¶Today's miracle.

THE HEARING EYE

It's well nigh impossible for us who are born with the twin abilities of speech and hearing to realize what a child who is born deaf goes through. Such children are unable to talk, not because they haven't the physical organs to do so, but because, never having heard the faintest sound, they have absolutely no conception of what speech is.

Let's look at my little friend Mary, three years old, chubby, blue-eyed and blonde—a beautifully healthy baby. Yet her parents were beginning to be tortured with worry. Slowly but surely it became apparent that she was unable to learn *anything*. The lower half of her pretty face became cloaked with listless lack of expression.

It was not the child's inability to learn to talk which frightened her parents as much as it was her complete lack of a healthy childish interest in her surroundings. Her indifference gave rise to the fear that her brain might be subnormal, tainted with idiocy.

When she was almost four her parents took her to a specialist. They were desperate and asked him outright whether there was anything wrong with Mary's mind.

The doctor perched Mary atop a high revolving stool. Then, striking a tuning fork close to each of her ears, he watched her eyelids closely. He was looking for the reflex twitch which, if present, proclaims rudimentary hearing. Mary stared fixedly—her lids still. The doctor repeated this as many times as he had different forks, testing her reaction to every note and half note.

Then he spun the stool rapidly with Mary still on it. After she had whirled for about thirty seconds, he stopped her abruptly and carefully scrutinized her eyes. They did not move. If a pre-speech baby has any ability, however weak, to decipher sound, spinning her around like this excites the fluid in the semi-circular canals of the ear. In turn this activates one of the motor nerves of the eyeball and causes it to move. The test is given in two planes, so the doctor laid Mary on his examining

table and spun her horizontally.

When he once more halted her with a jerk, she looked up at him and smiled, her big blue eyes steady and motionless. Wearily, the doctor turned to her nervous parents.

"Your baby's totally deaf," he told them.

He was a careful doctor. Before he told them that Mary had been *born* without hearing, he gave her a Wassermann test to make sure. "Hereditary" syphilis deafens many children between the ages of two and four. Prompt medical attention in these cases can very often restore a good part of their hearing. Little Mary's Wassermann was negative. There was no doubt she was born deaf. What was to become of her?

Schools for the deaf teach the little deaf child the sign language and let it go at that. A child whose only contact with the world is the sign language must necessarily confine all his conversation to those who are similarly afflicted. It is difficult to imagine why instructors persist in teaching it. Especially now after it has been indisputably proven that *all children born deaf can be taught to speak.*

Dr. Max Goldstein, head of the Central Institute for the Deaf, in St. Louis, claims that every congenitally deaf child has the potentialities of speech. But teaching these little tots to talk still leaves them totally deaf. How can they carve a normal niche for themselves out of their stone deafness?

What did little Mary do? She lived in Brooklyn so her parents had their choice of sending her to one of two excellent schools—the Lexington School for the Deaf, at 904 Lexington Avenue, or Public School 47, at 225 East 23 Street, both in Manhattan. They chose P. S. 47 which is ably administered by Miss Carrie W. Kearns. She has a peculiar hobby. It seems her chief joy in life is being orally thanked for her work by pupils who were speechless when they came to her.

The keynote upon which the success of all these schools is based is a combination of kindness and patience.

About four is the best age to begin instruction. The only two things the children really know then are hunger and sleep. It's not always easy to get them interested to toys. But usually after they spend some time in a room with other children who are playing they sooner or later imitate

them. As soon as they show a fondness for playing they are given toys which start them on a series of simple associations—manipulated toys.

One of them is a board with a square, around, an oval, and a triangular hole cut through it. Four pegs which correspond with the holes are furnished with the board. The idea is to get the child to fit each part into its proper place. Sometimes it takes months to teach them to plug the right holes with the pegs.

After they have learned this lesson they are shown pictures of fingers and feet and other parts of the body. As they look at each picture they are encouraged to touch the same part of themselves. In this way they complete a long chain of associations and finally are able to recognize and match pictures of kettles, cats, and all sorts of things.

At this stage of the game the children make noise, slamming their toys around with excess youthful energy. They are happy. When the child is well versed in his pictures and can identify and match them without mistake, the teacher begins pronouncing the names of them. This gives the children their first introduction to lip reading. They become used to seeing the same mouth movements accompany the same picture.

