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INTRODUCTION OF THE ARTICULATING SYSTEM FOR THE DEAF IN AMERICA.[1]

WE are gathered to-day to celebrate the twenty-first anniversary of the opening of the Horace Mann School and the dedication of this building to its use. The many friends that surround us, the band of experienced teachers, the large number of pupils, this new and beautiful building, mark it as the day of our prosperity.

It seems fitting on this occasion to spend a few moments in recounting the causes that led to the establishment of this school, in showing what it has accomplished for the education of the deaf at home and abroad, and in recalling the memory of him through whose instrumentality it was founded.

This was the first public day-school ever opened to deaf children. Before this, they had been gathered into institutions apart from friends, isolated from the world around them, a distinct and separate community. This plan was thought necessary to their education. Our experiment, carried on for twenty-one years, has proved, by its continued and growing success, that to the deaf as well as to others all the advantages of school education can be extended without the severance of home and family ties. As the direct offspring of this the first day-school, similar schools have grown up in other States, and its influence is felt through the length and breadth of our land.

Have we not reason to be glad of the past, and take courage for the future? But this school represents not merely the opening of the first day-school, but, with the Clarke Institution, the introduction and development of a system of education for the deaf until then unknown in this country. Before that time the education of the deaf had been carried on by the sign-language. That this system had accomplished great and good results we gratefully acknowledge; but in our midst was growing up a distinct race, using a language of their own, unknown to their friends, without literature, and, though perhaps often beautiful and expressive, still vague and indefinite.

Perhaps but few who rejoice with us to-day can go back in memory to the time when, in doubt and anxiety, but with courage and hope, our little school was opened, and still further back to the introduction into this country of the oral system of deaf-mute education which this school has helped to develop.

Let us briefly review the history of deaf-mute education in this country from its commencement; and, if my narrative becomes somewhat personal, may I be excused. All great movements start from a small centre. Our broadest charities have grown from some individual human need. My own interest in the education of the deaf, and my earnest efforts to introduce what I believed a better method of instruction than the one then in use, sprang first from my anxiety for my little deaf child.

Early in the present century the parents and friends of a little deaf girl in Hartford, Conn., sought for her some means of education. There were no schools for the deaf in this country, and the Rev. Thomas Gallaudet was sent abroad to visit the various institutions in France and Germany, and study the methods of instruction. He brought back the French system of the Abbe de l'Epée. On inquiry, a number of deaf children were found, and the American Asylum at Hartford was incorporated. An appropriation was obtained from Congress and from each State from which pupils were sent. Other schools were opened in different States from time to time, and in all the sign-language was used.

Vague reports were occasionally brought to this country of another system, used in Germany, where the deaf were taught to speak and read from the lips. Nothing definite was known in regard to this system until 1843. In that year Mr. Horace Mann, then secretary of the Board of Education from Massachusetts, and Dr. Howe, went to Europe to study the various systems of education. They visited several schools for the deaf in Germany, and were surprised to find deaf children taught to speak and read from the lips. On their return, Mr. Mann published a report, and strongly advocated the adoption of the German oral system of instruction in this country.

His report excited such general interest, that the American Asylum and the New York Institution sent gentlemen abroad to investigate the subject. They reported that the sign-language was used in France, Italy, and Great Britain, and the oral system in Germany only; "that in the case of the great majority, instruction in mechanical articulation was attended by too little benefit to compensate for the serious efforts made in attempting it," and therefore no material change should be made in the American schools. A teacher of articulation was employed for a short time at the American Asylum; but the results were not satisfactory, and the system was abandoned. Earnest and devoted teachers labored faithfully to develop the mind and train the faculties through the medium of the sign-language. Much was accomplished, many a darkened mind was brightened, many lives enriched, many a saddened heart made glad; but the child was a foreigner in its own land, comprehending and using a language known only to the institution. It was taught to read and write the English language, but it remained always an unfamiliar tongue. The medium of instruction met the natural expression of its thoughts and feelings.

