

WALTER MIENTKA
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(interviewed by Kenneth A. Ross)

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

I became interested in mathematics in grade school as a consequence of my success on team competitions. One of the events, for example, required rapid response to the multiplication facts.

Where did you grow up?

I grew up in Amherst, Massachusetts and attended Amherst Elementary, Junior High and High School.

What did your parents do?

My father emigrated from Poland with his mother, father and sister in 1904. He became a cobbler. At age 32, when I was 7, he went to the hospital for a "routine" operation. Unfortunately, he did not survive the operation leaving me, my two brothers and my sister to be brought up by our mother. She became a cook at the University of Massachusetts student health infirmary and cleaned the house and did laundry for an Amherst College professor.

Did your parents or siblings influence your interest in mathematics? If yes, how?

Not that I am aware. Our main focus as a family was to be accomplished students and to add to family income by working on farms (tobacco, potatoes and onions) during the summer.

Were there individuals outside the family who inspired your early interest in mathematics?

I certainly had some excellent teachers of mathematics at the pre-collegiate level that provided the basic mathematical training for academic success.

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

Yes, I in fact was a Chemistry major for two years but changed to mathematics mainly because I had difficulty completing my experiments in the two-hour allocated periods. I also pursued courses relating to nature study (Zoology, Botany, Biological Field Studies and Entomology), an interest motivated by my Boy Scout training. Ken, this additional training led me to become a nature counselor for nine summers at a two-month camp in Maine. This was a welcome

change from the farm work, since I had difficulty with physical labor because I contacted polio at the age of 1.

What was the special attraction of mathematics?

I believe that the sequential nature of its development and the problem-solving challenges were intriguing to me, especially the satisfaction of obtaining the solution to the problems.

Where were you an undergraduate?

University of Massachusetts at Amherst (UMass, for short). The path to my enrollment at UMass was not without obstacle. The application required the recommendation of my high school principal. When I asked him if he would provide it, he said that he thought it best if I went to work on a farm (he knew I had to work on the farm during the summers). This stunned me since I ended with a high course average after completing a pre-college program that consisted of 2 years of Latin, 2 years of French, 4 years of Mathematics, 4 years of English, a year of Physics, Chemistry and many Social Studies courses. I had known while growing up that persons of non-English background were unfairly treated and classified. However, I never thought that my background would be used against me.

I informed my mother about the decision of the principal and she was very disappointed. In fact, she expressed her disappointment to a Professor at Amherst College during her weekly cleaning of his house. Soon thereafter the Principal called me in and informed me that following a visit from the Professor he decided that he would write a recommendation, provided I took another year of high school. Even though I was again personally disconsolate, I had no choice but to stay in high school one more year and the following year I was accepted to enroll at the university.

All of the male students at the university had to take ROTC. I lasted in the program until we were given a rifle and, because my polio affected my left arm, I could not raise it above my waist. I then was excused from the program. Incidentally, my two brothers entered the military and the Draft Board called me up twice; each time I informed them I was unable to handle a gun. They then gave me a 4-F rating.

My understanding is that you then went to Columbia University.

Yes. My goal of study at the University of Massachusetts was to become a mathematics teacher at a prep school. To do this I knew I would have to have a Master's Degree. I was accepted at Columbia University, but I needed to earn my degree in 9 months, since I only had \$1500 that would to cover my tuition and dorm room.

Columbia was a new experience for me since, except for one hour exam, no course exams were given until the finals. This was quite a challenge for me. Using cumulative study I felt confident that I would be ready.

I met Sherman Stein in Professor Eilenberg's Group Theory class and we became friends. Professor Eilenberg was very willing to have me add his name to my Columbia faculty recommendation list and my degree has the signature of President Eisenhower, who was the President of Columbia at the time of my presence.

