A MEMOIR OF THEODORE STRONG, LL.D.: PREPARED AT THE REQUEST OF THE NATIONAL ACADEMY OF SCIENCE AND READ BEFORE THAT BODY, THURSDAY EVENING, APRIL 17, 1879

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JOSEPH P. BRADLEY

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THEODORE STRONG, LL.D.

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THURSDAY EVENING, APRIL 17, 1879,

BY

JOSEPH P. BRADLEY,

ASSOCIATE JUSTICE OF THE SUPREME COURT OF THE UNITED STATES.

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From the Inspector
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MEMOIR, &c.

THEODORE STRONG, one of the original corporate members of this Academy, was born on the 26th day of July, 1790, and died on the first day of February, 1869, in the seventy-ninth year of his age. His birth took place at South Hadley, Massachusetts, at the house of his uncle, Col. Benjamin Ruggles Woodbridge, a prominent citizen of that place, who virtually adopted him as his own son. His father and grandfather both bore the name of Joseph Strong, and were Congregational ministers, descended from Elder John Strong of Northampton, whose descendants, generally worthy of their Puritan ancestry, are scattered all over the land, and often found, as they have ever been, occupying positions of trust and responsibility. One of them is at this moment an honored associate of my own on the bench of the Supreme Court, being in the same degree of descent as the subject of this memoir,—namely, the sixth degree from their common ancestor.

From this respectable lineage Theodore Strong inherited his vigorous constitution, as well as those solid elements of character which made him as eminent in purity and honor as he became in the walks of science.

His mother was Sophia Woodbridge, daughter of Rev. John Woodbridge of South Hadley, the ninth generation of a succession of ministers bearing the same name. So that, on either side, Theodore Strong came from genuine Puritan stock. His ancestor John Strong was one of the

first settlers of Dorchester in 1630; and his ancestor John Woodbridge came to Massachusetts in 1634, and, returning to England, became one of the two thousand ejected ministers soon after the restoration of Charles II., and returned to this country as his permanent home in 1663. It is said of Theodore Strong's mother, Sophia Woodbridge, that she was a woman of very superior natural abilities, especially of the argumentative kind, and that in her younger days, she was exceedingly beautiful. Men so often inherit from their mothers their strong and healthy intellects and powers of reasoning, that it has almost come to be a maxim of human experience that a man gets his mental ability from his mother. But Professor Strong's father is also said to have been a man of great energy, piety, and perseverance. But being blessed, like all of his ancestors, with a large family, he was not unwilling to permit his brother-in-law, Col. Woodbridge, who had no family of his own, to adopt his young son, Theodore, and take the responsibility of his bringing up and education. So it happened that the boy spent his early days in that beautiful region of mountain and farms, where he was born. Of course, he was early sent to school, where the spirit of emulation was first excited in him by a bright-eyed girl, who persisted in getting to the head of her class. Which of us has not had that same experience? At a proper age his uncle sent him to prepare for college with a neighboring clergyman, with whom he learned more accidence than he did arithmetic or algebra. At the age of eighteen he entered Yale College, then presided over by Dr. Dwight; the mathematical chair being occupied by Jeremiah Day, the chemical by Benjamin Silliman, and that of the learned languages by James L. Kingsley; with all of whom it became his good fortune to form associations of the greatest mutual respect and friendship. For the memory of President Dwight, in particular, he always retained the profoundest veneration. It was President Dwight, as he often remarked, who first taught him to think; and he was especially wont to speak

of the benefit he received from the debates of the senior class held in Dr. Dwight's presence, and stimulated and guided into higher reaches of thought by his pungent questions and observations, "I could feel my mind *stretching*," he would say, "under the influence of Dr. Dwight."

