

ROBERT LEE MOORE, 1882–1974

BY R. L. WILDER

If one were asked to list mathematicians who had the most influence on the development of American mathematics during the first half of the twentieth century, certainly R. L. Moore's name would find a prominent place among them. Among the fifty doctorates which he supervised are two former presidents of the American Mathematical Society, four former presidents of the Mathematical Association of America, three members of the National Academy of Sciences; and the number of doctorates which have originated from Moore doctorates either directly or through later generations is apparently in excess of 500.²

These statistics already imply that the man must have been a great teacher; and that he was, any of his students would testify. The "Moore method" of teaching, the heart of which is to get the student to find his own proofs of theorems and, ultimately, to suggest and prove new theorems, has been recorded on a film made by the Mathematical Association of America with the title *Challenge in the classroom*. However, no film, no matter how faithful to detail, could record all the pertinent features of his teaching associated with the man's character and environment.

An essential part of the method was Moore's ability to search out and recognize creative ability among the multitude of students who presented themselves at the University of Texas. It was Moore's custom to teach five courses (which he continued to do until his retirement at age 86!) consisting of calculus, an intermediate course such as advanced calculus, and three courses which began with point set topology ("Foundations of Mathematics") and culminated in a research course. Frequently he would find a promising student in his calculus class, and from then on that student would become a major project; Moore would carry him on through one course after another of the above sequence to the Ph.D. If any proof were needed that the *capability* of doing creative work in mathematics is not the rare genetic accident that it is commonly considered, Moore certainly gave it during his career as a teacher.

¹ For supplying information and materials, I am indebted to several of Dr. Moore's past students and colleagues, and especially to Professor Robert E. Greenwood.—R.L.W.

² A count of the doctorates listed in D. R. Traylor, *Creative teaching: Heritage of R. L. Moore* (University of Houston, 1972), yields 50 Moore Ph.D.'s and 442 later generations of Ph.D.'s. The latter figure is low, since apparently some of the second generation did not report their Ph.D.'s. Allowing for this fact and for the years (apparently 4) since the list was compiled, I estimate there have been over 500 Ph.D.'s in the 2nd to 6th generations. Summarizing, I estimate over 550 "descendants" of R. L. Moore.