

The Beginnings of The American Mathematical Society. Reminiscences of Thomas Scott Fiske

In the spring of 1887, when I was a graduate student in the Department of Mathematics of Columbia University, my teacher and friend, Professor J. H. Van Amringe, suggested that I visit Cambridge University, England.

One of the Columbia trustees, George L. Rives, afterwards Assistant Secretary of State under President Cleveland, had been fifth wrangler at the mathematical tripos in 1872 and had declined the offer of a fellowship at Trinity College. Rives gave me letters to Cayley, Glaisher, Forsyth, and Sir George Darwin; and on my arrival at Cambridge I was treated as a guest and was invited to attend any mathematical lectures whatsoever in which I might be interested.

Scientifically I benefitted most from my contacts with Forsyth and from my reading with Dr. H. W. Richmond, who consented to give me private lessons. However, from Dr. J. W. L. Glaisher, who made of me an intimate friend, who spent many an evening with me in heart to heart talks, who took me with him to meetings of the London Mathematical Society and the Royal Astronomical Society, and entertained me with gossip about scores of contemporary and earlier mathematicians, I gained more in a general way than from anyone else. As for Cayley, I had attended only a few of his lectures on the "Calculus of Extraordinaries" when one day he slipped on the icy pavement and suffered a fracture of the leg which brought the lectures to an end. Before the end of my stay, however, I had the pleasure of dining with Mr. and Mrs. Cayley in their home.

On my return to New York I was filled with the thought that there should be a stronger feeling of comradeship among Americans who were interested in mathematics, and I proposed to two fellow students, Jacoby and Stabler, that we should try to organize a local mathematical society.

On November 24, 1888, we three, together with Professors Van Amringe and Rees and a graduate student, Maclay, met for the purpose of organizing a New York Mathematical Society. We agreed upon the desirability of joining to our group all mathematicians resident in New York and the neighborhood.

However, at the end of the first year our society had only eleven members. In December, 1889, five new members were admitted including McClintock and Pupin. Five members were admitted during 1890; one in January, 1891; and one in February, 1891.

The member elected in January, 1891, was Charles P. Steinmetz. Born in Breslau, April 9, 1865, of Protestant parents, a hunchback with a squeaky voice, as a student at the University of Breslau he had been the ablest pupil of Professor Heinrich Schroeter. In the spring of 1888 he was about to receive the degree of Ph.D., but in order to escape arrest as a socialist he was compelled to flee to Switzerland. Thence he made his way to America, arriving in New York June 1, 1889. About a year later my attention was attracted to an article of sixty pages or more in the *Zeitschrift für Mathematik und Physik* on involutory correspondences defined by a three-dimensional linear system of surfaces of the n th order by Charles Steinmetz of New York. This was his doctor's dissertation. I soon learned that Steinmetz was an employee of the Eickemeyer Dynamo Machine Company of Yonkers, N.Y., and I invited him to come to see me at Columbia University. I told him that his future articles ought to be written in English and published in the United States. I offered to help him if he should desire my assistance in connection with the English of his papers. At the same time I invited him to become a member of the New York Mathematical Society. His membership in the Society continued until his death, October 26, 1923. He presented a number of papers to the Society, two of which were published in the *American Journal of Mathematics*.

Steinmetz told me that it had always been his wish to devote his life to mathematics but that the necessity of earning a living had forced him to become an electrical engineer. After the organization of the General Electric Company in 1892 he was compelled to give practically all of his time to electrical engineering. Eventually he became chief consulting engineer of the Company and was authorized to draw a salary far higher than that paid to any professor of mathematics in the world.

I had many long conversations with Steinmetz. I remember one in which he insisted that science had flourished in Germany not because of, but in spite of the influence of the government. Somehow I joined this to the thought that Steinmetz, not because of, but in spite of his natural inclinations, had become the most distinguished and most highly paid electrical engineer in the world.

At the beginning of 1891, in preparation for the publication of the *Bulletin* we obtained from several publishing houses, notably the Macmillan Company and Ginn and Company, lists of college teachers and others interested in mathematical publications. The names and addresses of suitable persons were culled from these lists, and to them were mailed prospectuses of the

Bulletin and invitations to join the Society. Those who joined were requested to suggest other suitable persons for membership.

Professor William Woolsey Johnson, of the United States Naval Academy, was an intimate friend of Dr. Glaisher. They spent many of their vacations together and were in constant correspondence. Glaisher had spoken of me in his letters to Johnson and, as a result, Johnson and I met at his publishers, John Wiley and Sons, in New York. Johnson became greatly interested in the proposal to enlarge the New York Mathematical Society and to publish a historical and critical review of mathematical science. At that moment the total membership of the Society was only twenty-three. Johnson became the twenty-fourth member. He was the first person from outside the New York circle to join the Society. He contributed the leading article to the first number of the *Bulletin*.

The external appearance of the *Bulletin*, the size of its page, and the color of its cover were copied from Glaisher's journal, *The Messenger of Mathematics*, in which parts of my dissertation for the doctorate had been published. The *Bulletin's* character, however, was influenced chiefly by Darboux's *Bulletin des Sciences Mathématiques* and the *Zeitschrift für Mathematik und Physik*.

When only two or three numbers of the *Bulletin* had appeared I began to receive from Professor Alexander Ziwet, of the University of Michigan, a series of friendly letters containing many helpful and constructive suggestions. I invited his editorial cooperation without delay, and he proved a most valuable editorial associate, serving continuously from 1892 until 1920.

