

### Introduction

Alexander Graham Bell is considered to be one of the most important scientists and inventors the world has ever known. Upon his death in 1922, *The New York Times* wrote that "the little instrument he patented less than fifty years ago, scorned then as a joke, was when he died the basis for 13,000,000 telephones used in every civilized country in the world." The patent for the telephone he invented has been called "the most valuable patent ever issued" by the U.S. Patent Office.

Long before he gained celebrity as an inventor, Bell was a noted elocutionist and teacher of the deaf. As the son of a deaf mother and the husband of a deaf wife, Bell's lifelong dedication to the hard of hearing formed the basis for much of his original research into the telephone.

Later in life, Bell took an interest in a number of fields, including the emerging science of heredity and genetics, which was a popular area of study at the time. He also was a proponent of human rights, social justice and universal suffrage.

Much has been speculated and written about Bell's interest in heredity and its connection to his early work with the deaf. Drawing from Bell's own writings and comprehensive academic research using primary sources, the FAQ that follows is an attempt to address a growing body of rumors, disinformation and false narratives that have unfairly tainted the inventor's life and work.

Part of the mission of the Alexander and Mabel Bell Legacy Foundation is to promote and defend the historical accuracy of the inventor's work while ensuring the true historical record of his life and times.

#### LEGACY FOUNDATION

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### I. The Deaf

### How did Bell help the deaf and hard of hearing?

Although he is best known as the inventor of the telephone, Alexander Graham Bell actually devoted much more of this life to helping people who were deaf or hard of hearing, especially children.

Bell's mother Eliza lost most of her hearing in the 1860s when Alec was a boy. He learned to speak close to her forehead so she could feel the vibrations of his voice and would serenade her on the piano as she sat with a hearing tube pressed against it, her face lighting up with pleasure at the sounds of music she could no longer hear otherwise.

Alec taught his first deaf children in 1868 at a London school run by Susanna E. Hull, and "was thus introduced to what proved to be my life-work – the teaching of speech to the deaf," as he later recalled.

Bell developed innovative new methods for teaching the deaf and, after emigrating to Boston in 1870, was hired to instruct teachers at Miss Fuller's School for Deaf Mutes. In the evenings he tutored adult deaf men without charge. His progress at the publicly funded Miss Fuller's School was so successful that the Boston school superintendent observed in his annual report that results were "more than satisfactory; they are wonderful."

Over his lifetime, Bell wrote nearly a thousand pages of essays about education of the deaf. He spoke at innumerable conferences and testified before committees, created and funded a national organization for teachers of the deaf, and in 1893 founded what is now the Alexander Graham Bell Association for the Deaf and Hard of Hearing (agbell.org), one of the world's leading sources of assistance for the deaf.

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What was Bell's relationship to Helen Keller?

In 1887, a newspaper editor in Alabama, Arthur Keller, was told he should put his deaf and blind daughter Helen, a "wild little creature" of six, into an asylum, as so often happened with deaf children in that era. Instead, Keller took his daughter to Washington to seek Bell's help.

Helen later recalled that, "You held out a warm hand to me in the dark... I did not dream that that interview would be the door through which I should pass from darkness into light."

Bell helped introduce the Kellers to Helen's teacher, Annie Sullivan, and continued to correspond with and mentor the young woman the rest of his life. "You followed step by step my teacher's efforts," wrote Helen. "When others doubted, it was you who heartened us." Among other travels, Bell took Helen to Niagara Falls and put her hand on a window pane so she could feel the power of the water.

Later, Helen was especially grateful that Bell had been adamant that she be educated with hearing children, rather than solely in a school for the deaf. This training helped her gain admittance to Radcliff, where she graduated in 1904 at the age of 24.

Bell disagreed with others who saw limitations for Helen's future. He told her that "with her gifts of mind and imagination there should be a great future open to her in literature." She took his advice and went on to publish 12 books and several articles, and tour the world giving lectures.

In 1903 Helen dedicated her autobiography, The Story of My Life, to Bell, "who has taught the deaf to speak." It became a national bestseller and is still in print.

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### What devices did Bell invent to help the deaf?

In 1879, Bell invented the audiometer to measure the amount of a person's hearing loss. It was the first device designed to measure different levels of sound, and is the reason that sound is now measured in "decibels."

Bell long dreamed of an electronic way to help the deaf to hear, a vision that has now become real with cochlear implants. He believed there should be a way to "produce the sensations of hearing by direct communication with the brain, through the bones of the head," Bell told an interviewer in 1893 (who felt the idea was farfetched.)

