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John Torrence Tate

A LETTER dated June 29, 1916, from Professor Henry A. Erikson, Chairman of the Department of Physics at the University of Minnesota, addressed to Professor Anthony Zeleny, a colleague on a sabbatical leave, contains the statement, "I have received a telegram from Dr. Tate accepting our offer of an instructorship at \$1500 with consideration for promotion to Assistant Professor at the end of the first year, on the condition that he makes good." That John T. Tate did make good in the eyes of the university administration cannot be doubted, for after each of the succeeding few years on the staff he received a promotion. By 1920, at the age of 31, he was a full professor.

Why he made good can best be appreciated by his students and colleagues. For many years he taught two courses, "Introduction to Theoretical Physics" and "Seminar in Contemporary Experimental Physics." The former, an intermediate course in classical physics, was taken by all beginning graduate students in physics. Few will dispute the frequently heard comment, "He was the best teacher I ever had." The second course was taken, once for credit, and as many more times, without credit, as one could fit it into his program. While certain broad subjects were chosen for discussion in any single term, the schedule was never so rigid as not to allow for frequent excursions into almost any branch of physics. The first meeting of the class after an American Physical Society meeting invariably meant a discussion of important papers presented at the meeting. The receipt of an exciting paper in the editorial office of *The Physical Review* almost certainly resulted in a presentation of its contents to the class. Often the presentation took place without opportunity for preparation, the manuscript having arrived the hour before. Nevertheless, a long paper might be abstracted before the class, the important results being clearly presented. Hardly a class closed without several ideas for theses appearing—not as direct suggestions, but through the elucidation of unsolved problems in physics.

It was no wonder that in Dr. Tate's twenty active years in the department prior to World War II he should be the major adviser to 27 of the 48 graduate students who received their Doctor's degrees in physics.

It is also not surprising that a recent national survey of Ph.D.'s in physics showed that among major institutions a larger proportion of Minnesota men gained eminence, as evidenced by appearing as "starred" in *American Men of Science*, than in almost any other institution; John T. Tate did not operate a diploma mill, and graduate students were expected to be self-reliant and earn their degrees.

Although he was always available for consultation—his door was seldom closed—he had less and less time available as the years passed by. The ever increasing load of the editorship of *The Physical Review*, the work incident to the establishment of the American Institute of Physics, and the growing demand of university and national affairs all conspired to keep him out of the laboratories he so dearly loved. In spite of the many demands upon him, he always found time to spend with a promising student. After disposing of the definite commitments for the day, he would be found headed toward the research "alley" in the physics building.

For a man so interested in physics, and so keenly aware of the unsolved problems and methods for their solution, he had relatively few publications. With the exception of a very few instances, his name did not appear on publications of students working under his direction. In later years, when he had paid assistants, his name always appeared last on publications. In at least one case he is known to have apologized to his assistant for having to include his name at all! This generosity was characteristic in all his dealings. When the writer, who had been a former student of Tate's, returned to the University of Minnesota as a staff member in 1938, it was the money which had been appropriated for Dr. Tate's personal research which made possible the purchase of the writer's apparatus and financed his research for the next few years.

"Jack" Tate had many friends in all parts of the University and enjoyed and valued their company. He was a well-known figure in the University's faculty club, and participated actively in the recreational, as well as academic, opportunities of the University.

His ability to make sound decisions and to get things done was fully recognized. Thus, in 1937, when J. B.

Johnston, one of Minnesota's educational statesmen, retired as Dean of the College of Science, Literature, and the Arts, it was only natural that John T. Tate should be appointed to fill the position. His appointment as Chief of Division 6 of the National Research Committee took him completely away from the campus and led to his resignation as Dean. His return to the University in 1946 as a research professor of physics to serve as an "ordinary" colleague of some of his former students and assistants was accompanied with a humility found only in truly great men.

His untimely death on May 27, 1950, a year before he would have rounded out a quarter of a century as Managing Editor for the American Physical Society,

came as a shock to his many friends and colleagues at home and abroad. Although Dr. Tate had received his share of honors, including several honorary degrees, election to the National Academy of Sciences and the American Philosophical Society, election as President of the American Physical Society in 1939, and medals from the British and from our government for his service during World War II, his greatest monument will be his influence upon the science of the world through his students and *The Physical Review*.

His students, colleagues, and friends affectionately dedicate this issue of the *Reviews of Modern Physics* to John Torrence Tate.

ALFRED O. NIER