

The Education of Laura Bridgman

And the Epistemological Debates of the 19th Century

A month past her second birthday, Laura Bridgman was stricken with scarlet fever. The fever killed her two older sisters and left Laura blind and deaf, and "almost completely obliterated" her sense of taste and smell. In a fascinating and deftly written new book, Ernest Freeberg weaves together several stories: of Laura herself, of course; of Samuel Gridley Howe, the director of the Perkins Institute for the Blind in Massachusetts, who eagerly took up Laura's case both because he was a dedicated educator and because it allowed him to test his ideas about human nature and cognition; of the lively philosophical debates of antebellum American culture; of the early attempts at empirical psychological research; and of 19th century attitudes toward the disabled.

Although the story of Laura Bridgman was soon eclipsed by that of Helen Keller, Laura was the first deaf and blind person ever to learn to communicate through language. Indeed, as Freeberg reports, "Keller's parents first realized that their own daughter could be taught when they read an account of Laura's education." As we look in on Laura's journey, she has just arrived at the Perkins Institute. She is not quite eight years old. To follow the unfolding events of Laura's development and of the outcome of Samuel Howe's famous "experiment," you will just have to visit your local library or bookstore this summer, and then settle in for a compelling read.

—EDITOR

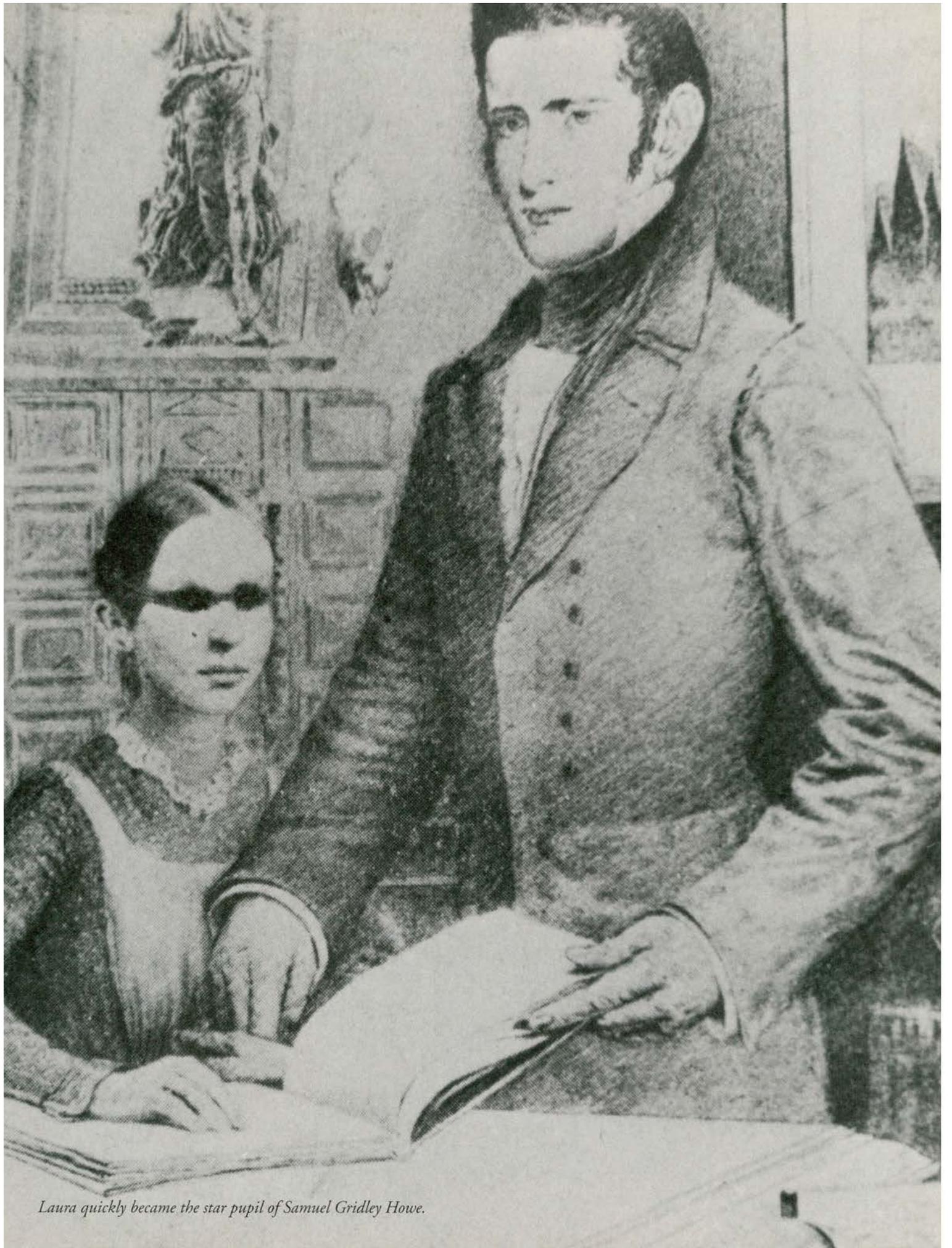
By Ernest Freeberg

Laura's parents delivered her to the Perkins Institution on October 12, 1837. Confused and frightened, the young girl burst into "bitterest tears" when they left her. She soon recovered, however, and within a week began to develop strong attachments to the house matron and to Miss Drew, the instructor who had been assigned by Howe to work closely with Perkins' first deaf-blind pupil. She spent her first days engrossed in her knitting and showed obvious signs of pleasure when the women praised her work by giving her a caress on the cheek.¹

The maternal bond of trust between Laura and her female instructor was balanced by Howe's role as the child's new father figure. During Laura's first weeks at the institution, Howe established his paternal authority by attempting to lead her around the room by the hand. When she resisted, he held her hand firmly, forcing her compliance. She soon submitted, and three weeks after her arrival a visitor to the school noted that she was "very much under the command of the Doctor." If Laura ever felt compelled to submit to Howe's superior strength, those feelings were soon superseded by intense affection toward him, and Howe never had to rely on force again. Once this bond of trust and affection was established and the child grew more comfortable in her new surroundings, he felt ready to begin his experiment to reach her intellect.²

Today, growing up as we do hearing the story of the marvelous accomplishments of Helen Keller, we may take for granted the inevitable success of Howe's experiment. It requires an effort of historical imagination to recognize that, as he sat down with the eight-year-old to begin her first lessons, his faith that there was a mind "in there," capable of learning, was an unproven intuition, one running counter to a century of failed efforts to reach other deaf-blind children. Many years later Howe's wife, the writer and suffragist Julia Ward Howe, would capture the excitement of that moment: "The personage within was unknown to him and to all, save in her outer aspect. What were her characteristics? What her tendencies? If he should ever come to speech with her, would she prove fully and normally human? Would her spirit be amenable to the laws which govern our thoughts and conduct for mankind in general?"³ For searching out the