"The brains of deaf people are usually in a perfectly healthy condition, and the only thing which prevents them from hearing is some defect in communication with the vibrating air," he pointed out. "If their brains could be excited artificially in the same way that the brains of ordinary persons are excited by vibrations communicated through the various chambers and passages of the ear, then the deaf would hear in the same way that other persons do."

### Was Bell against signing?

No. He taught signing as a young teacher of the deaf, and sometimes signed with students including Helen Keller and with his wife Mabel, who was deaf. Bell's last words in August 1922 were signed to Mabel.

It's important to remember that signing In Bell's lifetime was not the sophisticated system that ASL is today. There were different methods of signing in the 1800s, and many people signed using time-consuming "fingerspelling" with an alphabet glove, spelling out words one letter at a time.

In Bell's time, deaf persons who only communicated by signing were limited to conversing with people who also knew signing. He believed that Helen Keller's extraordinary successes proved the value of deaf children interacting with hearing children, as well as others who are hearing impaired.

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### How are signing and the oral method different?

In his lifetime of work with the deaf, Bell hoped they could be as integrated as possible with the hearing world and emphasized speech therapy and lip reading for the deaf over signing. This became known as the "Oral Method," as opposed to the Manual Method, which relied largely on signing.

Bell was not dogmatic about this and emphasized focusing on the best interests of the deaf. In his writings, he recognized that not all deaf people could master the difficult challenge of lip reading, and therefore signing was necessary to some degree.

In his comprehensive 1973 biography of Bell, Pulitzer Prize-winning professor of history Robert V. Bruce noted that when Bell formed a national organization of teachers of the deaf in 1891, he "committed it to promoting speech teaching but declared its neutrality as to the several teaching methods — oral, manual, and combined."

Today, Bell would almost certainly prefer the "combined" method, making use of lip reading, speech therapy and signing, as well as technological advances – whatever is in the best interest of the individual deaf person.

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### Did Bell discourage the use of sign language?

No.

Long before Bell was an inventor, he was a noted teacher of the deaf.

Bell taught sign language as a young teacher of the deaf, and sometimes signed with his mother and later with his wife Mabel, who were both deaf. However, in Bell's lifetime signing was not the sophisticated and complete language that American Sign Language is today. In Bell's era most people signed using time-consuming "fingerspelling" with an alphabet glove, spelling out words one letter at a time.

Throughout his lifetime, Bell worked to ensure that the deaf and those with hearing impairments were fully integrated into society. To achieve complete assimilation in society, Bell encouraged speech therapy and lip reading over signing as much as possible

In an 1898 paper titled <u>The Question of Sign-Language and The Utility of Signs in the Instruction of the Deaf</u>, Bell said: "I believe in the use of natural actions and natural gestures, as hearing people employ them, not in any other way. I believe it to be a mistake to employ gestures in place of words; and natural pantomime, or sign-language of any sort, should not, I think, be used as a means of communication. I do not object to manual alphabets of any kind in the earlier stages of instruction."

"I prefer the pure oral method to any other, but I would rather have a deaf child taught through De l'Epee signs than not educated at all," he said, referring to an early form of sign language developed in France.

Bell goes on to say that "I do not approve of continuing the manual alphabet method throughout the whole school life of the pupil, but look upon it only as a means to an end. The oral method should, I think, be used in the higher grades; and speech-reading be substituted for the manual alphabet after familiarity with the English language, and a good vocabulary, have been gained. In my preference, oral methods come first; the manual alphabet method second; and the sign-language method last; but my heart is with the teachers of the deaf whatever their method may be."

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Did Bell want to restrict the rights of deaf people to marry? No.

In an 1891 speech about heredity to a group of deaf students at what is now Gallaudet University in Washington, DC titled, <u>Marriage, An Address To The Deaf</u>, Bell was quick to note that "You yourselves are a part of a great world of hearing and speaking people. You are not a race distinct and apart, and you must fulfill the duties of life and make your way to honorable positions among the hearing and speaking people."

Bell goes on to say that "I know that an idea has gone forth, and is very generally believed in by the deaf in this country, that I want to prevent you from marrying as you choose, and that I have tried to pass a law to interfere with your marriages. But, my friends, it is not true. I have never done such a thing, nor do I intend to; and, before I speak upon this subject, I want you distinctly to understand that I have no intention of interfering with your liberty of marriage. You can marry whom you choose, and I hope you will be happy. It is not for me to blame you for marrying to suit yourselves, for you all know that I myself, the son of a deaf mother, have married a deaf wife."

