THE CHILDHOOD OF HELEN KELLER

BY

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"A deeper import lurks in the legend told my infant years
Than lies upon that truth we live to learn."

(Quiller-Couch, in the *Oxford Book of English Verse*.)

"There was a time when meadow, grove and stream,
The earth and every common sight
To me did seem
Apparell'd in celestial light
The glory and the freshness of a dream."

(William Wordsworth. Ode: *Intimations of Immortality*,
from *Recollections of Early Childhood*.)

The above quotations speak to the existence, and in the first quotation the permanence, of early impressions gathered in childhood. They are from the experience of gifted but otherwise normal people, and may be taken as representing the experience of the average adult, who, however, would not express his recollections in such poetic fashion. I have quoted them to introduce an equally gifted woman who, as a child, suddenly lost the two great avenues by which impressions reach the mind. It may be that the study of such a case will give some light on the value of early impressions. I refer to Helen Keller, who was made completely blind and deaf at the early age of 19 months. Much has been written about the early years of Helen Keller, but I have her own assurance, and that of Anne Sullivan, her teacher, that no exhaustive examination has been made of Helen's first nineteen months, when she saw and heard.

Lately, when the guest of these ladies in the Scottish Highlands, I raised a question which has often interested me—namely, "The Story of the Frost King." This story, spelled into Helen's hand at the age of 8 years, when she could not possibly understand it, was unwittingly reproduced by her as her own at the age of 11 years. It was called a plagiarism, but this it was not, for Helen was unconscious of ever having heard it. But it was so well reproduced that its source could not be denied. Miss Canby, its author, thought it in some respects better than the original. What happened in Helen's mind during the interval of those three years "in the underground laboratory of her thought"? I do not know, but the problem suggested an inquiry into the question. What became of the impressions gathered into Helen's mind, and stored away somewhere, during the nineteen months of seeing and hearing? Were they lost or had they merely lost their labels (for the time at least)?

There are two or three physiological and clinical facts which must be stated before entering on the case of Helen Keller.

1. There is a hereditary tendency to use language, although it be only a sign language, in all the higher animals, including man.
2. There is in man a hereditary tendency to speak—although not to use any particular form of spoken language—and the centre for the acquisition of speech is Broca's convolution, near the juncture of the lateral aspect and the base of the brain.
3. It is probable that objects have little definite form to the eye, or sound definite meaning to the ear, during the first three months of life. The next eighteen months are, however, very fruitful in the acquisition of impressions, both of sound and of sight, and through repetition by parent and nurse most common objects are recognized by their names. After the first year many of these names are not only recognized but by successful imitation are repeated by the normal child.
4. Sudden deafness, when complete and when occurring during the first three years of life, is followed in a short time by the loss of speech. This occurs in two or three months, unless means are at once taken to perpetuate the speech. The names of objects get wiped out or the labels are lost.
5. Such lost speech may be resurrected by the teacher. It is easier to recover speech in such a child than to create speech in a deaf-born child. Every teacher of the deaf knows

this. The extent of the acquired vocabulary at 18 months or 2 years varies with the rate of development of the child, but is always less than that understood by the child.

(Note.—Preyer gives figures for the number of words used at 2 years as 100 to 1,000—probably about 400 or 500. These words are a much more recent acquisition than the knowledge or recognition of the things and actions they denote, and are therefore more easily lost should sudden deafness occur.)

Believing that some parallel might exist between the "Frost King experience," on the one hand, and the gap in Helen Keller's life from 19 months, when she lost her sight and hearing, and the coming of Anne Sullivan, when Helen was 7 years of age, on the other, I began a cross-examination of both teacher and pupil. Whether the parallel could be sustained or not was not of the first importance. If it suggested a useful line of inquiry good might come of the effort.

I have intentionally left Wordsworth's verse at the head of this paper incomplete, for he finishes thus:

"The things which I have seen I now can see no more."

But Wordsworth had an unbroken series of subsequent impressions which obscured his earlier ones. Helen has none of this, except through the senses of touch and smell. Was this an advantage or not? It isolated or cut off her earlier experiences. It was a disaster to Helen. Had it any compensations for the student of child life? I hope to show that it had.

How far back does the adult memory go into the recollections of childhood? In my own case not earlier than the fifth year. In some of my friends it goes back to the fourth year, and in one or two to the third year.

In Helen Keller's case it certainly goes back to the second year. She is quite positive that she remembers a tremendous pain in her eyes and a fear of light. These, along with screaming and tossing about, were features of the illness which destroyed her sight and hearing. This evidence must be put in a class by itself. Helen remembers nothing more of this early seeing and hearing time. But the experience was a striking one, and may well stand out from all that went before or along with it. It needed no name or label. As we have seen, the names of things soon went—the writing was rubbed out—the label lost. But were the things the names stood for quite forgotten, quite lost? Because if not some light may be thrown on Helen's subsequent mental history. Even her present marvellous powers of description of nature may be in part accounted for. Given a skeleton of fact and a vivid imagination a blind-deaf person may become anything, even a poet, and Helen is essentially a poet. The best authority on this subject is, of course, Anne Sullivan, her teacher, who, along with Helen herself, brought out some interesting points, of which I quote the following.