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Laura quickly became the star pupil of Samuel Gridley Howe.

answers to these questions, Howe earned a reputation among his contemporaries as the “Columbus” of the mind.⁴

Unlike Columbus, Howe was not venturing into entirely uncharted waters. Although his educational techniques were untested, his understanding of the human mind was guided along the well-worn tracks of Anglo-American moral philosophy. Like most educated Americans of his day, Howe’s notions about human psychology were drawn from the writings of the widely influential thinkers of the Scottish Enlightenment, particularly Thomas Reid and his disciple Dugald Stewart. Howe had encountered these “common sense” philosophers in his undergraduate courses in moral philosophy at the orthodox Brown University, as well as in sermons preached from Unitarian pulpits in Boston.⁵

Following in the philosophical tradition of Descartes, these Scottish philosophers were dualists, insisting that the mind is distinct from, and superior to, the body. Their strong defense of the existence of a nonmaterial human mind is one reason why their writings were so popular with American religious leaders, serving as a cornerstone of American theology and moral philosophy well into the nineteenth century. The historian Daniel Walker Howe has suggested that Boston’s Liberal Christians found the mind-body dualism of the Scottish philosophers particularly compatible with their Christian theology. In their view, the philosophers’ concept of an immaterial “mind,” distinct from the body, was just another way of talking about what Christians had always called the eternal “soul.”⁶

Along with dualism, the Scots were strong believers in faculty psychology, the view that the mind is composed of various “faculties.” In the common sense tradition, this mind (or soul) was not a passive and ethereal abstraction but an active agent, possessed of certain “powers” of intuition and reason that allow us to clearly and directly perceive the world around us. This idea that the mind is a collection of

distinct “faculties,” each attuned to a corresponding part of the external world, was first developed by the Greeks and had been commonplace since the Middle Ages. But Scots like Thomas Reid offered a particularly strong defense of the mind’s innate “faculties, dispositions, and powers,” in response to the epistemological skepticism of David Hume.

Though Howe cared little about the philosophical controversy that had produced the common sense philosophy, he accepted Reid’s conclusion that the mind is endowed with a range of distinct faculties.⁷ Pained by philosophical complexities, Howe was particularly attracted to a simple and practical variation of faculty psychology, the “new philosophy” of phrenology. According to phrenologists, the common sense philosophers had correctly identified many of the faculties of the mind but had failed to ground their psychological theory in empirical observation. Phrenologists dismissed the philosophers’ concept of “mind” as only an intellectual abstraction, found between the covers of weighty tomes and prone to the abuse of unfounded metaphysical speculation. Fashioning themselves to be scientists and practical reformers rather than philosophers of the mind, the phrenologists argued that a truly scientific and useful psychology had to be grounded in the observable, verifiable material world. Accordingly, they claimed that the careful examination of hundreds of human skulls and brains had revealed that each of the various faculties of the mind has a *physical* existence, embodied in one of the dozens of separate “organs” of the brain, and usually reflected in the various “bumps” on each individual’s skull.⁸

One of the founders of phrenology, Dr. Joseph Spurzheim, arrived in Boston in 1832, the same year that Howe began his career as an educator of the blind. As a young and relatively inexperienced physician cast suddenly in the role as Boston’s “expert” on the education of the blind, Howe was no doubt searching earnestly for some firm intellectual foundation. His undergraduate education at Brown had been largely wasted, he later confessed, in the pursuit of

Howe required his students to take part in a rigorous daily exercise regimen.



youthful pranks. Growing more serious while taking his medical training at Harvard, he found that he had particular talents as a dissector and anatomist. Thus, given his interest in anatomy and his own temperament, long on action and short on systematic reflection, Howe was understandably attracted to this new science, with its self-proclaimed virtues of simplicity and practical utility, all grounded in the science of dissection.⁹

Howe maintained his allegiance to phrenology long after most of his peers abandoned the cause, distancing themselves as the science degenerated into carnival sideshow quackery. Yet in the 1830s, his fascination with “craniology” cannot simply be attributed to his peculiar training or his intellectual naiveté. In these years, his interest in the new science put him in the company of some of the most respected medical minds of Boston, including many of his former professors at Harvard’s medical school. Howe was not the only one who was attracted to the prospect of replacing the wrangling of the philosophers with an outline of the mind that was “clear, simple [and] natural.”¹⁰

Thus, as Howe contemplated the prospect of educating Laura Bridgman, he consulted the phrenologists’ charts of the brain. There his attention was drawn to one particular “organ,” the “intellectual faculty” of “Language.” This organ, according to Howe’s favorite manual on the new science, “gives a facility in acquiring a knowledge of arbitrary signs to express thoughts—a facility in the use of them—and a power of inventing them.” In short, Howe’s general education in Scottish mental philosophy supported what his more recent explorations in phrenology confirmed with more precision: that Laura Bridgman’s brain contained an innate ability to understand and create language. Guided by this premise, Howe reasoned that this power of the mind lay dormant, but unimpaired, inside the child’s damaged body.¹¹

Of course, Laura had already shown a desire to communicate and had even developed some of her own sign language. In Hanover, Howe had seen her family speak to her through a series of gestures—a pat on the head signaled approval, rubbing her hand meant the opposite, and pushing and pulling were used to tell her which direction to move. Laura had also invented her own signs: fingers held to her face referred to a man with a beard; a hand revolved in the air meant the spinning wheel. Howe recognized that, if left on her own, she would probably continue to develop this non-verbal language, learning to communicate many of her basic needs. But he decided that in the long run this language of gestures would be too limiting, putting blinders on her intellect, shutting her off from the knowledge of more complex, subtle, and sublime human emotions and ideas, locking her in a state of permanent mental and moral childhood.¹²

Howe was determined, instead, to bring Laura into the conversation of human society as an equal, and to prove to the world that, within a damaged body, her mind was intact and fully human. To do that, he felt that he must teach her the use of an arbitrary language, in this case English, founded on an alphabet. She needed, he explained, “a knowledge of letters, by the combination of which she

might express her idea of the existence, and the mode and condition of existence, of anything.”¹³

