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(interviewed by Kenneth A. Ross)

This interview took place in Knoxville, Tennessee.

**When did you get interested in mathematics? What were the circumstances?**

I was pretty young.  My father enjoyed doing mathematical puzzles, so I got interested too.  This was a way to get his complete attention.  In my first year of high school I was placed in an honors math class with some really good students.  (This wasn't easy, but) I loved it.  My honors geometry class, which was taught by Mr. Weiss, was my best class ever and this solidified my love of mathematics.

**Did you ever consider fields other than mathematics as a vocation?**

In high school I thought about being a psychologist.  I didn't consider mathematics at that time.  My parents felt that college should lead to a profession, which I presumed meant teaching or nursing.  So in my first semester of college, I was an elementary education major.

**What was the special attraction of mathematics?**

In the beginning it was the puzzle quality that my father had introduced to me.  I enjoyed the challenge.  I also realized that I was good at mathematics.  That certainly fueled my interest. The purity of the mathematics attracted me a lot.  Later on, I wanted to see applications, but not particularly to physics.  I was more interested in applications to the social and biological sciences.

**Where did you grow up? Where did you go to school?**

I grew up in Brooklyn about two and a half blocks from Ebbet's Field.  However, I finished my last two years of high school at Dobbs Ferry High School in suburban New York.  By the way, I skipped the second grade so I was quite young when I went to college.

**What did your parents do? Did they influence your interest in mathematics?**

My father was a civil engineer, and he had a master's degree. He worked for an excavation company that "paved the way" for the building of skyscrapers. He was a very good cellist, my mother was a violinist and there was lots of music in our house. As I mentioned earlier, my father got me interested in mathematical puzzles very early on. He always wanted to see my homework problems!

**How about siblings? Did they influence your mathematical development? How?**

I had one sister who was eight years younger than I was. She was very good at many things, including mathematics, but since I was so much older any influences went from me to her. She went to the University of Rochester, and they killed her interests in mathematics by placing her too high in the calculus sequence. She was a gifted writer and poet and she became an English teacher, though since she had taken quite a few math courses, she occasionally was drafted to teach mathematics.

**How did you decide to go to Russell Sage College? Tell me about your undergraduate experiences.**

Well, I desperately wanted to go to college away from home, but my parents felt that I was too young; I was sixteen. My mother had heard that the small women's college, Russell Sage, was wonderful; in particular, the women were "protected."

A problem was that then there was no mathematics department. I took lots of mathematics, physics and chemistry, but I couldn't be a math major. So, in my sophomore year, I applied to Barnard College for the second time and got accepted again, and again without housing. When I went to the dean at Russell Sage, she created a "math major" because she wanted me to stay. In reality I was a math major at Rensselaer Polytechnic Institute, which was also in Troy, New York, a few blocks away from Russell Sage. That's where I took all my mathematics courses for my last two years. I was the only female undergraduate there in those days. So much for being in a "protected" environment!

**How did you choose to study at the University of Rochester?**

During my time at Russell Sage, I was still a "mathematics secondary education" major, because my father wanted to see me with a career at the end of my college education. A friend at Rensselaer Polytechnic introduced me to Gamov's book, "One Two Three Infinity," which introduced me to mathematics for its own sake. Because of this, and since I needed a master's degree to teach in high school, I rationalized that my next step was graduate school. I didn't get very good guidance as to where to go, and I was accepted by the two departments to which I applied: University of Rochester and NYU (New York University). The dean at Sage obtained her Ph.D. from Rochester, so she talked me into applying there. The acceptance at NYU included little or no money, so I accepted Rochester after changing my status to a Ph.D. student so that I could get a Teaching Assistantship.