Evidence of the Second Class

1. On Miss Sullivan's arrival, one of the first things Helen did was to take her teacher's hat, which lay on the bed of the room, and putting the hat on her own head went to the mirror and, preening herself, adjusted the hat to various positions. When Helen was a baby she was often put before a mirror to see herself and her blue eyes.
2. When Helen was given a pipe with which to produce soap bubbles, she, without any hint, put out her hand to feel for the bubbles—bubbles she could not see and had not been told about. It was known that during her seeing period she had, along with a little friend, produced such bubbles. Helen says that when she puts her hands into soap bubbles and the sun shines on them she feels them sparkle and quiver. Here is an association of touch with recollected sight.
3. Heat is always associated in Helen's mind with light. When she stands before a fire or radiator she always turns her face upwards as she did and does to the sun. This is an association in Helen's mind of heat with light or brightness.
4. When given a banjo, Helen at once began to twang the strings. Now in her father's house, which was a large one, an old nigger used a banjo much as a piper uses the bagpipes in Scotland. During her childhood this old nigger sat about the door and played the banjo, and during her hearing period Helen heard the banjo and saw the playing of it.

5. Helen's father was a newspaper proprietor, but also a gentleman farmer who hunted and had dogs. Helen herself was attended by a black nurse. Helen's dreams, since she was able to express anything, have been visual. A common dream is of a person putting out her hand "to grasp me" showing evil intent, and this person is always black. As Anne Sullivan says, "Helen is not blind-minded."

In dreams, too, Helen is conscious of the eyes of other people and of animals. Fear, alarm, and astonishment are common in childhood. Here they are linked to a definite recollection. Helen Keller has discussed her dreams in *The World I Live In*. I quote the following apropos of what I have said above:

"In my dreams I have sensations, odours, tastes, and ideas which I do not remember to have had in reality. Perhaps they are the glimpses which my mind catches through the veil of sleep of my earliest childhood. I have heard 'the trampling of many waters.' Sometimes a wonderful light visits me in sleep. Such a flash and glory as it is! I gaze and gaze until it vanishes."

(Note.—It should be stated here that Helen Keller has no recollection of having used such childish words as mamma, dadda, tata, baba—the labial and dental words usually spoken by children in early childhood. Helen states that she thinks her dreams have perpetuated her memories of what she once saw and heard.)

With such a skeleton of nearly forgotten impressions, and with her remaining senses of touch, smell, and taste, Helen Keller, aged 7, met her teacher, Anne Sullivan, and then began the most remarkable educational triumph of which we have any record. Miss Sullivan had little to build on, for be it noted at once that Helen Keller's sense organs were not then, and are not now, more acute than the average. What takes place, then, in the blind or the blind-deaf is not a change in the terminal sense organs of the fingers or nose, but the better use of the impressions sent from the terminal organs to whatever exists inside the skull; call it mind, soul, or aggregation of grey matter with connecting fibres as you will. Dr. Tilney, in an exhaustive examination of Helen Keller's sense organs, has settled all doubt on that point as far as Helen is concerned.

The normal child goes on adding to his sense impressions after the age at which Helen had to stop. But he goes on with help other than his senses. His mother tells him fairy tales, he falls into the hands of a teacher who, in some sense, educates him: he reads books, and in a year or two his mind is so packed with information from various sources that it is not possible to say whether what he knows is from first-hand or second-hand, or from any further out source. Listen to Mark Twain on Helen Keller and the Frost King incident. "Substantially all ideas are second-hand, consciously and unconsciously drawn from a million outside sources and daily used by the garnerer with a pride and satisfaction born of the superstition that he originated them. Whereas there is not a rag of originality about them except the little discoloration they get from his mental and moral calibre and his temperament, which is revealed in characteristic phrasing." Even allowing that Mark Twain was in a temper and defending a heroine, what he says is substantially true. There is little originality in anything we either do or say.

Helen's perceptual world is very accurate for near objects. Take the case of a horse. She has passed her hand over its body, has fondled its nose and neck, and has had her affection returned. She knows the mould of its fetlock, the texture of its coat; in fact she knows all about it except its colour. She has ridden a horse, been thrown from it and got on its back again, and she is a poet; she might write a poem like Byron's *Mazeppa's Punishment* quite well. I do not think Byron tells us the colour of Mazeppa's horse. She has crawled into the newly excavated dwellings of the Picts in Orkney and Shetland, and come out with a better idea of bed and fireplace than those who saw the interiors. So much more accurate and memory-fixing is the sense of touch in the blind than that of sight, in most ordinary people.