The plight of Julia Brace at the Hartford Asylum seemed to prove his point. Her education had failed, Howe believed, because her instructors had allowed her to rely on a “natural language” of simple gestures, rather than the abstract and man-made language of the alphabet. Howe expected that, without this help, Laura would also rely on a primitive language of simple signs, as automatically as water flows downhill by the easiest course. His goal, then, was to guide the stream of Laura’s communication into the man-made channel of an arbitrary alphabet.¹⁴

This distinction between the “natural” language of gesture and the artificial language of the alphabet was not original with Howe but was another theme developed by Scotland’s common sense philosophers. In his *Inquiry into the Human Mind*, Thomas Reid devoted considerable attention to the language of pantomime, arguing that this form of communication proved the existence of an innate linguistic faculty in man. Those gestures—the pat on the back for approval, the frown to suggest displeasure, the knitted brow of anger—come instinctively to all human beings, in all cultures. Even the youngest infant, the uncivilized tribesman, and the linguistically isolated deaf person automatically understand the meaning of a smile or a frown or tears. Reid suggested that this natural language of posture and facial expression was the alphabet of humanity’s first language, providing the common ground necessary for the subsequent invention of the arbitrary language of words.¹⁵

Reid believed that this evolution from natural gestures to artificial words came with a price. Our original language of gestures, he argued, was peculiarly well suited to expressing the inner world of emotions. When societies developed artificial languages, their instinctive vocabulary of physical gestures atrophied. By his own time, Reid believed, only orators and stage actors could still speak the true language of the emotions. While such an evolution drew human society farther away from the language of its feelings, the transition was a necessary step in the fuller realization of human intellect. “As ideas multiply,” Reid’s disciple Dugald Stewart explained, “the imperfections of natural language are felt and men find it necessary to invent artificial signs, of which the meaning is fixed by mutual agreement.”¹⁶

Echoing Reid and Stewart, Howe summarized the distinction between natural and arbitrary language by comparing the former to a “man in his wild state, simple, active, strong, and wielding a club.” The spoken language of an arbitrary alphabet, by comparison, was “subtle, flexible, minute, precise [and] is a thousand times more efficient and perfect instrument for thought; it is like civilized man, adroit, accomplished, well-trained, and armed with a rapier.”¹⁷

Howe reasoned that Laura could only develop this facility for language if her one remaining sense of touch could be developed to the point where she could use it to read a manual version of the alphabet. Howe’s plan was anticipated by the French philosopher Denis Diderot almost a century earlier. The sense of sight uses a written alphabet, Diderot ex-

plained, and hearing relies on symbolic sounds. But he saw no reason why the sense of touch might not develop its own medium of symbolic language. "For lack of this language," he speculated in his *Letter on the Blind*, "there is no communication between us and those born deaf, blind, and mute. They grow, but they remain in a condition of mental imbecility. Perhaps they would have ideas, if we were to communicate with them in a definite and uniform manner from their infancy; for instance, if we were to trace on their hands the same letters we trace on paper, and associated always the same meaning with them. Is not this language...as good as another?"¹⁸

Diderot's conjecture about the possibility of a manual alphabet was confirmed by a later generation of French educators who worked with the deaf. Until the Abbé de l'Épée began his pioneering work with the deaf in the late eighteenth century, most philosophers who speculated on the subject believed that thought, even the written word, was impossible without sound; signs of intelligence in deaf persons were often greeted as little short of miraculous. But the Abbé's success in teaching a manual alphabet to the deaf proved that the sense of hearing is not an essential component of thought. The manual alphabet cut language loose from its presumed moorings in the voice and the ear.¹⁹

The Abbé pushed even further. If hearing could be dispensed with, he reasoned, why not sight as well? Anticipating Howe by a half-century, he published speculations on a possible method of instruction for the deaf and blind, a problem more hypothetical than real to him since he did not know of any person so afflicted. Sicard, the Abbé's successor at the Parisian school for the deaf, went on to prove that even the blunt sense of touch could become refined enough to serve as the medium of thought. In fact, he had actually used such a language, conversing with one of his students in the pitch darkness of midnight by impressing the signs of the manual alphabet into the outstretched hand of his companion.

Thus, as Howe began his unprecedented experiment with Laura Bridgman, he was guided by the theories of Scottish philosophers and phrenologists, whose map of the brain showed him that the child's mind was endowed with a linguistic "faculty," a capacity to learn and use an arbitrary language. Their theories assured him that, if he could find a way to speak to her through the lone sense of touch, she would eagerly meet him half-way. French educators provided Howe with that language, the manual alphabet of the deaf. Howe's work as a pioneer in the education of the deaf and blind must be understood in the context of these European precedents. Presented with a rare opportunity to help a young deaf-blind student, Howe turned Old World theory into New World practice.

Howe began Laura's education by trying to teach her to associate simple objects with their names, imprinted in raised letters. He attached embossed paper labels on a few simple objects—a knife, a pin, a pen, and others. Laura was first presented with the label itself, detached from its corresponding object. She was then made to

feel the object, on which Howe had attached an identical label. To express the idea that the embossed letters "p-i-n" were somehow identical with the pin she held in her hand, Howe resorted to one of Laura's own signs for likeness—he held his two forefingers together, suggesting identity. According to Miss Drew, Howe's assistant in these lessons, Laura "readily perceived the similarity of the two words." And, rewarded by pats on the head for correct answers, "the natural sign of approbation," the student learned within a few days to match the labels to their appropriate objects. The teachers knew they had succeeded in this first crucial step of Laura's education when they saw that "a light of intelligence lighted her hitherto puzzled countenance." However, Howe recognized that, though his pupil was evidently bright and eager to learn, she had not yet grasped the mysterious power of language. She matched words and objects not in order to communicate but merely as an intellectual exercise of "imitation and memory."²⁰

Once she had this first inkling about "words as a whole," Howe then tried to teach her to create words herself. He broke the paper labels up into their component letters. Laura soon learned to arrange these slips of paper in their proper order, recreating the label and matching it to its object. At first she spelled out these words in a "mechanical" fashion. Howe compared her skills at that point to those of "a very knowing dog" who was eager to perform tricks only in order to win approval, the reward of loving pats on the head. Howe reached for a sign that she was beginning to truly appreciate the communicative power of those patterns at her fingertips, and it came at last, after several months of patient, methodical instruction.

