

Reminiscences of a Former M.I.T. Student

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In the fall of 1927, I went to M.I.T. as a graduate student, having received my B. A. from Vassar in Mathematics. Professor Phillips was the one who helped me fill out my application and advised me on what courses to take. Although I somehow found myself enrolled as a third year electrical engineering student, for which I was totally unqualified, I am grateful to Professor Phillips for advising me to take Dr. Dirk Struik's course in probability. I remember a course in vector analysis, too, which may also have been taught by Dr. Struik . . . or possibly by Dr. Phillips. I know that it was one of the classes I enjoyed.

I also took a course called "Fourier Series" with Dr. Norbert Wiener. To this day I have no idea what Fourier series *are*, except that they are "infinite series." Dr. Wiener was a brilliant mathematician, "The Father of Cybernetics," but not a brilliant teacher. When the bell rang, he bustled into the classroom and, without looking at the students, began writing formulae on the blackboard. We frantically copied them into our notebooks until the next bell rang and Dr. Wiener left, still without looking at us. Sometimes one of my fellow "Fourier" students came to my room to study, and we would try to figure out how Dr. Wiener got from step A to step B. It would take us ten or twenty steps to reach the conclusion which to Dr. Wiener, who was a genius, seemed one simple, logical step. We used to wonder whether Dr. Wiener would notice if nobody showed up in class at all. Would he just go ahead and put his formulae on the blackboard as usual? We thought he almost certainly would, but we never dared make the experiment.

Unlike Dr. Wiener, Dr. Struik was a brilliant teacher as well as an outstanding thinker. When I started attending his class, he began each day by addressing us: "Gentlemen and . . . lady." I felt very much like an afterthought. Later he changed to "Gentlemen and Helen." In class Dr. Struik led us from step to step by logic. "If this is true, then it follows that such-and-such must be true." He taught mathematics not as some esoteric mystery, but as practical common sense. And yet, at the same time he gave us a glimpse of the sheer beauty of it. It was at this time that I understood Edna St. Vincent Millay's line, "Euclid alone has looked on Beauty bare." I used to stay after class and Dr. Struik would ask me if I thought he had made everything clear. He asked me to find out from my fellow students if there was anything they had not understood. He was eager that every student should be really learning. He was also working on a textbook, and wanted to be sure it was not over the head of the average student.

One incident I found very amusing happened when I was in Dr. Struik's office.

Dr. Wiener bustled in (he always bustled, since he was rather short and round) and said excitedly, "It couldn't have been So-and-so, because the butler saw him in the library!" It turned out that they were both reading a mystery novel by S. S. Van Dine, which was appearing serially in some magazine. I was delighted to find that these two great minds were interested in mystery stories and I became forthwith a fan of S. S. Van Dine. . . .

When I was at M.I.T., the student body consisted—as far as I remember—of 7 girls and 3,000 men. Interestingly enough those were the words we used. Not *women and men*, always *girls*. I was the only woman in each of my classes. A few years later Dr. Struik wrote to me, "I have another girl in one of my classes. She is almost as smart as you, and much prettier." . . .

My most wonderful memories of my time at M.I.T. are of the Struiks' Sunday brunches. Both Dirk and his wife Ruth were famous mathematicians. Mathematicians from all over the world, when they came to M.I.T. or Harvard or wherever, used to attend the Struiks' Sunday brunches. I felt honored indeed to be included. The conversation was always brilliant and wide-ranging. True, it was often in some language other than English, but I had a smattering of French, and when it was in German or Dutch or Russian, Ruth Struik was usually kind enough to translate at least the highlights for me. . . .

Dirk and Ruth Struik are two of the most brilliant and fascinating people I have ever met. I have always felt privileged to have known them, and I have treasured our friendship for sixty years.