In 1860 my little girl lost her hearing through a fearful illness. She was a bright, intelligent child of four years, but her language was lisping and imperfect. When convinced of her deafness, our great anxiety was to retain her

[1] Address delivered by the Hon. Gardiner G. Hubbard at the twenty-first anniversary of the Horace Mann School, Boston, Mass.

language, and to know how we might carry on her education. We asked advice of one of the oldest teachers of the deaf. "You can do nothing," was the answer. "When she is ten years old, send her to the Institution, where she will be taught the sign-language."

"But she still speaks. Can we not retain her language?"

"She will lose it in three months, and become dumb as well as deaf. You cannot retain it."

It was in this time of our discouragement that we heard of the visit of Mr. Horace Mann and Dr. Howe to the schools of Germany, and their report in favor of the oral system. We turned to Dr. Howe for help. He told us that even children born deaf could be taught to speak, and encouraged us to talk to our little girl, and to teach her to recognize the spoken words of our lips. He warned us not to use nor to allow any signs, and never to understand them. Cheered by his encouragement, but discouraged by all other teachers of the deaf and by our own ignorance, we groped our way. Gradually light dawned. The child began to recall words forgotten in her long illness, and to add new words to her vocabulary learned from our lips. A young teacher, Miss True, who has ever since been devoted to the instruction of the deaf, but was then totally inexperienced, though admirably fitted by nature and training for the work, came to our aid. Our little girl joined her sisters in their lessons and their play. She knew no signs, she spoke imperfectly but intelligibly, and understood those around her. It was in after years that she told me she did not then know that she differed in any way from other children, and sometimes wondered why strangers would address her younger sister rather than herself. Meanwhile, under Miss True's intelligent teaching, her mental development progressed rapidly, and her language grew daily. We could not but feel that we had chosen the better system of education for our child, and earnestly wished other deaf children might share its advantages. We were confirmed in this opinion when, on a trip to Washington, we called with our little girl on Mr. Gallaudet and his mother, a deaf-mute. As she observed the child, and witnessed the readiness with which she understood and answered Mr. Gallaudet, she turned to her son and asked, "Why was not I taught to speak?"

In 1864, in connection with a few friends and aided by Dr. Howe, we applied to the Legislature for a charter for a school where the system of teaching articulation and lip-reading should be used. Hon. Lewis J. Dudley of Northampton, a member of the Senate and of the Committee on Education to which our petition was referred, had a daughter born deaf, then a pupil in the American Asylum. He was convinced from his own observation that it was impossible to teach the deaf to speak, and through his influence our efforts were defeated.

Not baffled nor discouraged by defeat, we then, with the aid and sympathy of a few friends, determined to open a little school of our own. After eight months of waiting for pupils, our school was opened at Chelmsford, in June, 1866, with only five pupils; but Miss Rogers was their teacher. Her sister had been with Dr. Howe as the teacher of Laura Bridgman and Oliver Caswell, both deaf, dumb, and blind from their birth. How identified Miss Rogers has been with the whole work from the very beginning, how much of its success is due to her earnestness and entire devotion, we all know.

Since the first days of that little school, teachers equally faithful, equally devoted, equally earnest, have entered into the work, and have carried it on to its present success; but Miss Rogers gave it its first start. Hon. Thomas Talbot, then lieutenant-governor, and brother-in-law of Miss Rogers, became interested in the work, and encouraged us to apply again to the Legislature. Mr. Talbot called with me on Gov. Bullock to secure his aid. To our great surprise and pleasure, the governor informed us that he had just learned that a gentleman in Northampton had been watching our work, and was ready to give fifty thousand dollars towards the endowment of a school for the deaf in Massachusetts, and that he would gladly help us.

In his annual address to the Legislature, in 1867, he said, "For successive years the deaf-mutes of the Commonwealth, through annual appropriations, have been placed for instruction and training in the asylum at Hartford. While, in the treatment of these unfortunates, science was at fault and methods were crude, in the absence of local provisions, this course was perhaps justifiable; but with added light of study and experience, which has explored the hidden ways and developed the mysterious laws by which the recesses of nature are reached, I cannot longer concur in the policy of expatriation, for I confess I share the sympathetic yearnings of the people of Massachusetts towards these children of the State detained by indissoluble chains in the domain of silence. This rigid grasp we may never relax; but over unseen waves, through the seemingly impassable gulf that separates them from their fellows, we may impart no small amount of abstract knowledge and moral culture. They are the wards of the State. Then, as ours is the responsibility, be ours also the grateful labor; and I know not to what supervision we may more safely intrust the delicate and intricate task than to the matured experience which has overcome the greater difficulty of blindness superadded to privation of speech and hearing. In no other object of philanthropy the warm heart of Massachusetts responds more promptly, assured as I am, on substantial grounds, that legislative action in this direction will develop rich sources of private beneficence. I have the honor to recommend that the initial steps be taken to provide for this class of dependants within our own Commonwealth," etc.