The truth began to flash upon her, her intellect began to work, she perceived that here was a way by which she could herself make up a sign of anything that was in her own mind, and show it to another mind, and at once her countenance lighted up with human expressions; it was no longer a dog or parrot,—it was an immortal spirit, eagerly seizing upon a new link of union with other spirits! I could almost fix upon the moment when this truth dawned upon her mind, and spread its light to her countenance. I saw that the great obstacle was overcome.²¹

Howe's 1841 account of Laura Bridgman's linguistic breakthrough—described as a lightning-like burst of spiritual insight—bears remarkable resemblance to the better known story of the great turning point in Helen Keller's education. Howe suggested that, in spite of months of preparation, the obstacle was overcome "at once." The wide threshold, he suggested, between the "knowing dog" and the human spirit was crossed almost instantaneously. Her sudden understanding of the value of language seemed to induce a new birth within her, the creation of an "immortal spirit" right before Howe's eyes.

In her autobiography, Helen Keller described a similar rapid transformation, in the often-told story of her trip to the well. Understanding for the first time that the letters "w-a-t-e-r" spelled into her hand corresponded to the cool water that flowed over her hand, she suddenly realized that all objects have names, and that the manual alphabet was her key to expressing them to others. Keller later described that moment as "in the nature of a revelation."



Laura was an eager reader, despite the discomfort caused by the large size of books with raised letters.

There was a strange stir within me,—a misty consciousness, a sense of something remembered. It was as if I had come back to life after being dead...I understood it was possible for me to communicate with other people by these signs. Thoughts that ran forward and backward came to me quickly,—thoughts that seemed to start in my brain and spread all over me...Delicious sensations rippled through me, and sweet strange things that were locked up in my heart began to sing.

These two accounts of a miraculous and immediate transformation of the soul, of a spiritual birth through language, are remarkably similar. Yet they also share the fact that they were written years *after* the events actually occurred. Setting aside consideration of Helen Keller's experience, it is important to notice that Howe's version of Laura Bridgman's linguistic apotheosis was first published in his annual report of 1841, at least three years after the events he describes. All of his accounts prior to this time failed to mention this singular and powerful moment of intellectual and spiritual birth, and instead described a much more subtle and painstaking process of gradual enlightenment.²²

Howe's 1841 report of a great spiritual apotheosis exaggerated the contrast between the pre- and postlinguistic child. While Laura's introduction to arbitrary language was undoubtedly of profound importance to her subsequent intellectual development, she arrived at Perkins with an intellectual curiosity that could hardly be described, as Howe had done, as "mechanical" or animal-like. Howe himself noted, in his first report on her in 1838, that she was extremely curious about her surroundings, "constantly active," evidently "intelligent," able to express affection, take part in imaginative play, and mind her manners while at the table.²³

Howe's later account also ignored his previous testimony about the child's slow and painstaking introduction to language. In his 1838 report, he announced that his pupil had succeeded in learning the nature of words and could use letters to express the names of "substances." In this first published version of the story, Howe found her accomplishment "gratifying," but did not suggest, as he did later, that "the great obstacle was overcome." Rather, he remained cautiously optimistic that her grasp of language could be advanced through the "slow and tedious" process of education.²⁴

The only other eyewitness observer of Laura Bridgman's introduction to language was Miss L. H. Drew, her daily instructor during this period. In an account also written much later, Drew made no mention of any single moment of apotheosis, noting only that "whenever she overcame a difficulty, a peculiarly sweet expression lighted up her face, and we perceived that it grew daily more intelligent."²⁵

In short, some of the contours of Howe's account of Laura's education seem to have taken shape over the course of his first few years with her. His role as a disinterested observer and reporter of an important psychological experiment may well have been eclipsed by his inclinations as a journalist and a publicist to adorn a tale that might better capture the sympathy and imagination of his growing reading public.

While the story of Laura Bridgman's first breakthrough into the world of language may have developed over the course of her first few years at Perkins, Howe moved much more quickly to assert the important philosophical conclusions to be drawn from his successful experiment. In his first public reports on her progress, he confidently announced that Laura Bridgman was not, as might be supposed, "but a blank." He had broken through her damaged body to discover a soul, "active, and struggling continually not only to put itself in communication with things without, but to manifest what is going on within itself."²⁶

In this report, given four months after her arrival at Perkins, Howe believed that he was already beginning to discern the basic outline of that spirit that was "shut up in a dark and silent cell." He marveled at her playfulness and affection for her teachers and classmates, and he took a parent's pride in her physical skills, her ability to sew and knit and dress herself "with quickness and precision"—all skills she had learned prior to coming to Perkins. But most importantly, he rejoiced at what he called her "mental phenomena."

She has a quick sense of propriety; a sense of property; a love of approbation; a desire to appear neatly and smoothly dressed, and to make others notice that she is so; a strong tendency to imitation, inasmuch that she will sit and hold a book steadily before her face in imitation of persons reading... The different states of her mind are clearly marked upon her countenance, which varies with hope and fear, pleasure and pain, self-approbation and regret; and which, when she is trying to study out anything, assumes an expression of intense attention and thought.²⁷

At this early stage, Howe felt that he could not say conclusively that his young pupil had a clear sense of right and wrong, apart from the love of approval that she so eagerly sought. But he was convinced that her mind, her conscience, her soul showed all signs of being in healthy working order, unimpaired by her physical infirmity. The mind, Laura's case already seemed to prove, was not only at least partially independent of the body but showed every sign of being able to overcome the most horrendous physical barriers imaginable. "The immortal spirit within her," Howe wrote in the first month of his experiment to a supporter in Maine, "although in darkness & stillness like that of a tomb, is full of life & vigor, is animated by innate power & triumphantly refutes the doctrine that the soul is but a blank sheet upon which education & experience write everything."²⁸

By insisting that Laura's mind was not a "blank sheet" but was driven by an "innate power" to communicate, Howe was entering the child as a crucial piece of evidence in one of the most important scientific and theological debates of his time. For more than a century, the role that the senses play in determining human nature and creating human knowledge had been *the* crucial debate in philosophical circles, the sticking point that had divided the various competing branches of Enlightenment thinking about the human mind.

Locke had established the starting point of that debate,

with his efforts to place the study of the human mind on the same scientific footing that Newton had placed the study of the heavens. The view held by Descartes and his fellow rationalists that humans are born with certain innate ideas that the Creator plants, fully formed, into the human mind was, for Locke, an unfounded superstition, a remnant of the discredited vagaries of medieval scholasticism and mystical neo-Platonism. Searching instead for the observable mechanisms of mental activity, Locke posited that the mind contains no innate ideas but develops them from the sensory input of the external world and from self-reflection on its own activity. Prior to receiving these sensory impressions, the child is born, in Locke's famous phrase, into a state of *tabula rasa*.