Next the instructress seats herself a few feet away from her pupils, facing them, and sticks her tongue out as far as it will go. First she wags it up and down smartly, then sweeps it from side to side.

The children, that is, most of them, grimace gleefully back at her, waving their tongues waggishly. With all their children's delight in making faces it is impossible for them to resist the grown-up example in front of them.

Remember, these children have never spoken a word in their lives. Before any attempt can be made to teach them to speak, their vocal cords must be strengthened through exercise. Most of their vocal organs are in the state your legs would be had you never been allowed to walk, functionally perfect, but weak and unagile.

After these exercises have made the children's faces facile, the instructress lights a row of candles and blows them out, one by one—*phft, phft, phft.* She uses a great deal of gusto doing it and the attendant noise is not unlike a fruit-

ful jeer. When she's finished, she lights them again. This time she lets the children blow them out. As they blow they make the same noises she made.

"Phft, phft, phft" are usually the first controlled sounds the child makes. Now the child's vocal organs are ready to talk.

The teacher next strikes a tuning fork and touches one of the child's fingers with it until the oscillations are completely dampened. It tickles the child at first and his only reaction is to smile and squirm as he feels it. He does not realize that he is being introduced to sound along the only avenue leading into his mind—the sense of touch.

In the next scene the child sits in the teacher's lap and presses his little hands against the cheeks and throat of his tutor.

"Cat, cat, cat." Over and over again the teacher enunciates sharply, the pupil watching her lips intently. Each time the teacher pronounces the word "cat" she points to a picture of the tabby.

This is the first training of the child's hearing eye. He watches the teacher's lips and feels the vibrations of her cheeks and throat until the teacher can say "cat" and have the child pick out a picture of a cat from an assortment of other animals. It's a long drawn out process and they both plug at it until the child has a vocabulary of about a hundred common household words that he can either read from lips or identify from cheek and throat vibrations.

When the child's ability to interpret satisfies the teacher, she shifts one of the baby's hands from her cheek to his own.

"Cat, cat, cat," the child feels his tutor repeat. The teacher's voice is clear, yet not exaggeratedly perfect by any means. After all, the child in her lap must be taught to lip read and speak ordinary colloquial English. "Cat, cat, cat," she continues patiently.

You can see the child concentrate on his fingertips which lightly clutch his own throat.

"Ket, ket—*cat.*" The child is talking! His voice is unnaturally high and quavering, but all that will be taken care of later.

These children's sense of touch becomes remarkably sensitive. When they are perfectly acquainted with the vibrations of the teacher's throat, they make use of their marvelous mimicry and reproduce the same vibrations in their own throats. They imitate the lip move-

ments of the teacher too. When their vibrations and lip movements are the same as the teacher's, they are talking, although most of them don't know it at first.

Naturally nothing is done about modulating the voice until the child can talk fairly well because pronunciation is more important than pitch. Yet none of these children has any idea of tone. A few begin to talk in a basso profundo, but by far the greatest majority of them start by squeaking.

If a child starts talking too high in the scale, they lay him down on the floor. The pitch of his voice goes down with him. No one seems to know exactly why this happens, but it probably has something to do with the relaxation of his throat muscles when he lies limp.

On the other hand, if the child begins to speak in an offensively deep baritone, they stand him atop a chair and his voice rises with him. Here it's probably the tension accompanying height which raises his tones.

The child is taught ordinary reading, writing, and arithmetic. If he's old enough, handicrafts; then later, trades. Deaf schools were the first pioneers in industrial education. They have long known the value of the manual arts. The pupils weave beautiful cloth by hand loom, beat fine copper ware, work lathes and furnaces.

About half of the child's eventual success in the world depends on lip reading. They become almost unbelievably skillful at it. So adept that they can carry on a rapid conversation with a teacher who has her hand completely covering her mouth and exposes only the profile of her cheek to her listener. Demonstrations of this sort are not tricks. The teachers use ordinary conversational facial movements. This is however a rather rare degree of optical dexterity.

There is really nothing outstanding about deaf children who have been taught to talk, except perhaps a certain succinct quality about their speech. They speak well but never talk merely to hear their own voices. Theirs is a great victory, great because the more thoroughly they win it, the more completely they hide their long fight from us.—*Vincent Boslet, condensed from The Commentator.*

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