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### Would Bell be an advocate of the deaf today?

#### Yes.

During his lifetime, Bell was a passionate and vocal advocate for the deaf and hard of hearing. As the son and husband of a deaf person and a teacher of the deaf, Bell spent his entire life exploring the endless potential of individuals who were deaf or hard of hearing.

Bell would likely be delighted with the wide recognition of the rights of deaf people with the growing use of American Sign Language in public forums, and the growth in ASL, which is a much more sophisticated language now than it was in Bell's time a century ago

Bell was a progressive thinker and scientific visionary who sought to fully integrate deaf people with the larger society. On the occasion of his death in 1922, the Journal of the National Education Association wrote "In 1884 Dr. Bell laid before the Chicago Board of Education the principle that every effort should be made in the training of deaf children to have them associate with the hearing children. He furthermore suggested that a feasible plan would be to provide a separate room and special teachers for the deaf children in the same building with hearing children. 'Too visionary' was the verdict in 1884; in 1916 the school was built and has since served as a model for the idea it embodies."

Today most children who are deaf or hard of hearing who use listening and spoken language are successfully mainstreamed into regular education classrooms. We now understand that we hear with our brain and our ears provide access to sound.

It is likely Bell would be enormously pleased with today's technology which allows people who are deaf or hard of hearing to hear spoken language. Bell would indeed be a strong advocate for modern technology and intervention methods including newborn screening, early diagnosis, early access to modern hearing aids and/or cochlear implants, all of which have dramatically changed outcomes for the deaf and hard of hearing.

Bell's vision has been carried forward by the Alexander Graham Bell Association for the Deaf and Hard of Hearing in Washington, D.C., which works globally to encourage people who are deaf and hard of hearing to listen and speak. The organization also provides professional support to both families and teachers and offers professional certification for listening and spoken language specialists (LSLS).



### II. Heredity and Genetics

### Was Bell a proponent of Eugenics and the practice of human engineering?

### No.

Bell was not a proponent of human engineering. Bell had an interest in the burgeoning science of genetics and heredity stemming from the work of Charles Darwin, whose groundbreaking research was published in 1859.

In November 1883, Bell presented a paper at a meeting of the National Academy of Sciences titled <u>"Upon the Formation of a Deaf Variety of the Human Race."</u> In the paper, Bell notes that *"We cannot dictate to men and women whom they should marry and natural selection no longer influences mankind to any great extent."* 

This scientific paper, one of only two on the subject of heredity that Bell wrote in his lifetime, offers Bell's own research regarding deaf persons and their offspring. It makes no public policy or social engineering recommendations to reduce the frequency of deafness in society.

# Was Bell in favor of laws or programs to breed an improved race of people?

#### No.

In a 1908 article for *National Geographic* Magazine titled <u>A Few Thoughts Concerning Eugenics</u>, Bell notes that scientists "have learned to apply the laws of heredity so as to modify and improve our breeds of domestic animals. Can the knowledge and experience so gained be made available to man, so as to enable him to improve the species to which himself belongs?"

In pondering this question, he goes on to state that "The problem is one of great difficulty and perplexity, for its solution depends upon the possibility of controlling the production of offspring from human beings. By no process of compulsion can this be done. The controlling power, if it is possible, to evoke it in the interest of the race, resides exclusively with the individuals most immediately concerned. This fact, I think, should be recognized as fundamental, so that our processes should be persuasive rather than mandatory."

At the time Bell was writing there was very little understanding about genetics or heredity in the scientific community and the topic had yet to make its way into popular conversation. In fact, the word "genetics" did not exist until it was introduced in 1905 by English biologist William Bateson.

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Did Bell endorse using genetics to restrict marriage?

No.

Bell gave a talk in 1891 on the subject of marriage at what is now Gallaudet University. He said, "I know that the idea has gone forth, and is very generally believed in by the deaf of this country, that I want to prevent you from marrying as you choose, and that I have tried to pass a law to interfere with your marriages. But, my friends, it is not true. I have never done such a thing, nor do I intend to... I want you to distinctly understand that I have no intention of interfering with your liberty of marriage. You can marry whom you choose, and I hope you will be happy."

In a 1908 article for <u>National Geographic Magazine titled A Few Thoughts Concerning Eugenics</u>, Bell notes that "the moment we propose to interfere with the liberty of marriage we tread upon dangerous ground. The institution of marriage not only provides for the production of offspring, but for the production of morality in the community at large. This is a powerful reason why we should not interfere with it any more than can possibly be helped."

