception. Those, again, who are dumb from imperfect organs of the voice may perfectly understand the language they hear spok n, though themselves unable to use it. This kind of dumbness must also be distinguished from that occasioned by deafness, as its effects upon the sufferer are by no means of the same character with those perceived in the deaf-mute. That class, then, only of the dumb who are also deaf, and who have been

termed with significance *deaf-mutes*, it is our object here to contemplate The others are not of that interesting character, nor do they form so peculiar a class as the deaf and dumb.

Those who have given but a limited attention to mental philosophy will easily perceive that the deaf and dumb form *no distinct class in their natural intellectual constitution;* that the difference which they present is wholly produced by their want of social intercourse; and, however after a time this deprivation may prevent the formation and development of their character, still by nature they are endowed with feelings, sentiments, and passions, common to the rest of mankind. They are gratified with attention and applause, and they resent injuries equally with others, and exhibit amongst themselves the same varieties of disposition and intellect that mark the characters of the more fortunate of their species. The difference between them and others is solely that of their peculiar position — their state of isolation in society. In what condition, then, does this loneliness of their situation leave them? What are the effects produced by man's social intercourse with his fellows? How much do we owe to society? The celebrated French physiologist, Andral, in the *Dictionnaire de Médecine*, describes the condition of the deaf-mute as follows: "We

find him," says he, "remain habitually in a sort of half-childishness, and he has great credulity. To balance this, he is, like the savage, exempt from many of the prejudices which we owe to our social education. In him the tender sentiments are not very deep; he appears not to be susceptible of lasting attachments or lively gratitude – pity touches him but feebly; he is an entire stranger to emulation; he has few enjoyments and few desires; and the impressions of sadness but slightly affect him." Mr. Baker remarks on this subject, "that experience and observation would have induced this accomplished pathologist to have bestowed on them a more liberal endowment." He also observes, "at the same time, it must be acknowledged that the deaf and dumb are generally inferior in their moral and intellectual powers to those who do not labour under the same defects." From what we have before remarked, it will be seen that we do not suppose by *natural constitution* they are endowed with an inferior intellectual and moral nature, but that the inferiority is solely the result of their position. Amongst them will be found all the variety of intellectual and moral character which is presented by others. The difference, therefore, which they may be found to possess as regards *degree* in their moral and intel-

lectual nature, must find its cause in the absence of that anxious training which parental affection—when communication is complete between parent and child—will instinctively provide. But, shut out from intercourse with his friends as a deaf and dumb child is, no moral truths enter his mind, he sees in the world around him no government or order; he is not taught to recognize there the guiding hand of an all-wise Providence, and he remains without God in the world, a stranger to every sentiment that ennobles, and to every hope that elevates man above the transitory things of time. What, then, does man not owe to society? It is to him what sun and air are to plants—it is the atmosphere adapted for the development of his nature, and, deprived of its influence, he grows up without unfolding one embryo blossom of his spirituality. Those of mankind who are endowed with hearing and speech, from their constant intercourse with society, educate themselves, and long before they have arrived at mature age, they will have acquired an extensive acquaintance with many of the most useful facts of nature. Take, as an example of the value of early acquirements, the instance of language, how perfectly and how extensively do even children become acquainted with it; not, certainly, with its principles, but what is of far more im-

portance, its practice. Few, indeed, estimate properly the value of this early acquirement, and it is only when it has to be taught by a kind of artificial means, as is the case with the deaf and dumb, that it can be fully appreciated. Then, again, if we can estimate the amount of useful knowledge, the historical facts, the moral truths, &c., which we have received in the conversations of social life, we shall approximate to an estimation of what our education owes to our being one of an intelligent community. It is only by such an examination that the true position of the deaf and dumb is ascertained. And what, we ask, is that position? Are they placed in a condition to educate themselves, like the rest of mankind? Do they acquire that key to knowledge—speech, in its written and spoken form—and thereby enter into communion with the wise of all ages, past and present? No! They are alone in the world of thought, and remain ignorant even in the midst of knowledge. Their mental and moral nature is imprisoned; a barrier separates them from those regions which science enlightens, happiness vivifies, and which virtue consecrates. Of all calamities, this is truly one of the most desperate. Sociality is the highest blessing bestowed on man, for it is only through its portals that he can become acquainted with himself, or learn the will of his Creator; and from this

greatest and most important of blessings the deaf and dumb are shut out.

The laws of England do not visit with much civil disability those who are deaf and dumb, but this is not the case in several of the countries of Europe.

The Roman law considered the deaf and dumb incapable of contracting marriages, and such contracts only became valid in France in 1658. The Code Napoléon makes no special provision for them, but leaves them to be dealt with by the Courts according to the merits of the case. In Switzerland the deaf and dumb are not allowed to marry, unless by consent of the magistrates in open court; and in Prussia two deaf-mutes are not allowed to marry, lest, it is said, they have deaf-mute children. There have also been in some countries restrictions as to their making a will, but both England and America have always considered their position favourably in this respect. A very interesting case was, not long ago, reported by Mr. Buxton, the intelligent Principal of the Liverpool Institution, where he had been called in as an expert. The case was one where the person was not only deaf and dumb, but blind also. The testatrix, Jane Poole, had been born deaf and dumb, and educated by the usual process, and at the age of 60 became

blind. After her blindness she continued to hold intercourse with her friends by means of spelling on each other's hands, as in the two-handed alphabet. She died at the age of 70, and bequeathed considerable property. The will was contested, but from the evidence of Mr. Buxton (who had assisted at its making), as to the intelligence and ability of Miss Poole, its validity was confirmed by the court.

There is an account of a Countess of Orkney, a deaf-mute from birth, having been married about a century ago, the legality of which marriage never appears to have been questioned, so that English law, both in cases of bequeathing property, and in contracting marriage, has always dealt liberally with the deaf-mute. The case appears to have been somewhat different in France. Piroux relates some rather amusing instances in his journal, not, however, amusing to those interested. One of these: M. L. was an uneducated deaf-mute, twenty-five years old, robust, healthy, affectionate, capable of managing a household, intelligent enough to wind up the house clock, and set it to the right hour, and, for a peasant, rich. A young man of the same village sought her in marriage. The girl consented, as was said by her parents, "by the play of her countenance and her signs expressive of tenderness and love." But the maire

of the commune refused to perform his office, though acknowledging the respectability and praiseworthy character of the young lady. He could not find in those amorous signs which she made, and which were so attractive to her lover, a sufficient proof of her recognition of the duties of husbands and wives as required by Cap. VI. of the Civil Code. But other authorities have proved more considerate, and V. M., an intelligent dressmaker, who could only express herself by signs, after being refused by a maire, was allowed by the court, after being examined by interpreters, to join in holy wedlock, and we trust she spent a happy life and made a praiseworthy wife.

As we have already stated, the laws of England do not visit with severe disabilities the deaf-mute, while there is on the other hand leniency shown to some of his delinquencies. In all cases of great crimes—as in murder—his condition influences the jury as an extenuating circumstance, and we have never known the rigour of the law carried out on a deaf and dumb person. No one but must feel the judicial wisdom manifested by this interpretation of the law; but we do not think that a well-educated deaf-mute, one who has had all the advantages of a good intellectual, moral, and religious education, and is of good

natural ability, should, from his infirmity alone, escape due punishment for serious offences. If the vindication of the law is a terror to evil doers who can hear and speak, it must also be held to be one to the educated deaf and dumb, and to operate alike in both cases in deterring from crime. To give too much influence, therefore, to this benevolent feeling might lessen the motives of deaf-mutes to good citizenship to an extent not advisable. While, therefore, we grant to the deaf-mute the same privileges as we do to his brother who speaks, we must not altogether release him from a similar amount of responsibility. It is true that there exists always a kind of isolation in the deaf and dumb, which makes them somewhat different to ordinary persons, and there are also amongst the educated many who never reach that state of intellectual culture to which the generality of men are rising in our own time, and from such considerations a compassionate rather than a rigorous interpretation of law is desirable, if it does not extend too far; while in all cases it is only fair, as in the case of foreigners, that the deaf-mute should have by him an expert or interpreter, so that he may fully explain himself, and fully understand everything that is said having reference to him.

There is another character in which a deaf-mute may appear in a court of justice, besides that of seeking his civil rights, or defending himself as a criminal—it is that of a witness.

Of persons deaf and dumb from their birth, it has been said that in presumption of law they are idiots. And though this presumption has not now the same degree of force which was formerly given to it, that unfortunate class of persons being found, by the light of modern science, to be much more intelligent in general, and susceptible of far higher culture than was once supposed, yet still the presumption is so far operative as to devolve the burden of proof on the party adducing the witness to show that he has a true notion of the moral and religious nature of an oath. This being done, a deaf-mute may be sworn and give evidence by means of an interpreter. If he is able to communicate his ideas perfectly by writing, he will be required to adopt that as the more satisfactory method, but if his knowledge of that method is imperfect, he will be permitted to testify by means of signs.*

In the case of a perfectly educated deaf-mute, questions in writing would be sufficient to elicit every information which the witness might possess, but in cases where education was less

* Taylor on *Evidence*.

perfect, it would be desirable to allow him to assist his verbal communication by signs, and here again an interpreter would be necessary, and a teacher of the deaf and dumb would be the most desirable. There is one situation in point of competency in a deaf and dumb witness which is not so easily settled, that is, the power of an uneducated deaf-mute to understand the nature of an oath. In a case where this occurred it happened that we had ourselves to take a part. It was a case where one deaf and dumb man had robbed another. The robber had been instructed and understood language. The one who had been robbed was uneducated, and an exception was taken to his understanding the nature of an oath. The judge himself had not evidently paid any attention to the condition of the deaf and dumb, and could not for a moment believe that a man thirty years of age could have lived in society and grown up to that age without comprehending the nature of an oath. The interpreter of this uneducated deaf-mute was a friend, who undertook to say that the witness did know the nature of an oath, and this the judge believed and admitted. It was much more, however, than we would have undertaken to admit from the evidence that was shown in his communication with his interpreter, which was of the most meagre character, and

consisted only in making a few consenting nods to some very confused and limited arbitrary signs. There was no doubt, however, that the prisoner had robbed him, and that substantial justice was done in convicting him. In England, then, it may be taken as a principle settled by precedent, that a person born deaf and dumb, even if utterly unable to read and write, is competent as a witness, provided he evinces sufficient understanding. It must be remembered that all observations on the position of deaf-mutes in a court of law refer only to those who are not wanting in intelligence, and not to those who may be imbecile as well as mute.

It is not unfrequently asked what notions the uninstructed deaf-mute has of the Deity. We have never been quite able to satisfy ourselves whether or not the deaf and dumb have naturally any notions of a God, but we incline to the belief that they have not. If they have, their notions of Him are crude and low; they feel that He is a power to be dreaded, one that punishes and smites. Baring-Gould says "That man, in his lowest term, has no other conception of God than one of power, and power exercised for his bane. Everything that is agreeable is accepted tacitly as a matter of course, but his attention is riveted by antagonistic forces." Such is the case with the deaf and dumb, but it

is difficult to determine whether or not their notions are instinctive or the result of education. When a deaf and dumb child does wrong at home it is chided by its mother, and she generally accompanies her marks of displeasure with pointing upwards, thereby wishing to impress upon her child that the eye of the Almighty sees its wrong-doing, and will punish it. Though not comprehending altogether the lesson the mother wishes to teach, the child learns to associate with something above displeasure and punishment, and it is worthy of remark that this being who is above is generally thought to be the moon. Many children whom we have questioned about their early notions have told us that they looked upon the moon as the "great master," and that they were afraid of it. One boy related that he thought when people died they were "shot by the stars," and that the moon was their ruler, and that he was always afraid of the moon and stars.

Not being able to hear, darkness to the deaf and dumb is more impressive than it is to those who possess hearing, a sense which informs them of external circumstances as well as sight does. When the deaf-mute cannot see, he loses his great power of ascertaining what is going on about him, while ordinary persons still have their

hearing to warn them of surrounding dangers. This makes the gloom and loneliness of darkness much more intensely felt by the deaf-mute than it is by others, even though most children are timid in the dark. We do not think we have ever met with a deaf-mute who was not fearful in the dark, and most of them hold the moon and stars in awe, associating with them, more or less, the natural calamities which befall mankind. The deaf and dumb have dreams, too, and these probably help to impress the hours of darkness with more terror, and to make them still more fearful,

When the dragon-wing of night o'erspreads the earth.

But whether or not the idea of supernatural power, which by them is associated so generally with the moon, be a natural feeling, or whether it be the result of early lessons taught in childhood in the manner already alluded to, we have never been able to determine.

Regarding their feelings of right and wrong, we have the same doubts. They may be instinctive, or they may be the result of some early training. There is one failing that all children who have had a neglected early bringing up are subject to—*i.e.*, they are nearly all liars. Lying is undoubtedly the great natural safeguard of the weak against the strong. By denying having

done some wrong act they find they escape punishment, and so get into a habit of continually denying any wrong of which they may be accused, even though they may be caught red-handed. No doubt these poor children, when associated with their more fortunate playfellows at home, are made the scapegoats for all the juvenile offences that occur in the neighbourhood, and consequently from their inability to explain matters, they get into a habit of giving a universal negative to all accusations implying blame. They are also apt to appropriate the playthings of their fellows, and it would be amusing, if it were not sad, to see how stoutly some little fellow will deny having taken them, even when they are found in his pocket. Their tempers too are often a little more than sharp, though sullenness and moroseness are not often found amongst their shortcomings. It is perhaps one of the greatest pleasures that falls to the lot of the deaf-mute teacher to see these moral obliquities depart, and truthfulness and honesty take their place. He may not be able, in many cases, to do all he desires in giving them intellectual attainments; but in most instances, even with those of low intelligence, he sees a great moral advancement, and knows that he has been the means, under God's

providence, of sending into the world children who otherwise might have remained in a sad and pitiable state of moral degradation, persons capable of asserting their humanity, and of becoming honest and God-fearing men.

CHAPTER V.

THE DEAF AND DUMB, AND THE BLIND.

The comparative condition of the deaf and dumb and the blind has often formed a subject for consideration. A glance at it here may assist us in putting the situation of the deaf and dumb more clearly before our readers, not only in respect to the blind, but also as respects society; it may also help to show what is the peculiar assistance which their respective conditions demand. In an estimation of our knowledge, it is extremely difficult to assign to our separate faculties the true amount furnished by each. Our nature has so much of unity in it, that the derangement of one power materially interferes with the manifestations of others. It becomes difficult to say, therefore, what may be the true condition of either the deaf and dumb or the blind. We know, that in the formation of our notions of simple objects more than one sense is usually employed, and that our senses have a reciprocal

influence on each other in the formation of such perceptions. To reason, therefore, upon the functions of any one sense from what we consider in ourselves its appropriate action, may, perhaps, be as false as our chemical reasoning would be, were we to attempt to infer the properties of an uncombined acid or alkali from an observation of the very different properties of a neutral salt, into the composition of which we know that the acid or the alkali has entered. So our reasoning upon the effects of deafness or blindness, from what we believe in ourselves to be the functions of hearing and sight, may be very liable to error. Yet an examination of what we owe to the senses will assist us to estimate, in a great measure, the position in which persons are placed who are deprived of any of the five.

It is now pretty generally admitted that the mind possesses no innate ideas. It has faculties capable of acting upon external nature, when brought into connexion with it, but these cannot develope themselves unless the means exist for their being linked with objects beyond them. The mind may be compared to the eye, which, when perfectly formed, is capable of being excited by light, of receiving its impressions, and transmitting them to the brain ; but though the eye be ever so perfectly formed, if light be shut out

from it, it is unable to go on with its functions. The mind, if deprived of the external world, would remain, like the eye, in darkness. Man, then, possesses powers for receiving and operating upon external impressions, but he does not possess intuitive knowledge. An erroneous view in this respect of the true mental condition of man frequently leads to grievous errors in education. Miss Martineau, in her "*Society in America*," speaking of such errors, and after remarking on the physical and moral evil produced in the subjects of such mistaken education, adds also: "This fundamental principle is working mischief in other directions. It affects, very unfortunately, the welfare of the blind, and yet more, the deaf and dumb, who are taken under the benevolent protection of society. As long as there are many of the most distinguished members of the community who hold that the interior being of these sufferers is in a perfect state, only the means of manifestation being deficient, that their training is to proceed on the supposition of their being possessed of a complete set of intellectual and moral intuitions--and that they therefore only need to be furnished with types, being already full of the things typified—and even that they have the advantage over others, in the exclusion of false and vulgar associations—the pupils will have little chance of benefit

beyond the protection and comfort secured to them in their appropriate institutions. In the conversation of those who verbally pitied their case, I could frequently trace an inward persuasion that the deaf and dumb were better off than those who could hear and speak ; and there were few who discovered, while admiring the supposed allegorical discourse, or compositions of the pupils, that the whole was little more than a set of images, absolutely empty of the abstract truth which they were supposed to involve. *I have witnessed this tremendous error in teaching the deaf and dumb elsewhere.*" * This error is not confined to America, but may be met with in other countries. It is a mistake that can only arise from an ignorance of all facts connected with the mental constitution. The deaf and dumb, we have heard remarked (by those who thought themselves perfectly competent to judge), have, to compensate for their loss of hearing and speech, a "powerful imagination, which more than supplies to them the loss they sustain in the deprivation of a sense." We have before remarked that they do not form any distinct class as far as natural mental endowments are concerned, and therefore in this faculty they are precisely as others ; but let us for a moment con-

* *Society in America*, by Harriet Martineau, vol. iii., page 176 et seq.

sider what is the true function of this faculty, which is in them supposed to *compensate* for their loss of hearing and speech. Imagination here is supposed to be a power able of itself to *create,* not by forming *new groups* out of old *materials,* furnished by sensation, but totally independent of all knowledge obtained by means of the senses ; that it can of itself, and by itself, originate, *proprio vigore,* something altogether different from, and independent of, acquired perceptions. Nothing can be further from the truth.

Let us consider the nature of memory. No one ever mistakes the legitimate operations of this faculty, yet imagination is very nearly allied to it as a mental act. Memory is the power which the mind has of retaining and reproducing ideas, formed by the intellectual powers, attended by the consciousness of their former existence, and following the order of events as they were produced in nature. But memory could have no place as a mental power, if there did not exist facts in the mind on which it could be exercised. We have remarked that imagination partakes in some respects of the character of memory ; that is to say, it reproduces impressions like the memory, but in their reproduction it differs from memory, in producing them without regard to the order or the time in which they previously

existed, and indeed without regard to their past existence at all.

Imagination, then, enables us to form new and ideal groups, but these are all formed out of the materials gathered in the first instance from sensation. The painter, when he produces the finest specimen of his poetic imagination, has still in the first instance been indebted to his senses for a knowledge of those beautiful varieties of form and effects of colouring which compose his picture; and though to his taste and genius belong the creative power of adapting them to the particular combination which they now exhibit, still it is the arrangement alone that is new. An artist with ever so much genius, had he neglected to study form and colour, could never produce a great imaginative work. Imagination, therefore, deprived of the assistance of the senses, never could manifest itself; and this power, in the deaf-mute, partakes of the same depression which is suffered by his other powers, in consequence of the state of isolation to which he is doomed.

The mind to receive knowledge must be brought into communion with the external world; and this can only be accomplished by means of the senses.* These are separate and

* "In these [sensations] we find the elements of all our knowledge, the material on which the mind is ever operat-

distinct from mind, yet so dependent is it upon their presence, that if they are absent its powers must remain undeveloped, for the mind is incapable of originating any subject of thought *sud sponte*, but operates upon materials furnished by the senses. Even in dreams, where the vagaries of the mind appear farthest from anything like sensible impressions, still, a careful analysis of these strange and often ludicrous wanderings will show that the fundamental idea is always caught from sensation.

As in the case of the material world, man can mould its plastic character into a thousand forms —can combine, compound, and sever its parts, so in the world of thought, he may variously arrange and transform his impressions, but in it also he has no creative power.*

So much, indeed, of human knowledge, and of all that is delightful in human feeling, involves these elementary sensations, as it were, in the very essence of the thoughts themselves, that some of the most acute and subtle reasoners have maintained that the whole variety of conscious-

ing, and without which it seems to us almost impossible to conceive it ever could have operated at all, or could even, in its absolute uncertainty, have been conscious of its own inert existence."—*Dr. Brown's Lectures on the Philosophy of the Human Mind.*

* Locke.

ness is sensation merely transformed.* But though various facts disprove this simplicity of arrangement of the mental phenomena, still it is not the less certain that the variety of our consciousness, when carefully traced, may be shown to be the result of sensation in some of its several forms.

In the case, then, both of the deaf and the blind, there must be a considerable difference in their mental acquirements, compared with those whose senses are complete—an absence of a number of sensations which the perfect senses would have supplied. It would seem a truth almost axiomatic that *(ceteris paribus)* in the same ratio in which we are denied the use of our senses will be the absence of intelligence, and in consequence, the deaf-mute and the blind, from their respective positions, if allowed to remain without the application of some artificial means for supplying them with instruction, must always be inferior in their condition to those who possess their senses perfect. It seems almost unnecessary to argue this point, yet such are the mistaken notions which are not unfrequently met with upon it, that it becomes necessary for us to do so.

From the peculiar situation in which the deaf and the blind are placed, instruction cannot

* Condillac.

proceed in the same manner, as in the case of those more favourably endowed. It is, therefore, required for their instructor to invent some special method by which their education can be accomplished.

In the case of deafness, speech fails to be naturally acquired, and this is unquestionably the greatest deprivation which arises to a deaf person; and if he remain uneducated, his loss must be estimated by a consideration of all the advantages which flow from the use of speech, and of all of which he is deprived.

This loss, though the greatest, is not, however, the only one; the enjoyments produced by music are entirely shut out from him, nor does it appear that by any analogous sensations he can be made to participate in the delightful emotions which musical expression produces. The deaf and dumb may be made to comprehend that the ear is cognizant of a variety in sound, as the eye is cognizant of a variety in colour, and that the ear may be pleased or offended from such sensations, as the fact is with the eye from colours, the taste from flavours, or the smell from odours; but the feelings which music awakens in the mind, that magic power of music described by Dryden, which—

> Raised a mortal to the skies,
> And drew an angel down,

can never be understood or experienced by the deaf and dumb.

It is very difficult to say how much of knowledge may not be acquired by a person born blind. A very profound writer maintains, with considerable appearance of truth, that "Sight discovers almost nothing which the blind may not comprehend."* It is a fact frequently remarked, that blind persons distinguish themselves in mathematics—the science of form—and that they have shown a perfect knowledge of the powers both of the microscope and telescope, and have also been conversant with the laws of optics; and these are branches of knowledge the phenomena of which are generally believed to be closely connected with sight. They seem also to have upon such subjects clear and precise arrangements of thought, nor do they appear to have any difficulty in following any discourse where reference is made to such subjects. This could hardly be the case if their ideas were not clear and definite. Such qualities as form, magnitude, extension, &c., they might be supposed to acquire through the sense of touch; but the idea of colour would appear to be difficult, if not impossible, for them to conceive.

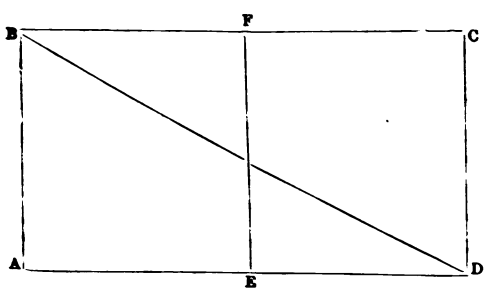
That they may form notions of this quality has been, however, often maintained, and that

* Dr. Reid.

they can form certain analogical ideas of its nature is very probable, by a similar process to that by which we have shown the deaf and dumb may arrive at some idea of music. But they can never feel the pleasure which results from a contemplation of objects arranged according to the laws of harmonious colouring. So, while the deaf and dumb are denied the pleasures arising from a perception of the harmonies of sound, the blind are denied the enjoyment to be derived from harmony of colour. That the blind speak often feelingly of the exciting effects of soft and pleasing colours, as well as forms, may be seen in the poetry of many blind persons, who frequently speak of the "blooming cheek" and "clustering ringlet," and "eyes of blue with jetty fringe," but it is probable that this language in them has force in association rather than from any literal meaning which it possesses.