Young Strong entered the Freshman class, very well prepared in the languages, but not much advanced in mathematics. At one of the earliest recitations in this department he made a failure, and was rather rudely laughed at by one of the class, which so excited his indignation that he turned to the offender, and forgetting the proprieties of the place, said to him, quite audibly, "I'll teach you that I know as much about mathematics as you do!" From that moment he made up his mind to excel in that branch of study, and he kept his word to such purpose that when he graduated in 1812, he took the mathematical prize, and had already acquired such proficiency in the science as to attract the attention and friendship of his teacher, Professor Day. His other studies had not been neglected, and he had become so deeply interested in Professor Silliman's department, that at this period he formed the intention of pursuing the positive sciences, and especially chemistry. But it so happened that shortly after his return home, Hamilton College, located at Clinton in the State of New York, was in need of a mathematical tutor; and Dr. Azel Backus, the president of that institution, wrote to Dr. Dwight to inquire if any of the recently graduated class could be recommended for the position. Dr. Dwight unhesitatingly recommended Theodore Strong, and he was immediately appointed, and accepted the place. He remained at Hamilton College as tutor of mathematics for four years, and after that as professor of mathematics and natural philosophy for eleven years longer; and during that period laid the foundation of those profound acquirements in pure science which gave him such a high reputation amongst those engaged in similar pursuits throughout the country.

Thus, accident in this instance, as in ten thousand others, —or, at least, what appears to us as accident,—cast the die which gave direction to a long and eminent life. Given a certain volume of brain, and favorable circumstances for its development, and, from the observation I have made, I am convinced that the attainment of eminence in any particular department of science, or of active life, depends not so much upon any natural gift or aptitude therefor, as upon other second causes, operating to lead the attention and energies in a particular direction. Men may be born poets or artists; that is, provided they cultivate poetry or art. For even here cultivation and practice are essential.

"For a good poet's made as well as born."

But in the special and particular development of the intellectual faculty, I am sure that more depends on opportunity or chance, than on any native genius or bent for a particular pursuit. Brain and opportunity are the factors of life. Nothing can be done without brain, of course; and nothing worth remembering without massive brain. But given that, opportunity, often accidental in its character, does the rest.

Being a minute too late for the steamboat on the way to the metropolis to seek one's fortune, may change the whole course of life; may lead to the college and the forum instead of the counting-house and the exchange, and make a man to become what he never thought or dreamed of becoming. I have known just such a case. One man becomes an eminent divine instead of a lawyer; another an eminent mathematician instead of a merchant. Opportunity—accident, decided which it should be. Theodore Strong had brain, and a good store of it; and was, therefore, of capacity to become whatever Opportunity should set him to try for. She set him at mathematics, and he became a great mathematician.

When he received the invitation to the tutorship of Hamilton College he hesitated about burying himself in what

was then regarded as the "Far West." But his uncle, who seems to have been a man of strong sense, and who undoubtedly exercised an indelible influence on his character, said to him: "Theodore, I have given you an education: now go forward and make a man of yourself!" He accordingly went; and perhaps the opportunities which he enjoyed for study and original investigation in that young institution were more favorable to his advancement in solid proficiency than a like position would have been in Yale with its army of students, and consequent tax on his time. Professor Day, in a letter addressed to him in December, 1813, says: "I have received yours of 15th November, and thank you for the communication of your ingenious discovery and demonstration of a property of the circle, which I do not recollect to have seen in any author. I shall be gratified to hear from you frequently, and to learn from time to time what progress you are making in mathematical discoveries. I am very glad to see you placed in a situation where you have opportunity for investigation in your favorite science. I wish I had myself more leisure to devote to the higher departments of science. But as I am now situated, I can do little more than endeavor to render truths long since discovered intelligible to those whom I am bound to instruct." The discovery and demonstration referred to by Professor Day were probably the demonstrations made by the young tutor, about this time, of the celebrated theorems respecting the circle, which had been propounded as a challenge to the world by Dr. Matthew Stewart in 1746. No demonstration had appeared until Mr. James Glennie, nearly sixty years afterwards, printed one in the Edinburgh Philosophical Transactions; but it is not probable that this had ever been seen by Mr. Strong. His attention was called to these theorems by one of the professors of Hamilton College soon after his going to Clinton. They had been recently published in the 8th volume of Rees's Cyclopedia (article "Circle") which was just being reissued in Philadelphia. In the then state of