Bell goes on to note that "the community has no right to interfere with the liberty of the individual and his pursuit of happiness in marriage unless the interests of the community are demonstrably endangered. The happiness of individuals is often promoted by marriage even in the cases where the offspring may not be desirable."

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Did others at the time oppose marriage of the deaf?

Yes.

Even the simplest mechanics of genetics were misunderstood at the turn of the 19<sup>th</sup> Century. Most scientists believed that traits such as deafness were hereditary and that the chances of children being born deaf were increased if their parents were both deaf. The incidence of deafness was also more common then, before antibiotics were available.

In 2015, <u>Professor William Ellis</u> of the University of Iowa did a meticulous study of faculty writings and student newspapers at Gallaudet University for the Deaf and found that:

"The idea that deaf people should not marry one another was embraced by faculty in Gallaudet's early decades, diffused from administration to faculty, from faculty to students (deaf undergraduates as well as hearing students studying deaf education), and ultimately carried to other deaf educational institutions via the alumni. While student responses to these ideas were fluid, their adoption by early administration and faculty had a profound and lasting impact. One result was that, for much of the early twentieth century, deaf people were less likely to marry, and when married less likely to have children."

Did Bell believe parenting had an equal or greater impact on society than genetics?

Yes.

In a 1908 article for <u>National Geographic Magazine titled A Few Thoughts Concerning Eugenics</u>, Bell endorses the idea that society should "Throw wide the gates of marriage, and where children are produced, close tight the doors of divorce. Every child is entitled by nature to a father and a mother; and no people should produce children who are not prepared to give them parental care for life. Without going to extremes, I would say that the interest of the community demand the we should make marriage easy and divorce difficult."

Did Bell campaign for the sterilization of deaf girls?

No.

This is a completely false narrative with no basis in fact or history. No document exists connecting Bell with compulsory or voluntary sterilization.

#### LEGACY FOUNDATION

### Did Bell lead the Eugenics Records Office?

### No.

Bell played an inconsequential role with the Eugenics Records Office in Cold Spring Harbor, NY.

Dr. Charles B. Davenport was the Secretary of the Board of Scientific Directors and Director of the Eugenics Records Office, which he established in October of 1910 and received initial financing from <a href="Mary Williamson Harriman">Mary Williamson Harriman</a>, the wife of railroad magnate E. H. Harriman, as well as John D. Rockefeller and others.

Bell was named to an honorary position as Chairman of the Board of Scientific Directors. Other members included Dr. William H. Welch, professor of pathology, Johns Hopkins Hospital, Vice Chairman; Prof. Irving Fisher, Yale University; Prof. Lewellys Barker of Johns Hopkins Hospital; Prof. E. E. Southard of Harvard University and Director of the Psychopathic Hospital, Boston; and Dr. Charles B. Davenport, who was the Secretary of the Board of Scientific Directors and Director of the Eugenics Records Office.

## Did Bell ever speak at a eugenics conference?

#### No.

Bell is listed in the <u>program</u> among the 41 members of the honorary committee of the <u>First International Eugenics Conference</u> held in London in 1912. However, Bell <u>did not speak</u> at the event nor did he attend or present a paper.

In 1921 Bell was the honorary president of the <u>Second International Congress of Eugenics</u> held under the auspices of the American Museum of Natural History in New York. Bell did not attend, present a paper or speak as part of the proceedings. The summary of the proceedings notes that Bell was a <u>"pioneering investigator in the field of human heredity."</u>

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### Did Bell conduct genetic research?

### Yes.

Bell had an interest in the emerging science of heredity, and later genetics, as it applied to livestock.

In the 1890s, Bell began three decades of observing and recording experiments in sheep breeding on his estate in Canada. He hoped to develop sheep that were more likely to bear twins in order to make the flocks more productive for local shepherds.

The mechanisms of heredity were poorly understood in 19<sup>th</sup> Century before the experiments on pea plants conducted by the renowned scientist Gregor Mendel became known among the scientific community after the spring of 1900.

A clear understanding of the basic rules of genetics and heredity would not emerge for decades after Bell's death in 1922

# Was Bell an advocate for genetic research on humans?

### No.

In 1909, The American Breeders Association, which focused on livestock, launched a new section to study the science of heredity in human beings. This section was divided into two parts: The Eugenics Records Office, established in 1910, and a series of subcommittees to study how specific genetic traits are inherited. Bell was appointed to be the chairman of the <a href="sub-committee">sub-committee</a> on Heredity of Deafmutism.

Bell's scientific interest in heredity led him, in 1910, to be appointed to an honorary position as the <u>Chairman of the Board of Scientific Directors</u> to the Eugenics Record Office.

