THE SCIENTIFIC WORK OF ELIAKIM HASTINGS MOORE

1. *Introduction.* In a previous number of this Bulletin* the writer of these pages has published a biographical sketch of the life of Eliakim Hastings Moore. No account of his life can approximate completeness, however, without a more detailed description of his scientific activities than was given there. His enthusiasm for mathematical research was a dominant one, more characteristic of him than any other, in spite of the fact that he had many administrative and editorial responsibilities which often interfered seriously with his scientific work. He had a catholic interest in all domains of mathematics and a breadth of knowledge which was remarkable. I have known few men with so great an appreciation of the mathematical efforts of others, or so well qualified to discuss them in many different fields, qualities which were an important part of his insignia of leadership. If there were two characteristics of his research which could be distinguished above others, I should say that they would be rigor and generality. He strove for precision in thought and language at a time when vagueness and uncertainty were common in mathematical literature, and he profoundly influenced both students and colleagues in this respect by his teaching and example. He was furthermore among the very first to recognize the possibility and importance of the great generality in analysis which is now sought by many writers.

Moore was a prolific thinker, though not throughout his lifetime a prolific writer. His papers, as given in the bibliography at the end of this article, fall roughly into the groups indicated in the following table which lists the numbers of the items in the bibliography belonging to each field and the dates of the first and last papers in each group:

I. Geometry; 1–4, 28, 41, 43–44, 47, 63; 1885–1913.
II. Groups, numbers, algebra; 6–9, 12, 13, 15–18, 20–27, 29, 32, 33, 42, 46, 48, 53, 60, 68, 69, 71; 1892–1922.
III. Theory of functions; 5, 10, 11, 14, 19, 30, 31, 35–40, 52, 59, 67, 73, 74; 1890–1926.
IV. Integral equations, general analysis; 50, 51, 54, 56, 58, 61, 62, 64–66, 70; 1906–1922.
V. Miscellaneous; 34, 45, 49, 55, 57, 72; 1900–1922.

The table indicates fairly well, I think, the sequence of his major interests, though it does not represent adequately the relative enthusiasms with which he pursued them. The domains suggested in the second and fourth entries were the ones to which he gave most thought. His studies in algebra and the theory of groups fell in the period of his greatest activity as a writer, while integral equations and general analysis were his absorbing interest during the latter part of his life when he published least. For general analysis, in particular, he never lost his enthusiasm. He continued his speculations in that field into the last year of his life, as long as his strength permitted.

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