The possession of the sense of hearing, however, enables the blind to become acquainted with the use of speech, like other persons, and consequently places them in a position to cultivate their minds by communication with their fellow men. They have not, like the deaf-mute, to wait until they acquire a means of communication by a special mode of instruction. They obtain it like ordinary people, and thus, though

they never leave their home, they are never entirely deprived of instruction. But the deaf-mute, if left under such circumstances, languishes for want of intellectual culture. M. Piroux, the eminent Professor of the Institution for the Deaf and Dumb at Nancy, has illustrated, by a very ingenious diagram, the comparative condition of the deaf-mute and the blind.* He thinks, "From first appearances we are apt to suppose the situation of the blind more deplorable than that of the deaf; but to estimate justly we must not be led away by external appearances. The blind requires a conductor to guide him; the deaf-mute requires a guardian, that his person and property may be protected according to law. The first does not see the light of day; but the second does not see the light of truth." With the following diagram he illustrates their condition.



He supposes the normal state of man to be

* *L'Ami des Sourds-Muets*, par M. Piroux.

represented by the rectangle A, B, C, D. He divides this into two equal parts by the line F, E, the rectangle E, D, C, F representing the physical part, and the rectangle A, E, F, B representing the moral part of man. Then from B, he draws the line B, D, and the triangle B, D, C represents the condition of the deaf-mute, and the triangle A, B, D represents the situation of the blind.

Here it will be seen that, while their deprivations in extent are considered to be equal, the *nature* of these are very different. In the triangle representing the deaf and dumb, the physical part is exhibited as superior to that in the triangle representing the blind, and the moral part of the deaf and dumb as much inferior to that of the blind.

The advantages which the deaf and dumb have over the blind in their physical part are regained to the blind in their moral part; and, on the other hand, what deaf-mutes lose in their moral power they gain in their physical power. Thus, while their losses in relation to the normal state of man may be deemed equal, as far as extent is considered, namely, one sense, the effects produced respectively are entirely different; the one confining and limiting the mental, and the other the physical powers, with which man is endowed.

Thus, in the case of the deaf-mute, we have seen that his situation is one of isolation. He is shut out from intercourse with his fellow-men, and consequently cannot become acquainted with the knowledge which exists in society. How melancholy must be the lot of such a human being! He cannot obtain the slightest knowledge of the duties which he owes to his Creator, or to his neighbour, his state of sinfulness or his privileges as an object of a Saviour's love—all these, the highest and the most human of feelings and aspirations, are entirely denied him. To him have never come the glad tidings of salvation, even though a dweller in the midst of Christianity. More cannot be said than this to show the misery of his condition or the extent of his calamity. The blind, from his position, suffers deprivations of physical enjoyments. He cannot see the variety exhibited by the delightful changes of external nature, and the pleasing pictures presented in those extended scenes which at one glance the eye can survey. But, by means of *language*, he can hear all the beauties of nature described, and can to some extent experience the emotions which their beauties excite in us. The blind have the enjoyments—blessings almost indescribable—which flow from the familiar and endearing conversations of domestic life. They possess

also the means of religious communion. All the truths which revelation teaches they can become acquainted with through the ordinary means of religious worship—the ministry of the church. They are not, therefore, so dependent on the contingencies of eleemosynary aid as the deaf and dumb. The fact that many blind men have risen to the highest eminence, both in literature and science, supports strongly the belief that the impediments to the progress of the deaf and dumb are of a far more insuperable character than those presented to the blind; since it has been remarked that no deaf-mute has ever been distinguished amongst the great in literature or science in any age or country. A recent writer on the deaf and dumb attributes this to their want of ambition; but granting this feeling to be one of the elements of greatness, it is certainly not the only one, otherwise we should have as many philosophers as pedants. The true reason is more probably to be found in the difficulties they have to surmount before they can enter fully into communication with the accumulated stores of intellectual experience.

It has sometimes been attempted to educate the deaf and dumb and the blind in the same institution, but there is nothing to be gained by this arrangement, unless in the case of small

establishments, where it may be desirable to practice economy.

There is so little that the two classes have in common in their education, that there are no educational advantages to be gained from it. At Newcastle-on-Tyne the experiment was tried for some years, and finally abandoned, as no advantages were found to result from it, and the blind were placed ultimately in an establishment by themselves. The same has been the case in other places.

Sad as the affliction of deafness or blindness may be, there is still one affliction which is yet more melancholy, viz., that where deaf-dumbness and blindness occur in the same person. Happily, this sad condition is not of frequent occurrence, but there are, unfortunately, some cases where persons are deaf, dumb, and blind. We, ourselves, have never met with a single case of this kind, so that we have nothing to record of our own experience as to the peculiarities of the state in which this combination of evils places the sufferer. It is an affliction, however, to which man has long been subject, since we find an instance of it mentioned in the xii. Chapter of the Gospel of St. Matthew, "Then was brought unto him one possessed with a devil, blind and dumb: and he healed him, inasmuch that the blind and dumb both spoke and saw," ver. 22.

The first instance of this kind which excited any great public interest in recent times, was that of James Mitchell, who was examined and reported on by several philosophers, amongst whom were Mr. Wardrop, Dugald Stewart, Dr. Spurzheim, and Dr. Gordon.

Mitchell was born in the Highlands of Scotland in 1795. As he grew up he manifested a most extraordinary acuteness of the senses of touch and smell, and was soon able, by these means, to discover strangers, and any article that was appropriated to himself. One of his greatest enjoyments was to strike anything he could get hold against his fore teeth, gratified, no doubt, with the sensation it produced. He could feed himself, and he behaved properly before strangers, and when one arrived at his house, he discovered the fact by his smell, which also directed him to the spot where he was, and then he used to go and examine the visitor by feeling him all over. If strangers arrived in carriages, he was able by the smell to become aware of the fact, and he would go and examine the carriage all over by means of feeling it. From this description, gathered from the reports of those who examined him, the mind of Mitchell was very much what we could have predicted of a person wanting in the senses of sight and hearing, excepting that the sense of smell was more

acute than we could have thought, and it is possible that its powers might have been magnified, as Dr. Gordon, in one of the communications he addressed to Professor Stewart, says he had never seen it so manifested as to convince him that Mitchell could tell the exact place where strangers stood or sat in a room about him, and the knowledge of how much the capabilities of the deaf-mute have been exaggerated should make us cautious of receiving as true reports of things that are "very wonderful." Mitchell never appears to have received any of that kind of special instruction which in later years has been attempted to be given to persons so afflicted. The most interesting of these latter cases are those of Julia Brace and Laura Bridgeman, both Americans. Dr. Howe, the teacher of Laura Bridgeman, has published lengthened reports of his instruction, which was conducted as a matter of necessity chiefly through the sense of feeling. Unfortunately we have not seen any of Dr. Howe's late reports, and cannot say, therefore, how far he has been able to carry his instruction. Intercourse with those persons must, however, almost solely be confined to signs expressed through feeling, and it is not very easy to see how a very extended field of information can be conveyed to them by such means.

The mode in which Dr. Howe carried on his instruction with Laura Bridgeman, as he himself tells us, was as follows: "Her teacher gives her an object, say a pencil; he first lets her examine it, and get an idea of its use, then teaches her how to spell it, by making signs for the letters with her own fingers; the child grasps her hand, and feels her fingers as the different letters are formed, and when she comprehends the lesson she holds up her fingers, and spells the word on the manual alphabet; next she takes up her moveable types (as used by the blind) and arranges her letters; and last, to make sure she is right, she takes the whole of the types comprising the word and places them upon or in contact with the pencil or whatever object it may be." This will show that the mode pursued by Dr. Howe is a kind of mixture of the methods used by the deaf and dumb and the blind, though the extent to which gesture can be used must be limited, as it must be confined to such signs as can be comprehended by the touch.

A remarkable case is recorded of a person named Edward Meystrie of Lausanne, who, under the care of Mr. Hirzel, was taught to pronounce some words. He could also use the turning lathe and chisel with some skill. Meystrie did not, however, become blind till

eight years of age, and had learned many things before that time, so his case does not present the same interest as one where the affliction is congenital, or occurring in the first years of childhood.

From these successes it would appear that zeal, perseverance, and ingenuity have a power of making even this sad affliction yield, in some degree, to their efforts, teaching us the great lesson that we should never consider any cases, either of physical or moral evil, so bad as to be beyond improvement.

CHAPTER VI.

HISTORY OF DEAF-MUTE INSTRUCTION.

The deaf and dumb do not remain in their state of isolation without making efforts to procure for themselves an intercourse with the world—and to some extent they succeed. Unable to address the ear, they have recourse to the eye of their fellows, and by a species of communication, to which we have already alluded—*gesticulation*, they find that some of their wants and feelings can be made known.

There are many instances where deaf-mutes who have never had the advantages of instruction, have been able to establish a kind of communication with their relations, and those immediately surrounding them, so as to make themselves very well understood on the ordinary affairs of household employments, and who have been able to perform the usual avocations of a country life with an average ability. But, no doubt, mute children who are left without instruction generally grow up passionate and head-strong, and

as a consequence, often betray strong self-will and a great mistrust of others, and with their violent gesticulations and inarticulate noises have often engendered the belief of their being incapable of instruction. Happily, however, for such sufferers, this feeling has been got over, and the deaf and dumb of all countries are now enjoying the blessings of being restored to social and civilised life by means of education.

One of the earliest records of deaf-mute instruction is found in the *Ecclesiastical History* of the Venerable Bede. It is there noticed as a miracle, but there is no doubt that it was an early attempt, and, from the tenor of the description, may be considered as not a very unsuccessful attempt, to teach the deaf-mute to articulate from the motion of the lips.

The person who performed the miracle was Bishop John of Hagulstad (now Hexham), in Northumberland. This bishop, we are told, had a mansion, where he used at times to seclude himself for solitary purposes, especially at the season of Lent. On one such occasion, desiring at the same time an object on which to exercise his charity, he caused to be brought to him a young man whose case and cure are thus described:—"There was, in a town not far off, a young man that was dumb, and well known to the Bishop (for he used to come before him

oftentimes to receive his alms), who was never able to speak so much as one word. This impotent Lazar the Bishop commanded to be brought thither, and a harbour to be made for him within the precinct of his house, where he might ordinarily every day receive his alms. And when one week of Lent was past, the next Sunday he desired the poor man to come unto him. When he was come, he bid him put out his tongue and show it unto him; and taking him by the chin made the sign of the Holy Cross upon his tongue; and when he had so signed and blessed it, he commanded him to take it in again and speak, saying, 'Speak me one word; say, Yea, yea.' Directly the strings of his tongue were loosed, and he said that which he was commanded to say. The Bishop added certain letters by name, and bid him say A. He said A. Say B, and he said B, &c., and when he had said and repeated after the Bishop, he gave him syllables and whole words to be pronounced. Which, when he had answered all properly, he commanded him to speak long sentences, and he did so." *

Now, here is an instance, and apparently a pretty successful one, of a deaf man being taught to articulate so early as the eighth

* *Bede's Ecclesiastical History*, Book v., Chap. ii. Cambridge, 1722.

century, for Bede died in 735. It appears, however, to have been a solitary case; and as it was put forth rather as a miracle than as the result of human effort, probably no one who knew of the case ever attempted to obtain similar results.

After seven or eight hundred years had rolled away we meet again with an effort to educate the mute. In the latter half of the fifteenth century we learn that an attempt was made to instruct the deaf and dumb. This is related in a posthumous work of Rudolphus Agricola, *De Inventione Dialecticæ*. The author says: "I have seen an individual deaf from birth, and consequently dumb, who could understand what was written to him by others, and could also express his own thoughts by writing." Jerome Carden, an Italian philosopher, who was born in 1501, and died in 1576, a man of an almost universal genius, maintained that the deaf and dumb could be made to hear by reading, and to speak by writing. Carden was also one of the first who asserted the possibility of the blind being taught to read by the touch. A learned Spanish Benedictine monk, Pedro Ponce, taught with success some deaf and dumb persons; he left no record of his plans, but the fact of his success is related by two of his contemporaries. Father Ponce died in the year 1584, and in the

register of his death it is recorded that "he was distinguished by his eminent virtues, and that he obtained a just celebrity throughout the world in instructing deaf-mutes." The first work published upon the art was by John Paul Bonet, a Spaniard. It appeared in the year 1620, and we learn from its contents that he considered himself the inventor of the art. Whether or not any traditionary knowledge was preserved of Ponce's method it would be difficult to say. It is, however, by no means improbable that, after a lapse of forty years, many persons may have remained who had heard of or seen Ponce's success, and amongst them might have been Bonet.

Bonet's method, as explained in his book, "*Reducion de las Letras y arte para ensenar a ablar los mudos*," does not materially differ from that which is followed at the present time. He gives more prominency to articulation than is now done, except in Germany, and makes the use of the manual alphabet of more importance than it is now considered to be. In the early part of the seventeenth century the possibility of teaching the deaf and dumb to speak was maintained by some learned professors in Italy. These, however, were rather theoretical speculations than practical demonstrations, excepting in the instance of Peter de Castro, who is said to

have instructed a son of the Prince of Savoy; but he has left no record of the method he employed, nor of the results he obtained.

The earliest writer on the deaf and dumb in England after Bishop John of Hexham was John Bulwer, who in 1648 published a work on the subject;* and in the year 1662 Dr. Wallis, Professor of Mathematics at Oxford, exhibited deaf and dumb pupils before the Royal Society of London, and in 1669 published a paper giving an account of the methods he employed in his instruction. William Holder is another gentleman who has left us records of his attempts to teach the deaf-mute. He claims to have instructed previously one of the pupils exhibited by Wallis. In 1670 George Sibscota published his *Deaf and Dumb Man's Discourse*, and ten years later there appeared a work entitled *Didascolocophus*, by George Dalgarno. Dalgarno was little known till Dugald Stewart drew attention to his work in his account of James Mitchell, and he speaks of him as a very "original thinker, who had anticipated some of the most refined experimental conclusions of a more enlightened age." Dalgarno proposed to depend upon written language and the manual alphabet; and though he does not

* Bulwer published two works, *Chirologia* and *Philocophus*, and was the first person in England who proposed to use signs as a means of teaching language.

deny that articulation can be taught, he doubts if it can be so sufficiently to be of any great practical value. His work is of a highly practical character, and might be read with profit at the present time.

Little more was done for the deaf and dumb in England till towards the close of the eighteenth century, when the true education of the deaf-mute really commences. Holland had produced some writers on the subject as early as 1667, but their works chiefly contain theories which they held on language. Their first actual instructor was Conrad Amman, a physician of Amsterdam, who died in 1724. His efforts were chiefly to restore the voice, and though he taught his pupils to write, his great error—and one which he shared with nearly all the early teachers of the deaf and dumb—was the importance he gave to oral language, believing, indeed, in its absolute necessity for the culture of the intellect. Amman's *De Loquelâ* was published at Amsterdam in 1700, and Boerhave says of this work: "So minutely had he enquired into the structure and action of the organs of speech, that if his life had been longer spared he would have explained the physical causes of the various kinds of voice in other animals." At a meeting held at Chevalier Bunsen's in London a few years ago, convened for the purpose of considering the important

question whether or not a uniform system of expressing foreign alphabets by Roman characters could be discussed and agreed upon, Prof. Owen characterises this work of Amman's as "exhausting the subject of speech so far as its physiological causes are concerned."

The Italian and English writings on the subject soon became known to the Germans, who quickly gave them their attention. Camerarius, Schott, Morhoff, and Mallenttot, were writers on the subject, and about the beginning of the eighteenth century Keyer began teaching the deaf and dumb in Silesia. He appears to have been about the first to acknowledge that mechanical articulation was not indispensable to educate the deaf-mute. He says: "Every deaf-mute, who is endowed with common intelligence, by the sense of sight alone can be taught to write and to understand the meaning of what he reads, even though he may not have been taught to speak at all;" and adds further, "To do this demands less of patience on the part of the master and less of labour from the pupils than when they are required to learn to pronounce words and to read upon the lips of those that speak to them." No truer philosophy of deaf-mute teaching can be propounded at the present day. During the whole of the eighteenth century a succession of writers appeared in Germany until

the time of Heinicke, who became undoubtedly one of the most distinguished of the German teachers. He was the director of the first institution for the deaf and dumb ever established by a civil government, viz., at Leipzig in 1778, and he had great success as an instructor. The system he adopted is that which is still, with little variation, the one followed in Germany.

Portugal produced some men who distinguished themselves in the art of teaching, more especially Rodriguez Pereira. He made a profound secret of his method, and refused to reveal it unless government gave him a large sum, which they did not choose to do. His own family was not allowed to know his secret, and his pupils were bound by a solemn oath not to reveal it. There is no doubt of his being a most successful teacher, and his method, as far as it has become known, appears to have been much the same as that followed in our own time.

Though in France, Ernand and the Abbé Deschamps had both exerted themselves in the cause of the deaf and dumb, especially the latter, whose whole life and fortune were devoted to their welfare; still it is to the unceasing and successful labours of the Abbé de l'Epée that France has such strong claims on the gratitude of the deaf and dumb of all countries.

Having slightly sketched the earlier history of the art down to the times of the two great modern promoters of deaf-mute instruction, viz. : de l'Epée, of Paris, and Heinicke, of Leipzig, we shall now glance at its history nearer to our own times, when the instruction of the deaf-mute as a general movement commences.

It is to be regretted that a difference in the views of de l'Epée and Heinicke produced a controversy that still to some extent exists, and has not always been conducted in a manner most to be desired. The chief point of difference was on the value of articulation. Heinicke's views on the subject may be gathered from the following passage, which, in substance, is in his own language ;—"The written word is only the representative of articulate sound ; it addresses itself to the eye, and can never be imprinted on the soul, or become the medium of thought. That is the sole prerogative of the voice. Without an acquaintance with spoken language, a deaf-mute child can never be anything more than a writing machine, or have anything beyond a succession of images passing through his mind."

This being the theory of the German master, he necessarily laboured to make articulation with the deaf-mute the great object of his instruction, and since his time the German teachers have been his closest followers.

The Abbé de l'Epée, on the contrary, assumed that our ideas had no closer connection, naturally, with vocal sounds than with written words, and that the signs or gestures natural to the deaf and dumb may be made to answer the same purpose which our native tongue serves in learning a foreign language. He aimed, therefore, to give his pupils an acquaintance with language under its visible forms, by means of gesture or pantomimic language, without the intervention of speech; directly opposing Heinicke in his theory, that speech or vocal sound was necessary to give ideas or real instruction.

Heinicke published a work in 1780, where he not only advocated his own system, but also declared all other methods to be useless and pernicious, and no less than "folly, fraud, and nonsense." De l'Epée entered the arena of contest, and a somewhat sharp correspondence followed, the substance of which may be thus stated: the German maintained that the deaf and dumb, instead of being instructed in language through the medium of signs and writing, should be taught speaking and reading aloud, by imitating the motion of the lips. De l'Epée replied to Heinicke that he had himself instructed the deaf and dumb in speaking, and that, according to his experience, the acquisition was of no great value, that the mechanical learning of speech was to

them so much deducted from mental cultivation; that if it was impossible for the deaf and dumb to remember, by the sense of sight, the order in which the letters of words were placed in writing, the same difficulty appertains to speaking aloud, since they must remember the different positions of the mouth demanded by the different sounds, and that neither the sounds of letters nor dactylology were capable of conveying the signification of words, for which recourse must be had to signs.

Which had the best of the contest, where both were more or less wrong, it is not worth while to examine; but it is worth while to notice, that since that time, unfortunately, a division to some extent has existed amongst teachers, which has had the effect sometimes of making the partizans of each run their theories to such extremes, as to become dangerous to the cause itself. This may be more particularly said of those, who have been the great advocates of articulation—the teachers of the German schools. Members of Heinicke's family filled the institutions of Crefeld, Berlin, and Leipzig, and teachers formed under them have spread over Germany, and carried with them all his predilections for articulation. Sicard succeeded de l'Epée, and modified his method, and those who have followed him have done the same, so that those points which appeared weakest in

his arguments with Heinicke have now been given up or modified. De l'Epée laid great stress upon the manual alphabet, but it now occupies, as an instrument of instruction, a very subordinate position. More and more as the improvement in teaching progresses is dependence placed upon written language, explained in the elementary stages by means of those gestures which are found to be natural to all who have not otherwise a common language, and in the more advanced stages by means of that language already learned.

The aids now used in teaching the deaf and dumb may be said to consist of,

First—Signs, or gestural language, with which may be classed pictures, models, and illustrations of various kinds.

Secondly—Dactylology, or spelling on the fingers.

Thirdly—Articulation, which may be divided into lip-reading and speaking; and

Fourthly—Writing and reading.

Different teachers have estimated these aids at different degrees of importance, but all are more or less employed.

There may be said to be three systems of teaching deaf-mutes, namely, the *French*, the *German*, and the *English*. The French system has chiefly made use of signs, which

it has developed to a wide extent into what have been termed *methodical* signs, but it has paid little or no attention to articulation.* The German system, on the contrary, as we have mentioned, uses speech as the principal means of imparting instruction, and endeavours to make all its pupils articulate like those who hear. It forbids the use of signs as far as possible, and uses as little as may be the manual alphabet. It attempts to change the deaf-mute into a speaking, and, apparently, a hearing person. The English system adopts an intermediate course between the German and the French. Like the latter, it employs signs as the great means of imparting knowledge, but confines itself chiefly to natural signs, and has used but sparingly those methodical additions adopted by the French. It uses, like the Germans, articulation, though in many of the British schools this has been abandoned as impracticable, when extended over a number of pupils, but it is still taught to such pupils as indicate an aptitude for its acquirement, and to

* The French have now modified their system, and teach articulation in cases where some hearing exists and where some speech had been acquired before deafness had taken place. They also appear now to place less dependence on methodical signs than they did in the time of Sicard.

all those who partially hear, or who have learned to speak before becoming deaf.

The American schools professedly follow the French system, though, of late years, they have appeared to approach nearer to the eclecticism of the English. But, where institutions may be said to have agreed upon the general principles of education, there will still arise differences in respect to the degree of prominency which should be given to one or other of particular points, and it is to be expected, therefore, that different characteristics may be found in different institutions, even in the same country.

The first institution for the deaf and dumb in England was established in 1792 in the Old Kent-road, London, chiefly from the exertions of the Rev. Mr. Townsend. It was placed under the care of Dr. Watson, who was a nephew and pupil of Mr. Braidwood, one of our earliest deaf-mute teachers, who at first was a resident of Edinburgh, where he practised the art. Dr. Watson afterwards published a work in which his views of instruction are detailed. He taught articulation, and considered five years as the shortest time in which an education can be given suitable for such children as are "to earn their bread by the labour of their hands." This Institution has since had a prosperous career, and is now under the direction of a grandson of Dr.

Watson. Very little is known of the method pursued by Mr. Braidwood, except that it was probably the same as that published by Dr. Watson, who had been his pupil. Braidwood ultimately removed to near London, where he and some of his family continued to teach till a comparatively recent period It may now be said that the instruction of the Deaf and Dumb has extended throughout all the civilised world.

From the last information we have on the subject, it is stated that there are 196 schools in the world, supplied with 449 teachers, and about 7,000 pupils receiving instruction. There are in the British Islands 22, in France 44, in the German States 28, Austria 10, Italy 11, Prussia 25, Belgium and Holland 10, Bavaria 10, Denmark, Norway and Sweden 5, Switzerland 10, Russia and Poland 2, the United States 13, Canada 1, Spain 2, Portugal 1, and in Asia 2 To these must be added at least 2 in Australia, and as the information is not very recent, probably 6 or 8 additional for private establishments and new public institutions.

CHAPTER VII.

GESTURE-LANGUAGE.

We have already, in our first chapter, referred to gesture-language, and shown somewhat its general character. We shall now examine its peculiarities more in detail, and more especially its application to the instruction of the deaf and dumb.