A meeting of the Eugenics Section of the American Breeders' Association was held in Washington, DC in 1911. Bell hosted the meeting at the Volta Bureau but did not present a paper or discuss any of his own research.

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Was Bell connected to the U.S. Supreme Court case of *Buck v. Bell*? No.

The controversial case *Buck v. Bell*, in which the U.S. Supreme Court ruled that laws mandating the sterilization of the mentally handicapped did not violate the Constitution, was decided in 1927.

The "Bell" in *Buck v. Bell* was Dr. John H. Bell, who had no relationship whatsoever to Alexander Graham Bell who died in 1922.

Dr. John H. Bell was a prominent eugenicist and physician in Virginia. John Bell advocated the forced sterilization of people believed to be incompetent. Appointed superintendent of the State Colony for Epileptics and Feeble-Minded, in Lynchburg, John Bell became a principal in the lawsuit arranged by the former superintendent to test Virginia's 1924 legislation allowing for forced sterilization. Carrie Elizabeth Buck, a patient at the colony, had been selected for the test case. John Bell performed the operation on Buck himself. In its landmark ruling in *Buck v. Bell*, the U.S. Supreme Court upheld the constitutionality of Virginia's law.



### III. Human Rights and Social Justice

## Did Bell believe in universal suffrage?

### Yes.

Bell was extremely inclusive in his views about society and believed that all adult citizens had a right to vote regardless of wealth, income, gender, social status, race, ethnicity, or any other restriction. In a 1901 letter from Bell to his wife Mabel, he wrote "I believe in universal suffrage, without qualification of education, sex, color or property."

Bell went on to tell his wife, "I am quite sure that you are much better able to vote intelligently than a farm laborer who can neither read nor write, and yet you are denied the right to vote — if you so desire — and he is not. One half of the whole population — and that the more intelligent half — is utterly disfranchised."

According to Bell, "I do not recommend women to vote — that is a matter for themselves entirely to decide — but I have no right to prevent them from doing so. Men, having at the present time the sole legal power of voting, have abused their power by denying to women the exercise of what is a natural right under the republican form of government."

It was not until 1920 that the US Congress ratified the 19<sup>th</sup> Amendment granting women the right to vote.

### Did Bell support public education?

### Yes.

Bell was extremely forward-thinking in his views about society. In <u>a 1901 letter from Bell to his wife Mabel</u>, he wrote "I believe in the republican form of government, and so believe in the compulsory education of the people at public expense."

He went on to say, "The ignorant will always be a danger to any community let us have as few of them as we possibly can."

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# Did Bell support equal rights for women?

### Yes.

Bell was extremely progressive in his views about women and their role in society. In a 1901 letter from Bell to his wife Mabel, he wrote "If only the educated can vote, they not only rule the uneducated, but have the power to prevent the latter from being educated — a dangerous power to place in the hands of a class. If women are excluded men not only rule the affairs of women, but have the power to PREVENT women from ever getting a franchise unless THEY (the men) choose — an equally dangerous power. "

He goes even further, saying "And so with women — who are — on the average more intelligent and better educated than men — at least in America. The bulk of the men go to work early, and the preponderance of girls in the high schools of the country is very marked. The girls who receive a high school education so enormously outnumber the boys as quite to outweight the preponderance of males receiving a university education. While women do not, excepting in very exceptional cases, reach as high a point in education as men, still, taken as a whole the general level of intelligence and culture is, I think, indisputably higher among women than men, and the difference becomes more marked as you go down in the social scale."

# Did Bell endorse racial segregation?

### No.

Bell was a strong and early believer in equal rights. In 1876, Bell hired draftsman Lewis Howard Latimar, the son of a former slave, to execute his drawings and assist in the preparation of patent applications for Dr. Bell's telephone. In 1904, Bell wrote a letter to then U.S. President Theodore Roosevelt calling for a State Department investigation into the "protection to colored citizens of the United States in Canada."

The letter was prompted by the poor treatment Bell's employee, Mr. Charles Thompson, received while traveling to Bell's estate on Cape Breton Island, Canada. Thompson, a Black man, and his wife had been denied accommodations at multiple hotels in Sydney, a port city on the Island.

In the letter, Bell notes that Thompson "is an upright, conscientious man whom I have the highest confidence. He has traveled with me in Norway, Sweden, Denmark, Holland, France, Italy and Great Britain, as well as in Japan and the Hawaiian Islands, and never outside of his own country has he been discriminated against on account of his color except in Sydney, Cape Breton Island."