For a general notion of the world beyond the reach of her fingers or her sense of smell, of course, Helen has to borrow, and she tells us how she gets the scaffolding of facts from her teacher and Miss Thomson. There is no hypocrisy about Helen Keller. It is here, however, that I believe Helen Keller resurrects the once vivid impressions of early childhood—those of colour and sound. Those impressions for a time have lost their names, but the percepts have not been lost. They have only faded and, with her imagination, she can paint a vivid picture. This world beyond the reach of her hand has been brought near her by Miss Sullivan. Her teacher has, on the banks of the Tennessee, made a toy world for Helen with sand mountains, and real water forming the associated rivers and lakes.

Helen is a good walker and climber, so she knows something about a mountain top, she is also a good swimmer and knows a great deal about the sea, and she has felt the rush of the air caused by the wings of a thousand birds at the Island of Nos in the Shetlands. Helen Keller therefore is not space-blind; she knew before her sight and hearing were lost all about a three-dimensional world, how things were either to one side or the other, above or below, and in front or behind one another. Guided by her sense of touch and that of smell her space-knowledge has been kept in operation. Then it must be granted that she had then, as she certainly has now, a wonderful memory—the Frost King incident proved that.

Lastly, she has had the whole attention, during nearly fifty years, of a fine teacher, who has devoted her life to a receptive pupil with this tenacious memory. Any teacher of the deaf or the blind will agree as to the advantage this confers. Indeed, every deaf child should have for some years a whole-time teacher. Unless Miss Sullivan had given her whole time to Helen we should never have had the educational result which continues to astonish the world.

Such are examples of the perceptual skeleton which Helen clothes with imagination and produces as a prose poem. One cannot live with her for an hour without the poet breaking out. Recently, on a motoring run in the Highlands, when the weather was changeable—the B.B.C. announcer would have called it "showers with bright intervals"—Helen said, "I feel the mist and the sunshine chasing each other on my face"; and again referring to the weather of the same day, "In Scotland one is always on the edge of the unexpected."

What I have written is not an attempt to explain the whole mind of Helen Keller; she has herself done this well in *The World I Live In*. I have tried to resurrect some impressions of her early childhood, which she could not recover alone because the names of such perceptions had been lost. But the impressions, the perceptions, were not lost, as she herself says:

"During the first nineteen months of my life I had caught glimpses of broad green fields, a luminous sky, trees and flowers which the darkness which followed could not wholly blot out. If we have once seen, the day is ours and what the day has shown."

The above quotation from Helen's book, *The Story of My Life*, is interesting. For two summers she lived in the brilliant sunshine of Alabama on her father's farm, where the main features of external nature were broad green fields, flowers, and a luminous sky, and where all the life of a farmyard completed her world. During those two summers she had her sight and hearing. There is no record that she was anything but a bright, ordinary child, and no first-hand reference can be got, for Helen's father died early, her mother has been dead some years, and Helen was the eldest child: but her subsequent development warrants the opinion that she was from the beginning an unusually bright child.

It is perhaps worth while emphasizing this point. In four months after Miss Sullivan's arrival Helen Keller writes letters which an ordinary seeing and hearing child cannot write after years of schooling. In seven months Mr. Anagnos of the Perkins Institution for the Blind wants a picture "of Helen and of her illustrious teacher

to grace the pages of the forthcoming annual report." In a paper like this I cannot quote those letters, but I pass on to one written to Oliver Wendell Holmes on March 1st, 1890, three years after Anne Sullivan's arrival, and beginning "Dear Kind Poet"; and this is Holmes's comment: "Anthropologist, metaphysician, and, most of all, theologian, here is a lesson which can teach you much that you will not find in your primers and catechisms. Why should I call her 'poor little Helen'? Where can you find a happier child?" Psychology was not so fashionable in Holmes's time as it is now, but I would add "psychologist" to his list. Clearly we are not dealing with an ordinary child in little Helen Keller.

REFERENCES

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SILICOSIS AND TUBERCULOSIS IN SOUTH AFRICA

REPORT OF THE MINERS' PHTHISIS BUREAU

A report on the work of the Miners' Phthisis Medical Bureau, covering three years, has been compiled by its chairman, Dr. L. G. Irvine, and is published by the Government of the Union of South Africa.¹ Since 1929 the number of routine examinations has grown rapidly. Assumption by the Bureau of direct responsibility for the periodical and initial examinations of non-European miners accounts for some of this increase, but the greater part is explained by the large number of examinations of European miners or of prospective recruits for mining. The Bureau is compelled to examine anyone who cares to apply for an initial examination before taking up mining work, and although the standard of health required is very strict the number of those approved is considerably above that which the industry can absorb at present; hence much of the work appears to be wasted. It is suggested that the present system will have to be modified if the industrial depression continues. At the request of the City Council of Johannesburg the Bureau undertook the routine examination of persons employed in rock drilling for sewer construction. Several well-marked cases of silicosis were discovered among these, and there were two deaths. Other municipalities have therefore been warned of the danger attaching to this kind of work, and of the need for rigorous control of such operations from the point of view of dust prevention.

