

## Charlotte Angas Scott

Charlotte Angas Scott was a revolutionary forging through various obstacles to acquire numerous firsts for women in the field of mathematics. She was the first British woman to receive a doctorate in mathematics as well as the first mathematician and Bryn Mawr. Her work on admission requirements and examinations at Bryn Mawr aided in the establishment of the College Entrance Examination Board. She published the innovative textbook *An Introductory Account of Certain Modern Ideas and Methods in Plane Analytical Geometry*. Scott authored over thirty papers in international journals. In one momentous paper, Scott supplied the geometric approach to Noether's Fundamental Theorem. Scott also became editor of the *American Journal of Mathematics* and served as Vice-President of the American Mathematical Society.

Scott was introduced to the world of academia early in life. She was born on June 8, 1858 into a "Nonconformist" Christian community that supported a variety of social reforms including the education of women. Her father's occupation, as the Principal of the Lancashire Independent College, provided her with tutors from age seven.

At age eighteen Scott won a scholarship to Hitchin College, renamed Girton, on the basis of the tutoring she received at home. While Girton College was the first college in England to offer women a postsecondary program, women students were only educated when established professors and male tutors found it convenient.

In 1880, Scott was allowed to participate in Cambridge's Tripos examinations, which determined who was qualified to receive a bachelor's degree with honors. Scott's performance on the final examinations placed her eighth amongst all the men in the university. Despite her accomplishment, Scott could not attend the award ceremony nor could her name be officially mentioned at the ceremony. However, she won the esteem of many of her peers in the mathematical community. At the ceremony, when the man reading the names came to 'eighth', before he could even utter the name, fellow male undergraduates caused an uproar chanting "Scott of Girton" and cheering and throwing their hats.

Scott's trail blazing accomplishment sparked a movement that resulted in a resolution that allowed all resident women to take the Tripos examinations as well as have their names publicly announced. Based on her mastery of the examination, she gained a lectureship at Girton College as well as the attention of Arthur Cayley. Cayley was a leading algebraist who aided the women's resolution at Cambridge. Scott attended many of Cayley's lecture series as she continued her research on algebraic geometry. Under Cayley's influence Scott received a Bachelor of Science degree in 1882 and she earned her doctorate in 1885 from the University of London. She received both "First Class" degrees, the highest scholastic level, from the University of London since Cambridge did not grant women degrees until 1948.

After teaching at Girton College for four years, Scott's dedication and arduous work in mathematics had earned her a distinguished reputation. She was offered Bryn Mawr's first endowed chair in mathematics. As she accepted her position at Bryn Mawr, Scott faced a new challenge which would threaten her ability to teach. Scott's deafness was almost complete by the time she taught at Bryn Mawr. Like the obstacles that her gender presented, she would not allow this type of social isolation affect her work or create distance between herself and her students.

Scott left this world in 1931 with a legacy that challenged women to destroy the sexual stereotypes in mathematical and science societies. She supervised seven women's doctoral dissertations. Scott inspired women to pursue an active role in mathematics for "there is never any harm in trying to secure for yourself exactly what you want," (Scott at a American Mathematical Society meeting in 1922).

**Written Sources:**

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