I arrived at Rochester with a fairly weak background, and my first year there was very difficult. I really didn't expect to last more than a year. Rochester was an excellent place for someone with my background and mathematical ability. When I was there, the atmosphere was friendly and nurturing to graduate students. The department chairman, Len Gillman [former Treasurer and President of the MAA], required that we attend colloquia, which we didn't always appreciate at the time, but there were rewards. I'm glad now that I heard speakers like Sierpinski (in French!), Mort Brown, Walter Rudin, and others. After I married and asked for extra teaching to help support us, Gillman wouldn't allow it and always managed to find some money for me. At one point, I threatened to leave. I explained to Gillman that I wasn't getting any results. I whined that all I did was "think, write, look at it, and throw it in the garbage." I'll never forget his parting advice as he hustled me out of his office, "That's not what I hear from Kemperman (my advisor). Get a bigger waste basket!"

I'd like to stress how supportive Joop Kemperman and his wife were to me. When I thought my thesis was done and I was already teaching at Goucher, I convinced Kemperman that there was an error in it. He and his wife arranged for me and my two babies to live in a motel for a month while I worked on the thesis and fixed the problem. I was also given lots of support by Dorothy Bernstein [former President of the MAA], because she let me drop my teaching duties at Goucher for that time. Others at Rochester who were especially kind were Sandy Segal and Ken Ross. At

one point I was teaching a large statistics course of about 125 students and I had no office, so Ken let me use his office on the days that he worked at home.

**When did you join the MAA?  Before Rochester or at Rochester?  Was this under the influence of Len Gillman?**

I either joined MAA as a graduate student, in which case Gillman was no doubt an influence, or shortly afterward.

**How did you get actively involved in the MAA?**
When I was essentially finished with my Ph.D. at Rochester, I applied to three colleges: Williams College, Union College in Schenectady, and Goucher College in Baltimore.  I received offers from all three and had to think hard about which one to accept.  Williams is a great college, but the location would have been limiting for my husband, Chuck, even though they offered him a job in their administration.  There were no women at either Williams or Union College.  And there were endless opportunities in Baltimore for Chuck, so I went to Goucher.

Dorothy Bernstein at Goucher was heavily involved with the MAA.  She arranged for me to be on a committee making a bibliography of mathematical video tapes and films.  It probably was a subcommittee of CUPM or CTUM.  In the early 1980s, I was appointed to the Committee on Service Courses.  Here I volunteered to focus on service courses for Computer Science and this led naturally to discrete mathematics.  I was able to get funding from the Sloan Foundation to look at the role of discrete mathematics in the curriculum, and this led to the publication of a report on "Discrete Mathematics in the First Two Years" for the MAA, in 1985.

I also got involved with other MAA activities because of my friendship with Doris Schattschneider.  Doris and I had known each other at Rochester when she was an undergraduate and I was a graduate student.  I did refereeing for Doris when she was editor of *Mathematics Magazine*.  Frankly, I think I did an excellent job, especially on a certain paper on Markov chains that was written by an undergraduate.  I was on the editorial board for many years.  Jerry Alexanderson became editor of *Mathematics Magazine* after Doris, and then I became the editor (1991-1996).  As editor,

I had a seat on the Board of Governors and was elected to represent the editors on the Executive Committee shortly afterward.

**Did you receive mentoring in the MAA at the early stages of your career? By whom? Gillman? Others?**

I've already mentioned the influence of Dorothy Bernstein and Doris Schattschneider. I'm sure my involvement was quietly supported by Len Gillman. Moreover, I was encouraged by seeing his heavy involvement in the MAA. My friends Gerald Porter, Jerry Alexanderson, and Ken Ross set outstanding role models. But Lida Barrett probably was the most openly encouraging.

**Tell me a little about the Maryland Mathematics and Science Coalition. When was it founded?**

I was one of three people who formed the Maryland State Mathematics Coalition in 1990. Because of the national organization of science coalitions, we had to later add "and Science," which of course wasn't a bad thing, but it blunted the influence of mathematics somewhat. Mathematician Ken Hoffman is the executive director today.

**What other activities have you been involved in?**

In 1980 I started the "Applied Mathematics Laboratory" at Towson. I am particularly proud of this accomplishment. It was the first "Claremont Clinic" type course to involve only undergraduates. The NSF helped get us started. The variety and success of the projects we completed for business, government and industrial sponsors over the more than 20 years that I directed the AML are sources of great satisfaction. The AML continues to flourish today under the leadership of younger colleagues,.