Down to Howe's own time, American intellectuals revered Locke's accomplishment, and college students dutifully worked their way through his *Essay Concerning Human Understanding*. But some also worried that a group of Locke's disciples, particularly among the French, had mistaken him to mean that the "mind is the result of sensation." The mind, these French materialists argued, is born passive and inert and is shaped entirely by its external environment. Today, Locke scholars point out that this has been a common misreading of the philosopher's famous metaphor of *tabula rasa* and show that Locke actually credited the mind with a more active role in converting sensory input into knowledge through certain innate reasoning "faculties." But in Howe's time the materialistic implications of Locke's sensationalist psychology were made dangerously clear by some of the radical thinkers of the French Enlightenment. Condillac, for example, felt that he was only carrying Locke's psychology to its logical conclusion when he tried to prove that the mind contains no innate faculties and that thought is therefore purely the product of physical sensation. Explaining all mental phenomena as byproducts of the senses, the materialists seemed prepared to dismiss the immaterial mind and the immortal soul as unscientific superstitions.²⁹

In Howe's time, this philosophical radicalism was not easily dismissed as another Old World madness, safely contained on the far side of the Atlantic. In the 1830s, the fruits of French materialism were ripening in the midst of pious New England. Two years before Howe met Laura Bridgman, he set down his own fears about the rise of an "infidel party" in Massachusetts in a two-part article called "Atheism in New England," published in his own *New England Magazine*. Howe warned his readers that the freethinkers of his day enjoyed growing congregations who gathered each week to hear their "ministers" ridicule Christianity, foment envy and class hatred among the poor, undermine the institution of marriage, and promote "degrading profligacy."³⁰

At the bottom of all these threats to "the foundations of the social-fabric" lay the theory of materialism, what Howe called "the doctrines of the French infidels." In an effort to make this perfectly clear, Howe quoted verses from the infidels' "Bible of Reason":

The soul is [only the] principle of sensibility. To think, to suffer, to enjoy—is to feel. When the body, therefore, ceases to live, it cannot exercise sensibility. Where there are no senses,

grooved pasteboard placed underneath her paper. Before long she was conducting a simple but voluminous correspondence with her family, and recording her daily lessons in a journal.³⁴

As Laura's grasp of language continually improved, Howe grew more confident that his protégé had dealt a knockout blow to the doctrine of materialism. He wrote to the English writer Harriet Martineau that "her whole nature seems changed & the now triumphant mind begins to speak out in her countenance with a natural eloquence surprising to those who remember her former situation."³⁵

Howe drew his philosophical conclusion emphatically in his 1838 report.³⁶ In the sentimental prose style that Howe used to appeal to the deepest sympathies of his readers, he painted the scene of a chance meeting in the institution's hallway between Laura and one of her classmates. He described "an intertwining of arms—a grasping of hands—and a swift telegraphing upon the tiny fingers (which communicated) exchanges of joy and sorrow...kissings and partings." Moving to the moral, he concluded that such a scene was "a better refutation of the doctrine, that mind is the result of sensation, than folios of learned argument. If those philosophers who consider man as only the most perfect animal, and attribute his superiority to his senses, be correct, then a dog or a monkey should have mental power quadruple that of poor Laura Bridgman."³⁷

Howe was fully prepared to give the senses their due. The "French philosophers," he conceded, were correct in asserting that "all ideas of sensible objects are derived immediately or remotely from impressions made upon the senses." In other words, our knowledge of the material world must come from our experience of it, through the senses. Thus, for example, a deaf and blind person could never learn anything about the true nature of color or sound. Where the empiricists had erred, Howe claimed, was in their attempt to overapply this "doctrine of sensation," claiming that *moral* and *spiritual* knowledge were also produced by sensory experience. "All the higher and nobler attributes of the soul, all that part of man which is truly in the likeness of God, is independent of sensation," Howe concluded. "The hope of immortality, the love of goodness, the veneration of justice, the desire of sympathy, the yearning for affection, are all independent of external sensations." Though such claims carried Howe far beyond the evidence provided by his experiment thus far, he was confident that Laura would reveal all of these symptoms of the soul in due course.³⁸

If popular press accounts of Laura's breakthrough into language may be taken as a measure of general public reaction, Howe's audience was eager to accept his claim that the child's story proved the existence of an immaterial soul. Countless writers echoed Howe's argument that Laura's education was a profound tribute to the human spirit's power to overcome physical barriers. However, very few writers for the popular press took a serious interest in the more intricate philosophical details of Howe's battle against the philosophy of materialism or his hasty attempt to enter Laura's story as evidence in the philosophers' ongoing epistemological debate. Popular Christian belief at the time led most people to accept dualism, a clear distinction between body and soul, as

a matter of course, untroubled by the arcane epistemologies of European radicalism.

But the intellectual community took Dr. Howe's contribution to the mind/body problem quite seriously and praised his vindication of "this imperial mind of ours." Dr. John Kitto, author of a widely read book on the senses, called the moment of Laura Bridgman's linguistic breakthrough proof that "wherever there *is* mind, there is no imprisonment from which it cannot be freed." Kitto praised Howe's work as a "great discovery in the history of man" and urged that the specific moment of the child's linguistic breakthrough should be carefully recorded for posterity. One of Howe's professors at Harvard's medical school, visiting Perkins less than a month after Laura's education began, wrote that the child's "power of ratiocination" was sufficient evidence "to convince the greatest skeptic of the existence of the soul."³⁹

The most thoughtful endorsement of Howe's attack on materialism came from the *Christian Examiner*, the leading journal of Boston's Unitarians. Mrs. L. Minot explained to her readers that there were "two grand divisions of metaphysical systems," one which attributed knowledge to the senses and the other which held that the intellect, the human mind, is an essential and active agent in the formation of ideas. Like Howe, Minot freely acknowledged that the input of the senses was necessary to the formation of most human knowledge about the world. But she claimed that the materialists, those prodigal heirs of Locke who had so troubled Howe, were guilty of exaggerating the importance of the senses, downplaying or dismissing altogether the crucial, even "godlike" role that the mind must play. Already anticipating Kant's influence on America's emerging Romantic movement, Minot greeted Howe's experiment as part of a broader intellectual revolution against materialism. "The senses, which in philosophy have long been lord of the ascendant, and claimed to be the source of all the godlike thoughts of the soul, are now hiding their diminished heads. The ideal is regaining its rightful domain, and restricting them more and more to the mere threshold of the soul's temple."⁴⁰