INCIDENCE OF SILICOSIS

Whereas the average number of returns of compensation for this disease in the four years 1912 to 1916 was over 800, the combined number of all new cases of silicosis and tuberculosis with silicosis detected by the Medical Bureau during the three years 1929-32 among miners who had been at work since 1916 has averaged annually under 300. Since the number of miners employed underground was for both periods much the same—namely, about 11,000—these figures are fairly comparable, and indicate a decline in the incidence of about 60 per cent. It is pointed out, however, that the actual number of cases of silicosis in any year depends on factors which are variable. In the two three-year groups 1920-3 and 1928-31 the annual average was the same, namely about 251 cases, but between 1923 and 1927 there was a pronounced rise above this level. The most reliable measure of incidence is provided by the actual rates of liability to contract the disease shown by miners working in each successive year of underground service. These rates have undergone a marked, though not uninterrupted, decline during the past fourteen years. The general liability of the working

miner to contract silicosis was reduced between the triennium 1920-3 and 1931-2 by no less than 55 per cent. This Dr. Irvine regards as the true measure of the improvement. Yet the number of cases detected has shown no proportionate decrease, but rather an increase, which is attributed by him to two factors. A considerable proportion (but less than one-half) of the increase in cases in 1923-6 he attributes to changes in the standard of diagnosis and selection of early cases which were adopted by the Medical Bureau during that period as the outcome of improved radiological technique and accumulated experience. A still more important factor in this increase was the very marked rise since 1920-3 in the number of miners working in the later years of underground service, at which the incidence of silicosis is at a maximum. The actual figures are thus the net result of the operation of two conflicting influences: a decline in the liability to contract silicosis, and the progressive heaping up of miners in the later years of service. The first influence has now become dominant, and is of very encouraging import for the future. There has been much improvement in the environmental conditions and also a lessened liability of the individual to contract the disease.

PROGRESS OF THE SILICOTIC LESION

Returns are published in the report indicating the subsequent history of silicosis cases. The most serious feature of this condition is its progressive tendency. Three factors appear to be concerned in this. Even in the absence of infection or of further exposure to dust, a simple, uncomplicated silicosis often shows much advance, probably by reason of the amount of silica dust retained in the lungs. A final degree is reached, however, and the process is then arrested, unless an active tuberculous infection develops. Again, in the silicotic lung there exists a high potential predisposition to the ultimate development of active tuberculosis. This heightened susceptibility may be caused by reactivation of a pre-existing focus of tuberculous infection, or by a reinfection occurring simultaneously with, or subsequent to, the development of the silicotic lesions. Thirdly, in a lung significantly occupied by silica dust, a tuberculous infection commonly tends to develop atypically, with the production of chronic indurated lesions of mixed silicotic and infective origin. These are generally slowly progressive, and may become very extensive, but they also may, and often do, undergo long periods of virtual arrest. To these characteristic lesions the term "tuberculo-silicosis" has for many years been applied in South Africa. The excessive fibroid reaction which they present tends on the one hand to restrict and retard the spread of the tuberculous infection, both in the lung and to other organs, but, on the other hand, this reaction renders the infection less capable of an ultimate practical cure. Although, in consequence of this characteristic feature, the ultimate manifestation of active tuberculosis may be long delayed, the latter condition is by far the most common cause of death in cases of silicosis. The existence and the common concurrence of these factors explains the numerous variations in the development and character of individual cases. Those which are highly infective from the onset progress rapidly, some patients dying within a year. In others the disease may reach a condition of prolonged or virtually indefinite arrest. Nevertheless, the intrinsic tendency of silicosis to progress is on the average very pronounced and singularly uniform. It was hoped that with the introduction in 1919 of compensation for the ante-primary stage of silicosis, and with the removal from underground work of miners in the earliest detectable stage of the disease, the subsequent progression would be modified favourably and substantially. This expectation has not been realized. It would rather appear that the only definite advantage gained by the earlier diagnosis and removal of cases has been in the direction of slightly retarding, without in the long run substantially modifying, the intrinsic progressive tendency of the disease, at all events during the first five or six years of its course. The cases which progress to the secondary stage in the first few years after their detection are those in which an

¹ Government Printer, Pretoria. U.G. No. 22. 1933. (3s. 6d.)