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(interviewed by Kenneth A. Ross)

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

I grew up in Los Angeles, in a small community in the mountains north of the city, but still within the city limits. It was a wonderful setting, where I could hike freely into the national forest, or what we call a forest in Los Angeles. All of my schooling, kindergarten through graduate school, was in the public schools in Los Angeles. Being first-generation college, my horizons didn't extend beyond that.

After high school, I went to California State University, Northridge (CSUN), intending to be a high school teacher. I wanted to go to UCLA, but my parents couldn't afford it. A boyfriend went to nearby Caltech, which in those days didn't accept women undergraduates.

When did you become interested in mathematics?

Encouraged by my parents, who saw it as the only professional field open to women, I always knew that I wanted to be a teacher. However, I didn't know I wanted to be a math teacher until I started college as a history major and was told at the first orientation that there were 2000 history majors on campus and that not many of them would be getting teaching jobs. The advisor said that the real demand was in math. I switched my major.

Then I didn't really become interested in math until I had almost finished graduate school. Most of my high school and undergraduate math classes were permeated with the "new math" philosophy. I couldn't get excited about that develop-everything-from-the-axioms approach. In almost every math book, the first chapter was called "set theory"; we spent far too much time proving things like $A \cup B = B \cup A$ and never got to the heart of any subject. As a result, I went through college without paying much attention and doing just the minimum. Nothing went through my brain.

To finish a teaching credential, I needed graduate units so I enrolled in CSUN's master's program in mathematics. Then two things

happened that made the light go on. First, I met my husband, Bill. The depth and scope of his view of math just bowled me over. He taught me that math should make sense, that every little fact fits into some bigger scheme, and that the scheme is splendid. If math seems like a bunch of isolated techniques or theorems, then that means that you don't understand what is going on. For the first time I had some idea of what mathematical power is.

Also, in my first year of graduate school, there was a regional MAA meeting at CSUN. At this meeting, two graduate students (female of course) were asked to work at the registration desk and I was one of them. Helmut Hasse gave a talk that included a list of unsolved problems. One involving the number 6174 caught my imagination. The simplest version of the problem is this. Take any four-digit number where not all of the digits are equal. Rearrange the digits from largest to smallest and then from smallest to largest. Subtract. Repeat, inserting leading 0's if needed. Show that you reach 6174, in at most seven steps. As seems to be the case with a lot of people, it took a fun and accessible problem to get me hooked on math. (The original reference for this problem is D. R. Kaprekar, "Another Solitaire Game," *Scripta Mathematica*, 15, (1949) pp. 244-245.)

When did you get interested in statistics? What were the circumstances?

After getting a teaching credential and master's degree in mathematics at CSUN, I entered UCLA's Ph.D. program in mathematics education. After meeting Bill, it never occurred to me to go on in mathematics. I thought that it would require the depth that he had.

UCLA's program included a lot of statistics, and I fell in love with it. Statistics has all of the appeal of math—deep theorems, clever arguments, cute problems, lovely ideas—with the incredible bonus that even advanced ideas are useful in everyday life. There is no question that statistics is important; people out in the real world need statistics all the time whether they are teachers, working in industry, deciding on medical treatment, or just reading the news. Once I

started teaching statistics, I never again had those nagging doubts about whether my students really needed to know this.

I had some extraordinarily good teachers at UCLA, Jim Bruno and Jim Popham among them. After I aced Jim Popham's final, he told me how few people really understand statistics and encouraged me to focus on statistics because it could make my fortune, as it had his. I was impressed by this advice.

What attracts you about teaching?

Here's an example: One of my favorite teaching moments happened during an intermediate algebra class when I taught at a two-year college. I'd given the class Cardano's problem: Divide 10 into two parts such that the product is 40. After the class decided that it was impossible, we solved the problem using the quadratic formula and got $5 + \sqrt{-15}$ and $5 - \sqrt{-15}$, which checked. The students had not seen complex numbers before and were unimpressed, to say the least. But one young woman, who had said little all semester, began to laugh. I knew then that we had her. Anyone who sees the humor in that solution should be a math major.

How did you get involved in the MAA?

I began attending local MAA meetings with Bill, and I found both the people and the mathematics friendly. I was attracted to the books on display, especially the New Mathematical Library (NML) books and those by Ross Honsberger. Up until that stage, I had pretty much only seen textbooks and so these were eye-openers—the NML in laying out a conceptual approach to mathematics and Honsberger in his spirit of playfulness and elegance in writing mathematics.

As the best customer, soon I was put in charge of the book sales for the Southern California section. And so it went.

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

When a statistician friend was asked by the *College Mathematics Journal* to write a review of a book by Fred Mosteller, he passed the

job on to me. Soon I was refereeing for the *CMJ*, then asked to be an associate editor, and soon Don Albers asked Bill and me to co-edit the journal.

In those days, only a handful of two-year college teachers were active in the MAA—Don Albers, Ron Davis, Warren Page, Liz Teles, and Wade Ellis among them. All or some subset of us worked on the MAA's projects involving two-year college teachers, served on the Board of Governors representing two-year college teachers, and edited the *College Mathematics Journal*, which then was called the *Two-Year College Mathematics Journal*. It was a very supportive group. Don, then at Menlo College, was the unofficial leader.

Here's an example of what we did. The MAA, of course, has a reputation of presenting outstanding expository lectures on mathematics. So historically the leadership was reluctant to have contributed paper sessions because, having seen contributed paper sessions sponsored by other organizations, they felt that quality could not be ensured.