As important as Howe's experiment was for the vindication of the intellect and the ideal, Minot was more impressed by the breakthrough he had made in applying the scientific method to the study of the human mind. Rationalists and empiricists, she explained, had been deadlocked for centuries in an armchair debate over the origin of human ideas in large part because they lacked the techniques for investigating the matter first-hand. Infants, Minot suggested, offer an ideal testing ground for resolving these questions about the workings of the human mind, yet this fertile field of scientific investigation was abandoned to mothers, their own minds hopelessly distracted by the "petty cares and duties" of child-rearing. Facts were needed, data gathered by "the closest attention of a cautious and philosophic observer."⁴¹

Howe's experiment, Minot suggested, represented an entirely new and scientific approach to ancient moral questions, the chance at last to gather "details such as the

philosopher has long sought in vain." Howe had found in Laura Bridgman an ideal specimen to study. Even infants learned at lightning speed, but Laura's mental processes were slowed by her handicaps. "The steps of her progress are laborious," Minot explained, "which enables a careful observer to note them accurately." She added that it was the scientific community's great fortune that fate had entrusted this case to Howe, a philosopher and "a man of candid and accurate habits of mind."⁴²

In spite of all the praise heaped upon Howe by his contemporaries for his scientific credentials and careful observation, the flaws in his famous "experiment" on the role the senses play in creating mind seem glaringly obvious to even a casual observer today. To refute the doctrine that "the mind is the result of sensation," Howe would necessarily have had to show that Laura Bridgman's mental life existed independent of *all* sensory input. After her illness, Laura enjoyed considerably less outside stimulation than the average person, but with her single sense of touch her mind was never devoid of a sensory connection with the world around her.

Perhaps sensitive to this flaw in his experiment, Howe often minimized the importance of the sense of touch, dismissing it as the least articulate and the crudest of senses. He portrayed the girl, prior to her education at Perkins, as little more than a cartesian corpuscle, bouncing in a cold and barren world made up only of space and matter. Even her own younger brothers and sisters, Howe wrote, "were but forms of matter which resisted her touch, but which differed not from the furniture, save in warmth and in the power of locomotion. And not even in these respects from the dog and the cat."⁴³

Yet Laura's sense of touch was undeniably an essential stimulus to her mind after her illness; and, judging from the affection she expressed to her family and the number of household duties she performed, the sense of touch conveyed a great deal more to her mind than Howe acknowledged. Without downplaying the severity of the child's plight or the value of Howe's humanitarian act, it seems clear that at no point during her illness and isolation did Laura ever resemble the child which he described as a "soul buried a thousand fathoms deep—so deep that no one could reach it or make a sign to it."⁴⁴

The most important challenge to Howe's claim that his experiment had proven that the mind operates independent of the senses comes from the fact that Laura Bridgman experienced the full range of sense experience for more than two years before her illness, and had even begun to develop her powers of language. Howe repeatedly probed his pupil for evidence that she remembered any of the impressions she received in those years, even resorting to experiments with hypnotism, then known as the new science of "animal magnetism." He concluded that, "to the best of my judgement, she has no recollection." Since she was unable to recall anything of the world of sights and sounds from her first two years of life, Howe concluded that the influence of these sensations had been completely erased from her brain, at least "for all practical purposes."⁴⁵

As years went by, his accounts of the child's earliest years

usually omitted mention of her early language skills, or even her experience of sight and sound. She had been deaf and blind, he began to write, "from her tender infancy." When some of his contemporaries expressed skepticism, suggesting that Laura's remarkable progress in learning language was due to "some remembrance of oral language," Howe could only accuse them of being "metaphysical hairsplitter[s]."⁴⁶

Today, with the benefit of a century and a half of empirical research, psychologists tell us that the sensory impressions gathered in the first two years of life are both indelible and enormously important to proper mental development. In fact, subsequent work with the deaf and blind has shown that those *born* into this state face nearly insurmountable barriers to mental development. Howe's breakthrough to Laura was a remarkable achievement of pedagogy, and a great act of human kindness, but in the end it could not resolve the ancient complexities of the role that the senses play in forming human knowledge.⁴⁷

The efforts Howe made to explain away these flaws in his experiment suggest that he was well aware of them. Yet, in all the scientific discussion of Howe's work during his lifetime, there was little explicit criticism of his methodology. Not until the next generation of more empirically sophisticated psychologists arose were the flaws in Howe's experiment made plain. In 1879, G. Stanley Hall, the last scientist to examine Laura Bridgman in person, concluded that she could remember nothing of her first two years. But he added, "Yet, when we reflect on the amazingly rapid self-education of infantile life through the senses and its fundamental nature, it is impossible to believe that its effect can ever be entirely obliterated." Hall conjectured that Bridgman's "insatiable curiosity" about a world she could neither see nor hear was one crucial remnant from her first two years.⁴⁸ Perhaps even more important, her relatively rapid understanding of the nature and use of language was no doubt a product of her early linguistic development.

One possible explanation for the widespread uncritical acceptance of Howe's method and conclusions is the fact that they accorded so well with the prevailing wisdom of his time. Laura Bridgman delighted the Anglo-American intellectual community because she seemed to prove what they had already believed. Defenders of the Christian faith welcomed what they took to be scientific evidence of an immaterial soul. Others in this era of democratic reform, individualism, and expansion embraced Howe's claim that Laura Bridgman proved that the human spirit, however humble, could conquer the most formidable physical obstacles. Steven Jay Gould, the historian of science, has suggested that scientific attempts to describe and measure the human mind have often been "virtually free from the constraints of fact." One reason, says Gould, is that the study of the mind is typically "invested with very little reliable information. When the ratio of data to social impact is so low, a history of scientific attitudes may be little more than an oblique record of social change."⁴⁹

According to Gould, the likelihood that an observer's bias will corrupt the objectivity of an experiment is increased not only by the social significance of the results but also by the scarcity of reliable scientific evidence. In this re-

gard, the obvious flaws in Howe's experiment reveal the primitive state of experimental psychology in the antebellum period. In the previous century, the thinkers of the Enlightenment had called for a new, scientific study of the human mind. Locke, as a pioneer in psychological speculation, founded his new science of the mind on the method of "introspection," the careful observation of the processes of one's own mind. This approach was vulnerable to the charge that each observer's self-reflections are inevitably subjective, even solipsistic.⁵⁰

Howe, like many in his time, dismissed the introspective approach used by Locke and, later, the common sense philosophers, as hopelessly flawed. "They all hold up consciousness as a mirror before them," he wrote two years before finding Laura Bridgman, "and think they see there an image of man which they attempt to describe; but alas! the mirror is so narrow that it will admit but one image at a time, and that the image of him who holds it up." Echoing the prevailing scientific wisdom of his day, Howe concluded that such an approach "must ever err."⁵¹

Thus it was left to Howe and other nineteenth-century heirs of the Enlightenment to devise a new model of psychological investigation, based on the systematic observation of the minds of others. Howe's work, flawed as it was, must be understood in this context—as an early attempt to find a new method of empirical psychological research. By attempting to study the processes of Laura's mind rather than those of his own, Howe anticipated the course of future experimental psychological research. But clearly his own biases, and those of his society, compromised his observations and his conclusions, making his work no more objective than that of his predecessors.