This portion of the message was referred to a large joint special committee, of which Mr. Dudley was chairman on the part of the House. Dr. Howe and Mr. F. B. Sanborn (the chairman and secretary of the Board of State Charities) appeared for that board; I represented petitioners for an act of incorporation; while Rev. Collins Stone (the principal of the American Asylum), Rev. W. W. Turner (its former principal), and Hon. Calvin Day (one of its vice-presidents) appeared in the interests of the asylum as advocates of the sign-language, and as opponents of our petition. A large number of deaf-mutes, with Professor D. E. Bartlett as interpreter, were also present. At one of the hearings my daughter was called before the committee, and questioned in arithmetic, history, and geography. Her answers were satisfactory.

To test her general intelligence, a gentleman asked, "Can you tell me who laid the first Atlantic cable?" Quickly and smilingly she answered, "Cyrus Field." The committee was convinced that her progress and intelligence were equal to that of most hearing children of the same age, and gave us our charter. At one of these hearings our little girl saw for the first time the deaf-mute's signs, and asked why deaf-mutes did not speak with the lips, as she did, for she thought it a great deal better to talk with the mouth than with the fingers.

Mr. Dudley became convinced of the superiority of the

oral system, and, with tears in his eyes, asked if his little daughter could ever be taught to speak. In a year he heard from her lips the words "father" and "mother."

Miss Rogers removed with her little school to Northampton, and became its principal. Thus the first school for teaching articulation, lip-reading, and oral instruction, was established in this country.

A member of the committee from Boston, also a member of the school committee of Boston, took an especial interest in the hearing. He attended every meeting, and visited our little school at Chelmsford, called repeatedly to see our daughter, and aided us by every means in his power to obtain our charter, having first inserted a provision giving us the right to establish schools in two other suitable places besides Northampton. The name of that gentleman was Dexter S. King. His interest in the education of deaf children, instead of ceasing with the granting of our charter, increased.

Scarcely was our school opened, when he asked that a branch might be started in Boston. This we were unable to do. Mr. King, as a member of the school board, secured the appointment of a committee to consider this subject in 1868 and 1879. The city was canvassed. Fifty deaf children were found, of whom only twenty-two were in school. Twenty-eight were at home, with no one able to render them aid in their search for an education. The committee established this school by the name of "The School for Deaf-Mutes." It was on Nov. 10, 1869, in a room in the old schoolhouse in East Street, with nine pupils. In one week an afternoon session had opened for eleven other pupils in the schoolhouse on Somerset Street. In January, 1870, it moved into suitable quarters on Pemberton Square, where it remained for several years.

When Mr. King retired from the school committee of the city of Boston, in 1871, a series of resolutions were passed,—"that to him was mainly due the project of establishing in this city a public school for deaf-mutes, the first institution of the kind in America,"—and expressing the thanks of the board for his valuable services.

For the remaining years of his life he was almost a daily visitor at the school. In the year 1873 the name of the school was changed to "The Horace Mann School." A principal was necessary who could not only instruct the deaf, but could supervise all the interests of the school, securing both the affection of the pupils and the confidence and respect of the school committee. To Miss Fuller this school and the deaf children of America owe a debt of gratitude that can never be repaid.

A few years later an English gentleman, Mr. B. St. John Ackers, visited the various schools of England and America, seeking for the best means of educating his own deaf child. He decided that she should be taught by articulation rather than by signs, which was the system then used in the English institution. He was so much pleased with this school, that he engaged one of its teachers, Miss Barton, to return with him. More and more convinced of the superiority of articulation teaching, and feeling the importance of thorough and earnest teachers, he was led to establish a normal school, which has sent out many teachers well fitted for their work. Subsequently Mr. Ackers, then a member of Parliament, was influential in securing the appointment of a royal commission to investigate and report upon the condition of the blind, the deaf, and the dumb of the United Kingdom, and was appointed one of the commission by the Queen.