The means by which communication is carried on in society is spoken and written language. It has been shown that the deaf and dumb do not, like other persons, learn these methods of intercourse, and when left without the peculiar instruction which their situation requires, they are unable to attain them Under such circumstances, therefore, they have recourse to a language which is found to exist, independent of all conventional arrangement, and which is principally addressed to the sight. It is that language of gesture which assists our first attempts at intercourse with a foreign or strange people, and which is found to be as universal as those

feelings which are the distinguishing characteristics of humanity itself. Gesture, then, opens to us a way, by which we can exchange our thoughts with the deaf and dumb, and by which these unfortunate sufferers can be brought into the possession of some of those advantages which man gains from his social intercourse. Dr. Reid says, "If mankind had not a natural language, they could never have invented an artificial one. For all artificial language supposes some compact or agreement to affix a certain meaning to certain signs, therefore there must be compacts or agreements before the use of artificial signs, but there can be no compact or agreement without signs, nor without language, and therefore, there must be a natural language before any artificial language can be invented."*

It is upon this language,—almost obliterated by the polish of civilized manners—that we fall back upon, in order to free from its imprisonment the moral and intellectual nature of the deaf-mute.

The mind is subject to a variety of feelings, and the effects of these are visible in the features, attitude, or gesture. Every distinct emotion has its appropriate muscular expression, and thus a language altogether independent of words exists, displayed by the countenance or

* *Inquiry into the Human Mind.*

action of man. Every person is aware of the bodily expressions of fear, love, joy, and one can seldom or ever mistake or confound the signs of these with that of courage, hatred, or sorrow. Such language is immediately and instinctively recognised in every state of civilisation, from the Australian savage to the most refined citizen. The haughty step, the erect carriage, and disdainful look, are always sure indications of pride; in the timid gait and sidelong look, fear and cunning are at once perceived; while agony is always too fearfully pourtrayed, in the distorted looks and agonized features of severe suffering. This language addresses itself to the sight, the deaf and dumb, therefore, are able to avail themselves perfectly of its use, and thus it possesses for them, through life, always a charm which written language appears rarely to acquire. In the application of this language to their instruction a wider extension is given to it than is found in such instances as we have mentioned. It is made to embrace various signs which, though perhaps less natural, still partake of that character, and become of great importance in mute instruction. Such are the imitations of the forms and actions of animals, and of certain motions and actions of the body, which, though perhaps not strictly natural, still are easily understood. It is by these various gestures that the

uneducted deaf-mute succeeds in his communication with the world. He sees, for instance, one of his companions under the influence of anger; he sees his swollen features, his distorted visage, his convulsed limbs, and in fact he has carefully noted and observed all the violence of action visible in anger. To tell the circumstances of his having witnessed this he would imitate those contortions, and by acting the scene he would relate to others what he had himself beheld. This language, though confined in extent, is powerful in effect, and impresses often more forcibly than spoken language, since we know that it is not false. If we are told by a man, with an expression of joy upon his countenance, that he is overwhelmed with sorrow and torment of mind, we do not believe him, because we see that the natural expressions of grief are not upon his countenance, and we believe that his verbal, rather than his gestural, language is counterfeited, and that the latter is a more certain index of feeling than the former.

It is by natural signs that the orator chiefly gives force and energy to his language, and in proportion as his oratory is deficient in the use of these natural signs, it is the less expressive and effective. It is for the same reason also that reading is less persuasive than speaking; and he who addresses an assembly by reading

merely will have little power over the feelings of his auditory, compared with him who adds to artificial language the energy and force of natural language.

Phrenologists have often dwelt upon the fact that every mental power has a natural and manifest expression peculiar to itself, and though the idea has met with considerable ridicule, yet careful observers, whether through the means of Phrenology, or otherwise, will find that such gestural expression has a much wider range than is generally supposed. The power of mimicry, which we frequently find so strongly developed amongst the deaf and dumb, depends altogether upon an appreciation of those minute shades of difference seen in natural expression, and which go to produce manner in individuals. There is a general character, as there is a general likeness, which is common to man, and which is discovered by all ; but it is he who discriminates the peculiarities which apply to each, that makes the great artist. Careful to observe all such differences, the deaf and dumb catch these peculiarities, and, consequently, are able to reproduce them ; whereas, those who are not so careful in observation of natural gesture, lose the minute varieties which belong to the individual, in the general features which belong to the mass.

Gesture, however, will not entirely fill the place of speech or writing. The deaf-mute cannot through it make himself generally understood; and as a language for the full improvement of his reasoning powers it is incomplete. It has a force and power when addressed to the feelings, but it is inferior to written or spoken language when addressed to the reason. Thus it may be said to be the language of poetry, of painting, and of acting, but it fails somewhat as a language of argument. It may entice, but it cannot so fully and clearly convince. Artificial language, like algebraical symbols, signifies and speaks to the understanding with accuracy and precision, but to the feelings it is comparatively dead, whilst the language of nature has the power of at once rousing, with energy, our passions.

The purely arbitrary character of written or spoken language is one of its chief excellencies, as a vehicle, for the reasoning process, but it is defective as a language of passion and feeling. Thus the man of *science* pushes it to its extreme limits by the adoption of *technicalities*, while the orator and the actor always associate with it the language of nature—*action*.

But it must not be considered that because gesture is inferior to spoken and written language as a medium for reasoning, that, therefore, the deaf and dumb who use it are incapable

of reasoning. We have already shewn that they can reason and do so, though, no doubt, not to the same extent as do those with a knowledge of the written and spoken form of thought.

Natural language has great charms for the deaf-mute, and it remains always dearer to him than the most polished speech, but, unfortunately for him, it cannot be adopted in society, and it does not restore him to the world. He must, therefore, not be contented to rest here, but must master the language of his country. This, and this only, will place him in a condition to enter society, and, alas! it is his greatest difficulty. The language of action is very different in its forms to alphabetic language, and this difference operates much against an easy acquirement of the latter mode of expression.

Alphabetic language possesses a certainty and precision in the laws which regulate its combinations that admit of little misapprehension; its entire conventional character, leaves, when properly understood, no doubt on the mind in regard to the ideas it wishes to express, but it is somewhat different with the language of action. From the pictorial form of its signs there occasionally arises a certain degree of doubtfulness between analagous ideas, and from the meagreness of its syntax, the groups which it

presents are sometimes ambiguous in expression. Sign language then is used by teachers because it is the only common ground on which they can meet their pupils, and where they can both understand each other, so that the one can communicate and the other receive the knowledge to be conveyed. But when it can be abandoned for alphabetic language it is so, and it is never considered other than a *means* in deaf-mute instruction. This is a point which has been very much misrepresented by persons who have a *little* knowledge on the subject, and who illustrate very forcibly the truth of the line that tells us, "A little knowledge is a dangerous thing," for they speak of signs as "degrading the deaf and dumb."

It would appear that in no country is the use of signs so much discountenanced, and the intellectual inferiority of the deaf and dumb considered so great, as in Germany. We have already stated that Max Müller considers them incapable of reasoning before instruction, and that even after instruction he thinks that they are only capable of thinking the thoughts of others ;* while Herder also, in his *Philosophie der Geschicte der Menschheit*, says : "The history of uneducated deaf-mutes shows how rarely men can rise to the exercise of reason when deprived

* *Science of Language*, second series, Lect. II., pp. 69-70.

of the faculty of speech; they remain, in fact, within the mere limits of animal instinct. A deaf-mute will imitate whatever he sees, whether good or bad, just like a monkey; though he is, indeed, sunk lower even than that animal, for the instinct of sympathy with his own race is wanting in him." To show this he gives, as an illustration, the fact of a deaf-mute killing his brother, from his strong instinct to imitate a butcher killing a pig, which act he had seen done a short time before. He adds: "This is a horrible proof how little our vaunted human reason and sympathy with our species can effect when dissevered from the faculty of speech."

We have already shown that we by no means consider the deaf and dumb so debased as to be "sunk even lower than monkeys," far from it, but the question we wish to examine here is, why it is that the German philosophers have formed so low an opinion of the mental state of the deaf-mute. There can be only two reasons for this: either they wish to make the facts harmonize with certain theories which they hold on the nature of speech, or the strong discouragement which is given by teachers in Germany to the use of natural signs, has extended to check intercourse by such means between the children and their parents at home, and has consequently depressed the intellectual and moral nature of

the deaf and dumb more than is found to be the case in countries where this mode of communication is more freely and generally used.

There are in the room where we write at this moment, two mute little girls, sisters, one thirteen, and the other ten years of age. From peculiar circumstances they have been unable to be placed under special instruction till about three months ago. They have no speech, and their knowledge of written language extends little beyond a few names of objects and their qualities, but they have been well brought up so far as manners and habits go, and have been taught to do little things in the household. By the means of signs these children can enter into lengthened and continuous conversations, they can tell much about what they have seen in their walks, make pertinent observations on the dresses and actions of their young companions, and they manifest warm and affectionate feelings for their parents and friends; they can give also vivid descriptions of the neighbours living in the same street with their parents, telling where "the stout man lives who has a garden with a mulberry tree, and several cherry trees in it, and who is married, but has no children;' also when he goes to business, and when he returns. They can also tell about the man with the beard, who is a music-master, and teaches their sister the

piano, and a great deal of such like gossip, all the result of their own observations. Now, all this, and much more of the same kind, they can talk about by the means of signs, and they can explain to us, who never saw these parties, much about them—all, indeed, that they could learn through the sense of sight – nearly as well as ordinary children of the same age could do by means of speech ; and yet we are to consider these children "sunk even lower than monkeys." They have a third sister, also deaf and dumb, and no doubt the language of gesture has been developed by their conversations with each other more than it would be in a family where there is only a single child so afflicted, and with no one to converse with but hearing and speaking persons, who have generally an unwillingness to use signs more than is absolutely necessary.

It is indeed possible that Heinicke's dogmas may have extended their influence so far as to prevent deaf-mutes from using signs amongst themselves and in their family circles, and that their general intelligence has consequently really become more depressed, and so given some seeming grounds for the opinion expressed by Herder; but we have a strong suspicion that such a view has been adduced to support certain theories of language, rather than from any actual observa-

tions made by the philosophers themselves on the state of the deaf and dumb mind.

There are again instances where mute children, when left to grow up to ten or twelve years of age at home without instruction, have shown strong tendencies to evil and dangerous dispositions, but, is this not the case also with other children. Is it not with such that our reformatories and other prisons for juvenile offenders are filled. One mute may be mentioned as being a pest to the neighbourhood in which he lived; he was not sent under instruction till twelve years of age, and his parents were of a low and an ignorant grade, and they used to encourage the boy in stealing and all manner of mischief. On one occasion he went to a railway station in the neighbourhood, and tore off the directions of all the parcels he could find. The difficulties and trouble such an act would produce are more easily conceived than described. This act, however, obtained for him the advantages of instruction, since the authorities of the district did not know what might follow, and sent him at once under instruction. The character of this boy has now completely changed. He is steady, obedient, and guilty of no daring acts of mischief, and, though not a bright or active boy intellectually, yet one

who will make, there is every reason to believe, a steady and hard working man.

The instance adduced of a deaf and dumb boy killing his brother, because he saw a butcher kill a pig, and wished to imitate him, is not an isolated case, confined to deaf-mutes; for, within the last twelve months, a case of the same kind has gone the round of the English newspapers as occurring with two children who could both hear and speak.

History teaches us that pantomime was highly cultivated amongst the ancients, and carried to such perfection that the pantomimists, "Whose hands were eloquent, and fingers tongues," contended with the public speakers for the prize in eloquence, and were frequently declared the victors; but to our age,—the age of Christian benevolence—it belongs to have applied this language as a means of comforting affliction, and of giving to the deaf and dumb the blessings of social intercourse, and the light of Gospel truth.

This language, however, as now used in the schoolroom, does not confine itself to what may be considered natural signs. It has been so extended as to embrace a large number of signs as artificial as written language itself, so that, as now employed by teachers, it is of a mixed

character, and requires some discrimination in its use.

Sign language, in its natural character, does not afford the means of that elegant variety, or of those nice differences of expression, allowed by the extended phraseology of a cultivated language; it may rather be compared to some of those languages of uncultivated nations which, we are told, "have but one sound to signify *joyful*, *joy*, and *to rejoice*, and that through all moods and tenses; the radical ideas only are set down together, the connecting links must be guessed at." In bringing the language of natural signs to bear upon one which is cultivated and refined, we feel desirous of engrafting upon these natural roots such artificial additions as will help to give to this language more of the copiousness and accuracy found in the fulness of polished speech; and hence gesture as now employed in the schoolroom consists of both natural and artificial signs.

Natural signs are, however, by far the most important, and the only ones by which we can first convey *ideas* to the mind of the pupil.

These signs are capable of a twofold division, viz., into those *truly natural*, and those *descriptive* or *imitative*.

Purely *natural* signs are common to all mankind, are instinctively made and instinctively

interpreted. They are so associated with the mental faculties that the signs become the certain indices of the internal state, and in fact are to be ranked amongst the involuntary, rather than the voluntary acts. They are the result of the relation established by nature between the mental emotions and the different bodily organs, every distinct emotion having its peculiar effect upon the muscular system. The merest infant can interpret a mother's smile or a mother's frown, and it is upon this instinctive method of communication, independent of all conventional agreement, that we begin to build our ORGANON of deaf-mute instruction. To limit natural signs, however, to this class only, would be a rigorous definition, and, were we solely to confine ourselves to the use of such signs, we should shut out a large class of the utmost importance in the work of instruction—a class comprehending signs which, though they cannot strictly be termed *natural*, may yet by a little extension of the term be ranked under this category.

These signs are such as persons ignorant of a common language would at once have recourse to, in their communication with each other. They are not inappropriately termed *descriptive* or *imitative* signs, and hold a very important office in the education of the deaf and dumb.

They comprehend the various gestures and movements of the body and its parts, imitative of the different actions employed by man in his various operations of necessity or duty. They also extend to descriptions of the actions and habits characteristic of different animals, as well as to the pointing out of the peculiarities of inanimate objects. Thus our signs for eating, drinking, ploughing, reaping, &c., are actions imitative of these operations; our signs descriptive of flying, running, &c., are of the same class; and when these are associated with signs indicative of the operator, combined with any other particulars that may be necessary, we are enabled to tell a little story more or less graphically, according as the relator may be more or less observant and expressive in his signs. Pointing to the coals, then to the fire, and imitating the act of throwing the former on the latter, would readily be understood to imply that we wished the fire to be replenished with fuel. These signs would all be readily responded to by an uninstructed deaf-mute, if he had previously possessed opportunities of witnessing the realities which they were intended to represent. It will at once be apparent to what a large extent this class of signs is available, and, though they may not, philosophically, be considered natural signs, yet for all the practical

purposes of the schoolroom they are so. In using these signs it is not uncommon for different individuals to vary to a certain extent their descriptions of the same thing, from the fact that different peculiarities may impress themselves with different prominency upon the mind of each, so that, in describing a bird, one may have been impressed most by its bill, another by its feathers, and another by its wings, while, in an elephant, one may dwell on the length of its trunk, another on its tusks, and another on the peculiarity of its gait; and yet these differences are never so great as to produce misunderstanding, or practically to interfere with the value of the signs themselves as a means of instruction.

So far, then, we proceed upon a language which is natural, and therefore self-interpreting, to our pupils. It is a language which has always peculiar attractions for the deaf and dumb, and one in which they are all more or less eloquent.

So rapid are the mental processes beyond the means of communicating our ideas, that a continual tendency is produced to express our thoughts in the most abbreviated form compatible with being understood. This principle is felt in spoken language, and it operates upon the signs which we are now considering; for we frequently find, when our communications with

our pupils have extended over some time, that the full natural signs are often so abbreviated as merely to be indicated by slight motions of the hand or head—the roots indeed not unfrequently being lost sight of altogether in these abridged forms of expression When such a habit is indulged in, the process becomes one of mere arbitrary forms, and is comprehensible only amongst ourselves. If the ideas have first been imparted by the full signs, the custom of afterwards using the abbreviated forms may not be so reprehensible, but when they are employed to convey first ideas to young pupils, the only connexion that will be taught will be between the word and the sign, and the idea itself will not appear in the association in the mind of the pupil, however it may have a place in our own.

In entering upon a consideration of the next class of signs, we have to deal with one very different from that already discussed. We have now to examine those signs which are *conventional*, and which, to be understand, must have a meaning affixed to them by agreement. They are divided into what are termed *methodical signs* and *arbitrary signs*. The former are essentially to represent words, and to bring sign language into closer affinity to the vernacular. They, like natural signs, are expressed by gesture, and it is because they have the same outward form,

covering a very different nature, that the danger in their use exists, in the hands of the inexperienced teacher.

A difference of opinion has long existed, and to some extent still exists, as to how far methodical signs may be employed with advantage. That in many instances they have been misapplied, and invested with undue importance, there can be little doubt; while totally to discard them appears throwing away an auxiliary that on some occasions may prove useful. The earlier French teachers produced a system of methodical signs so perfect that each word had its equivalent sign, and the education of the pupil was to be accomplished by his learning to associate these together. When he could translate the signs of the master into proper language, his education was considered to be complete. That this was a grievous error there can be no doubt, and productive of more evils than one. In such a system storing the pupil's mind with facts, or in other words, giving him information in the different branches of knowledge, is altogether lost sight of, while we do not really give him that acquirement we most desire to bestow, the language of his country. It is true that this must ever remain one of the great objects of our instruction, but if it is to be the mere power of writing words, or even sentences, from the signs

made by the teacher, without comprehending their meaning, then, as far as its real usefulness goes, it might as well have remained unlearned.

Probably no teacher now depends upon such means for giving a knowledge of language; but, where much reliance is placed upon methodical signs, there will always be a tendency to suppose our pupils more advanced in this respect than they really are. Like children, who will go very well while held by the hand, they immediately fall when left to themselves. It is true that methodical signs may not in all cases be altogether arbitrary, but still, in their nature, they are essentially word-signs, and contrary in this respect to natural signs, whose office is to give ideas—*res non verba*. In *signing* lessons from books, too, a strong desire is felt to associate our signs with the words more closely than mere natural signs will permit, and perhaps there is no teacher, however he may condemn their use, that does not in some degree introduce them. Yet this should not be done without care being taken to ascertain that the meaning of the words, which the signs are to recall or express, is already known to the pupil. We have heard of teachers who would *sign* through a lesson, giving sign for word in regular succession, in the belief that each sign they made was of equal importance and would necessarily give

the idea. We could hardly have supposed that there could have been teachers with such "madness in their method." Let us see what would be a safer mode in teaching such a lesson. Suppose a new lesson in history is to be taught, the judicious teacher would pursue some such plan as the following; he would first ascertain if the pupils understood the lesson by requiring them to read it by the means of natural signs—he would then explain to them by the same method, such passages and words as they might not fully comprehend, and would further illustrate these, if necessary, by their use in familiar occurrences. If he afterwards wished to introduce methodical signs, he would go over the lesson again by this process. It is difficult to see what would be gained by it, yet it is the only safe way of introducing such signs in the operation. The language itself is already in its proper form before the class, and its translation into methodical signs will not give the reasons for these forms, nor rules for applying them correctly on another occasion, so all that is accomplished, in such a case, is a repetition, through another form, of the words already there. We would here emphatically state that we never teach lessons to our pupils by mere "Questions and answers." In all cases we place the lesson first before them in the narrative form, and when it

has been read and learnt in this form then we put questions upon it, if necessary, to ascertain that the pupils have rightly seized the value of each limb of the sentences, and to impress the facts more on their minds.

There is another application of methodical signs, where they are supposed to be of especial value—in giving lessons by dictation. Is it true that exercises in dictation, in the case of ordinary children, are to correct their syntax, and make them better acquainted with the modifications of words produced by their grammatical changes and relationships? Is it not rather an exercise to correct their orthography, to teach them to spell words correctly from their sound,—a difficulty not easily overcome in a language so arbitrary as ours is in this respect? What great lesson can it be, in the case of a hearing child, to write the word he hears named, whether it be noun, or adjective, verb, or adverb, in the active or passive form, singular or plural? Surely this can be no great mental exercise for impressing the peculiarities of grammatical structure; but it would be an important exercise in teaching the pupil to spell the word correctly by the ear, which is not, however, an object contemplated in our instruction. In the case of the deaf-mute, there would merely be a substitution of the words for the signs; he might, or might not,

understand the ideas; and no principle would be given which would point out to him the proper application of the words in new combination. It does then appear that these signs cannot be ranked amongst the important auxiliaries of instruction, while they may yet possess a function of sufficient consequence to entitle them to a certain extent to a place in the schoolroom. They offer a ready means, when teaching a lesson, of pointing out and correcting an error, and they enable us to *recall* to the mind of the pupil a word that may have been forgotten for the moment. To this extent we have employed them, and we believe not without advantage.

It must not be forgotten that there is a vital difference between *descriptive signs* given *methodically* and in order, and *methodical* signs—a difference of such importance that it can never be lost sight of without serious error. For, if these signs are given to the pupil as equally comprehensible and expressive, the result will be that we shall find his mental progress far below what we had anticipated, and, indeed, what might have been the case had we analysed better our means of instruction. Descriptive signs in all cases convey ideas, while methodical signs are essentially word-signs, and cannot be depended upon safely to afford us more assistance than we have already indicated.

The other sub-division of artificial signs, those known more particularly as *arbitrary*, need not be dwelt upon, as their character is much more generally understood. They consist of a class of signs altogether conventional, but without claiming the verbal accuracy which belongs to methodical signs. Here a sign may be significant of an idea, and represent several words. Hence the elevation of the thumb for *good*, and of the little finger for *bad*, not only expresses these words, but also such others as imply generally approval on the one hand or disapproval on the other. Our signs for *duty*, *necessity*, *power*, *&c.*, are all of this class. These signs are, however, so thoroughly recognised as arbitrary that they are seldom misapplied or misunderstood, and need not be discussed further.

We have already remarked that gesture-language is very different in its character from written language, and that the various relations expressed by conjunctions, prepositions, relatives and inflections, are almost without equivalents in gesture-language, while a single action, where the eye, face, and hands speak simultaneously, represents at once an idea which could not be expressed without many words.

The order of natural language is extremely different from that of written language. We know that in various spoken languages much

difference exists in their collocation. If, however, there be a natural order in the succession of thought, one would imagine that gestural language would also assume that order.

Dr. Spurzheim refers the variety exhibited by different languages* in this respect to the cerebral development of different nations, and considers that the difference between the French, who take the noun before its attribute, and the English, who place the adjective before the noun, depends upon the larger endowment of the organ of individuality, which is more prominent in the French than the English. If such a supposition be correct, gestural language, perhaps, will represent the same variety of form according to the peculiar organization of different individuals. Be this, however, as it may, the difference between the order of gestural language and that of the English language presents a difficulty which the instructor has to use the utmost care and attention to get his pupil to overcome. The order of natural language appears, as far as we have been able to investigate it, to be what in the English language would be considered the inverted order; the subject comes before the attribute, the modifier after the modified, and the object before the action. The early efforts in composition of

* *Philosophical Principles.*

the deaf and dumb betray in them this arrangement of thought, and such examples as "beautiful dog" will be written "dog beautiful," "large lion, "lion large," &c.

In treating of the collocation of gesture-language, it is difficult to place it altogether in comparison with languages under grammatical regimen, if indeed it can be so compared at all. But as signs, no less than words, are the representatives of thought, our object may be assisted by taking the logical as well as the grammatical classification. Logical classification deals with the relation which thoughts have to each other, while grammar analyses the words according to the forms and laws of language.

The great logical divisions of a sentence are the subject predicate and object. These generally agree in grammar with the nominative noun, the verb, and the objective noun. A simple sentence may consist of three words, expressing three ideas, or to each of these may be added others termed adjuncts. "The master praises the girl," is a simple sentence—"master" the subject, "praises" the predicate, and "girl" the object.

In the English language the order in which these three great parts are commonly introduced is that here given, and any adjuncts that might be required would be added by being put next to either of the limbs to which they might belong,

as "the benevolent master kindly praises tbe little girl." This order, however, which we as Englishmen are apt to consider the most natural and expressive, is by no means the order followed by all other languages. The Latin may be instanced as opposed to the English in this respect. In the English phrase, "the master praises the girl," we should not have "praises" standing between "master" and "girl," but coming last, while the Latin sentence, "*magister puellam laudat*," brings the verb last.

