

A Conversation with T. W. Anderson

Morris H. DeGroot

Ted Anderson was born on June 5, 1918, in Minneapolis, Minnesota. He received an A.A. degree from North Park College in Chicago in 1937, a B.S. in Mathematics from Northwestern University in 1939, and an M.A. and a Ph.D. in Mathematics from Princeton University in 1942 and 1945, respectively. In 1945-1946, he was a Research Associate in the Cowles Commission for Research in Economics at the University of Chicago. From 1946 to 1967 he was a faculty member of the Department of Mathematical Statistics at Columbia University, starting as an Instructor and, in 1956, becoming a Professor. He served as Chairman of the Department in 1956-1960 and 1964-1965, and as Acting Chairman in 1950-1951 and 1963. In 1967, he accepted his present position as Professor of Statistics and Economics at Stanford University. He was a Guggenheim Fellow in 1947-1948, Editor of the *Annals of Mathematical Statistics* in 1950-1952, President of the Institute of Mathematical Statistics in 1963, and Vice President of the American Statistical Association in 1971-1973. He is a Fellow of the American Academy of Arts and Sciences and a member of the National Academy of Sciences. The following conversation took place in his office at Stanford one morning in late February 1985.

"I WAS TERRIBLE IN THE LABORATORY"

DeGroot: How did you originally get interested in statistics?

Anderson: As an undergraduate I was a student in chemistry, and that came about because I had a high school teacher, Henry Schoultz, who made chemistry seem very interesting and fascinating. I went to a junior college in Chicago, called North Park College, for two years and I took all the chemistry that I could there. Then I went on to Northwestern in my junior year and I took physical chemistry and quantitative analysis. There was a lot of laboratory work, and I was terrible in the laboratory. I could hardly come within 50% of the right answer. One of my professors still delights in talking of the miserable results of this student who went on to become a well-known mathematical statistician. After that year I got so discouraged about the laboratory work (I didn't realize that you could be a theoretical chemist) that I gave up chemistry. At that point I debated whether to go into psychology or into mathematics and statistics. I had an advisor, Angus Campbell, a psychologist who has since died, who thought it was just crazy of me as a senior to think about changing into a new major. But I was sure that I wanted to get out of chemistry.

(Laughs) So I insisted, and mathematics seemed to be the more suitable field for me. Certainly it turned out to be correct that mathematics is what turned me on and what I was good at. The trouble was that in spite of having been a chemistry major I took no mathematics in my first two years, so as I went into my senior year I had only gone through differential calculus. It was kind of late in the game.

DeGroot: You had to make everything up in your senior year?

Anderson: Yes, I made everything up in my senior year. In fact, I took two required courses at the same time; I would drop off my homework in one course, walk across the hall to the lecture in the other course, and at the end of the hour get the assignment in the first course. I was also interested in economics and social science generally, partly out of interest in the subject and partly because of some vague idea of doing some good. So I followed my interest in economics along, and statistics seemed to be a natural link between economics and mathematics. At Northwestern there was a very lively and interesting man by the name of Harold T. Davis. He had the nickname of Little Caesar.

DeGroot: Because of his personality?

Anderson: Yes. [Laughs] He taught econometrics and statistics, and some time series analysis.

DeGroot: Was he in the math department?

Anderson: He was in the math department, yes. He got me going along that track, and I think my interest in time series analysis really started with him. Then I spent one year as a graduate student at Northwestern because I had been so far behind in my mathematical preparation. I took some courses in mathematical economics with a fellow by the name of Bill Jaffé, who made a lifetime career out of translating Walras and editing his letters. He was very enthusiastic about the use of mathematics in economics, and he also stimulated me in that direction. So I got into statistics in part because it's a branch of mathematics and in part because I thought it would be useful in the social sciences.

DeGroot: So your interest in social science and economics really goes way back to your undergraduate days.

Anderson: Yes, it really does.

"I TALKED MARSCHAK INTO TAKING ME ON"

DeGroot: When you moved from Columbia to Stanford in 1967 your title changed from Professor of Mathematical Statistics to Professor of Statistics and