Because Howe's earliest findings confirmed his society's cherished belief in an immaterial soul, many observers hailed him as a profound philosopher and a pioneering scientist of the human mind. But Howe's work with Laura was just beginning at this point. He vowed to carry on, learning what he could of the operations of the mind as he studied the gradual unfolding of "the moral and intellectual nature of this interesting child." Having proven the existence of the soul, he now proposed to dissect it, to search for clues to its internal nature.

As ever, Howe brought his own biases into this investigation. But at this point his assumptions about what he expected to find veered off from the broad intellectual consensus shared by Anglo-American Christendom. He would find in his exotic pupil a mind and soul that operated according to phrenological laws that mirrored his own liberal faith. While Howe's famous experiment began with universal admiration and acclaim, the doctor would soon find himself mired in controversy. □

References

- ¹ Mary Swift Lamson, *Life and Education of Laura Bridgman* (Boston, 1881; New York, 1975), 5; Laura Bridgman, "Earliest Autobiography," 1849, Laura Bridgman Papers, Perkins (hereafter BPP).
- ² William Ingalls, M.D., *A Lecture on the Subject of Phrenology Not Opposed to the Principles of Religion; Nor the Precepts of Christianity* (Boston, 1839), 10. Howe never publicly mentioned using force, however mild, to win Laura's submission.
- ³ Samuel Gridley Howe, *The Education of Laura Bridgman*, ed. Julia Ward Howe (Boston, 1892), 4. The extent of the novelty of the Laura Bridgman experiment is exaggerated by Julia Ward Howe's description and her husband's own public interpretation of Laura's education. In the previous century a great deal of attention had been paid to similar cases of deaf-blindness, most notably the case of James Mitchell, a Scottish boy born deaf and blind. While those cases excited a great deal of philosophical interest, there was little doubt that James Mitchell was, in spite of his handicaps, "capable of reflexion and reasoning." Likewise, Laura Bridgman's own behavior prior to meeting Howe clearly suggested that she contained active powers of reasoning. Perhaps the drama of the Laura Bridgman experiment was heightened by more immediate comparison with the case of Julia Brace at the American Asylum in Hartford, whose physical infirmities were accompanied by apparent mental ones.
- ⁴ Maude Howe Elliott and Florence Howe Hall, *Laura Bridgman: Dr. Howe's Famous Pupil and What He Taught Her* (Boston, 1904), 157.
- ⁵ For general works on the influence of Scottish philosophy in America, see Sydney E. Ahlstrom, "The Scottish Philosophy and American Theology," *Church History* 24 (1955): 257-272. Daniel Walker Howe, *The Unitarian Conscience: Harvard Moral Philosophy, 1805-1861* (Cambridge, 1970); Donald Myer, *The Instructed Conscience* (Philadelphia, 1972); Richard Petersen, *Scottish Common Sense in America, 1768-1850* (Washington, DC, 1963).
- ⁶ Daniel Walker Howe, *Unitarian Conscience*, passim; Ahlstrom, "Scottish Philosophy and American Theology," 257-269.
- ⁷ Samuel Gridley Howe, *An Address Delivered at the Anniversary Celebration of the Boston Phrenological Society* (Boston, 1836), 18.
- ⁸ For a fuller discussion of the tenets of phrenology, see John D. Davies, *Phrenology, Fad and Science: A Nineteenth-Century Crusade* (New Haven, 1955); David Gustino, *Conquest of Mind: Phrenology and Victorian Social Thought* (London, 1975); and Robert M. Young, *Mind, Brain and Adaptation in the Nineteenth Century* (Oxford, 1970).
- ⁹ Howe to Horace Mann, 1857, Howe Papers, Houghton; typescript copy in Howe Papers, Perkins (hereafter HPP).
- ¹⁰ Howe, *Address*, 18. On the central role of phrenology on nineteenth-century discussions of psychology, see Young, *Mind, Brain and Adaptation in the Nineteenth Century*, passim.
- ¹¹ George Combe, *The Constitution of Man Considered in Relation to External Objects* (Boston: Allen and Ticknor, 1834; rpt. Delmar, NY: Scholars' Facsimile Press, 1974); see Alfred Young, ch. 4, for a discussion of nineteenth-century ideas about the link between the brain and language ability.
- ¹² Howe, *Ninth Annual Report* (Boston, 1841) (hereafter *Ninth AR*), 24.
- ¹³ *Ibid.*, 25. Howe's conclusion that Laura's own language of gestures, no matter how well developed, would have restricted her intellectual range seems supported by modern research on the linguistic development of the deaf. Most deaf children who are not taught a form of Sign or oral language will instinctively improvise a symbolic system of their own. These self-made languages, researchers have found, are never able to attain the complexity and power of more abstract symbolic language—either signed or spoken. "The deaf mute who has not been taught to speak," one study concluded, "does not possess all those forms of reflection which are realized through speech...[He] indicates objects or actions with a gesture; he is unable to form abstract concepts, to systematize the phenomena of the external world with the aid of abstract signals furnished by language but which are not natural to visual, practically acquired experience." A.R. Luria and F. Yudovich cited in Oliver Sacks, *Seeing Voices: A Journey into the World of the Deaf* (Los Angeles, 1989), 43.