Now, has sign language a peculiarity of this kind, or does it follow the order commonly found in the lessons we have to teach? In the illustration given above, it appears to us that sign-language would follow the order of the Latin rather than the English, and that in signing such a phrase we should feel the necessity of drawing the attention both to the *praiser* and the *praised* before we could introduce the "*praises*." This, indeed, appears to be the really natural order, if there be such an order, for if the process be analysed by which a knowledge of the fact is arrived at, we shall find that the master and the girl were in the mind antecedent to the praise, and that this latter idea in fact only resulted from the other two, so that the predicate here follows in the mind after the subject and the object.

This arrangement is strongly felt in sign-

language, and any other is scarcely understood or but feebly felt. The fact, however, of various languages presenting us with such a difference in their collocation would almost show that it is not of essential importance which of the ideas given in a sentence are first introduced, and yet as some languages are admitted to be more forcible, clear, and energetic than others, all modes of expression cannot be considered equally effective.

The want of inflexion of English nouns renders it necessary in many instances that the order given above should be used, since it would be impossible by any other to recognise which was intended for subject or object; for were the sentence written "the master the girl praises," we should not know which was the bestower and which was the recipient of the praise, so that the present arrangement seems a necessity arising from the peculiarity of the language. With the Latin it is different, for the terminations *er* and *am* sufficiently indicate the subject and the object, wherever they may be placed in the sentence. Now, signs being a representation of the fact itself, as near as one person can play the parts of both, there is little difficulty in showing which is the active and which the passive agent, and in adopting the order it does in arranging the ideas, sign-language may reasonably be

supposed to follow that most natural to the mind when unfettered by any grammatical restraints, so that the Latin language, in this respect, follows the mental arrangement of the ideas more closely than does our own language.

If we enlarge the simple sentence by an addition of adjuncts, these will be introduced in association with the limbs to which they belong, and in the order of their importance. In the sentence, "The lion tore the body of the dead ass," we shall have "lion," "ass," "body," "dead," "tore," here again the Latin follows closely the sign arrangement, *leo asini corpus mortuum dilaniavit.*

Hitherto we have only examined simple sentences, and we shall now make a few remarks on those which are complex. It has already been stated that signs, as far as they are natural, deal with ideas rather than with words. One of our most eminent philologists has divided all words expressive of ideas into two classes, the *noun* and the *verb*—the verb the *quod loquimur*, and the noun the *de quo*—what we say, and of what we say it. Hence, then, in sign-language there are not gestures representative of those words termed *relational* equally significant with those which exist of that class termed *notional*. Every complex sentence consists of two or more simple sentences into which it may be resolved,

and which are bound together and modified by relational words.

In sign-language we are obliged to have recourse to this analysis to bring the ideas clearly before the minds of our pupils. The complex sentence, "the ship which has just sailed, and is so heavily laden, is going to Australia," may be broken up in the following manner; "The ship just sailed," "The ship heavily laden," "The ship going to Australia," and in some such manner would we explain it to our pupils. The sentence might be literally given by using methodical signs, but, for the reasons already adduced, these would not necessarily convey the ideas, and would be even less likely to do so in sentences still more involved than the one here given.

Difficult complex sentences ought not to be introduced to the pupil till some advance has been made in the use of words as applied in simple sentences, and then by a synthesis of simple sentences, we are enabled to show how a complex sentence is built up of these, and to teach the value of those relational words by the use of which the simple forms are woven into the complex.

We have hitherto given those rules which are generally observed in an unimpassioned sentence, where no special *emphasis* is required; but when emphasis is necessary, then new

features of collocation present themselves. There is a great rule in elocution that the beginning and the ending of a discourse should always be the most impressive parts. If this is true of a whole discourse, so also is it of its parts—sentences. That, says Campbell, "which is uppermost in the heart is nearest the mouth," and hence we can always render any limb of our sentence more emphatic by placing it first. If we had wished to relate Sir R. Peel's death, we should not have said "A horse fell and killed Sir R. Peel," but should have placed the object, Sir R. Peel, and his death, as the first ideas to be fixed in the mind, and have afterwards related the manner, and other details.

So, whenever we displace the subject from its leading position in the sentence, that which takes its place at once becomes emphatic. In signs, this change of the position is the chief means we have of directing the attention of the pupil more especially to distinct parts of a sentence, and of bringing him to consider the suffering of the object rather than the doing of the agent. The passive voice of transitive verbs gives us this choice in ordinary language, and when combined with the modifications of voice used in accentuation enables us, in speaking, at once to fix the mind of our auditory upon any passage, or indeed any word in our sentence, that we are desirous should be more particularly observed.

We have, in our remarks, endeavoured to show the nature of sign-language, and to point out the relation between gestural signs and written language, and to show the principles which the teacher ought to keep in view in its use. Many persons entirely mistake the nature of the use to which sign-language is applied in deaf-mute instruction. Many appear to consider that those teachers who use signs as a means of instruction are content to let the deaf and dumb remain with this means of communication only, but this is directly opposite to the truth, and we reiterate the fact, that it is as a *means*, and not as an *end*, that all teachers look upon signs, and we boldly declare that no teacher can do without them. With natural language, the teacher commences his instruction, and with written or spoken language (so far as the instruction is *special)* it is terminated.

Pictures, diagrams, models, and illustrations of various kinds are all extensively used in deaf-mute instruction; they address the sight of the pupil, and have been found most useful in all teaching, but with the deaf-mute, who has almost only this sense to depend upon for his knowledge, they are of the greatest value, and consequently are extensively employed.

CHAPTER VIII.

DACTYLOLOGY.

Dactylology, says Degerando, "is only writing set free from its material dress." Degerando has so beautifully described the nature of Dactylology, and the function it has in deaf-mute education, that we shall present his observations instead of any description of our own. "Dactylology," says he, "is to alphabetic writing what that is to speech. Formed upon writing as its model, it represents it precisely as writing represents words. But in this connection between dactylology and writing, the reciprocal utility of the two orders of proceeding is at the same time the reverse of what we have remarked in the connexion between writing and speech. In fact, the office of dactylology consists in giving to writing that moveableness which speech enjoys, and which the first loses in the fixedness of depicted characters. Dactylology is writing set free from its material dress, and from those con-

ditions necessary for the employment of the pen or pencil; it carries with itself these instruments; it is thus ready in all familiar conversations; it affords help at all times, and in all places. It is thus that dactylology is little more than a toy for those who already possess in speech a means of communication more easy, and more appropriate to all circumstances. It is thus also that it becomes an essential resource to those who are deprived of speech, to whom it renders a portion of those advantages, supplying for them writing, and giving it in some manner a new extension. However, dactylology is far from affording all the advantages of speech, while it loses a portion of those which are peculiar to the privilege of writing. On the one hand, it is much less rapid than speech, it is unfurnished with that expression which belongs to the human voice—of that infinite diversity which the soul finds within for pourtraying all the sentiments which affect it: it has nothing of that harmony, that secret charm, that power of imitation, of which speech is so capable; its employment, besides, obliges the suspension of all business, and all action. On the other hand, it has none of that durability which renders writing so favourable to the operations of reflection; it is not able to exhibit its signs but after a successive manner, it cannot preserve in composing,

as writing does, those vast pictures which the inventive faculty embraces simultaneously, and subsequently surveys in every sense with perfect liberty. Dactylology shares in some of the inconveniences of speech, and in some of those of writing: it is as fugitive as the first, and it is as complicated in its forms as the second." Many have a very erroneous idea of the value of this auxiliary in educating the deaf-mute; imagining that all these persons naturally can understand language if it is only conveyed to them by the finger alphabet. Nothing can be further from the truth. Dactylology, after the alphabet has been acquired, will only be available in proportion as a knowledge of language exists; and in proportion only as the pupil advances in the knowledge of words and their combinations, in the same proportion will be his power of availing himself of "finger talking."

Talking by means of the hands was used as a mode of communication long before it was applied to deaf-mute instruction, for a method of indicating words with the fingers and hands has been traced to a very high antiquity. The Venerable Bede, to whom we have already alluded as recording the fact of a deaf-mute having been taught by Bishop John of Hexham, has in a little book he has left

shown that both Greeks and Romans had their modes of finger communication.* This manual correspondence, however, amongst the ancients appears to have been more employed in conveying numbers than in directly spelling words, but, as numerals were frequently expressed by letters, a communication in words could still be carried on. It has been suggested that a still higher antiquity might be claimed for a mode of communicating by such means, and that the reference in Proverbs vi., 13, to those who *speak by the feet and teach with the fingers*, would tend to show that even in the days of Solomon such a mode of conversing might have been employed on prohibited subjects.

Bonet, in his work, quotes John Baptista Porta for another ancient sign language, which is somewhat akin to the early Egyptian alphabet, viz., that of denoting each letter of the alphabet by touching some part of the body, the name of which began with the letter to be indicated. Thus, if Carthago was to be indicated, by touching *Caput*, *Aurem*, *Renes*, *Tempora*, *Humeros*, *Aurem*, *Guttur*, *Oculum*, the word Carthago was conveyed.† It is mentioned by Leibnitz that cer-

* *De Loquela per gestum digitorum libellus.* Ratisbon, 1532.

† See Bonet's *Reduction de las letras y arte para ensenar a ablar los mudos*, page 128. Madrid, 1620.

tain Monkish orders, whose rules forbade them to use the voice, used manual signs for communication. There are several other instances given of manual alphabet inventions, for it is easy to see that the combinations that may be formed by placing the hands and fingers in different positions are almost innumerable. We have already alluded to Dalgerno's *Didascolocophus*, and it is here that we find it first suggested by an English writer to employ the manual alphabet in the instruction of the deaf and dumb. He appears to have tried a great variety of different alphabets, and he at last fixed upon one much resembling the one now generally used in England. He says: "The one which, after much search, I have at last fixed upon, has the letters located upon the points, on the inside, and ends of the fingers, and the palm of one hand, which are to be touched by a thumb or finger of the other, or by more than one simultaneously." He further says that while congratulating himself on his successful effort, he on a sudden imagined a one-handed deaf-mute appearing to him, and expostulating with him, and "fixing my eyes," says he, "steadily upon his hand stretched out, I thought that I could discern a mouth and a tongue in his hand, the thumb the tongue, and the fingers and hollow of the hand the lips, teeth, and cavity of the mouth." This led him to modify his alphabet,

so that it might be also applicable to one-handed persons.*

There are now used in the instruction of the deaf and dumb two alphabets, one the two-handed alphabet, that chiefly, if not altogether, used in Britain, and the other the one-handed alphabet, which is used on the continent of Europe and in America. Some discussion has arisen as to the comparative excellence of these alphabets, and there is no doubt but that the latter has some advantages of importance; on the other hand, the two-handed alphabet is so generally known in England, amongst all classes of people, and is that which has always been employed, that we confess ourselves unwilling to leave it for a new one, which, though possessing some advantages in the schoolroom, would not be one that the deaf and dumb would find so generally useful in society.

In addition to these alphabets where positions of the fingers are made to express single letters, others have been attempted to be used where either one hand or two were employed to express words by syllables. This Syllabic Dactylology has had some con-

* I would acknowledge here my obligations to the "*Bibliographical Notices*" of Mr. S. Porter, of America, for several facts connected with the History of Deaf-mute Instruction.

sideration amongst teachers of the deaf and dumb, and though it has the great advantage of shortening the process of using language on the fingers, it never appears to have made much progress in deaf-mute instruction. For ourselves we cannot say that we look on dactylology of any kind as now having a very important place in our instruction, for dactylology is not more intimately connected with deaf-mute instruction than is writing. It may now be said that for general communication, practically, all persons can write, and the tablet and pencil are as good for the deaf and dumb as finger-writing. While in the schoolroom the lessons *written* on the black board, where they remain more permanently before the eyes of the pupil, are better in giving both the combinations of letters and the order of the words. Finger-language is fleeting, while written language remains and allows all combinations of letters and words to become more distinctly impressed upon the minds of the pupils. Yet, strange to say, there are persons of intelligence who imagine that the manual alphabet is everything in this branch of instruction, and the statue of de l'Epée in Paris is represented as thanking heaven for inspiring him to invent the manual alphabet, which, as we have shown, was used more than two hundred

years before he lived, and before teaching the deaf and dumb was thought of.

A kind of dactylology is also used in expressing figures, and, in fact, the evidence of the use of the fingers amongst the ancients for expressing numbers is more abundant than of their employing such a system for spelling words, though Bede's "*Libellus*" is sufficiently clear upon this latter point. Horne Took says: "It is in the highest degree probable that all numeration was originally performed by the fingers, the actual resort of the ignorant; for the number of the fingers is still the utmost extent of numeration; the hands doubled closed, or shut in, include and conclude all numbers; and might, therefore, well be denominated TEN. For therein you have closed all numeration; and, if you want more, must begin again, TEN and one, TEN and two, &c., to *Twain-tens*, when you again recommence *Twain-tens* and one, &c." *

This is actually one method that is used for counting by the deaf and dumb; but there is another method in use, which, though not quite so natural, is more convenient. It is one where the right hand only is used. By this method the right hand is first brought near to and in front of the chest, and closing all but the thumb and holding it perpendicular, indicates *one*,

* *Diversions of Purley*, vol. 2, page 209.

then opening the fore-finger and the thumb indicates *two*, and so on, till all are open, which indicates five; then, closing the hand, and opening the little finger indicates six, then opening the little finger and the ring finger indicates seven, and so on, till all but the thumb are open, which indicates nine. These, with the closed hand, which indicates nothing, complete the unit numbers. For tens we take a new position; instead of holding the hand perpendicular we throw it into a horizontal position in front of the chest, counting in the same manner for tens as we did for units; the thumb pushed out horizontally indicating one ten, the thumb and the fore-finger two tens, and so on, to ninety; the intermediate numbers between the tens would be indicated by a combination of the two positions, thus, for thirty-five the thumb and two first fingers would be thrust horizontally out from the chest, and the five indicated by opening the five fingers in a perpendicular position close to the chest. This would go on till we had reached ninety-nine, when for a hundred we again choose a new position. The position for indicating a hundred is by pointing the fingers perpendicularly downwards in front of the chest; combining these three positions we could go up to 999, which would be expressed by holding the four fingers with the thumb shut

(which is the nine sign) pointing downwards, which would represent nine hundred; then the same fingers pushed out horizontally would indicate ninety, and brought back perpendicular to the chest would indicate nine, and the whole combined would be the number, 999. For thousands we repeat these positions in front of the left shoulder, and for millions in front of the right shoulder.

The plan we have described may appear somewhat intricate, but in practice it is simply and rapidly performed, and from giving value to numbers from the positions which they hold in relation to each other, it carries out the same principles which we use in ordinary notation. This method is no doubt as conventional as our figures themselves, and it can only be used with proper effect after the true value of numbers has been taught by other methods, such as by real objects or by strokes or beads.

CHAPTER IX.

ARTICULATION AND LIP-READING.

So universal is the habit amongst mankind of associating their ideas with sound, that it becomes difficult to conceive it possible that ideas can be associated with written characters without the intervention of sound. Men learn to speak and then to write, and articulate sound, therefore, becomes the representative of ideas, and writing the representative of sound. It is thus that writing is not representative of thought, but of sound. It was probably from this circumstance that most of the earlier teachers dwelt so much upon the use of articulation as a means of instructing the deaf and dumb.*

* Much information on this subject is to be found in Dr. Wallis' *Grammar*, in an introductory chapter, which he entitles, "De Loquela, sive Literarum omnium Formatione, et genuino Sono." A translation of this is also to be found appended to Greenwood's *English Grammar*. Harris' *Elements of Speech* may also be consulted, where there are some valuable remarks on the subject, chiefly taken from the work of Conrad Amman already alluded to.

The value of articulation has been the theme of much discussion amongst teachers, and in the present day it has not found, from universal consent at least, its true position as an auxiliary in instruction. It will be readily seen that it cannot be to the deaf-mute what it is to those who both hear and speak, and much of the power and force of articulation can never be conceived by the deaf and dumb. The deaf may articulate but they have still no idea of sound; they can never know the variously-modulated intonations of melody; the variety of emphasis which marks the difference between commanding and entreating is lost to them; they are strangers to the tender voice of sympathy in suffering; no sweet sounds of music can ever reach their soul; and no instruction in articulation can ever restore the deaf and dumb to a consciousness of these blessings. The gratifications, therefore, which flow from the interchange of our ideas, through the means of "sweet sounds," as such, must for ever remain unexperienced by the deaf and dumb. It is only, therefore, in a limited extent that articulation, under any circumstances, can be made applicable to their condition. In the case of those who hear, speech is addressed to the ear, and it is the variations of sound that to them are expressive. To the deaf and dumb it is the position of the lips, and other vocal organs, that

become associated with language. Now, hearing and sound are fitted to each other, and so adapted by nature as to have the most intimate relationship. Hearing has been fitly denominated the "mirror of speech," but reading on the lips is not that of articulation. It is cold and lifeless in its association, compared to that of sound and speech. It has been maintained by some that it has a *special* value as an auxiliary in instruction, but in this respect we confess that we have never been able to discover its peculiar advantages. "Its great usefulness is to be considered as a means of communication amidst society, and the only advantages that it can have over writing are its rapidity and readiness, for in it the lips will move quicker than the hand, and it does not need tablets and writing materials, which writing always requires. But, on the other hand, the imperfection of articulation, which the great mass of the deaf and dumb never get over, is a disadvantage which is to be set against its advantages. Did articulation require little or no time to master its difficulties, its importance as a branch of instruction would be less questionable, but it is acknowledged that the time and attention it requires are great, and must often be bestowed by sacrificing some other acquirement. The facility of acquiring expertness in reading on the lips, and articulating sound, is in some

instances considerable, and in such cases to teach articulation may be practicable; but we must examine carefully what are really *practicable cases.* Suppose a mute to manifest just sufficient aptness for acquiring this species of knowledge as that by constant application during the period allotted to his education he may be taught to speak and to read on the lips of others a limited vocabulary of words—suppose, too, that he speaks but imperfectly, as, except after very long practice, and very persevering correction, he will often be most likely to do—and suppose, on the other hand, that he reads more imperfectly still, will such a one, on quitting his instruction, possess a knowledge of spoken language sufficient to secure to him the advantages we have enumerated? Will he be able to communicate with such rapidity and clearness as to give him the valuable properties of articulate language? Will he not, on the contrary, feel the continual necessity of repeating and re-repeating his own words, and of demanding a similar repetition from others? And will not this render the use of this imperfect faculty irksome to him in the extreme? And if, moreover—and this is a most important consideration—in the long period of close application necessary to acquire even the little that he has to boast, his mental cultivation shall have been neglected, can he be

said to have gained a fair equivalent for what he has thus lost? In such a case can it be said that to teach articulation is advisable? In cases where children learned to speak before becoming deaf, or in cases of imperfect deafness, where the degree of hearing still retained enables the deaf-mute somewhat to imitate sounds, or where extreme facility is shown in acquiring the benefits of articulation, it doubtless ought to be given. In theory, then, it may be true that the instruction of the deaf-mute is carried to its highest degree of perfection when the pupil has acquired the knowledge of the language of his country, not only in a written form, but also as it is spoken by those who hear; but practice shows that to give this is in most cases beyond the power of the teacher, owing either to the physical defect, or the want of ability in the pupil, or the limitation of time. From some recent discussions on this subject, where the capabilities of deaf-mute teachers have been somewhat unjustly questioned, it becomes necessary that we should devote more space to its consideration now than was given to it in the first edition of this work; and as the tendency of thought in those to whom the subject is new has been recently rather to believe in the great advantages to be derived from articulation, and indeed looking upon it as the main point of

instruction, this is the more necessary, and still more especially since we believe that it would be one of the greatest calamities that could befall the deaf-mute, if our modes of instruction were to take a retrograde movement in this direction.

It would appear from what has been stated in the discussions alluded to, as if teaching articulation and lip-reading to the deaf and dumb had never been thought of in this country, and that their introduction by English teachers had been altogether neglected and ignored, in fact, that the possibility of such teaching had never been contemplated by them. From our history of deaf-mute instruction, it will be seen how far this is from the truth ; and in fact there is scarcely an institution in England where they have not been taught, and they are still taught as a chief branch of instruction in the Metropolitan Institution in the Kent Road, London. A quotation from Sir W. Wilde, —and we refer to him because he is a man of acknowledged ability, who has given great attention to the subject, and is in no way connected with any teacher or system of teaching,— will show that most of the institutions in Britain have practised the teaching of articulation. On articulation, or the pronunciation of words and sentences, he says: "To what extent the true

congenital deaf person can ever be taught to speak is still undetermined, only a few of the most intelligent are at all susceptible of such teaching, and even in these the effort at vocalization is, from want of hearing, harsh and inharmonious, and seldom turned to much account in their intercourse in life. In most schools in Great Britain and Ireland, the system has, except in some rare instances, been abandoned as far as extending it to all pupils, while it is yet taught to semi-mutes or to children who have once spoken, the governors and teachers averring that the time spent in acquiring it might be more usefully employed in other descriptions of instruction." *

Further, we have shown that the first recorded instance we have of a deaf and dumb person being instructed is one of teaching by the means of lip-reading and articulation.

Again, the great father of the modern English movement of teaching the deaf and dumb, Thomas Braidwood, who, in 1760, opened a school in Edinburgh, which was the first place of instruction in Europe, used articulation as his chief means of instruction. In 1783 Braidwood removed to Hackney, where, after his death, his children and grandchildren continued for some time to carry on the institution.

* Wilde's *Aural Surgery*, Appendix, 458.

Henry Baker, of London, who died in 1774, and who cured stammering, taught several deaf-mutes to speak and read on the lips. Dr. Watson, a nephew of Mr. Braidwood, was the first master of the London Institution, and followed Braidwood's method of teaching, viz., articulation and lip-reading, and this method is still continued to be followed in this institution by his grandson. It will thus be seen that there is nothing new to English teachers in teaching lip reading and articulation to the deaf and dumb. There does not appear amongst the earlier teachers to have been any that did not use these methods, and indeed it is most probable that they thought them necessary to success in their work, and it was not till the Abbé de l'Epée, about 1780, propounded his method of relying more on pantomime and written language that the question became one of discussion. Gallaudet and Le Clerc introduced the French system into America, which has been the one followed in that country ever since. Mr. Gallaudet was sent to Europe by Dr. Cogswell and others, to acquire a knowledge of the art of instructing the deaf and dumb, in 1815. He returned to America with M. Clerc, who accompanied him from France, and in 1817 they opened the first American Institution, since which time several more have been established.

We cannot refrain here from paying a tribute of admiration to the Americans for the industry and ability they have brought to bear on the education of the deaf and dumb. Some of the Institutions of that country have sent their masters over the chief countries of Europe to learn what was doing in deaf-mute instruction, and their reports form a most valuable contribution to the literature of deaf-mute education.

At the second Conference of Deaf and Dumb Teachers, held July 28th, 1852, Mr. Baker made the following pertinent remarks on this subject: "It will probably be expected that I should make some allusion to articulation as an instrument of instruction. You are most of you aware that my opinion is unfavourable to any large devotion of time to this object, except in cases where a natural aptness exists. Though there will be found in every institution a few pupils, especially among those who have become deaf after learning to speak, whose improvement repays the care of a teacher (and to such I would afford every facility for recovering the lost faculty) – the success hitherto attendant on the efforts to teach articulation to the totally deaf is by no means flattering, and I do not believe there is one institution in our country which can produce a dozen pupils whose articulation could be understood by

indifferent auditors. But I am content to let the intelligent and educated deaf and dumb themselves settle this controversy, confining the decision to those whose deafness is congenital, but who have had every advantage that the best teachers of articulation and reading from the lips have been able to bestow on them. Do such educated deaf persons converse orally among themselves? On the contrary, do they not invariably converse with each other by signs and spelling? Do they prefer oral conversation with others, who are not deaf and dumb? On the contrary, do they not prefer the means presented to them by their writing materials, or the manual alphabet? We are all acquainted with deaf and dumb individuals, either personally or by report, who have been educated by the means of articulation. Can we say that the value of speech is to them in any degree equal to the cost of its attainment?—that either they or their friends value it as the advocates of articulation would lead us to anticipate?—or that the acquisition is in any respect equal to its cost in money, and in the even more precious cost of time bestowed upon it? But although I admit that speech is a good and natural exercise for the lungs and voice, I have never discovered that it is requisite for health, nor that the pupils of an Institution in which articulation is *not* taught

have worse health than those of one where it is an object of attainment. I must therefore decide against giving up the time now bestowed on the acquisition of language and useful knowledge by my pupils, to devote it to the specious acquirement of articulation."—*Transactions of First and Second Conferences, &c.*

As far, then, as the teaching of articulation to the deaf-mute is new, it will be abundantly evident from the foregoing statements that it has been known and practised in this country from the earliest period of their instruction, and that its merits and demerits have been discussed by teachers is equally clear, so that if it be not generally adopted in England, this does not arise from any lukewarmness or ignorance on the subject on the part of deaf-mute teachers.