Mr. Gallaudet and Professor Bell were invited to be present as representing the two systems in use in this country. Mr. Bell gave a full account of the Horace Mann School and its work, in which he has always felt the deepest interest. In their report the commission recommend "that every child who is deaf should have full opportunity of education in the oral system; that all children should be for the first year, at least, instructed in the oral system; and after the first year they should be taught to speak and lip-read on the oral system, unless they are physically deficient; that children who have partial hearing should in all cases be instructed in the pure oral system; that trained teachers of the deaf should, as in Germany, receive salaries such as would induce teachers of special attainments to enter the profession, and on a higher scale than those enjoyed by trained teachers of ordinary children."

In England as well as in our own country the influence of our work has been felt. The year before the Clarke Institution was opened, there were only 119 deaf children from the State at school. Now there are 312, an increase of 160 per cent, while our population has increased only 50 per cent.

Massachusetts has, therefore, more than three times as many pupils to-day in proportion to population as it had twenty years ago. Starting from Massachusetts as a centre, public interest was everywhere excited by the deaf. New institutions and day-schools were established in different parts of the country. In many of these the oral system alone was used. In all, teachers of articulation were employed, and articulation and lip reading made a part of their daily instruction. The number of pupils has increased from 3,246 in 1870, to 8,575 in 1890; and, in proportion to population, the ratio of increase equals that of our own State three to one. Who can doubt but that this is due to the influence of the Clarke and Horace Mann Schools, and to the general interest they have awakened in the education of the deaf?

Institutions for the deaf are undoubtedly necessary in every State, as children must be gathered from distant points; but wherever there are, in cities, a sufficient number of children, day-schools are certainly to be preferred. The home influence, the strong ties of affection, are often more important to the deaf child than to the hearing, for he is less prepared to fight the battle of life. The success of the Horace Mann School has led to the opening of day-schools in Portland, Providence, Cincinnati, Milwaukee, Chicago, St. Louis, Evansville, New Orleans, and La Crosse.

Let us here pause for a moment to pay a tribute of respect to the memory of one of the first and best teachers of this school. Early in its history Miss Bond became interested in it, and gave to it her time, her sympathies, and her earnest labors. For years her efforts for its progress were unwearied, and even in failing health and extreme physical suffering the welfare of the school was ever in her mind.

When we consider that the interest in deaf-mute education which formed the Royal Commission and the recommendations which have so changed the system of education in Great Britain is a direct growth from our work, have we not reason to believe that the seed sown in our weakness has already borne much fruit, and will yield a still more abundant harvest?

Believing that for the deaf our system lessens their privations, brings them more into communication with their friends and fellows, and, instead of building up still higher the separating wall of a different language, opens to them as to others the treasures of written language, shall we not rejoice that

it has been our privilege to work together for this end, and that out of the affliction of a little child a blessing has come to so many ?

The success of our schools in which we rejoice to-day is due not only to the superiority of the oral system over the sign-language system, not only to the energy and perseverance of their founders, but, more than all, to the devotion, to the untiring zeal, and to the ability, of our teachers. No other teaching is so exacting, requires such constant attention and unwearied application.

The names of all are too numerous to mention. In our earthly as in our heavenly firmanent one star differeth from another in glory, but bright as constellations shine the names of Miss Rogers, Miss Fuller, and Miss Bond.

This school is appropriately named the Horace Mann School, since Mr. Mann was the first to recommend the adoption of the oral system; but it was to Mr. King that this school owes its existence. The names of those who laid the foundation and built the edifice should not be forgotten.

But it is to Mr. King that this school owes its existence. A bronze tablet should be affixed to its walls; and associated with the name of Horace Mann should be the names of Dexter S. King and Sarah Fuller, inscribed thereon, that thus the names of the three who have done so much for the education of the deaf may be perpetuated.

THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY.[1]

AN institution of learning may make a demand upon public recognition and gratitude because of its good work in training successive classes of young men for usefulness in life, even though it be not an innovator in education, and uses only the old and familiar methods of instruction; but it may acquire a further and larger claim by becoming a leader in its department, by introducing new methods, and opening the way to a better kind of intellectual and professional training.

How the Institute of Technology has dealt with the thousands of young men who have been its pupils since 1865, what it has done for them, what places they now occupy in the industrial system, what services they have rendered to the arts and industries of the country, common fame will tell. Those who would study this matter more carefully will find material in the lists of its graduates and of the places they fill, as told in the annual catalogues.

But in addition to its work in training a certain number of young men for the duties of life, the Institute of Technology has been pre-eminently a leader in education. Its influence has not been confined to what it has done for its own pupils, but has extended as far as its example of advanced scientific and technical instruction has gone.

Almost at the very outset a long step forward was taken in the establishment of a laboratory of general chemistry. Up to that time general chemistry had been taught wholly by means of text-books, or by lectures with experiments by the lecturer. The student's part was only to look and to listen, and learn in this way what he could. It was not until the student was put into the analytical laboratory, and took the retort into his own hand, that he did or discovered any thing for himself. Under the inspiration of Professor Rogers and the enterprise and administrative skill of Professor Charles W. Eliot and Professor Frank H. Storer, a laboratory of general chemistry was established, and the pupil from the first day of his chemical studies was set to teach himself. This was no analytical laboratory. It was simply designed as a means of illustrating, emphasizing, and supplementing the instruction of the lecture-room in regard to the nature of chemical action and the characteristics of the principal elements. The student was not told what he should find. He was told to do something, and note what occurred. He was thrown upon his own faculties of observation and reflection. He learned to know himself, and to measure his own power, and he acquired ease and accuracy of manipulation by practice. So far as known, this was the first laboratory of such a character set up in the world. Certainly it was the first one instituted in the United States for the instruction of considerable classes of pupils. The publication of "Eliot and Storer's Manual," designed for students taking this course, marked an epoch in the history of education.

Another equally important step in scientific education, and one of which the originality is beyond doubt, was taken at about this time in the establishment of a laboratory now known as the Rogers Laboratory of Physics. Under the inspiration of President Rogers, the scheme of a laboratory where the student of physics should be set to make observations and conduct measurements for himself, in demonstration and illustration of the physical laws taught in the lecture-room, was carried out with remarkable ability on both the scientific and administrative sides by Professor Edward C. Pickering, now director of the Harvard Observatory. So complete was Professor Pickering's study of the needs and capabilities of such a laboratory, so masterly his treatment of it, that it has required only more room and additional apparatus to allow the system he then devised and formulated to be extended successively to classes of fifty, of one hundred, and even of one hundred and fifty students.

In the school year of 1871–72 another forward step in education was taken at the Institute of Technology. Down to that time the instruction in mining engineering and metallurgy had been, here as elsewhere, conducted by means of text-books, lectures, drawing models, and assays of small pinches of ore, supplemented, in the case of the more fortunately situated schools, by occasional visits to mines in actual operation. In the year named a scientific expedition to the Rocky Mountains was undertaken by a large party of students and instructors from the institute. While in the Colorado mining regions, Professor Runkle conceived the idea of a laboratory which should add to the existing means of instruction in mining and metallurgy the practical treatment by the students of economic quantities of ores. This conception, so fully in the line of the general work of the institute, was given effect by the purchase in California, before the return of the expedition, of a number of pieces of apparatus suitable for the beginnings of such a laboratory. The apparatus thus obtained was set up by Mr. Robert H. Richards, then instructor, and now for many years professor, of mining engineering.

From these small beginnings made under Professor Richards's care it has grown steadily to this day. It was the first proper metallurgical laboratory devoted to the purposes of instruction in the world. It is under its title, "The John Cummings Laboratory," by far the largest and the best in the world to-day. Its graduates are found in the most important mines and smelting and reduction works of the

[1] From the Commemorative Address by Augustus Lowell, Esq., at the twenty-fifth anniversary of the Massachusetts Institute of Technology.