The funds I had for meals were minimal and just barely enough for me to get by. Near the end of the first semester, on a Friday, I visited with Professor Smith, chair of the department, to ask him if there was any work that I could do for the department. He said he was sorry that none was available. He then asked if I would be interested in a problem that he received from Chicago. I said that I would be pleased to look at it. I worked on the problem throughout the weekend, and I was confident enough that I had solved it that I presented my solution to him on Monday morning. He looked at it and said it was very good.

I managed to pass all of my courses the first semester and was optimistic that I could do the same for the second. I was just about to accept a position at a prep school in Virginia when I received a call from the chair of the department at UMass asking me if I would like return as an Instructor. The offer and my acceptance of this position were certainly a turning point in my academic life. I realized that teaching at a University would fulfill a lifetime goal and this would be my chance to achieve it.

During my second year at UMass I became close friends with one of the professors and one day asked him why I was extended an offer to become an Instructor. His answer was: "What was the problem you solved at Columbia?"

During my third year as an Instructor at UMass, I knew that if I were to be successful in academia I had to have a PhD degree. The question was where I should pursue this degree. During my undergraduate days I had read the poetry of Robert Frost and remembered a particular phrase from his "Mending Wall" poem, namely, "Good fences make good neighbors". Now, because of my local categorized experiences, I felt that it was necessary for me to "jump over the good fences" to seek a new environment. Consequently, I decided to apply for graduate study at the University of Colorado.

I see that you got your Ph.D. with the famous number theorist Chowla. How was that experience?

My arrival at Colorado coincided with that of Professor Chowla and his family. He had been at the University of Kansas following his stay at the Institute of

Advanced Study. I was his first PhD student. I shall forever appreciate his brilliance and kindness. Professor Burton Jones was also a special person and an excellent teacher and researcher.

I was granted the Ph.D. after studying for three years at Colorado. I was fortunate to have received a fellowship for the last two years. I had passed my French, German and Qualifying exam the first semester; this may explain an award presented by Professor Jones.

My academic studies were supplemented by the scheduling of two summer Number Theory Conferences organized by Professors Jones and Chowla. They provided me with an opportunity to attend presentations by Professors Selberg, Mordell, Mahler, Bateman, Erdos, Davenport, Kempner, Schoenfeld, the Lehmers, the Todds, Niven, Ayoub, Graham, Selfridge, Strauss, Room and many others.

How did you get involved in the MAA?

I first became a member of the MAA in 1952 during my Instructorship days at UMass. I became a member because of The Problems and Solutions sections of the Monthly and references to the MAA by the lecturers at the multiple-college seminars held at UMass, Mt. Holyoke, Smith, Amherst and Williams. Incidentally, during one of the seminars I presented my first post-masters-degree talk. Its title was "How do you know when a knot is a knot (pause) or not." Professor Kemeny was the invited lecturer.

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

Throughout my career I sort of was mentored by the staff, committees and projects of the MAA. You will note in my Vitae I listed 9 MAA connections. During my early and later stages of my career, the counsel and support provided by Al Willcox, Henry Alder, Dave Roselle, Dick Anderson, Lenny Gilman, Ken Ross and all of the Presidents and officers of the MAA will always be appreciated by me.

When did you go to the University of Nebraska?

I was in my first year as an Assistant Professor at the University of Nevada–Reno, and I really liked my colleagues and the emphasis on teaching and service. In fact I presented (by invitation) 18 half-hour television programs on the Reno commercial station. I called the program, "Fun with Figures." I began each program with a mathematical model (e.g. curves of constant width), then a main topic such as probability, and ended each program with a problem of the week that I solved during the next program. Why did I leave Nevada after only one year? Well, my wife Gretel and I returned to her home in Boulder for Christmas

(her father was chair of the CU psychology department and her mother was a medical doctor for the CU student health facility). During the visit I visited with Professor Jones and indicated that I liked Nevada, but would perhaps some day become part of a larger department. A few weeks later I received a call from Professor Leavitt, Chair of the UNL Department who offered me an appointment. I followed 5 years of teaching at other universities with 45 years at Nebraska.