In addition, I have been active in shared governance at Towson since I joined the faculty in 1971. I continue to serve on the University Senate and am a Towson representative to the Council of University System Faculty, and I served twice as chair of that council. Because of this work, I had the pleasure of being on the Search Committee for the Chancellor of the University System and eventually selecting and working with mathematician, Chancellor William (Brit) Kirwan, whom I knew when he

was president of the University of Maryland and a member of the Mathematics Department there.

**What events led to your becoming Secretary of the MAA?**

When I was editor of *Mathematics Magazine* I was automatically on the Board of Governors, and was on the Executive Committee too. Soon after this I was invited to run for MAA President against two outstanding candidates: Jerry Alexanderson and Tom Banchoff. Jerry was elected President-elect. At that time he was MAA Secretary. I was recommended by the search committee and elected by the Board to complete Jerry's term. It has been an honor to serve as Secretary with then-President Ken Ross, as well as Jerry, Tom Banchoff, Ann Watkins, Ron Graham, and Carl Cowen.

**How involved have you been with MD-DC-VA Section?**

This is a fine section, and I have been involved for a long time. But I got active at the national level before I had a real chance to be active at the sectional level. I am a Section NExT mentor and I go to as many meetings as I can. So I'm a supporting member, but have no official involvement in the section.

**How did you become a co-author of *Finite Mathematics* with Goldstein and Schneider?**

I knew David Schneider through the University of Maryland and subsequently through work in the MAA on those video tapes! I had taught from his *Finite Mathematics* book (co-authored with Larry Goldstein) and loved it. He offered me the opportunity to be a co-author on the third edition and I eagerly agreed. David is a gifted writer of elementary mathematics books, and some of his gems are in this book. The book is now in its ninth edition and its success is a tribute to David's genius.

**What is the background of the "reform" text, *Functioning in the Real World*?**

After the major interest in "reform calculus," there was considerable interest in "reform pre-calculus." The book you asked about was authored by five of us: Sheldon and Florence Gordon, Alan Tucker, Ben Fusaro and me.

We all met together to create the outline, but most of the actual writing was done by the Gordons.  Alan wrote one chapter.  My contributions were mostly conceptual.  I think it is an excellent book, but it only went to a second edition (as of 2006).  By the way, my students loved the course taught from this book!  It introduced students to elementary mathematical modeling and taught them pre-calculus material at the same time.

**What accomplishments as MAA Secretary are you especially proud of?**

My continuing efforts to help the MAA Presidents to do their jobs.  Along the way we've been working to enhance the diversity of the membership in governance and on committees.  I am excited about so much of what the MAA has done and continues to do for the profession and for our members.  As Secretary, I have had a small hand in encouraging the people with great ideas and in creating a place where those who love mathematics can find resources and support.

**What , so far, is the best part of being Secretary? the worst part?**

The best part is working with all the wonderful people in the MAA.  The MAA is a genuinely caring and collegial community.  The most pleasant task is informing people who have won prizes and awards.  The worst part involves efforts to pare down the structure, especially the effort to dissolve committees.  There are always some people who are attached to structure that we feel needs to go.  Another disadvantage of being Secretary is having to miss too many short courses, minicourses, and talks that I know I would have enjoyed a lot.

I'd like to put in a plug for the MAA.  It's not just about education.  It's about mathematics.  It is no secret that members cite our publications as their favorite aspect of the MAA.  Our meetings are stimulating and fun. The MAA is a wonderful resource where one can broaden one's mathematical horizons.

**What personalities have stood out in the mathematical community?**

The many women who seemed to have full lives and served as good role models.  Among them are Lida Barrett,  Doris Schattschneider, Dorothy Stone, Mary Ellen Rudin, Cathleen Morawetz, and our own Executive

Director, Tina Straley.  It has been a special privilege to have worked with outstanding presidents and with Jim Leitzel , Chris Stevens, Aparna Higgins, and Joe Gallian.  Some personalities stick out because they are difficult, others because they are just plain wonderful.  Add to the wonderful list Don Albers, Susanna Epp, and some of the very young people coming into the profession, both in Project NExT and otherwise.