When through the generosity of President Seth Low, of Columbia University, a new professorship of mathematics was created at Barnard College, it was Professor Ziwet who suggested the appointment of Frank Nelson Cole. To Professor Ziwet's inspiration, therefore, may be traced the good fortune of both Columbia University and the American Mathematical Society in securing the never to be forgotten services of the late Professor Cole.

It should be mentioned also that it was through the influence of Professor Ziwet that our distinguished fellow member Earle Raymond Hedrick established his first contact with the *Bulletin*. While a student at the University of Michigan, Hedrick at the request of Ziwet prepared several Lists of New Publications for the *Bulletin*.

Conspicuous among those who in the early nineties attended the monthly meetings in Professor Van Amringe's lecture room was the famous logician, Charles S. Peirce. His dramatic manner, his reckless disregard of accuracy in what he termed "unimportant details," his clever newspaper articles describing the meetings of our young Society interested and amused us all. He was advisor of the New York Public Library for the purchase of scientific books and writer of the mathematical definitions in the *Century Dictionary*.

He was always hard up, living partly on what he could borrow from friends, and partly on what he got from odd jobs such as writing book reviews for the *Nation* and the *Evening Post*. He was equally brilliant, whether under the influence of liquor or otherwise, and his company was prized by the various organizations to which he belonged; and so he was never dropped from any of them even though he was unable to pay his dues. He infuriated Charlotte Angas Scott by contributing to the *New York Evening Post* an unsigned obituary of Arthur Cayley in which he stated upon no grounds, except that Cayley's father had for a time resided in Russia, that Cayley had inherited his genius from a Russian whom his father had married in St. Petersburg. Shortly afterwards Miss Scott contributed to the *Bulletin* a more factual, sober article upon Cayley's life and work, in which she remarked that the last of Cayley's more than nine hundred scientific papers had been published in the *Bulletin* of our Mathematical Society.

At one meeting of the Society, in an eloquent outburst on the nature of mathematics C. S. Peirce proclaimed that the intellectual powers essential to the mathematician were "concentration, imagination, and generalization." Then, after a dramatic pause, he cried: "Did I hear some one say demonstration? Why, my friends," he continued, "demonstration is merely the pavement upon which the chariot of the mathematician rolls."

The year 1894 was the culminating year in the history of the New York Mathematical Society. A number of circumstances combined to awaken the Society to a full consciousness of the fact that it had become national both in character and in influence.

The local committee in charge of the International Congress of Mathematicians in Chicago in 1893 applied to the New York Mathematical Society for financial assistance in the publication of the Congress papers; and the Council of the Society voted to undertake their publication and also to solicit personal contributions in support of the undertaking from those members of the Society who were willing and able to furnish such assistance. This enterprise, transcending considerations and sentiments of a purely local character, seemed to justify the Society in its desire for a name indicating that its character was national, or rather continental.

And at the same time, the meeting of the American Association for the Advancement of Science in Brooklyn in 1894 seemed to present to the Society a most favorable occasion for its debut as a national organization. It appeared likely that the influence of the American Association would bring to New York from remote parts of the country many members of the Society who would welcome the opportunity of attending one of its meetings. Accordingly, plans were made for a meeting to be held in Brooklyn in affiliation with the American Association. This was the first summer meeting and at the same time the first meeting of the Society under its new name, "The American Mathematical Society."

At the first annual meeting after the change in the name, Dr. George William Hill was elected president. During his presidency two summer meetings were held in affiliation with the American Association for the Advancement of Science, in 1895 at Springfield, Mass., and in 1896 at Buffalo, N.Y.

At the annual meeting in December, 1895, Professor Cole was elected secretary of the Society, in which capacity he was to serve for twenty-five years.

The summer meeting at Buffalo in 1896 is memorable for the first colloquium of the Society. The colloquium was the idea of Professor H. S. White, then at Northwestern University, who had been one of the leading spirits in the organization of the colloquium held at Evanston in connection with the World's Fair at Chicago.

Dr. G. W. Hill was succeeded in the presidency by Professor Simon Newcomb, under whom in the summer of 1897 the Society met at Toronto in affiliation with the British Association for the Advancement of Science.

During the presidency of Professor Newcomb the Society felt acutely the need of better facilities for the publication of original papers, and at the meeting in Cambridge in the summer of 1898 a committee was appointed to consider the possibility of improving such facilities through an arrangement with the *American Journal of Mathematics* or otherwise.

As representatives of this committee, Professor Pierpont and I went to Baltimore for a conference with President Gilman and Professor Newcomb, but we found them unwilling to give the Mathematical Society a share in the editorial control of the *American Journal*.

Finally, in the spring of 1899 a meeting was held at the home of Dr. McClintock in New York. Besides Dr. McClintock those present were Bôcher, Moore, Osgood, Pierpont, and I. We agreed to recommend that the Society undertake the publication of a journal of research to be known as the *Transactions of the American Mathematical Society*, a name suggested by Bôcher.

The recommendation was adopted; Moore, Brown, and I were appointed editors of the new journal; and the first number made its appearance in January, 1900, with Professor Moore acting as editor-in-chief, Professor Brown as editor for applied mathematics, and myself as editor in charge of the arrangements with the printer.

For a number of years Moore, Brown, and I met three or four times a year at the Murray Hill Hotel in New York and discussed various problems connected with the *Transactions*. Never have I been associated with men more unselfish, more considerate, or more devoted to high ideals than Moore and Brown.