Tell me about your involvement in your MAA section.

As the following list shows, my involvement was extensive.

Member of the Ad Hoc Committee on Two-Year College Mathematics Contests
Governor and Section Chair, Nebraska/South Dakota Section
Member of the MAA Committee on New Priorities in Mathematics
Staff Resource person for the MAA/NCTM Task Force on Competitions
Appointed (1976-1998) the Executive Director of the Mathematical Association of America, American Mathematics Competitions Examination Program with responsibilities including the Annual Implementation of the following examinations: American Junior High School Mathematics Examination, American High School Mathematics Examination, American Invitational Mathematics Examination, USA Mathematical Olympiad. Total number of participants in these examinations: over 600,000.

Accompanied the U.S.A. International Mathematical Olympiad (IMO) Team as the Official Leader Observer or Leader or as Secretary of the IMO Advisor Board to Warsaw, Poland 1986; Canberra, Australia 1988; Braunschweig, Germany, 1989; Beijing, PRC 1990; Sigtuna, Sweden 1991; Moscow, Russia, 1992; Istanbul, Turkey 1993; Hong Kong, 1994, Toronto, Canada in 1995; Mumbai, India, 1996; Mar del Plata, Argentina, 1997; Taipei, Taiwan, 1998; Romania, 1999, South Korea 2000.

Served as the Secretary of the IMO Advisory Board from 1995-2001.
Served as the Executive Director of the 2001 USA IMO held in Washington, DC.
Served as the USA IMO 2001 representative to the 2002 IMO held in Glasgow, Scotland.

Invited guest of the Japanese IMO 2003 IMO organization directors

How did you get involved with AMC?

I had served as the Vice Chair of the UNL (University of Nebraska) mathematics department beginning in 1970. In 1975 Professor Henry Alder, then Secretary of the MAA, visited with me to ask if I would be willing to become the Director of the Annual High School Mathematics Examination. Professor Henry Cox, who served part-time in our department in addition to Directing our Examination Service, was about to retire. James Earle of the University of Omaha served as the Chair of the exam committee.

Since I have always been interested in mathematics competitions (while at UMass I started the Massachusetts competition and did the same for Nevada during my tenure there), I accepted Henry's offer effective in 1976, thereby resigning as Vice Chair of the Department. The position during my tenure as ED (Executive Director) was never full time, but I was given the reduction of one course in my teaching assignment.

Tell me any especially interesting stories about your long association with AMC.

I relate three stories associated with IMO 2001.

1. Following the Opening Ceremonies held on July 4th, I had engaged three river boats for a trip along the Potomac for all to see the fireworks display. Following my return to the Leader Hotel, Dan Ullman, who along with Stan Eliason and Mark Saul was in charge of the students, guides and operations at George Mason University called me and asserted that one of the students fell into the water departing from the boat. My heart dropped. He informed me that the student was from Iran (it took me one month to get permission from the State Department to get visas for the Iranian and Vietnam contingents). My heart sank deeper. Then he told me that after three tries they were able to rescue the student. His only concern was that the student lost his glasses. Dan wondered if I would replace them. The answer was clear and without hesitancy. It was somewhat difficult for me to inform the Leader of the Iranian team but he was very understanding. Thank goodness I had a liability insurance policy for the IMO, and I was pleased that I did not have to use it.
2. I had arranged for buses to take all of the students to the National Aquarium in Baltimore with separate buses for the students and Leaders. After they had departed, the Leader and Deputy from Vietnam came to me informing me that they had missed the bus. Luckily I had rented a van for the duration, and I drove them to Baltimore and found their team. At about 11 o'clock that night I received a call from the Baltimore police department indicating that two people had come to them indicating that they had missed the bus to Baltimore, and he wondered what to do with them. I asked to speak to one of them and much to my consternation it was the Leader from Vietnam. He was very apologetic. I asked if he had any US dollars and he answered in the affirmative. I informed him that I would ask the police officer to take them to the railroad station (I knew the train ran every hour) and then when they arrived at Union Station in Washington to take a taxi to the hotel. The arrangements were made. I waited and waited for them to arrive and finally at 3 am a taxi pulled up. I ran outside and they were there. The Leader asked me for \$40 since he

did not have enough money to pay for the cab. The cab driver surely took fare advantage of them. I did not complain since they were back safely.