In more recent times, when a tour on the continent has become so much more general than formerly, travellers, among the various "sights" presented to their notice, have also visited the institutions for the deaf and dumb in Germany, and, finding articulation used, have returned both to America and this country full of wonderment at what they considered a new and marvellous achievement,—teaching the dumb to speak. It is remarkable that people generally are much more anxious to have their wonder excited than their intelligence exer-

cised. They have often come back with greatly exaggerated accounts of what was done, and in this, as in many other things, have believed more in what they saw abroad than what they found at home. Little pains, it is true, have been taken to correct the false notions of these visitors to the German schools. "People want to be deceived," said Mr. Sagaert to me, "and the marvellous has so much enticement that it would be next to cruelty to destroy these erroneous notions which seem to make them so happy." On the arrival of these reports, however, in America some years ago, the institution in New York, one of the most important in that country, determined to send a commissioner to investigate and report upon the different European institutions, and more particularly as regarded articulation. The gentleman sent was the Rev. G. Day, and his report is, as we have said, one of the most valuable contributions to the literature of the deaf-mute. Since his visit, Dr. Peet and Mr. Weld have both visited European institutions for the same purpose, and have arrived at the same conclusion, namely, "that as a regular part of a system of public education, the introduction of articulation into our institutions would be a serious misfortune to the cause of deaf-mute instruction."*

* Day's *Report.*

Before, however, entering into a detailed examination of these reports, it may be well to recapitulate and show how the deaf-mute is mentally situated, and what it is he really wants. Mankind in general communicate by means of *speech*, one form of language, and by this, all hearing persons first learn to express themselves and commuicate with each other. *Written words*, the other form of language, are learned afterwards. In the first case, the sound and the idea are associated together ; in the latter case the written word is associated with the sound. But neither the one form nor the other has any natural relation to the idea, nor will convey it until it is first shown by some comprehensible means. Neither *hat* as spoken, nor *hat* as written, has any natural relation to the object *hat*. This must be first pointed out to the learner by showing him the real object, or a pictorial representation, before he can associate the word "hat" and the idea. So teaching the deaf-mute to say *hat* with his voice gives him no more information about a hat than he could learn from the word when written, though it would take him a considerably longer time to learn to speak it than to write it.

As the deaf-mute cannot hear, he cannot learn to speak as other people do, and if he is to be taught either speech or writing, some

method must be devised different from that adopted in other cases. Now, as has been shown, the earlier teachers first laboured to give him speech by an artificial method, viz., by making him closely watch and imitate the motions of the vocal organs, and at the same time emit sound, thus causing him to articulate words. It may be worthy of notice that disease of the vocal organs is rarely the cause of mutism amongst deaf and dumb ; the cause being generally found in the imperfection of the auditory apparatus. It was not to be wondered at that the earlier teachers had recourse to vocalization, inasmuch as it was through this way alone that all other persons came to the use of written language, and it was hardly to be expected that they would perceive at once that written language might be associated directly with thought, without the intervention of speech, though Jerome Carden, a distinguished historian and philosopher of the sixteenth century, had promulgated the doctrine that the deaf-mute could be taught to "hear by reading, and speak by writing."

A deaf-mute, by his calamity, is placed amongst society without being able to communicate with those around him, but as he grows up he is not satisfied with this state of isolation, and makes efforts to overcome it, and to some extent he

succeeds. What, then, are the means he uses to make himself understood? These are pantomimic or natural signs, a method of communication that all must fall back upon when they meet with those with whom they have no common spoken language, and which we have already considered. Having this means of communicating with him, we begin to teach him easy and simple sentences, and from the simplest sentences progress to more difficult ones, and advancing by degrees, we get him in time to answer questions, or ask them by the means of written language. Now, here is the point where teachers of vocalization would differ from those who are against its general adoption.

The former, while devoting much of their time in teaching these words and sentences in their written form, also attempt to teach the pupils to express them in their spoken form, and in many institutions those children who cannot master vocalization are considered as being incapable of instruction. This is a most false conclusion, for though they may be unable to make progress under a method the most foreign to their nature, it is no proof that they are incapable of making progress by instruction given in a simpler form; and which, if not adopted, leaves no chance of their instruction, which is harsh, unjust, and cruel. M. Morel,

an eminent French teacher, in some remarks on the education of the pupils at Zurich, says: "Articulation is taught to all the pupils, and the results are remarkable. But it is important to state on what conditions these results are obtained, and to examine whether these conditions can and ought to be realised in our large public establishments."

"Every year, only three or four new pupils are admitted who can thus become the objects of particular attention. Out of ten or twelve children who annually present themselves for election, only three or four are admitted." Preference is given also to the most intelligent, and to those who have heard, or to those who still hear a little. These pupils are then admitted on trial, and if, after having been tried during a certain time they do not answer the expectations which had been conceived, they are sent back to their homes. "Among thirty-four pupils admitted between 1838 and 1843 ten have been dismissed, or one in three." This, after the first careful selection, shows how very few ultimately get the advantage of instruction.

In these articulating institutions it does not appear that more than one-fifth or one-third are retained for instruction, while in the Paris Institution not more than one in fifty is dismissed. All children not absolutely idiotic are received

in the West of England Institution, and *all improve.* We ourselves have always felt the greatest reluctance to refuse children admission from "deficiency of intellect," and even though it may keep down the average advance of our school, and apparently tell against our efforts, it is better that this should be than that these poor children of low intelligence should be deprived of the knowledge they are capable of acquiring, for it should be ever remembered that if they are not received by us, there is no other chance for their improvement, and though the acquirements may be small which they are capable of receiving, still to them they are of vast importance. A clever mute may in some degree make himself useful and understood without going to an institution at all, but a child of low intelligence, if left uninstructed, is indeed in a pitiable condition—he remains a useless citizen, and becomes the butt or the plague of all around him.

Whether or not such close weeding out of unpromising articulating pupils is carried out or not in other institutions, it is difficult to say, but it is a sure sign that where success in articulation is the most apparent, the weeding out has been the closest. This principle will also apply to other institutions, though not altogether with the same force.

CHAPTER X.

ARTICULATION—AMERICAN REPORTS.

In examining more in detail the results obtained by instruction in articulation and lip-reading, the most satisfactory means that we have for doing so are the reports of the Rev. Geo. Day, Dr. Peet, and Mr. Weld, all gentlemen who have at different times been sent by American institutions to enquire into the system of deaf-mute instruction in Europe. It is not sufficient to take what a gentleman saw here, or what a lady saw there, or what has been heard of at some other place, as evidence from which to form conclusions with any degree of certainty, and many of the accounts that have reached us of what such travellers have seen are only such as were derived from a few hour of cursory inspection, and not by persons best able to judge.

In the letter of instructions given to Mr. Day are the following directions: "It is understood that the German schools make articulation and

lip-reading the most prominent parts of their instruction, and it is a principal object of your mission to ascertain to what extent these acquisitions are practicable, and what are the actual advantages derived in the ordinary relations of life from such a degree of proficiency in both as is usually attainable by the deaf and dumb, and whether these advantages may be considered as a general rule, or in a fair proportion of cases, equivalents for the time and labour bestowed in teaching them articulation. That this Board and the American public may have the advantages and dis-advantages laid before them fully and impartially, and that those fallacies may be guarded against which arise from hasty, imperfect, or superficial views of a subject, you will, in addition to your own observations, endeavour to procure the views of the most profound and philosophical thinkers, and the closest observers, both amongst those instructors who advocate and those who discountenance the teaching of articulation." There are a great many further details given as to Mr. Day's enquiries respecting the effects of teaching articulation and lip-reading, but enough has been quoted to show the nature of the commission on which he was sent, and the anxiety of those sending him to receive the soundest information.

Mr. Day first visited the English schools; he

then passed over to Paris, and there learned which were reputed the best schools in which the German language was taught, visiting minor schools only for the most part as they came in his route. The chief schools which he visited were those of Richen (near Bâle), Zurich, Tübingen, Gmünd, Pfortzheim, Frankfort, Bremen, Hamburg, Cologne, Münster, Holberstadt, Halle, Weissenfels, Erfurt, Berlin, Leipzig, Dresden, Weimar, Eisenach, and Brunswick.

From this enumeration it will be seen how large a number of schools he examined, and also how wide a district they extended over. As the remarks here have reference only to the value of articulation, it will be unnecessary to refer to other points contained in Mr. Day's report, and as he took the German schools as the great exponents of the value of this system, from its having been taught longest and most generally and successfully there, it will not be requisite for us to take notice of his observations on either the French or English schools.

Mr. Day first reviews the history of the German schools, which we have already indicated, and shows that it was chiefly from the principle assumed by Heinicke—that thinking is impossible, except through the medium of articulate words,—that German teachers became so strongly wedded to teaching articulation. Latterly, how-

ever, this dogma has found opponents, and nearly all now are willing to admit that both signs and writing may serve as a medium of thought. Jaeger, however, denies the latter, although with strange inconsistency, he admits that the finger alphabet may answer this purpose.*

This breaking away from the old landmarks of German thought on this subject, has led several German teachers to give more value to signs and writing than was the case formerly, and it is only now from the greater attention that is yet given to articulation that the German system can be said to differ from the French or English. Signs, however, have not unfrequently been spoken of as being held in something like horror by the articulating schools, as if the English schools were "degrading" the deaf and dumb by their use; yet the language of signs, says Reich, "are the windows through which we are first able to look into the mind of the deaf-mute, and to judge what ideas they possess, and what degree of truth and clearness they have." While Jaeger says: "None but those only superficially acquainted with the nature of the natural

* The Rev. Mr. Jaeger is one of the most successful German teachers, and author of several valuable works. The finger alphabet is strangely misunderstood, even as would appear by Jaeger himself; as we have shown it to have no specific value in deaf and dumb teaching, and is merely another form of writing.

language of signs will deny that they have much influence in awakening the understanding and all the other mental faculties. Only an utter ignorance of all that pertains to the subject can venture the assertion that the deaf and dumb can be educated without calling in the aid of pantomime. Mimic signs are necessary in order to awaken the moral feelings of the deaf-mute, to render what is spoken comprehensible, and impart life, spirit, and impressiveness, especially in religious instruction, to the dead form in which written or spoken language comes to him, and, even after his education is completed, they are still necessary in order to enable him to modify or strengthen what he says."

After this we need not again refer to the Germans' repudiating signs, though in some of their writings they would appear to do so, and we trust that our English critics will be more careful in displaying their ignorance of the subject by talking about "degrading" the deaf-mutes with signs.

Mr. Day gives a lengthened account of the German method of teaching articulation, and shows that it requires much labour, and that it is named by the Germans "mechanical speaking," and that with the greatest efforts only can a defective utterance be reasonably expected,

even under the labours of the most experienced teachers.

As we before remarked, Mr. Day gives considerable space in his report to the explanation of the various modes followed in the German schools, which, however, it is unnecessary to follow here, the results being the great question for us to determine. One remark of his, however, is of importance, viz., that the mere casual visitor has little power of ascertaining the true attainments of schools generally in articulation, as a few of the pupils, who are the best, are most generally brought forward (which is natural enough) by the teacher, and there is also a tendency to use certain questions and sentences, which by continual repetition become more distinctly uttered than most others, and which would not afford a fair average example either how language can be generally expressed, or of the number of pupils that could use it. This arises from the circumstances of the case rather than from any wish of the teachers to impose upon the visitor. Under the heading of "How much can the speaking of the deaf and dumb be understood?—he says, "By the permission of an intelligent teacher I was allowed to select a passage in the Bible containing no difficult words, but of such a nature as to require that nearly all the words should be separately

comprehended, in order to understand it, and this I gave to one of the best scholars, who had been five years under instruction, to read. He read it twice over, but the teacher was unable to make out any part of it. On the second reading of another passage, by a scholar six years under instruction, the teacher repeated the whole."

Mr. Day also says that teachers themselves can understand their own pupils much better than those of others, which would lead to the supposition that they recognize the words, not so much from the intelligibility of the articulation, as from being aware how certain words are spoken. In answer to questions, when the form of the answer can be expected, they can be understood with tolerable certainty, and, in repeating such familiar sentences as the Lord's prayer, the articulation is generally intelligible. "But still a very general impression seems to prevail among intelligent Germans that the articulation of the educated deaf and dumb is unintelligible. While I have met with some who maintained the contrary, the more common testimony given by physicians, clergymen, and gentlemen in other professions, is, "We cannot understand them." Mr. Day continues: "The degree to which, on an average, I have found their articulation intelligible to myself may be summed up in three observations.

"First, a foreigner would find no difficulty in understanding the more common forms of expression, and a few simple questions and answers as spoken by the largest part of the pupils. It is not uncommon for children, after having been a few months under instruction, to be able to say, *guten morgen*, and the like, in a way to be understood.

"Secondly, in hearing the oldest class read he would be able by looking on the book, in the majority of cases, to keep his eye on the place.

"Thirdly, in hearing the same class read a passage, the book not being in his hand, or attempt to speak anything out of the usual course, he would only recognise a few of the more common words. In the most advanced class in one of the German schools, which had been four years under instruction, the scholars read by turns at my request, commencing at the 24th verse in the 4th chapter of St. John, and each reading a verse; the following were the results:

"Pupil No. 1.—Not three words intelligible.
„ „ 2.—Unintelligible, weak and nervous.
„ „ 3.—Ditto.
„ „ 4.—Not a single word intelligible.
„ „ 5.—Five of the simplest words intelligible.
„ „ 6.—One or two words intelligible.
„ „ 7.—Six words intelligible.
„ „ 8.—Four words intelligible.

"These results would vary somewhat in different schools; in some I think they would be more favourable. On the whole, however, it may be safely said, that the utterance of the pupils is so indistinct and unnatural as only to convey single words to the hearer. The greater part of the sounds they make in attempting to speak it is altogether impossible to understand."

Mr. Day also states: "In respect to *tone*, the speaking of the deaf and dumb is harsh, unnatural and monotonous, destitute, of course, of modulation and accent. It more resembles what we should conceive a speaking machine might attain, than the usual speech of mankind. Sometimes it is a whining noise, like that of one in distress, and sometimes a sudden concussive sound, resembling the bark of a dog.

"In many cases the unpleasantness is still further strengthened by the powerful high or low *pitch*, in some instances resembling a shriek, and in others a groan. When to this are added the contortions of countenance and the unnatural position of the mouth, produced by the effort of mechanically adjusting the organs, and putting them in play, it will be readily believed that the articulation of the deaf and dumb is far from agreeable."

Mr. Day shows that some of the best articulators are those who have *learned to talk before*

they were dumb, but to these no one would for a moment doubt the importance of preserving and developing the use of speech; nor can they be placed in the same category as those mute from birth, or from a time before learning to speak; in fact, such persons did not learn speech by the mechanical method, but by the usual method, and cannot be said ever to have lost it. It is by considering such cases as instances of the proficiency to which articulation can be carried in the deaf-mute that such erroneous ideas have been circulated, and such unfounded expectations cherished. Again, in summing up his observations, he says: "On the whole, then, it may be said that those pupils in the German schools, who succeed to any considerable degree in speaking, were either already to some extent in possession of spoken language before they lost the power of hearing, or were only partially deaf, or in addition to extraordinary aptitude for learning have received a degree of attention very far beyond what it is possible to bestow on most of the deaf and dumb." Again, he estimates that about one-tenth are absolutely unable to learn articulation at all, seven-tenths only very moderately, and the remaining two-tenths sufficiently well to be of any use.

Mr. Day furnished his report in 1845. Since that time, some persons in America having

brought further accounts of wonders having been produced in Germany by teaching articulation, Mr. (now Professor) Day* was requested again to go and ascertain if more had been accomplished than before. He did so in 1867, and the results of his new enquiries only further confirmed his first conclusions. He says: "No new reasons in favour of teaching articulation have been advanced, and no recent discoveries or improvements are pretended to have been made, by which the teaching of deaf-mutes articulation becomes easier or more successful than formerly."

Lip-reading is only a part of articulation, and is less difficult than vocalizing. But there are many objections to it, of a very serious nature, as a means of teaching lessons to a class First of all, the forms are so fleeting and so nice in their distinctions that they are not caught without the closest attention, and for those children who are naturally slow and have not the same rapid and keen observation as the

* Rev. G. Day is now a Professor of Theology in one of the American Universities, and is in no way connected with any Deaf and Dumb Institution, though in early life he was a teacher in one of these, and therefore has a practical knowledge on the subject. It is also stated by Dr. Stone that "he knows the German language well—speaks it—reads it—writes it—and is also familiar with the French and Dutch languages."

more intelligent pupils, this objection is most serious; whereas, when writing is used, the sentence is written down and remains till it can be contemplated, and studied over and over again till each word is fully comprehended, and the whole of the sentence thoroughly explained. Those, who before becoming deaf have learned to speak, have in this, as in vocalization, a great advantage over the congenital mute, because they have a better knowledge of language as regards vocabulary and grammar, and they can often conjecture the words to follow after catching a few first words of the sentence. Indeed, we have often found with a mute of this kind, when asking questions by speaking, that the full sentence has been conjectured, and the answer given before we had time to get through half of the words in the question. It is scarcely worth while to refer to the wonderful stories that have been told of the pupils "distinguishing in the dark" what is said by feeling the vibrations of the mere motions of the lips, &c. These wonderful performances are by the German teachers themselves declared to be mere "trifling and nonsense." Again, it has been asserted that when taught to read they take great "delight in poetry." Of course these observations could only be made by persons who will not take the trouble to think, or who cannot. "It is an absurd

fable," says Sachs, one of the oldest instructors in the Institution of Berlin, "that the deaf and dumb are able, by the sense of feeling, to distinguish in the *dark what is said.*"*

Mr. Day concludes his report with the following observations:—"I cannot leave this branch of the subject, however, without observing that those who occupy the lowest stages in the class are truly to be pitied. Unable from the want of sufficient power of attention, and mental activity, to unite the fleeting forms of the lips into intelligible words and sentences to the degree required, they lose a large part of the instruction given, and receive only crumbs and fragments. On this account the contrast between the appearance of the most advanced and the most backward scholars in the sams class is much more striking than with us." This, combined with the time required, constitutes the strongest objection to teaching articulation generally. The truth is, though articulation has been one of the great objects in German deaf-mute education, arising from the false views of Heinicke, there are amongst the Germans themselves those who very much doubt its value. One German clergyman writes. "What is truly valuable in the instruction of our deaf and dumb is the ability to read and write they acquire.

* *Andeutung des Verfahrens, &c.*, p. 13.

Their ability to speak and read on the lips is trifling, and of very little value."

Another eminent writer on the education of youth in Germany says, when speaking of the value of teaching articulation to the deaf and dumb: "I cannot conceal it, I have my doubts, only long and continued experience can decide. It would not, at any rate, be the first time that institutions have wished to do more than they should have wished."

One point on which the American reports remark is especially worthy of notice. They say that the pupils lacked that appearance of intelligence which the pupils of the American Institutions have, and they speak of this as very marked This they attribute to the efforts of the German teachers being spent in giving speech, while in America the efforts are given to enlightening the mind.

The fairness of the American reports, from which we have quoted so largely, has been acknowledged by the Germans themselves. They say, "although these gentlemen were foreigners, although they were not friends of our system of instruction, yet, inasmuch as they were competent men, and so almost entirely agree in their observations, it becomes us to consider very carefully the system of instruction we are pursuing."

The strong feeling that had been recently introduced into America upon the subject of articulation induced the State of Massachusetts to appoint a special committee of their legislature to enquire into the subject. Their report, with appendix, extends to upward of 200 pages of a large octavo volume. It contains the evidence, arguments, letters, &c., submitted to them, and these comprise all that can be said *pro* and *con* on both sides of the question. With the summing up into which all these are condensed by the Committee, we shall conclude this subject in their own words; they find

"1. That both the French and German systems have been taught for centuries.

"2. That both are taught in all the principal deaf-mute schools in this and other countries, except in Germany and in the London Institution where 'articulation' is chiefly relied on.

"3. That the sign language and manual alphabet can be taught to all classes of deaf persons and deaf-mutes, and are the most effectual means of communicating information to a large majority of such persons.

"4. That advocates of both systems admit that 'articulation' can be taught to some deaf-mutes, but not to all, but differ as to the number. It is a question of proportions. The fact, that it has been adopted by so small a proportion of the

schools throughout the world, seems a strong argument against its exclusive use in any school intended for all classes of deaf-mutes. Your Committee believe that to the majority of those congenitally deaf, or who lost their hearing in infancy, it cannot be successfully taught, but that it can be to the majority of semi-mutes and semi-deaf persons.

"5. That the ability to articulate is so great a blessing that it ought to be retained or restored if there be a possibility of doing so, even at the sacrifice of some other advantages. That the earlier the effort is made, the greater the hope of success.

"6. That success depends in some measure upon faith in either theory, and that the danger is that the advocates of each will be wedded to their favourite method. But that no public school ought to be exclusively devoted to either.

"7. That lip-reading or lip-signs (it is really but another sign language) may be taught to nearly all pupils, and there does not seem to be any necessary connection between it and "articulation," nor does it appear why it may not be learned by children entirely incapable of articulation, or be taught with or by the manual system, or *vice versa*. A child having learned the ordinary sign for 'boy,' for instance, or the letters b-o-y, can be taught the lip-sign for the

same word, or for the several letters, so that, while he may be unable to imitate by the lips either audibly or silently, he may be thus addressed; and to know this language would seem to bring him into nearer relation with all speaking persons than any other, and could be made available in individual conversation, though not in public addresses. It is true that there is a want of uniformity in the expression of the same word by the lips of different persons. Your Committee found this strikingly illustrated in their examination of the lip-reading pupils presented to them; for, while one member of the Committee could be readily understood by them, another would entirely fail, although uttering the same sentence with equal care.

"This is further exemplified in a letter of the Rev. Mr. Harlow, a deaf clergyman, who says: "In order to read on the lips of an individual, it is necessary that he should speak plainly, deliberately, distinctly, and show an expressive face. Those who wear a full beard, raise their voices to a loud tone, speak with great rapidity, so as to run their words together, or are very verbose with long sentences, show little or no movement of the lips, or keep their teeth closed together, are seldom or never understood at all.

"8. That the evils of 'aggregation in intensifying this infirmity' do not seem great enough to

recommend the abandonment of large institutions, or to counterbalance the advantages which they offer.*

"9. That a small number only can be taught lip-reading by one teacher, and that when learned it can be made available only in a favourable light, and at short distances. Your Committee felt that the deaf-mutes present at the several hearings, if they had been only taught lip-reading, could not have obtained any clear idea of the proceedings, which they were enabled to do by the manual signs of Professor Bartlett, who acted as interpreter." †

It will be seen from the summary here given of the report adopted after a long and careful examination of all the evidence procurable on both sides of the question, that the Committee come very near to the same conclusion as we have arrived at in the foregoing chapters, and this conclusion, we may add, is that held, we believe by nearly all the most eminent teachers in this country. No one has ever doubted the value of preserving and developing articulation in cases of imperfect hearing, or where speech

* The subject of "large institutions" being injurious to the deaf and dumb had been incorporated with the the question of "articulation," and this paragraph alludes to it.

† *Report*, Boston, 1867.

had been partially acquired before deafness supervened, and probably there is now no English Institution that does not contain examples of the teaching of articulation to both such classes, but these have never been considered or produced as illustrations of its success in giving the power of speech to the deaf and dumb.

CHAPTER IX.

WRITTEN LANGUAGE.