- ¹⁴ "Julia Brace," *Religious Magazine and Family Miscellany*, Aug. 1847, 347-355. The instructors at the Hartford asylum had, in fact, attempted to teach Julia Brace the use of the alphabet, in the hopes of eventually teaching her "moral and religious truth." Their own efforts largely parallel the technique later used by Howe, although Howe never publicly acknowledged this fact. Guided by carved wooden letters, Julia did learn to form the letters of "a few simple words." But, one writer reported, this cumbersome process of communication "soon became uninteresting to her," and apparently to her teachers as well, who abandoned the project as hopeless. After Howe's success with Laura Bridgman, Julia Brace was invited to come to Perkins to see if she might be able to learn to use the alphabet under Howe's instruction. The experiment produced a similar disappointing result, and Julia returned to Hartford. Howe claimed that this failure was probably due to the fact that she had passed the age when she could easily learn language. Considering that she did not enter the Hartford asylum until the age of eighteen, this seems like a likely reason why her initial language training in Hartford failed as well. Julia Brace's experience points to the importance of Laura Bridgman's young age as a crucial factor in the ultimate success of Howe's educational efforts.
- ¹⁵ Thomas Reid, *An Inquiry into the Human Mind on the Principles of Common Sense*, in *Thomas Reid's Inquiry and Essays*, ed. Ronald E. Beanblossom and Keith Lehrer (Indianapolis, 1983), 31-35. As educators of the deaf now point out, this scheme which divides language into a primitive system of manual gestures and a "higher" spoken language leaves out a third possibility; that a manual sign language may become as sophisticated, as capable of expressing abstract thought, as a spoken language. Because Howe accepted Reid's view of manual gestures, he became a leading proponent of teaching deaf children to speak and banning sign language from schools for the deaf. Historians of deaf culture now suggest that this "reform," fully realized a few years after Howe's death, set deaf education back for almost a century. Sacks, *Seeing Voices*, 27-28; Douglas C. Baynton, "Savages and Deaf-Mutes: Evolutionary Theory and the Campaign against Sign Language in the Nineteenth Century," *Deaf History Unveiled*, ed. John Vickrey Van Cleve (Washington, DC, 1993), 92-112.
- ¹⁶ Dugald Stewart, "Of Language," *Collected Works* (Edinburgh, 1854), 4:9.
- ¹⁷ Howe, *Tenth Annual Report* (Boston, 1842), 21.
- ¹⁸ Denis Diderot, *The Letter on the Blind*, trans. Margaret Jourdain, in *Diderot's Early Philosophical Works* (Chicago, 1916), 89.
- ¹⁹ Sacks, *Seeing Voices*, 15-17.
- ²⁰ Wright's description in Lamson, *Life and Education*, 5-6; *Ninth AR*, 25.
- ²¹ *Ninth AR*, 26.
- ²² In his book, on the experience of deafness, Oliver Sacks cites several historic cases that seem to parallel Howe's 1841 observation that Laura's understanding of the symbolic power of language was learned quite rapidly and that it had a profound transformative effect on her mind and spirit. Reviewing the story of Massieu, Sicard's famous deaf pupil who learned sign language at the age of fourteen, Sacks writes that, "in this way, at the age of fourteen, he entered into the human estate, could know the world as home, the world as his 'domain' in a way he had never known before." Sacks describes the experience of Kaspar Hauser in similar terms. Hauser was a German man who grew to maturity without learning any language, because his abusive guardians had locked him in a dark room for most of his childhood. When he emerged and learned language, Sacks writes, "this awakening to the world of shared meanings, of language, led to a sudden and brilliant awakening of his whole mind and soul." Sacks, *Seeing Voices*, 48, 52.
- ²³ Howe, *Sixth Annual Report* (Boston, 1838) (hereafter *Sixth AR*), 11-12.
- ²⁴ *Ibid.*
- ²⁵ Lamson, *Life and Education*, 7.
- ²⁶ *Sixth AR*, 6.
- ²⁷ *Sixth AR*, 6-7.
- ²⁸ Howe to "Sec. of State of Maine," 18 Oct. 1837, HPP.
- ²⁹ Michael J. Morgan, *Molyneux's Question: Vision, Touch and the Philosophy of Perception* (Cambridge, 1977), 82, 96-97; John Yolton, *John Locke: An Introduction* (New York, 1985), 134-135; *Condillac's Treatise on the Sensations*, trans. Geraldine Carr (Los Angeles, 1930), xxii; S.G. Howe, *Seventh Annual Report* (Boston, 1839) (hereafter *Seventh AR*), 9-10.
- ³⁰ S.G. Howe, "Atheism in New England, I," *New England Magazine*, Dec. 1834; S.G. Howe, "Atheism in New England, II," *New England Magazine*, Jan. 1835.
- ³¹ Howe, "Atheism in New-England, I," 505-506, 509; "Atheism in New-England, II," 56-57.
- ³² Howe, "Atheism in New-England, II," 60.
- ³³ Sir William Blackstone, *Commentaries on the Laws of England* (Philadelphia, 1771) I, book I, 304; S.G. Howe, *Education of Laura Bridgman*, 212-213. In the Public Eye.
- ³⁴ Lamson, *Life and Education*, 8.
- ³⁵ Howe to Harriet Martineau, 27 Apr. 1838, HPP.
- ³⁶ Drew in Lamson, *Life and Education*, 7.
- ³⁷ *Seventh AR*, 9-10.
- ³⁸ Howe, "Notes on Laura Bridgman," in S.G. Howe, *Education of Laura Bridgman*, 213.
- ³⁹ Dr. John Kitto, *The Lost Senses* (New York, 1852), 210; Ingalls, "A Lecture on the Subject of Phrenology," 10.
- ⁴⁰ L. Minot, "Review of *Eighth Annual Report*," *Christian Examiner and General Review*, July 1840, 373.
- ⁴¹ *Ibid.*, 367.
- ⁴² *Ibid.*, 370.
- ⁴³ *Ninth AR*, 24. Also quoted in Kitto, *Lost Senses*, 207. Kitto, in one of the few contemporary accounts that treats Howe's account with a modest measure of skepticism, commented, "This is perhaps too highly colored."
- ⁴⁴ Howe quoted in Mary Howitt, "Laura Bridgman," *Howitt's Journal*, 9 Oct. 1847.
- ⁴⁵ *Ninth AR*, 36; S.G. Howe, *Education of Laura Bridgman*, 386.
- ⁴⁶ Howe, *Eleventh Annual Report* (Boston, 1843), 27; Howe, *Education of Laura Bridgman*, 386.
- ⁴⁷ Douglas L. Geenens, "Neurobiological Development and Cognition in the Deaf-blind," in *A Guide to Planning and Support for Individuals Who Are Deafblind* (Toronto, 1999), 152-153.
- ⁴⁸ G. Stanley Hall, "Laura Bridgman," *Mind* 14 (Apr. 1879), 152-153.
- ⁴⁹ Steven Jay Gould, *The Mismeasure of Man* (New York, 1981), 22.
- ⁵⁰ For a general summary of the phrenologists' attack on the method of introspection, see "On the Comparative Merits of Phrenology and the Philosophy of Reid and Stewart," *American Phrenological Journal and Miscellany* 3 (1 Sept. 1841).
- ⁵¹ Howe, *Address*, 11-12.