3. At about 11 pm the day before the home departure of the teams, Leaders and Observers, Dan Ullman called to inform me that there had been an accident. One of the members of the Polish team tried to take our IMO banner that was posted in the George Mason University Student Union and he fell and broke his leg. Could I come to the Fairfax County Hospital? I had to wake up the Polish Leader and Deputy and finally was able to find the hospital. The boy was in the emergency room and after providing evidence of personal contact and information about the boy, the attendant finally let us into the room. It took about two hours before they found a room for the boy. It was evident that the boy could not return to Warsaw the next day as scheduled nor would the Leader and Deputy. After determining the length of time for his stay, with some hassle I was able to rebook the students' and Leaders' flights. I did encounter another problem and that is, where would the Leaders stay for two days. Fortunately, Dan Ullman had a Polish colleague in his department who graciously agreed to house them. On the day of the flight I received a call from Lufthansa indicating that they had to have a medical release before the student could board the plane. So I called the hospital for the release and after providing definitive information of my contact with the student and my IMO position I was able to obtain the release. Dan graciously agreed to take the student to the airport (the Leaders had to travel on a different flight) and he suggested that, before the student went through security, he be given the banner he tried to steal. I absolutely concurred...as a memento for the student's folly.

There is a sequel. It was about 6 am when I finished the arrangements for the Polish student at the hospital, and Dan received a call from Betty Reiter informing him that the first group of students was scheduled to leave for the airport but the bus driver was picked up for speeding on campus. Could I come over to help her rectify the situation? Fortunately, I had a direct cell phone line to the owner of the bus company and he immediately sent a replacement driver. The students met their plane on time.

You've indicated that the University of Nebraska was very supportive of AMC. Do you want to elaborate on this?

When I took over as ED, in addition to my department office I was assigned one other office for the secretary. Because of the expansion of the program I clearly needed more space. I was able to obtain space for our computer in the geology building. It soon became evident that more space was needed. The only place available was our home. Three of our children had moved out, so the operation was transferred to two of our bedrooms. It was necessary to move our shrink wrap machine home and arrange for a computer modem hook up. For three

years we used our home with the exams delivered to our garage, and then into the house for processing, and then to the post office (our son had a pickup truck). It was again evident that more space was needed. I was finally able to obtain a room in the recently remodeled room in the Geology building. This worked out for a while but I was getting pressure to vacate the room. Our big break came after I invited the President of UNL to the Washington awards ceremony. He subsequently assigned us to a vacant building, and paid for its remodeling. He was very pleased that the AMC was located at UNL and also pleased when he heard that the nephew of a member of the Board of Regents was honored in Washington as one of the USAMO finalists. Incidentally, the President paid for the heat, electricity and air-conditioning. I forgot to ask for payment for the water so it had to be paid out of AMC funds.

I am grateful for the overall support given to me by the University of Nebraska in general, and to the Department of Mathematics, in particular.

How did you get involved with the Edyth May Sliffe award?

Thank you for asking. That's an interesting and longish story. In 1978 I received a call from Dave Roselle who was then Secretary of the MAA. He asserted that he received a call from the Northern California section chair indicating that a person (Edyth Sliffe) in their section wanted upon her death to donate her stock portfolio to the MAA with the income to be used to reward teachers whose students performed with distinction on the AMC. Dave asked if it would be possible for me to meet her and to work with her to help her to fulfill her aspiration.