Having shown that articulate language is not the means best fitted for general communication with the deaf and dumb, inasmuch as its acquirement is more uncertain and tedious than that of writing, we shall now show that it is *written language*, or speech under *visible forms*, upon which the deaf-mute must be chiefly made to rely for his intercourse with the rest of mankind. We have before stated, that it is by gestural language that the deaf-mute is introduced to the knowledge first conveyed to him by the teacher, and that it is by the same means that he himself makes his thoughts and desires known. With the deaf-mute, therefore, gestural language first becomes associated with thought, as spoken language does with us; or, to use a popular expression, we think in words, he thinks in signs.

It has been already remarked, that a great difference exists between the language of signs

and that of written language. To change gestural expressions into their equivalents in English is not, therefore, merely a literal change of symbols.

This great difference in the characters of the two modes of expression renders the acquirement of the new language by the deaf-mute one of considerable labour and difficulty. It is long before he gets over the idioms of his own original language, and, as we have before observed, not until he can be made to associate in some measure writ'en language with thought shall we find his written phraseology free, easy to him, and devoid of those peculiarities which are so generally visible in the compositions of the deaf and dumb.

It requires but little acquaintance with the operation of the human mind, to be well aware how powerful is the influence of the retroactive agency of language upon thought; and all who are conversant with metaphysical speculations, know how much the mind, in its reasoning functions, is influenced by the signs which it employs. The ease and the accuracy, therefore, of the mental process will always, more or less, depend on the nature of the signs present; if these be undefined, general, and vague, there will be a corresponding want of distinctiveness in the mental process, while with a language definite and precise, with its relations metho

dized and understood, such as exist in all languages which are highly cultivated, the operations of thought became considerably facilitated.

In giving, therefore, to the deaf and dumb a knowledge of written language, we are not only conferring upon them the means of communicating with society, but are bestowing upon them a more efficient help in the improvement of their reasoning powers. It is curious to observe what strange fancies are formed when persons speak of things with which they are unacquainted. We have sometimes heard it remarked, that "the deaf and dumb have an extraordinary power and facility in written language, and that their expressions are finer and more forcible than those of ordinary people." Such opinions could only arise from a want of due consideration of the subject; though it is not improbable that the displays, which have degraded the proceedings of certain teachers by egregiously magnifying the acquirements of their pupils, have to some degree tended to create this erroneous impression.

To accomplish the end of making the deaf and dumb associate their ideas with written language is a long process, and we fear is, but in few instances, completely attained; not, however, because there is anything unphilosophical in

the principle of this association, but because it requires a longer time to accomplish than is generally allowed to the deaf and dumb for instruction. We shall not enter here into any arguments to prove the position we have advanced, namely, that the deaf and dumb can associate ideas with written language, as that position has already been sufficiently established.* The association of thought with written language will, doubtless, give to the latter a very different character to that which it assumes with those who hear and speak. With us a word is a complex idea composed of its several sounds, as in the word e-le-phant, or it may even be divided still more—into its letters, but with the deaf and dumb there exists no such division. Such words are expressive of an idea, and remembered only as a simple sign. The deaf and dumb, therefore, regard words "as units, in the same way that we regard letters; and the various objects around them are so many simple objects of thought." On this Dégérando remarks, that "written words

* Jerome Carden, a learned Professor at Pavia, so early as the 16th century, says:—"Writing is associated with speech, and speech with thought; but written characters and ideas may be connected together, without the intervention of sounds, as in hieroglyphic characters."

awaken in the deaf-mute the conceptions of things themselves, in the same manner as they awaken in ours the conception of sounds, with this difference, however, that polysyllabic words recall to the deaf-mute but a single idea, while they recall to us a number of sounds at once. We cannot, therefore, doubt that to the deaf and dumb our alphabetic writing, losing this character, becomes truly ideographic." Now one great aim of the instructor must be to accomplish this end; namely, to make written language the immediate representative of thought with the deaf and dumb; and although his great difficulty is to give the pupil a familiarity with, and facility in, using language, still the interest of the teacher should never cease till he overcomes, as far as possible, these difficulties, and makes written language to them the immediate representative of their ideas. We know it is difficult even for those who have all their faculties to acquire a new language, so that it may become to them the immediate sign of their ideas. It is long before an Englishman can master French or German so completely as to be able to make it take the place of his mother tongue; that is to say, "before he can think in it." Nevertheless, it is a matter to be accomplished, and though in the case of the deaf-mute, it may not often be attained, it is

a principle that ought never to be lost sight of in their education.

We have already mentioned that gestural language is very different in its constitution from written language ; that there are many species of words in the latter that have no representatives in the former, and this again is for a long period a stumbling-block to the deaf-mute. A single action, where every muscle speaks simultaneously, represents at once an idea which would require many words to express.

The language of gesture, then, which the necessity of the deaf and dumb compels them to adopt in the first instance must be retained no longer than necessity requires. The principle by which the use of signs should be governed is the same as that which is used in administering medicine, viz., that the least amount which will answer the desired end is the best. Whenever, therefore, we use signs, where written language can be employed, we are wrong, and it should be our constant endeavour to make words explain words whenever it is possible, and gradually as the knowledge of words increases should the use of signs be discontinued.

It unfortunately happens, that the tenacity with which the deaf-mute clings to the use of signs in his ordinary conversation, prevents those around him from using written language

as frequently as its importance demands; and teachers, though admitting fully the truth of the principle here advanced, often find it difficult to carry it into practice. Communication by spelling on the fingers is comparatively a long process, and what by this means it would require a dozen words to express, could be communicated by the means of signs with one or two passes of the hand and a single change of countenance.

Another circumstance, which operates often most powerfully against the deaf-mute's perfect acquirement of language, and over which the teacher has no control, is the insufficient time allowed by the friends of the pupil for instruction. Nothing can be more unwise than this ill-judged economy. Every person, who has experienced the advantages of education, is well able to estimate how much more is done in one year in the later stages of instruction, than can be accomplished in a similar period in its early part. The mind becomes more developed, the powers of perception and judgment become stronger, the knowledge already acquired assists materially in the acquisition of more, and those subjects, which at first were only partially comprehended, become more fully understood and impressed on the mind; habits of thoughtfulness are promoted, and altogether the mental powers

become sharpened and improved. The loss which the deaf and dumb suffer by a too early removal from instruction can only be fully estimated by those who know how much they have to learn, and the difficulties with which they have to contend. All that an instructor can do, therefore, in many instances, is to direct his pupils which paths to pursue, to lead them through the first difficulties which beset them, and to give them the means, if properly used, of working out for themselves the completion of their education. On a pupil's leaving school, especially under the circumstances we have just named, where language has been but imperfectly acquired, he will manifest, when communicating with his friends, the desire of using signs rather than written language; this habit should be checked, and he should be required, on all occasions, to express himself by alphabetical language, and the errors which he makes should be corrected and pointed out to him. It is only by such a plan that his use of language will be perfected, and the habit of thinking in signs be broken up, and the important acquirement of associating thought with written language attained; while, on the other hand, we have known many children, who have left school with a fair knowledge of written language, lose much of it in the course of three or four years, from not being required to use it.

The Abbé de l'Epée used grammatical or word signs in his instruction to a great extent, in the belief that they assisted in giving his pupils more facility in acquiring language grammatically, and he exemplifies in his work the signs which he employed for the various forms of grammar. It has been much doubted, however, whether he did not, in the use of this species of signs, often deceive himself, and imagine that he was giving his pupils solid instruction, when he was merely giving them the word without the idea being attached to it. It is said that by a certain set of arbitrary signs, the Abbé could convey any sentence to his pupils, and they could put it correctly into language, and yet these same pupils were unable alone to express their own thoughts in the simplest language. Such result would be very likely to happen, if means were not used to impart a knowledge of the language otherwise than by arbitrary signs.

There is now a change in the French method, and a distrust of grammatical signs seems now to prevail amongst the later French teachers. One of the most distinguished of these has the following observations: "The principles and processes by the aid of which every deaf-mute may be brought to think directly in the words of written language, constitute a new method, put in practice at the Bordeaux Institution. By this method

the natural language of signs is only employed to discover to the master the ideas that the pupil has acquired, or is still acquiring out of the class-room, and to ascertain the sense which he attaches to written language."

"It is sufficient to let it be understood that we condemn absolutely methodical signs, that is to say, those which translate, word for word, without inversion, the parts of a sentence, whilst pointing out, more or less, its grammatical relations. If signs sometimes owe their clearness to the simple elements of which they are composed, a mimic sentence owes its clearness solely to the manner in which the parts thereof are grouped for picturing it. Incompetency, the spirit of system, or ignorance of facts, can alone lead to a contrary opinion" *

There is some little difference amongst various teachers as to the best mode of commencing in teaching written language. Some prefer to begin with teaching a long list of nouns or names of objects, while others think it best to make this a kind of introduction only, so as to give the pupils the power of understanding the way of writing, and the principle of associating written forms with ideas, and then to proceed as soon as possible with the most simple sentences, containing a complete thought; and

* M. Valade-Gabel.

of this latter method we confess ourselves to be followers. In first beginning to teach written language, we commence with the manual alphabet, and the names of a few of the most familiar objects; this process is continued for some little time, when the most prominent qualities of these objects are pointed out and named; then the verb in its simplest forms is introduced, combining with it other words of easy acquirement; then follow longer sentences, the teacher in all possible cases illustrating the various forms of expression by the common and ordinary incidents of daily life. After this we advance from the simple into the complex, progressing as rapidly as the mind of the pupil will permit; and this progression is carried on through the various grammatical forms, idiomatic expressions, conventional phrases, &c., which are introduced according as they are more or less difficult. It must be understood that, in teaching these children, we can give them no grammatical rules; they are simply infants in language, and as infants they are to be taught, viz., by putting into simple language the most ordinary occurrences of the every day life which they see going on around them.

The difficulty with the deaf-mute in language is, not that he cannot make himself acquainted with those single words which

express an idea fully in themselves, as nouns, adjectives, and verbs, but it is with the collocation of words in a sentence, and with such words as only have a meaning when employed in a sentence, that his great difficulty lies. To teach, therefore, *long* lists of nouns and adjectives before commencing sentences, is a mistake, and such a method meets but feebly the difficulties which the deaf and dumb have to conquer, and is far less interesting to them than short sentences, expressive of the facts daily going on around them, and to be expanded by degrees into little *historettes*, given more or less fully and continuous, as the minds of the pupils themselves expand.

The acquisition of unconnected notional words is easy in comparison with the power of handling sentences and relational words; and the meaning of any new notional word can be acquired as well in a sentence as when standing alone. Indeed, if we are to advance the art of deaf-mute instruction, we believe the path to lie in this direction, viz., in formulating such series of lessons as will assist our pupils in advancing through the difficulties which connected language presents, in such a progression, that the last lesson learned shall diminish the difficulties of the next in an increasing ratio.

Such a series of lessons should be formed out

of the commonest words in the language, that is, such as are most in use. These probably might be confined, at first, to about five or six hundred, which, if properly arranged into as many changes as they are capable of, would give a variety of expression, and a command of phraseology which we have not yet found a deaf-mute generally to acquire during the usual term of his residence at an institution. How perfectly a child expresses itself when its vocabulary is very limited, and the ease with which it acquires that power, is evidence that the principle which we have indicated is the correct one to direct us in our endeavours to advance our art.

In seeking a guide to point out the best method to follow in our instruction, we may find considerable help in studying the plan followed by ordinary children. In our case, we have to substitute a language of sight for an oral one, and in our early lessons it is true that we must employ gesture to explain them, and to ascertain if our pupils comprehend and understand what is written; but ordinary children learn language in the beginning very much in the same way; for are not the earliest sentences which they acquire explained by the looks, gestures, and tones of voice of the mother? Probably all of us who have written lessons for the deaf and dumb have been a little too

systematic in our classifications, and too much inclined to adopt a kind of grammatical arrangement, which leads us into unnecessary difficulties and retards our progress by introducing forms not requisite in early lessons, while we leave untouched those that are in daily request. The true principle, then, to govern our early instruction in language would appear to be, to confine ourselves to a comparatively limited vocabulary, using the same words in all the different combinations of which they are capable, and repeating them frequently, and at the same time encouraging our pupils constantly to express themselves in words.

Ordinary observers, who are only acquainted with the teaching of speaking children, have little conception of the series upon series of lessons that are required for the deaf and dumb, to teach them the use of their mother tongue. Such lessons are intended to present to the deaf-mute that evolution of written language which comes to the speaking child in the endless, but unappreciated exercises and lessons which are evolved in his intercourse with his fellows in the playground, the streets, the family circle, &c.

The deaf and dumb child has no language master but his teacher. For his first instruction in language he is dependent on the teacher alone, and he can make no progress whatever in this

direction without the aid of the teacher. Little do the outer world know the infinite toil and labour which are necessarily devoted to pupils of the quickest parts to bring them to what will appear but a comparatively imperfect use of written language. During every day the teacher must devote hours and hours to a branch of knowledge which the speaking pupil acquires before he goes to school, and perfects in the family circle, in happy independence of the master who is supposed to have entire charge of his education. All vernacular language is a mere matter of rote, and in ordinary life this rote is, as it has been said, imperceptibly attained, but with the deaf-mute the teacher has to find a substitute for the constant exercises in oral conversation, which give a hearing child a knowledge of its mother tongue before it goes to school, and it is necessary to arrange series of lessons, which, beginning with the simplest combinations of words, shall ascend to complex ideas, until by dint of what must appear to the uninitiated an endless iteration, the pupil becomes capable of expressing himself in writing.

We have seen that signs are the master key for first opening the mind of the pupil; by signs he first gets an introduction to words; by signs and words he gets into the circle of knowledge; but words are foreign to his nature, and he clings

with tenacity to signs; signs, however, are incapable of giving him that intimate and accurate knowledge which words convey; and moreover, signs will not give him the means of intercourse with general society. Hence, though it is impossible to overrate the value of signs as the necessary first language and social means of conversation among the deaf and dumb, it is unwise to retain signs whenever words can be used to explain words. Even the youngest classes should, as far as possible, be made to study from books, in order to induce habits of self-exertion, and that no opportunity should be lost of augmenting their stock of words. Books of short lessons in continuous sentences, on subjects within the comprehension of the children, and illustrated with apt pictures, are the most important auxiliaries to the schoolroom, but, excepting in a few instances, these have not been attempted to be produced. It is a deficiency that every institution ought to do its best to assist to remedy. Illustrations are always costly, and teachers can hardly be expected, at their own expense, to incur an outlay where they can have little prospect of repayment. Their part is the preparation of the lessons required, while it ought to be the part of institutions to undertake their publication.

We may appear in our remarks to recommend

a mode of teaching written language somewhat different to that usually followed. The most general method is, first, to introduce single words, viz., common nouns, then to join these with the adjective, then with the verbs "to have" and "to be," then to give "the possessive case," &c., and to introduce these and other grammatical forms in a systematic succession, according as they are considered more or less difficult. We do not, however, condemn such a system, as we really follow it in giving *special* lessons, but at the same time that such special lessons are given, the children should be introduced to full and complete sentences in the manner we have indicated, and taught how to employ them as ordinary children are in daily occurrences. On the other hand the *special* lessons on language should form a kind of commentary explanatory of the language which the pupils have met with in their reading lessons. In these special lessons also we may, by apt illustration and careful classification, make words very considerably help to explain each other; as for instance, by grouping together particles that are connective, those that are antithetical, those that are illative, and those that are causative, the words of each class having all a kind of relationship, and all having, more or less, a common meaning. So also adverbs

should be grouped into classes, viz., such as denote order, number, past, present, or indefinite time, &c.; and so on with other classes of words. But it would hardly be wise not to introduce reading, or continuous sentences in which these words may occur, till we had taught them in a systematic manner. In fact there should be a combination of these two methods—the colloquial and the systematic—just as is the case with ordinary children, who use language in all the ordinary affairs of life, while it is being more systematically explained to them in the schoolroom. In the formation of our first lessons for a class we should be governed by some such principle as this: the lessons should be descriptive of occurrences in the schoolroom, or in the usual occupations of the house, or of things, persons, and events known to the pupils; the sentences used need not be very short, inasmuch as it is desirable to use the same words in different sentences differently combined. The forms of expression ought to be considered rather than the introduction of new words; and pronouns, conjunctions, prepositions, and different forms of the verb may all be used, care always being taken to see that the pupil understands the purport of each full sentence.

Exercises on the various forms of language is much facilitated by requiring the pupil to

fill up blanks in skeleton sentences, and to supply new sentences himself on the same model. Reading lessons also should be part of his daily work ; and these reading lessons should be on various subjects, according to his advancement, as geography, history, religion, &c. We would here state that we think it better that the lesson the pupil has to learn should be placed before him in a narrative form, rather than in an interrogative one, and this may be either in printed books, or plainly written on the wall. We never teach by question and answer merely ; the question and answer method leads the mind too much to consider each question as standing alone rather than as being a part of the great idea taught by the complete lesson. After the lesson has been read, and explained, then, if required, questions may be put. If a lesson be given by question and answer, it is not a bad exercise to require the pupils to put the question form into that of the narrative form, while they may also be made to put questions to each other from lessons given in the narrative form. These changes help to give life and variety to the repetitions upon repetitions which are required to give facility to the deaf and dumb in the use of written language.

We do not wait, in the case of ordinary

children, till we can explain specially the various meanings of *to*, *of*, or other particles, till these are brought into use; and why should we do so in the case of the deaf-mute. The ordinary child learns the meaning of the sentence as a whole, and learns how to use it; and why should it not be so learned by the deaf-mute. The truth is the two modes should go on simultaneously, and each will be found to help the other.

Another point is important, which is, to allow our sentences to dwell upon the eye of our pupils as long as possible. It is to present the full sentence more thoroughly in this respect that we prefer always to *write* our lessons on the wall or black-board rather than use the manual alphabet, which only allows them to be brought under the eye of the pupil letter by letter in succession, while the letters vanish as soon as formed.

The truth is, however, that the method which will give the deaf and dumb an ease, rapidity, and a correctness in the use of language has yet to be discovered, for we must confess with Dr. Peet that "All teachers of the deaf and dumb, in all countries, and under all systems, have been forced to acknowledge, with pain and humiliation, that, after their best efforts have been bestowed, they are able to show a few exceptional cases only of deaf-mutes from birth

who have attained the ability to read books with the ease, pleasure, and profit which well-educated persons associate with the idea of reading." On the other hand we ought to be allowed the satisfaction of feeling that we have raised them from the low start-point at which their instruction commenced to an elevation much greater in proportion than is generally attained by those who can hear and speak.

CHAPTER XII.

EARLY HOME TREATMENT OF THE DEAF AND DUMB.

No period of life requires more vigilance than infancy; it is then that the foundations of the future structure are laid, and if that structure is to be strong, symmetrical, harmonious in its parts, and useful in its adaptation, we must begin with such a design in our earliest labours. These qualities may only become visible when the loftiest pinnacle is finished, but they must have their beginning in the foundation.

When a mother discovers that her child differs from ordinary children, that it does not attempt to repeat the sounds which she supposes it to hear, and that it allows her words of affection to pass heedlessly by, she becomes alarmed, and finds at last, though very unwillingly, that it is deaf, and *consequently* dumb. The anxiety of a mother in such circumstances may be more easily conceived than described—her painful

doubts, her anxious desires, her blighted hopes, are all at last only quieted by the melancholy fact that nothing restores the use of that sense which her child wants. She sees him from day to day remain a stranger in his home, unable to mingle in the lisp and prattle of his infant brothers and sisters, or hear the merry tale of the domestic hearth. It is not surprising that a parent so situated weeps over her misfortune, and spends many anxious moments endeavouring to obtain the means calculated to ameliorate her child's distress. Her very anxiety often leads her from the only course which she is able advantageously to pursue.

Early attention to the physical development and moral training of all classes of children is of acknowledged importance, and the deaf and dumb do not, from their peculiar condition, form any exception to this law of nature; but, on the contrary, demand, if possible, a more careful attention in such particulars than others. On the parents of deaf and dumb children, then, this duty devolves, and it is of immense importance; for if it be neglected, no future education will be able to compensate for its loss.

We have thought it advisable to offer a few remarks here on this subject, since experience has shown us that very frequently the true interests of the deaf and dumb suffer materially from a

neglected early training. Institutions for the deaf and dumb in England generally receive children at an age between seven and twelve, and it is to children, therefore, under seven that our remarks are chiefly applicable. The first great object at this age is physical development—to see that the bodily organs are properly regulated, so as to induce in them the most healthy action of which they are capable, and to improve the constitutional vigour of the child. Wholesome and nourishing food, without being too stimulating, exercise in the open air, sufficiency of sleep and repose, attention to cleanliness and proper clothing, are the heads under which physical education may be classed. To adapt these particulars to the constitution and circumstances of her child must chiefly occupy the mind of the mother. Let her not trouble herself to make her child "an intellectual prodigy, which is an anomaly in nature," but let her anxiety be to produce a perfect and healthy organization, which afterwards will be able to stand the fatigue which will be required in the coming years of mental labour. Intellectual education during these years will proceed of itself. Although the deaf-mute may be shut out from hearing the sounds that are passing around him, his eyes will be active, and few things will pass before him which he will not

attentively observe. By such means he will make himself acquainted with common objects, and the uses to which they are applied, and even with the limited intercourse that exists between him and his friends, he will be able to express his pleasure and his grief.

While his intellectual instruction need not occupy particular attention, his *moral training* will require the greatest care. He will soon begin to show ebullitions of passion and waywardness, which, if unattended to and unchecked, will soon become a source of grief both to himself and his friends. Let every attempt which he makes at communication be patiently attended to. Endeavour, as much as possible, to enter into his sympathies, his pleasures, and his pains, his likes and his dislikes; and try, by your own example, to direct his feelings into such channels as virtue and religion demand. Never heedlessly turn away from his observations, nor consider them tedious; but, however imperfectly you may understand his signs, always endeavour to do so, and never let him witness in you a want of interest in his welfare. His state of isolation is deplorable enough already, and a heedlessness on your part will have the tendency to make it more so by preventing him from making such attempts at communication as his circumstances permit. Remember, that though he is a stranger

to your discourse, he has the same feelings as yourself—he loves and fears, he rejoices and sorrows; and though he cannot hear your words, he can still read the language of feeling. Never, then, subject him unnecessarily to unpleasant impressions; treat him ever with kindness and affection, so that such feelings may beget similar ones in himself. Love him, let him feel that he is loved, and he will love you in return. It is true that the soft and soothing tones of a mother's voice cannot reach him; but a language little less expressive is open to him—the language of the eyes. Look at him in affection and tenderness—smile upon him in earnest love—and his heart will be open to your discourse.

Nothing can be more striking than the difference of character produced in the deaf and dumb by early training, and which is so visible on their entrance into an institution. Those, whose unfortunate lot has been rendered harder still by the cruel treatment of heartless men, have no confidence in you. They have become, like savages, suspicious and cunning; and it is a considerable time before kindness and instruction can produce any degree of openness of communication. Their moral qualities have never been called into activity; while, in self-defence against the ill-usage of others, their cunning and selfishness have been continually exercised. In those whose

early training has been well cared for, a great difference is presented. They are more open in their manners, kinder and more grateful in their dispositions, and, as a consequence, their progress under instruction is more rapid, and their education less difficult, both to themselves and their teachers. There is another source of evil in the early management of the deaf and dumb, and from it probably arises more mischief than from any other, it is that of ill-regulated affection on the part of the parent. It is unfortunate for many mothers that mere *love* for a child will not alone accomplish the end of maternal duty. Were it so, fewer children would have to regret in after life the neglect of early training. A mother's love ought to be guided by intelligence. Love in itself is a mere animal instinct, and is as liable to abuse as any other feeling; and unfortunately the effects of its abuse are more frequently visible than its well-regulated application. The infirmities of the deaf and dumb frequently tend, in this respect, against their true interests. It is an ordination of Providence that the intensity of the feeling for and love of offspring bears a proportion to the weakness or helplessness of its object; and thus the misfortune of deafness frequently secures to the sufferer a more than ordinary share of maternal affection. But, alas, that affection too often leads to evil conse-

quences—*irrational indulgences*—the child being allowed to exercise every caprice without control, and indulge every desire without resistance. Such a mother is the deadliest enemy to her child's happiness—her kiss is fatal. A parent who pampers and spoils her child with such ill-regulated love, instead of conducing to its happines, is in danger of making it miserable. In proportion as a child finds itself able to do all it wishes, it shows the desire to increase the power, and at last it becomes a restless, headstrong, and selfish tyrant. The tendency to yield to every wish of the child, and gratify its desires, is one of the most unfortunate qualities in the character of a mother. It is the cause of misery both to herself and her offspring : and the probability is, that when her child grows up, all that she will receive for this ill-regulated affection will be coldness and indifference, or worse. She may wonder at and talk of the ingratitude of children, but she ought to know that its true cause was in herself. With what anxiety ought parents, then, to watch the early years of children ; for, "without such watchfulness," says Dr. Gregory, "they will contract such bad health, such bad tempers, and such bad habits, as will remain with them, in spite of all future care, as long as they live." * Think then what evil may

* Dr. John Gregory's *Comparative View of Man, &c.*

be produced if the deaf-mute be left to gratify every capricious wish, and indulge without control every evil passion which may arise in his mind, and that as all future instruction and moral training may never be able to eradicate the evil.