One evening in early 1984, a small group of us had a lovely dinner at Ron Davis's house in Alexandria, and we got to talking about how to encourage more participation by two-year college people. We decided that contributed paper sessions were the way to go, devised a procedure for finding speakers, and came up with a preliminary list of sessions. We decided that the proposals from speakers should be refereed, to try to keep the quality high. I suspect that the only reason the Executive Committee approved the idea was because they thought it would be something just for the two-year college folks and because the TYC leadership was solidly behind it.

We put a notice in *Focus* and got a big response from potential speakers. We were quite selective about the first groups of speakers and did some coaching about how to do an appropriate short talk. Two-year college teachers did present papers, but so did four-year people. Well, the sessions were an astonishing success. The rooms were full; the quality was high. People appreciated getting the chance to talk about and to hear about mathematics directly related to teaching.

Tell me about your work as co-editor of the *College Mathematics Journal*.

Editing an MAA journal was the most work-intensive thing I have ever done. But it also was the most rewarding. There is nothing like sitting back years later and gazing at a shelf of journals full of terrific articles. But if Bill and I hadn't been co-editors, I can't imagine how I could have done all of the work alone. We came from two different directions—Bill from mathematical research and me from teaching and editing—and we didn't publish anything unless we both loved it. I think we drove the authors crazy trying to please both of us.

What accomplishments in the MAA are you especially proud of, as President and in general? I thoroughly enjoyed your FOCUS article (January 2003), “A Year in the Life of the MAA: The Statistics,” which was a statistical summary of your term as President. I especially appreciated your statistic: Number of e-mails complaining that the MAA president didn't respond to a previous e-mail that requested no further communications from the MAA: 1.

At my first MathFest as President, we formalized SIGMAAs, disbanding the task force and creating the Committee on SIGMAAS. A challenge was determining which kinds of groups should be accepted as formal SIGMAAs, and it was decided, after much debate, that the group needed to represent special *mathematical* interests. Thus there are no SIGMAAs representing Christian mathematicians or Black mathematicians or LGBT (Lesbian, Gay, Bisexual and Transgendered) mathematicians or mathematicians from University X. However, the MAA continues to provide meeting space and publicity for these and similar groups.

MathDL (the MAA Mathematical Sciences Digital Library) came online the month I became President, and the transition to online services, now about complete, was very staff-intensive. We also began the process, under John Kenelly, of updating, validating and placing the MAA's placement exam online.

During my term, the American Mathematics Competitions (AMC) program was expanded, through the generosity of the Akamai

Foundation. (We all felt terrible when Akamai co-founder Danny Lewin was killed on 9/11 at the age of 31.) The AMC leadership changed from Walter Mientka to Steve Dunbar. Jim Lewis, at the University of Nebraska, was extremely helpful in this transition.

Working with AMATYC, the MAA received a grant to fund Project Access, a Project-NExT experience for two-year college teachers.

In late 2002, the MAA received a large gift from Paul and Virginia Halmos to fund the renovation of the Carriage House as a mathematical sciences conference center. We were fortunate to get Jerry Alexanderson to agree to chair the building committee and Jerry and Ken Ross to co-chair the advisory board for the scientific programs. We also received a bequest from the estate of Henry Alder to provide awards to junior faculty for outstanding teaching.

The MAA Executive Director, Tina Straley, also was new when I became President. We worked well together because we agree what the MAA is all about at the most fundamental level. One of our tasks was improving member services so that all members feel the friendly atmosphere that makes the MAA so special.

John Ewing, who was the Executive Director of the AMS, made cooperation on joint meetings and projects with the AMS pleasant and easy. He also saved me from one big mistake!

The most fun being President was attending MAA section meetings and giving talks. As Ed Burger advised me, people want to laugh—just give them a chance. The only problem was that I was often on the same program with terrific speakers such as Ed and Joe Gallian.

It was also a great deal of fun emceeding the USAMO awards ceremonies at the National Academy of Sciences, with the traditional pictures at the Einstein statue. A formal banquet followed in the breathtaking Diplomatic Reception Rooms on the top floor of the United States Department of State. The terrace has a sweeping view of the Washington mall. The atmosphere always was electric with pride and joy in these students. These ceremonies are impressive and memorable.

Have you been active in any other mathematics or statistics organizations, other than ASA? What about AWM? NCTM?

I am a Fellow of the ASA, and I have served on various ASA and NCTM committees. I was a member of AWM in its early years, and I used to encourage my students to participate in events for women. Then one day I told a class about an upcoming conference for undergraduate women and pointed out the advantages of networking, etc. Afterwards, a middle-aged Vietnamese refugee came up to find out more about how he could sign up to attend. He was profoundly embarrassed when I explained that he had missed the only requirement, "woman." After that experience, I vowed I would never do that to a student again.

What personalities have stood out in the mathematical community, in the MAA and elsewhere?

Oh, there are so many, so I'll mention only some of the older generation of awe-inspiring mathematicians who were so kind and supportive, such as Dick Anderson, Tom Banchoff, Lida Barrett, Len Gillman, Ron Graham, Roger Horn, Henry Pollak, Jerry Porter, Ken Ross, Doris Schattschneider and Herb Wilf.

In the early 1980s, I attended a panel discussion on Discrete Mathematics. Martha Siegel was the chair of the committee that wrote the report and a speaker. This was the first woman I'd seen in a leadership role. She became an instant role model, as I watched and admired her from the audience. I later found that she is terrific to work with.

Thanks, Ann, for an interesting interview.

Thank you, Ken, for coming so well prepared and for making it so easy for me to talk about myself.