It turned out that I had scheduled a meeting of the Committee on the American Mathematics Competitions in San Francisco in conjunction with an MAA/AMC meeting. I arranged for a dinner meeting at one of the hotels for the committee and called Edyth to see if she could attend the dinner. She responded that she would be happy to be present provided I drove her to the dinner. I informed her that I would be pleased to do so. It turns out that she lived in an apartment in Oakland and to my surprise she owned a Corvette. During the drive to San Francisco she informed me that because of a macular condition she could not drive any more and would have to sell the auto. She wondered if she could get \$2000 for it. I must confess I was tempted to purchase the car myself, but I felt that it was not proper for me to use my position for personal advantage. Since I did not want to park her car on the streets of San Francisco, by luck, I found an indoor parking garage near the hotel. As we were getting out of the car a young lady ran up to me and asked if the car was for sale. I said it was and she asked for the price. I said \$10,000. Much to my surprise and Edyth's she said that she would buy it. I did not know the real value of the car but I checked afterward and found that price was about right. I subsequently formally arranged for the purchase with payment made via a certified check.

Following the first meeting with Edyth, I traveled to see her on many weekends. She would call me frequently about some of her problems, particularly about her health. On one occasion she called me from a San Francisco hospital informing me that they would not release her. I managed to gain her release. I subsequently convinced her to try living in a nursing home. This lasted for a while, but she was not treated very well and then returned to her apartment. The apartment was very unkempt and I urged her to hire a cleaning person. Unfortunately, after being robbed by the one she hired, she no longer would engage another one. To help her with her macular condition she asked me to purchase some strong magnets, since she read that by placing them on her chest for periods of time the force would cure her condition. This did not work. She next read that if she drank tea, made from the leaves of Russian radish plants, this would cure her macular condition. She called me and asserted that she could not find these plants. I informed her that I would grow some for her and I subsequently sent her a shipment. Unfortunately, the "cure" did not work.

On several occasions during my visits she said she wanted to change her Will to leave her estate to me. Each time I informed her that I would not accept a change in the Will and her original intent should be maintained. On one occasion she asked me to go to a class reunion organized by her former students from Emeryville High School. I did accompany her and was very impressed with the compliments she received from her students. She asked me to dance with her since she frequently would go to dances with her boyfriend who died during a visit to Canada.

It became evident that she should no longer stay in her apartment. I convinced her to move to a nursing home that I found where I knew she would receive excellent care. She was getting along fine and after some weeks I planned to visit her. Unfortunately, I received a call from the home the day before I was to arrive informing me that she had died. I still made that trip so that I could make the burial arrangements that included having her casket sent to John Day, Oregon, her place of birth where she wanted to be buried next to her father. I attended her burial ceremony along with a minister that I engaged to fulfill her wishes. I also ordered a tombstone for her. Her father had a horse-and-wagon delivery business that delivered supplies for nearby lumber forestry operations. While in John Day I went to the Assessor's office, since I found several deeds amongst her possession for property her father owned in John Day. The Assessor looked up the records and indicated that her father had sold all of the property before his death.

I subsequently returned to her apartment and hired the son of the owner of the nursing home to help me dispose of her property. I gave everything away to the persons who had helped her including the blind agency, the nursing home and the manager of the apartment. I do not know the current value of her stock that was transferred to the MAA, but because of the current decrease in stock values I hope it will be sufficient to continue this award program.

What accomplishments in the MAA/AMC are you especially proud of?

Administering challenging competition programs for pre-collegiate students with the assistance of an outstanding support staff, committee members and students. This led to a feeling of accomplishment and identity of outstanding students of mathematics. The fact that the standards set by the competitions achieved by the participants were recognized by Colleges and Universities as excellent measures of their potential for academic success.

The planning and successful administration of the 2001 International Mathematical Olympiad.

What are your best memories of your work in the MAA/AMC?

The expansion of the program; the success of our IMO team; representing the USA at the International Mathematical Olympiads as an official observer and team Leader.