It is not till some advance is made in the instruction of the deaf and dumb that we are able to impress them with the knowledge of the attributes of a God, and their duty to Him as their Creator and Preserver. They cannot for some time learn their state as fallen creatures, and as being objects of a Saviour's love. They have not, therefore, those motives to lead them to acts of duty. At first, they ought to be taught implicit obedience to the will of a parent; and this duty ought to be insisted upon from them with undeviating strictness. So great is the necessity for enforcing this duty, that no parent should, in the first instance, request the performance of any act, if, on the refusal of the child, she is not prepared to insist on its being done. It is much better not to require it, than, after making the requirement, to let the child escape without obeying. It often happens that, from allowing unimportant requests to pass without being complied with, a child learns to resist more important ones; for we cannot expect that a child will be able to distinguish such differences, or, indeed, desire to do so; the

only wish it has in such cases is to gratify its own feelings. How great, then, are the duties of a parent, and yet how little they are generally thought of. Even when a mother does feel an interest in the education of her children how seldom is it that her own education enables her to fulfil properly her duties. From a want of knowledge, both of the bodily and mental constitution of her child, she frequently; in her very attempts at improvement, produces the contrary results. In the years of childhood, the chief mental education which is required is the education of the feelings. To train these, so that none shall be manifested too strongly or too feebly, it is surely requisite to have some knowledge of the various feelings which go to form the *character* of man. A mother, therefore, ought to have a knowledge of the mental faculties possessed by her child, and how and when to appeal to them as motives to exertion. True it is that motives are appealed to; but in such appeals there is a want of everything approaching to definite or systematic knowledge. Any thing like proper attempts to strengthen the feelings, which are but feebly developed, or to repress such as are unduly active, are scarcely ever made. How true and how forcible are the following lines of Mrs. Maclean, referring to the early management of children:—

"How much they suffer from our faults,
How much from our mistakes;
How often, too, mistaken zeal
A pupil's misery makes."

It is unfortunate that women have never yet been educated with the view of becoming parents. However fascinating and elegant may be the accomplishments which occupy the principal attention in a young lady's education, they are by no means fitted to supersede higher and nobler studies. Nature has given us faculties which fit us to receive pleasurable emotions from the beautiful in sound, form, and colour; but she has also implanted within us powers which are designed to enable us to perform the duties demanded of us as citizens, parents, and human beings; and when the due cultivation of any of these is neglected, education is imperfect. "That is the best education," says Plato, "which gives to the body and to the mind *all* the perfection of which they are capable." But in modern female education a very partial perfection is thought sufficient. Women are instructed to become musicians, artists, and proficients in dancing (*all* rational pursuits, as far as they *go*); but are they fitted to fulfil the responsible duties of wives and mothers? On these subjects they have too frequently to learn when they should act; and the consequence is, that they rarely

accomplish either well. Before, therefore, the education of woman, on whom is to devolve the duties of training the minds of others at the time when these are most susceptible of impressions, can be called complete, the nature of both the bodily and mental constitution of man ought to form a prominent feature in her studies. Nor indeed, until such an extension shall have taken place in the education of women, will society be freed from much of the bodily suffering, intellectual inability, and moral degradation, which it now so plentifully exhibits.

What different results would be produced on the character of society, if domestic education were better understood. It is in the first development, that the evil propensities in man are most easily repressed, and that the habits favourable to morality and happiness are soonest formed. How different it would be with education, if parents were themselves what they wished to see in their children. All children have strong tendencies to imitate the actions which they see performed by others, but the imitative impulse is pre-eminently powerful in the deaf and dumb. Parents, therefore, of such children ought to be in themselves examples of a Christian perfection: they ought constantly to be alive to the beautiful and the good: they ought to create around their afflicted offspring an

atmosphere untainted by vice, and in which no storms of passion—no withering blights of neglect, ought ever to be experienced.

In these remarks we have endeavoured to show that the chief care of the parent, in the first years of her child's education, ought principally to be devoted to the development of the bodily organs, and to the formation of good moral habits, and that lessons which would fatigue the mind are not to be attempted. Before seven years of age, any continued application is calculated to fatigue, and becomes more injurious than beneficial. The health obtained by exercise in the open air, and by cheerful play in the green fields, is, at this period of life, far more valuable than any scholastic information that can be given. It sometimes happens, however, that children are prevented from being placed under instruction after the age, when it becomes desirable that they should commence learning easy lessons. A few hints on the kind of lessons which ought to be then given may assist parents whose circumstances require them; and if such instruction were well imparted, it would be of considerable advantage in facilitating the progress of the child whenever it might be placed under a proper instructor. It is rather curious to observe that almost all persons who endeavour to give some preliminary instruction to the deaf and dumb

begin at the wrong end, and consequently the time and labour of such kind but ill-directed efforts are thrown away; whereas, if such exertion were properly directed, it would be of real advantage to the progress of the pupil when placed in an institution. In most cases where attempts have been made, either by parents or ordinary teachers to convey instruction to the deaf and dumb — and several instances of both have come within our own experience— they have generally commenced by writing some text of Scripture, or moral maxim, before the child, and teaching them to spell it on his finger, or to copy it on a slate. They do not see that, however correctly he might copy the forms before him, they remain still to him only so many unmeaning marks. The words themselves are not to him representatives of the things. A boy was once brought to an institution where we were by a village schoolmaster, who stated that he had already taught him some useful knowledge; and being asked to name what he had taught him, said that, amongst other things, he had taught him to know that "the way of God was a good way." Being asked to show how he knew that the boy understood the sentence, he made the pupil copy it; and this was to him a sufficient proof, although it appeared he had never even attempted to explain either what

God was, or what the *way of God* was. Now, it would be a considerable time before an experienced teacher would introduce such a sentence to a pupil; because, before attempting to do so, he must have explained to him something of the nature of the Almighty – of the different actions and thoughts of man—have pointed out those which God commands and approves, and those which he forbids, so as to show the difference between good and bad, as applied to obedience or disobedience to God's will; and then, after such preliminary instruction, the *way* of God would still have to be explained as a metaphorical expression.

It will be seen from this that considerable previous instruction would be required before such a sentence could be conveyed so as to be understood. It is hoped, therefore, that the few observations here made on the manner in which such instruction ought to be commenced will be found of use to those persons whose kindness or duty leads them to be interested in the welfare of this unfortunate class of children. It is not intended to give anything like a lengthened or systematic view of the subject, nor to enter into an enumeration of the various expedients which sometimes are required for communicating language to deaf-mutes, but merely to give such hints as are likely to be useful in

guiding an ordinary person in his efforts to be of assistance to them, before they are placed under proper instruction.

The first object of the teacher must be to find out such words as will be most easily conveyed to his pupil. He will find these to be the names of the common objects around him, and for which, if the parent is the teacher, a sign will already have been used between his child and himself. Select some of these objects, taking one at a time, and place it before the pupil; if he has a sign for it, he will probably make it to the teacher, and let the teacher receive this as the sign of the object. Let this be done with two or three more objects, then referring to the first object, let its name be written down on a slab or tablet; and to show the pupil that this is also a sign for the object, remove it, and call a child that can read, and show him the word, and require him to bring, or touch, or point to, the object which the name represents. Repeat this with other objects, and the deaf and dumb child will soon see that the word and the object have a connexion as well as his sign and the object.*

With regard to signs, the child will most likely have already fixed upon signs, by which

* Since the first edition of this work appeared the Author has published a "Pictorial Primer" for the Deaf and Dumb, which can be usefully employed in early home teaching.

it names most of the objects it sees around it, which it employs in its intercourse with its friends. These signs had better be retained, and if a word has not received such a sign, endeavour to get the child to fix upon one. It will do this most probably better than you. We give here some description of the signs generally used for a few common objects, which will afford some assistance towards forming an idea of the character of signs for objects :—

PIN.—Indicate on your finger the length of a pin. Make an appearance of holding it between your finger and thumb, touching your flesh with the point, then suddenly draw away your hand, to show that such contact gives you pain. You may also indicate that it is put into the cuff of the coat, where boys generally keep such articles.

BOOK.—Place your hands together, in the form of a book; hold them up before your face, and give the appearance of reading.

HAT.—Draw the hand round, in the form of a hat, and make the appearance of placing the object on your head.

KNIFE.—Describe with your finger the form of a knife, and draw the forefinger of the right hand over the forefinger of the left, indicative of the act of cutting.

EGG.—Indicate the size and figure of the object; make signs expressive of breaking the top of the shell upon your fist, and of eating the contents in the usual manner.

KEY.—Indicate the form of the object, and the act of turning round, and locking or unlocking.

CAT.—Indicate the size of the animal, draw your hands from each side of your mouth to shew it has whiskers. Stroke your arm down several times to shew the softness of its fur, and make the appearance of scratching, by applying your nails to your hand, and suddenly drawing it away.

DOG.—Shew the size of the animal, by holding your hand about its height from the ground; then pat your thigh, as is done in the act of calling a dog. You may also imitate its action in barking.

COW.—Draw your hands from your head, as if horns were issuing, and make the appearance of milking the animal.

HORSE.—Put your fingers on your head, in the position of ears; shew that something is put in its mouth, and put yourself in the position of a rider, imitating his movement briskly.

ASS.—Somewhat similar signs as above, elongating the ears more, and making the pace less active.

These examples will help to give some notion of the plan of expressing objects by signs. The general direction for forming such signs is, indicate the size and form of the object, and give its most striking quality, but in all the first lessons it will be more advisable to teach from the object itself, or its picture, using, when a sign is necessary, that given by the pupil.

Having carried our hints so far, we feel that to advance further would require our remarks to be made so much more in detail, and our illustrations so numerous, that they would not be suited to this volume, and if persons are

desirous of proceeding further they had better procure the *Pictorial Primer* already referred to. Our observations, moreover, are not made with a view of fitting a person to become a teacher of deaf-mutes, but to guide those who may for a short time have the opportunity of being useful to them before entering an institution. After the age of eight or nine it is most desirable that a child should be placed under a competent instructor one who has made the subject his peculiar study, for it is only under such a person that a child can be expected to be effectually educated. Nor is it to be wondered at that, even with all the aids that experience, ingenuity, and patience can afford, the progress of a deaf-mute's instruction, encumbered as it is with difficulties, is slow and uncertain, and that the results prove, in this instance, as in every other, that the perfection of nature is not to be reached even by the most elaborate efforts of art.

Another subject of importance may be referred to here; it is that of a case where a child loses its hearing after some language has been acquired. In all such cases all means should be used to preserve the language acquired, and if possible, to increase it. If the child has not learned to associate speech with writing or printing, the sooner it is taught to do so

the better. After the loss of hearing, it will probably show a great reluctance to speak; it ought, however, to be compelled to speak on all occasions, and new words ought to be taught by means of lip-reading. Again, when a portion of hearing remains, the child should be taught to repeat words by shouting into the ear. But in all cases, where some hearing is left, or where the use of speech has been attained before deafness occurred, and before reading has been acquired, it is advisable to bring them under the notice of an institution as early as possible.

Again, we would impress upon the minds of all connected with deaf-mutes the very great importance of paying attention to them after leaving school. At that time they should, as much as possible, be required, on all occasions, to use language either by writing or by the finger alphabet. Nothing improves a deaf-mute in his free use of language so much as such a course, and nothing throws him back so much as an opposite one. He should also have access to books written in plain and simple language, and if illustrated, all the better. By using such means, a deaf-mute, who leaves school with but an imperfect power of using language, will considerably improve and make a daily advance towards that perfection which it is so desirable that he should attain.

CHAPTER XIII.

INSTITUTIONS FOR THE EDUCATION OF THE DEAF AND DUMB.

The education of deaf and dumb children in this country is chiefly conducted in public institutions established for the purpose. These establishments are supported by payments from the children themselves, and by donations from the charitable Three classes of children are generally received, viz.: Private pupils, or children of gentlemen, who can afford to pay for their education, with a profit to the Institution; intermediate pupils, which are the children of the middle-class, who pay a sum equivalent to their expenses; and the children of the poor, who pay a certain sum towards their board. This sum is allowed by law to be paid by Union funds. According to the Poor Law Act of 1845, cap. 76, sec. 56, it is specially provided that Boards of Guardians may give assistance to deaf and dumb children, to enable

them to receive instruction in duly certified Institutions, without pauperising the parents of such children. Of course this arrangement is a kind of State aid, given on behalf of the deaf-mute, though given from local sources rather than from those that are are national, a plan which, we think, has several advantages.

In some countries institutions are solely supported by the State, and it has been thought by some that this country might follow with advantage such examples.* But we question very much whether, in the end, this would be beneficial to the cause of the deaf and dumb. The benefits of charity are not all on the side of the recipients. There is a humanising and elevating influence on the minds and hearts of the givers, of great educational value, by bringing them into more kindly relationship with those suffering objects needing their assistance. It may be true that charity has not unfrequently been injurious to those on whom its alms have been bestowed, and in cases where persons can, by their own efforts, help themselves, it is desirable that they should be made to do so. But in the amelioration of sufferings, which spring neither from imprudence nor vice, there is a wide field for enlightened charity to exert itself, and become an

*A Bill is at the present time before Parliament to obtain this object.

agent of heavenly beneficence, in soothing calamities which no forethought can obviate, and against which no prudence can provide.

When the deaf and dumb receive their education in an institution supported by the alms of the people the benefit does not end here. Persons who kindly give to these institutions, become more aware of the nature of the calamity of deafness, they estimate better the depressing and sad effects it entails upon those who are its victims, and their sympathies and kindness are roused in their behalf, and consequently in some degree they constitute themselves their guardians and protectors through life. A similar interest in their welfare is produced by bringing them in contact with the guardians of their parishes, which might not be the case were they cared for by the larger machinery of the State. When such is the case persons become merely statistical facts — figures instead of individuals and fellow-creatures — and sympathy for and interest in them is lost. It is thus that we must all be more or less our "brothers' keepers": and we cannot depute this duty to others, without withholding somewhat of that which we owe to the poor, the suffering, and the sad. It is with this feeling that we have ever estimated the value of all those noble institutions provided by the charitable for the sick, the maimed, the dumb, the blind, and the

idiotic. In a country where unlimited competition so thoroughly educates the selfish element of our nature, some compensating opposite principle is necessary for the moral life of society. Thus the two agencies have a healthy antagonism on each other. If the one prevents us from sinking into sluggish idleness, the other promotes that kind and considerate feeling for others, without the possession of which all else is but as "sounding brass or a tinkling cymbal."

Institutions are capable generally of receiving from seventy to one hundred pupils, and are situated in different parts throughout the country, at such distances from each other, that the districts of which they are the centres will furnish about the proper number of children.

The Metropolitan Institution differs somewhat from all others. It receives pupils from all parts of England, and educates and clothes them free of all expense. It also gives to many of its pupils, when leaving, apprentice fees, to assist in putting them to a trade, a custom which is also practised by many of the provincial institutions.

There is some difference of opinion as to the best age at which to send children to an institution, and there is some difference in the various institutions as to the ages at which children are received. In the West of England Institution,

they are received between the ages of eight and twelve, and most institutions admit them at similar ages; some, however, receive them at seven, and in America, twelve is the age when they are generally sent to an institution.

In considering this question, there are several points to be kept in view, and the regulations which would be best in America may not be exactly those best suited to this country.

These children are generally sent to school for a certain number of years, say six or seven, and it never ought to be less. After leaving, they should be in the best position to be placed as apprentices to learn a trade, by which to earn their future livelihood. In America, trades are generally taught in the institutions: therefore, where a trade is taught at the same time that school instruction is going on, twelve years of age for admission may be the best, but we think to leave a child altogether without education up to this age is wrong, and if there is no home teaching, then there should be some provision made for giving preliminary instruction before being sent to an institution. The question of teaching trades in institutions in this country has often occupied the attention of those connected with their management, and in some instances the plan has been tried, but it has always failed. If it could be adopted in

institutions, these would have to be placed under very different arrangements to what they are now; but even if such arrangements were made, and trades were taught, it is very doubtful if it would not be worse for the after life of the pupil, as from his having served no regular apprenticeship it would be difficult for him to get employment, which is not the case in America. As this subject is one of some importance, and one that had a good deal of consideration at the first Conference of deaf-mute teachers held in London on July 9th, 1851, we will here quote some of the arguments used for and against teaching trades in institutions:

"The opinion of the instructors present on the object of this meeting having been requested, Mr. Cook, of Edinburgh, said that he had prepared a paper on the industrial education of the deaf and dumb, and it was decided as the best course for opening the whole subject that this paper should be read, and that the gentlemen present should afterwards express their views upon it.

"Mr. Cook first considered what occupations seemed best suited to the deaf and dumb. These, in his opinion, were, first, shoemaking, which he regarded as most desirable on account of the steady employment it furnished, and the ease with which it was acquired; second, tailoring; third,

printing, which, however, was adapted only to the most intelligent and best educated ; fourth, engraving ; fifth, common day labouring and gardening ; sixth, joinering or cabinet-making ; seventh, work furnished in manufacturing towns.

"He next proposed a solution to the enquiry, what was the best mode of securing a trade to the deaf and dumb. The system of apprenticeship, he regarded, as attended in their case with serious difficulties. With the exception of those who were remarkably intelligent, and possessed a superior knowledge of language, they could not be instructed with ease by ordinary masters. Few, therefore, could be found willing to take them, and even in these few cases the deaf and dumb were apt to be discontented, and endeavoured to effect their release as soon as possible. He thought that under these circumstances the most feasible and judicious arrangement was to place them in an institution whose chief object was to give instruction in the mechanic arts, and where one or two hours a day might be devoted to carrying forward their intellectual training. Under judicious management, the pupils of such an institution might nearly earn the expenses of their maintenance. Here, relieved from the isolated position in which they were placed in society, their happiness would be increased, while mechanical instruction could be imparted with

more clearness, precision, and consequently success. An incidental advantage arising from an institution capable of meeting this want would be, that pupils in the existing institutions might remain a longer period under instruction, inasmuch as they are now obliged to leave at an early age, in consequence of the fact that masters are unwilling to receive apprentices later.

"Dr. Scott, of Exeter, differed from the views taken by Mr. Cook, in respect to the necessity of a separate institution for learning trades. He first proposed the inquiry, whether the deaf and dumb can learn a trade as well in an institution established for their relief as when bound as apprentices to a master. He said trades had been carried on at the Exeter Institution, but had been abandoned because they could not be well taught in the time allowed for such training, and he denied that trades could be as well taught in an institution as in an ordinary workshop. He considered this question settled as far as ordinary children are concerned by the experience of industrial schools, and the opinions formed by those who have tested their operation, and he said that trades were gradually being abandoned in unions and other public institutions. He instanced the commission issued by Government to inquire into the condition of the hand-loom weavers, and referred to a report of Dr. Mitchell,

wherein it was stated that the teaching of trades in institutions and unions tended to the formation of slovenly and careless habits of work, and to the production of a slop-work style. The fact that a master was immediately dependant upon the quality of his work for his subsistence, naturally made him more exacting than it was probable any one would be, not placed in similar circumstances. His apprentices, therefore, were more apt to acquire, and, as experience had shown, did in fact acquire more steady habits of industry and a more finished style of execution, than those not similarly circumstanced.

"The question then recurred, do the deaf and dumb so differ from ordinary children that the above remarks were not applicable to them? He thought not. The only question was with respect to the ability of the masters to communicate with them. The class of signs necessary for the purpose of teaching a trade were easily acquired, if not instinctively made, while most deaf-mutes had acquired language sufficient to make this also a medium of communication. Experience had moreover proved that deaf and dumb apprentices acquired a trade with the same facility as those who possessed all their senses. This was abundantly substantiated by the replies contained in a recent report of the Yorkshire

Institution for the Deaf and Dumb to queries proposed to masters with respect to their deaf-mute apprentices. He also read a letter, fully corroborating his position, from a man who had two deaf-mute apprentices. The question whether the deaf-mutes ought not to be kept longer under instruction, he considered to be entirely separate from this, which related rather to their mechanical proficiency. As far as his experience had gone, no difficulty was to be found in the unwillingness of masters to take deaf-mutes as apprentices. The only embarrassment lay in procuring an apprentice fee; this however might be obviated by an appeal to the charitable.

"The conclusion at which he arrived was, therefore, that a particular provision for teaching deaf-mutes trades was not necessary or desirable. As a beneficial exercise, however, for promoting health and industrious habits, he regarded gardening as an important object of attention for pupils undergoing a course of intellectual training.

"Dr. Peet, of New York, was then invited to express his views, and he remarked that the subject had engrossed much of his attention. Yet such was the difference between the circumstances of the deaf and dumb in England and his own country, that he might not, in the few

unpremeditated remarks he was about to offer, throw much light upon the practical question before the meeting.

"In the institution under his own care, pupils were not admitted under the age of twelve, when their minds were so mature that they could grapple most successfully with the difficulties of language. They remained usually from five to seven years. The latter period was the one assigned for the course of instruction, but the desire of parents for the assistance of their children frequently induced them to withdraw them before that period had expired. The pupils were instructed in the mechanic arts between three and four hours daily, and at the expiration of their term of instruction, they went forth into the world full-grown men and women, capable of supporting themselves, and, with very little additional instruction, ranked on a par with workmen who had passed through a regular apprenticeship. The duty of self-reliance was constantly urged upon them from the time of their entrance, and the truth prominently set before their minds, that their success in life depended mainly on their present exertions. The motives thus urged upon them stimulated them to greater earnestness, and compensated in a measure for the limited period allotted to the mechanic arts, under the eye of a competent

master, who, having prepared the work beforehand, did nothing while the pupils were with him, except giving them direct instruction.

"If even under these circumstances, they left the institution inferior to ordinary workmen, he thought that the single consideration, that they were under restraining moral influences at a period of life when they were most susceptible to external impressions, secured to them a higher benefit. Experience, moreover, had borne abundant testimony, in the success of his pupils in life, to the advisability of the system he had detailed.

"Whether, however, it was applicable to the education of the deaf and dumb in Great Britain and Ireland, admitted of some doubt. It was customary in the schools of that country to receive them at an early age. The object of this he understood to be, that the pupils might leave at a sufficiently early age to be bound as apprentices. Such was the competition in labour, and the low value set upon it, that none but superior workmen could command desirable wages. Hence it was necessary that the best facilities should be enjoyed by deaf-mutes. It was difficult, too, he understood, for those who had not served a regular apprenticeship, to obtain situations as journeymen. These considerations would go to show that it was not desirable to

pursue here a system which in America was undoubtedly the best, and he was not prepared to say therefore that existing arrangements would not conduce more to the comfort of the deaf and dumb in after life, than any change that could be devised.

"Mr. Saegert, of Berlin, was then requested to give his sentiments. He stated that he had tried the experiment of teaching trades to his pupils, in connection with their studies, but without success. The present arrangement was that they should enter the Institution at seven, and remain till sixteen years of age, when they were apprenticed to a trade for four years.

"Mr. Neill, of the Newcastle Institution, considered a separate establishment for instructing deaf and dumb youths in trades, after school-education was completed, unnecessary. In his opinion there was no necessity for separating the deaf and dumb from other youths during their apprenticeship, and that, so far as his experience went, masters, in general, did not object to engage them on the same terms as others.