The appointment by Marcia Sward as the Leader of the U.S.A. 1994 International Mathematical Olympiad (IMO) 6 member team. This team ranked first out of 69 participating countries at the IMO held in Hong Kong, July 8-20, 1994. It was the first team in the 49-year history of the competition to write all correct solutions to the 6 question, 9 hour examination. I received outstanding assistance during the Coordination of the team papers from Anne Hudson and Titu Andreescu. To date no other team has ever scored perfect papers during subsequent IMOs.

Making arrangements for our Hong Kong "Dream Team" and staff to meet with the Secretary of Education and Mrs. Clinton (President Clinton was not available) so that they could be recognized for their international accomplishment.

Identifying through the examination process the first female participant selected for our IMO team. Melanie Wood was an outstanding IMO participant; a model for all to emulate.

Meeting and working with outstanding students and teachers. The list of outstanding individuals who contributed to the success of the programs would include Nura Turner, Sam Greitzer, Murray Klamkin, Steve Maurer, Leo Schneider, Harold Reiter, George Berzsenyi, Dick Gibbs, Titu Andreescu, Ann Hudson, Donita Bowers, Cecil Rousseau, David Hankin, Noam Elkies, Dan Ullman, Mark Saul, Elgin Johnston, Gerald Bergum, Kiran Kedlaya, Joe Holbrook, Jeganathan Sriskandarajah, Wayne Roberts, Vince Schielack, Tatiana

Shubin and many more and all of the AMC Regional Examination Coordinators (RECs)..

Recognizing our wonderful AMC and IMO 2001 sponsors.

What changes have you seen in the MAA/AMC since you first became involved?

The introduction of the American Invitational Mathematics Examination and the American Junior High School Mathematics Examination.

In addition, on the recommendation of Professors Greitzer and Klamkin, the inclusion of the American Mathematical Olympiad program under the administration of the American Mathematics Competitions Program.

Moving the Olympiad Training program from West Point and Annapolis to the University of Nebraska-Lincoln because of the availability of the AMC staff, facilities and university support. Also, I was very concerned about the transportation safety of the students. Transporting the students to Annapolis was not as bad as travel to West Point. I had to be careful requesting this move from the ONR, ARO and the West Point officials since these entities provided the principal support for the training program. The sites were used alternately. I appreciated the approval and understanding of the ONR and ARO with respect to moving the training program. My ultimate decision to move the operation to Lincoln was a consequence of the following saga.

Originally, I drove the students to West Point, but I felt that there should be a change because of the long trip. I then had the students fly into LaGuardia and arranged for a Limo service to meet the students and then transport them to West Point. I did not want them to travel by bus. On one of the transport sessions to West Point I received a call from the Limo service informing me that one of the students was missing. I was stunned. I informed the Limo service to transport all of the other students but I would pay for another Limo driver to stay at the airport until I tracked down (if I possibly could) what happened to the missing student. After a series of telephone calls to the student's parents (he was from California) I discovered the he flew into Newark airport instead of LaGuardia, contrary to my instructions. The student was then transported to LaGuardia, and was met by the Limo driver. The student had a solo ride to West Point and was met upon arrival by our Olympiad staff that had been notified of his status and transport. I think he arrived at about midnight. Needless to say I was very pleased that this saga had a happy ending. However, I have always been very concerned about the obligation for the safety and welfare of our Olympiad students.

What personalities have stood out in the mathematical community, both in the MAA and in the community at large?

All of the members of the AMC Committees, the RECs, the Executive Directors of the MAA and Officers, the student participants and their teachers associated with participation in the examinations. Ron Graham and Arthur Jaffe for obtaining the Akamai Foundation and the Clay Mathematics Institute as key sponsors for the IMO 2001. Mel George and John Kenelly for their council during their tenure as Presidents of the IMO 2001 Executive Committee of IMO 2001.

Most especially my wife Gretel and our children Andre, Timothy, Rebecca and Bennet are personalities that provided continuous direct and indirect support to me throughout my academic career.