"Mr. Sleight, of Brighton, regarded the discussion, which had engaged the attention of the meeting, as important. As far as his experience went, he regarded the system of apprenticeship as the best means of teaching a trade. Those masters to whom his pupils were bound had

informed him that they worked as well and accomplished as much as their other apprentices." *

It seems then, from what has been said, that it is not desirable in this country to teach trades in an Institution, and the years to be fixed for study should be those during which a child will be best fitted to take all the advantages which a residence in an institution offers, previously to the time at which he must begin his apprenticeship. Supposing that he need not be bound for more than five or six years, he would be required to leave the institution at fifteen or sixteen, and for this purpose he should enter it at eight or nine, since he would make more progress between the ages of nine and sixteen, than he would between those of seven and fourteen.

But though not admitted to an Institution till eight or nine years old, a child need not be kept without earlier instruction, and we have already given the necessary directions for the early training of young deaf and dumb children at ordinary schools, or at home, and those, if properly carried out, would be found to have rendered good service when the children are placed in an Institution at the age we have named.

Recently there have appeared some articles

* *Transactions of the First and Second Conferences of Deaf and Dumb Teachers.* London: Varty & Co.

in which institutions for the deaf and dumb have been denounced as places of "exile" and semi-monastic establishments, and advocating the education of the deaf-mute with other children in common schools. It is to be regretted that in these articles the writers have not used more courteous language, and entertained more charitable feelings towards those from whom they differ, and their mode of dealing with the subject suggests a partizanship altogether inconsistent with true philosophical enquiry.

The question of educating the deaf and dumb in ordinary schools along with ordinary children is not new. In 1819 Mr. Arrowsmith, who had a deaf and dumb brother, published a work in which he advocated this plan, and argued "that deaf and dumb children will learn the language of their country to the best advantage by being associated with other children to whom it is vernacular, just as an English child will learn the French language best in a French family, or a school of French children." It is remarkable that Mr. Arrowsmith could not see the difference in the two cases. Why is it that a deaf-mute does not learn language as other children do? Is it not simply because he cannot hear them speak, and cannot, therefore, so learn their language. When children go to school, they know language, having learned it from associating

with those that speak, and at school they have only to learn to associate words, already learned at home, with the written or printed form of these words. But the deaf and dumb have to learn at school the meaning of the words, as well as the words themselves—quite a different thing. Mr. Arrowsmith's book went to a second edition, published in 1823, and the plan, appearing as it did to the general public to possess some advantages, was tried in some places, and, as might have been expected, failed.

It seems that the advocates of this scheme suppose that any one, who likes to try, can educate the deaf and dumb. This is a great mistake. We do not for a moment wish to throw any secrecy over the art, or shroud it in anything like mystery or magic; but in order to teach the deaf and dumb with success, a man must have certain qualities and attainments, not always found in ordinary teachers, and he must have experience in dealing with this peculiar class of pupils. The truth is, that the plan of teaching deaf and dumb children in ordinary schools has been tried, and failed. It has been tried thoroughly in Prussia, where the deaf and dumb were placed in common schools, and the results were found to be most unsatisfactory. In a great many cases, the children received into our British institutions have been for a more or less time sent with

their brothers or sisters to common schools, and where they have sometimes, under intelligent teachers, obtained certain acquirements, such as learning to write a fair hand, acquire some of the elementary rules in arithmetic, and sometimes, but less frequently, get a knowledge of a few common nouns, and to this extent we believe they may be taught with advantage; but we have known some evils arise from believing that the deaf and dumb can be properly educated in an ordinary school. Recently two boys lived in the same parish, who were deaf and dumb. The one was sent to the institution by the exertions of the medical man, the other, whose parents were in the employ of the landed proprietor of the district, was sent to the common school, which was managed in a great measure by the ladies of the family. The mother of this boy was frequently remonstrated with, to induce her to send him to the institution, but she refused, as he was "getting on well at school." The boy at the institution did fairly, and at the end of his term went home, and was bound an apprentice. The mother of the other boy then came to the institution, beseeching that her son should be taken in, as he was so far behind his friend, who had been properly instructed. He had, however, long

passed the stipulated age at which children could be received, and had, alas, to remain in his uneducated condition. In this latter case, writing had been taught, and some arithmetic, but there was no knowledge of language, and no power of communicating with others, he had little or no information on any subject, and is now doing the lowest class of agricultural labour, while the other is earning a good living as a smith.

How institutions for the deaf and dumb can be called "exile"—by which word we understand the isolation of the deaf and dumb from social intercourse—we cannot conceive, since it is really here where the deaf-mute gets into society. For all his life a child has been endeavouring to converse with those around him, and has succeeded only in the most limited degree; but, once into an institution, he finds himself amongst those with whom he can soon fully and freely converse. We have often noticed with what delight and astonishment a young pupil, when he first comes into an Institution, will gaze at the animated conversations that he sees going on around him in sign-language, and the gratification which he manifests when he can put in an observation that can be understood and replied to by others. It is one part of the value of signs, that in these colloquial communications each child can bring his own experience and his

own observations to mingle with those of others long before he is able to converse in written language. A vast amount of information is acquired by the younger from the older pupils in this manner, and such conversations cultivate and develop the intellectual powers, as do the conversations in ordinary schools for those who hear and speak.

Further, it has been stated that institutions augment and "intensify the calamity of the deaf-mute." How? Their calamity is deafness and dumbness. Do institutions make them more deaf, or more dumb? They are shut out already from communicating with society, since they are unable to use the ordinary means of communication—speech. We take them into a society where they can communicate freely, and we fit them for communicating with the world, by giving them a knowledge of the language of their country. Furthermore, we guard them from the dangers of evil example and moral degradation, and protect their persons against accidents, to which their infirmity renders them more liable than others; and we train them while in youth to habits of self-control, and endeavour in every way to stimulate them to lead a moral and religious life. We have no desire to keep these children longer in an institution than the exigencies of their case demand. We have already shown that we

think it best for them, after their school instruction is completed, to go into the world to learn their trades, just as other children do, since they are now fitted by instruction to converse with others in the language of society in one of its forms—writing, a power which by ordinary instruction they could not have obtained.

Again, institutions have been blamed for bringing the deaf and dumb together in large numbers. Unless we could provide special instruction in every village where one or two deaf and dumb children are found, and these probably only occurring in alternate generations, aggregation to some extent must be had recourse to; and to incorporate the deaf and dumb with ordinary classes of children is, as we have shown, entirely impracticable. Whenever the normal condition of man is departed from, there will be a corresponding variation in the treatment required, and unless we modify our means of treatment to meet these conditions we cannot expect the results to be satisfactory. Some objections no doubt to aggregation are worthy of consideration, and one of these is, that it may lead the pupils to form marriages in after life, which may tend to perpetuate the disease under which they suffer. In collecting together adult persons this objection might have some weight; but in pupils

who separate after the age of sixteen, and go to homes distant from each other, it has, practically, no weight. We have only known one case of intermarriage amongst our pupils during an experience of nearly forty years, and in that case the parents were neighbours, and the children brought up together at home. It happened however that none of their offspring were deaf and dumb. The husband was a steady workman—a cabinet-maker—and the wife a frugal housekeeper, who brought up her children well.

While then this objection may be considered practically as nothing, the advantages of assembling these children together under efficient masters, as we have already shown, is great. The younger pupils, too, gain important advantages from the older ones—in habits, in manners, in morals, and in intellectual development; while, from the constant superintendence given to them, not only in the schoolroom, but in the playground, in their evening studies, in their conversations, and in their readings, they are kept in as good order as are hearing and speaking children in our ordinary boarding schools. Deaf and dumb children could get no such advantages, if they were merely to attend a school for six or seven hours a-day as day-pupils, and board elsewhere with persons who knew little or nothing of the language of signs, and

who could not help them with their lessons, nor exert the same influence over them in guiding their tastes and in forming their habits, as the master in whose class they may be. Their playground, too, would be the street, and their companions such as they might by chance pick up. In institutions they have large playgrounds, situated in healthy localities, and well attended to in all sanitary arrangements. They have their games—their marbles, their ball, their cricket, their kite-flying, and the various other amusements of children—all under proper supervision, to see that all is conducted with fairness and propriety. We have always looked upon the lessons of honourable feeling, of truthfulness, and gentlemanly and courteous conduct towards each other which are learned in the playground, as amongst the most important acquirements obtained at school for any class of children, and we have always endeavoured to make a point of teaching such to our deaf and dumb pupils, and we believe not without success.

Though most of our children may occupy a humble station of life, and be employed in daily labour, that is no reason why polite manners, courteous behaviour to others, and a kind and Christian feeling may not be practised by them, and there is no way of inducing such conduct but by proper training in early life. One of the

greatest misfortunes of our poorer classes are their coarse and rough manners, their want of consideration for the feelings of others, and the practice so common amongst them of using low and vulgar language to each other. There is no reason why a common workman or workwoman may not be a gentleman or gentlewoman, in all the best sense of the terms, and to bring this about is the most valuable part of education. This amelioration of manners and habits is what institutions endeavour to secure to the deaf and dumb, as well regulated schools do to the wealthier classes of children. In the institution, over which we have the honour to preside, we have had children from the higher classes, and these have mingled with the poorer pupils in the playground, as well as in the school-room, and we have never had a complaint of a degradation in their habits, in their honour, or their truthfulness.

Though, then, there may be some evils arising from the aggregation of children in an institution, there are benefits which arise from it incalculably greater, and which can be obtained by no other practical means. In nothing which has been said do we wish to prevent any means being used, either in common schools or at home, for the improvement of the minds of the youthful

deaf-mute before entering an institution; nay, we have ourselves published a work, chiefly with a view to facilitate this object; but what we wish to be understood is, that no instruction which deaf-mute children can obtain by such means ought to be considered as a substitute for what they can obtain at an institution; and in this particular, we believe, we are borne out by every experienced teacher, both in Europe and America.

The late Abbé Carton, a great advocate for early home instruction, says, "the intention to entirely abolish these institutions could never have entered the head of any but a visionary enthuasist. My profound conviction is that the suppression of special institutions would be a public calamity," and we emphatically echo this conviction.

Let us shortly recapitulate what we have desired to say in our previous observations. First, then, young children may receive preliminary instruction at home, up to seven or eight years of age, with advantage. On attaining this age they ought to be sent to an institution, where they will be placed under such instruction as their peculiar condition requires. At fifteen or sixteen they will be in a position to be placed under a master to learn a trade, by which, in after life, to earn their livlihood, and this can be done in a manner as is usual with ordinary children, since

they have now learned the means of communicating with others, by written language. That the moral and religious training they have had during these years, when the habits are most easily formed, and the mind most effectually moulded, will most likely, under God's providence, be the means of enabling them to resist those evil temptations which unfortunately are too frequently met with in society, and enable them to become intelligent men, good citizens, and earnest Christians.

A remarkable passage occurs in the writings of one of the opponents of institutions: "The superiority of the social system," the objector says, "may be inferred, as it may be taken as proof, from the curious fact that very few deaf-mutes who have been educated in 'semi-monastic' institutions have risen to distinction, whilst a formidable list of names might be given of those who owe their surprising success to the blessings of the social system." In this sentence we understand the author to say, that while, under the education received in institutions, very few have risen to distinction, a formidable list could be given of those who have so risen under home or common school education. Now, however humiliating the acknowledgment may be, yet the truth is that no congenital deaf-mute, that we are aware of, has ever risen to distinction, in

either literature or science. This writer thinks that such is only the case with those educated in institutions, while, he says, hosts have so risen who have been educated out of institutions. But of the "hosts" he speaks of, we should like to be referred to one, whose name is known as a man eminent in literary or scientific research. It is however somewhat different in art. The chief requisites to understand and express pictorial representation are a good appreciation of colour, a quick observation of forms, and a facile pencil to depict them. Now, the deaf-mute is daily exercising himself in observing, through the sight, all that is passing before him, and imitating it in his gesture-language, so that the same difficulties, either of appreciating what has been done by others, or of expressing his own thoughts, do not present themselves here with the same force as in the intricacies of language and the profound reasonings of science. It is on record that Quintius Pedius, the grandson of the Consul of that name, and the nephew of Cæsar, was a mute from his birth, and was educated as a painter and "made great proficiency in that art."* Again, Juan Fernandes Navarette, commonly called El Mudo, was a Spanish painter of repute, and was a deaf-mute from birth. Lopez de Vega wrote his epitaph, in which he says, "Heaven

* Pliny *Hist. Nat.*, lib. xxxv., cap. 4.

denied him the gift of speech that he might give greater life and eloquence to the works of his pencil; and as he could not speak himself, he made them speak for him."* A Devonshire gentleman, named Cross, mute from his birth, was educated as an artist, and became portrait painter to George III., and amassed a considerable fortune by his labours. In our own times there have been several deaf-mute artists of good standing, both in France and Britain, and though, perhaps, no such English artists at this moment take the highest place in the profession, still their works may be annually seen on the walls of the Royal Academy, and are sold at good prices. Thus, then, we see that, while in art several deaf-mutes have risen to eminence as painters, both amongst those who have not, and those who have, received special instruction, there is no name, that we know of at least, who has taken the same position in science or literature, no doubt from the reasons we already mentioned.

Those that have lost their hearing at an age after some speech has been acquired, as Dr. Kitto and others, present altogether a different class, and there is no reason why such persons should not rise to distinction, as well as ordinary people. But the case of the congenital deaf-mute is quite a different thing. We have

* Guyot.

already alluded to the difference presented by these two classes of persons, and pointed out that those who have lost their hearing after the use of language has been acquired may or may not be advantageously educated in an institution according to the circumstances of the particular case. In those instances that have come under our own especial notice, we have advised in some cases that they should not be sent to an institution and in others that they should be, but in all such cases we have insisted upon the importance of preserving and developing their speech. On this subject however we have already expressed our opinions, and need not repeat them.

There is one other point which the gentlemen who have felt it a duty to condemn existing institutions for the deaf-mute have incorporated into their remarks, to which it is necessary to allude. It is one however to which we have some difficulty in replying, since it attacks the honesty and ability of their teachers. To a modest man, nothing is so painful as to speak about himself or his order; but when the honesty of his motives or his capability of performing his duties is attacked, he may be pardoned if he attempts to vindicate his character as a conscientious and honest man. It is unnecessary to repeat here the harsh things that have been said of the masters of institutions; but whenever they have

attempted to say a word in defence of the present system of instructing the deaf and dumb, their capability of giving an opinion has been questioned on the ground both of interested motives and a want of ability, and they have been spoken of as if they were a class of men of the meanest attainments, enjoying large remuneration for doing something that was worse than nothing. Now, as to their ability, we think they may fairly claim, as a class, to be on a level with men filling other professions; and, as to their remuneration, there are few occupations of an intellectual character that offer less. We know no men who are making fortunes in it; and, from the nature of the employment, there is no future advancement to look forward to. On this question however we shall allow another to speak instead of ourselves, one who, from the great attention he has given to the subject of the deaf-mute, from his high and varied attainments, and from his having no connection whatever with deaf and dumb teaching, can only speak from his own convictions, uninfluenced by anything but the truth, and who has an undoubted right to be considered as an authority, and with this quotation we shall close our remarks. Sir William Wilde, in his article on Deaf-Dumbness in his great work on *Diseases of the Ear*, says :—

"For wealth, men have risked their salvation; for fame, men have perilled their existence; for religion or enthusiasm, men have died at the stake;—the miser or the murderer saw, however, the golden glare of riches beyond the gulf of crime; the warrior felt already the laurel on his brow, and heard the shout of his welcoming countryman as he sought the thickest of the fray; and the martyr beheld heaven opening to him in the blue above his head; but to me it has always appeared that the patient instructor of the deaf and dumb deserved a reward which nothing earthly could bestow. And the energy, perseverance, and philanthropy of those good men who have from time to time undertaken, in different countries, that Herculean task, of teaching the eye to hear and the hand to speak, have only been equalled by the eloquence of those who have advocated the claims which the deaf-mute has upon all to whom the Creator has afforded the blessings of speech and hearing."

APPENDIX.

No. 1.

An interesting paper was read before the New York Lyceum of Natural History, by Dr. Akerly, in which a comparison is made between signs in use amongst certain tribes of North American Indians, and signs used by the deaf and dumb. The following is an extract taken from Dr. Orpen's "Contrast," where a more lengthened account is to be found of Dr. Akerly's paper:—

"If we examine the signs employed by the Indians, it will be found that some are peculiar, and arise from their savage customs, and are not so universal as sign language in general; but others are natural, and universally applicable, and are the same as those employed in the schools for the deaf and dumb, after the method of the celebrated Abbé Sicard.

"In comparing a few of these signs, it will be seen wherein they agree. Among them is found the sign for *truth*.

"*Truth*, in spoken language, is a representation of the real state of things, or an exactness in words, conformable to reality.

"In the language of signs, *truth* is represented by words passing from the mouth, in a straight line, without deviation. This is natural and universal; it is the same as was adopted by the Abbé Sicard, and is used in the schools for the deaf and dumb in the United States. It is thus de-

scribed in Major Long's Expedition, as practised by the Indians :—

" ' *Truth.*—The fore-finger passed, in the attitude of pointing, from the mouth forward, in a line curving a little upward, the other fingers being carefully closed.'

" A *Lie*, on the other hand, is a departure from rectitude —a deviation from that straight course which inculcates truth. The Indians represent a lie by the following signs :—

" ' *Lie.*—The fore and middle fingers extended, passed two or three times from the mouth forward ; they are joined at the mouth, but separated as they depart from it, indicating that the words go in different directions.'

" This sign is true to nature, and radically correct, though in the instruction of deaf-mutes, we simplify the sign, by the fore finger passed from the mouth, obliquely or sidewise, indicating a departure from the direct course.

" ' *House or Lodge.*—The two hands are reared together, in the form of the roof of a house, the ends of the fingers upwards.'

" This sign is true and natural, though we add to it by placing the ends of the fingers on each other, before they are elevated in the position of the roof, to indicate the stories of which a house, in civilized life, is composed.

" ' *Entering a House or Lodge.*—The left hand is held with the back upward, and the right hand also, with the back up, is passed in a curvilinear direction, down under the other, so as to rub against its palm, then up on the other side of it. The left hand here represents the low door-way of the skin lodge, and the right, the man stooping down to pass through it.'

" This sign, though peculiar, is natural as respects the mode of living of the Indians, but is not universally applicable. It corresponds with the sign for the preposition *under*."

"The sign for an object discovered, as distinguished from the simple act of seeing, is made by the aborigines with much nicety and precision, and may, with propriety, be adopted in a universal language.

"'*Seeing*.—The fore finger, in the attitude of pointing, is passed from the eye towards the real or imaginary object.

"'*Seen or discovered*.—The sign of a man, or other animal is made, after which the finger is pointed towards, and approaching to your own eye: it is the preceding sign reversed.'

"The Indian sign for a *man* is a finger held vertically, which differs from the deaf and dumb sign. Their sign for a *bison* is the same as the deaf and dumb sign for a cow, viz.:

"'The two fore fingers are placed near the ears, projecting so as to represent the horns of the animal.'

"Now, when a party of Indians are out on a hunting or warlike expedition, they may *discover* a man, the scout of a hostile party, or an herd of buffaloes. The sign for *discovery*, in such a case, will be different from that of the simple act of seeing.

"In general, we cast our eyes upon an object with indifference, and, in seeing, simply distinguish a man from an animal, a tree from a shrub, a house from a barn; or we determine the relative shape, size, or distance of an object. This is done by the *coup d'œil;* and therefore the act of seeing, in the universal language of signs, is to direct the finger from the eyes to the object.

"But when we discover an object, we look and look again; and then, in the true natural language of signs, it comes to our eyes, as the Indians have correctly represented it, because we have repeatedly directed the eyes to the spot where the discovery is made, and not seeing it the first, second, or third time, the object clearly comes to our eyes,

and hence the distinction between sight and discovery is founded in the universality of sign language.

"The signs for *eating*, *drinking*, and *sleeping* are naturally and universally the same, and cannot be mistaken. They are thus described in the account of the Expedition:

"'*Eating.*—The fingers and thumbs are brought together, in opposition to each other, and passed to and from the mouth, four or five times, within the distance of three or four inches from it, to imitate the action of food passing to the mouth.

"'*Drinking, or Water.*—The hand is partially clenched, so as to have something of a cup-shape, and the opening between the thumb and finger is raised to the mouth, as in the act of drinking. If the idea of water is only to be conveyed, the hand does not stop at the mouth, but is continued above it.

"'*Night, or Sleeping.*— The head, with the eyes closed, is laterally inclined for a moment upon the hand. As many times as this is repeated, so many nights are indicated. Very frequently the sign of the sun is traced over the heavens, from east to west, to indicate the lapse of a day, and precedes the motion.'"

Several more signs are given by Major Long, but which it is unnecessary to describe.

No. 2.

Lenormant, in his "*Introduction à un Mémoire sur la Propagation de l'Alphabet Phénicien dans l'Ancien Monde*," (Paris, 1866) states that—

"Writing is the system employed by man to fix the expression of his thoughts by material signs in such way as to communicate his ideas otherwise than by speech, and to give them durability; and that to attain this object two principles may be applied, either separately or together:

I. *Ideographism* or the painting of ideas, which may employ two methods:

1. The *figurative*, or *mimic*, which represents the objects themselves to be pourtrayed; and

2. The *symbolic*, which represents an abstract idea by a material object or figure to which that idea is conventionally attached, and that among the Egyptians the symbolic signs were represented or conveyed their meaning in different ways, viz.:

By *synecdoche*, or the representation of the whole sign by a part.

By *metonymy*, in painting the cause for the effect, the effect for the cause, or the instrument for the work produced.

By *metaphor*, in employing to express an idea an object which had some similitude to it, either real or supposed, and easy to be understood; and

By *enigma*, in employing to express an idea some object which had a more hidden and remote relation to it.

II. *Phoneticism*, which presents two stages, viz.:

1. *Syllabism*, which represents an entire syllable by a single sign; and

2. *Alphabetism*, which breaks up the syllable, and represents the consonant and vowel comprising it by distinct signs."

He shows that writing has progressively proceeded by those various methods and stages from the *figurative* to the *alphabetic*, and he analyses the four antient systems which are known to us, and which had all an independent origin, viz.:

The Mexican;
The Chinese;
The Cuneiform; and
The Egyptian.

And shows that all exhibit the *figurative*, but that the Mexican never advanced beyond it, except to represent proper names by a syllabic *rebus*; that the Chinese and cuneiform did not advance beyond the *syllabic*; and that the Egyptian was the only system which attained the alphabetic development, while it unfortunately retained all the earlier methods, and even employed various signs to express the same phonetic value, so that great intricacy and confusion resulted, and in the 16th sec. M. Lenormant proceeds thus:

"It is evident that, even after the Egyptians had arrived at the analysis of the syllable and at the separation of the consonant, there remained an enormous step to clear, a great progress to consummate, before writing could attain the degree of simplicity and clearness which could alone place it in a position to fill worthily and completely its high destiny.

"To repudiate all trace of ideographism, to suppress equally the syllabic values, to paint sounds by the method of pure alphabetism alone, in a word, to reduce the phonetics to a single sign, invariable for each articulation of the organ, such was the progress which was necessary to give birth to the alphabet, to consummate the intimate union of

writing with speech, to definitively emancipate the human mind from the swaddling clothes of primitive symbolism, and to permit it at length freely to take its upward flight, in giving it an instrument worthy of itself, of perfect clearness, suppleness, and fitness."

This he believes, in accordance with the general opinion of early authors, was achieved by the Phenicians, whose commerce brought them into constant intercourse with the Egyptians, who, it should be stated, had three systems of writing, all varying in form according to their antiquity.

1. The *hieroglyphic*, in which the signs were engraved or written with great care and distinctness.

2. The *hieratic*, in which they were written in a cursive and degraded form; and

3. The *demotic*, for more ordinary use, in a still more degraded form.

M. Lenormant gives a table of the letters of the Archaic Phenician alphabet, with the corresponding phonetics of the Archaic Egyptian hieratic, and their comparison leaves little doubt but that the Phenician letters were taken, both as regards figure and value, from the hieratic, as it existed in Egypt previously to the invasion of the Shepherd Kings of the 15th, 16th, and 17th dynasties, which separated the old empire from the new, and are supposed to have terminated prior to the time of Moses.

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