

■ ANDREW VAZSONYI, Feature Editor, McLaren School of Business, University of San Francisco

Math Wizards at the Supermarket

Andrew Vazsonyi, Feature Editor

Clarice is a cashier at my local supermarket. She moves food items across the counter with lightning speed as she totals my purchases, calculates taxes, tallies bonus credits, debits my VISA account and produces a detailed, printed list for my records. And this is only the beginning of Clarice's accomplishments.

She also enters my purchases into the inventory record and initiates a complex sequence of actions which eventually results in 18-wheel trucks backing up to the supermarket loading dock with more fresh lettuce and jars of peanut butter. I admire Clarice's tremendous calculating dexterity. Her performance at the computer is a triumph of the mathematical sciences and technology.

The fact is, however, Clarice proudly admits that she has mathphobia.

Mathphobia

General description: Excruciating angst and terror of mathematical equations and formulas. General disorientation and mental paralysis in response to any attempt to learn mathematical concepts.

General occurrence: Very common.

Etiology: All mental functions and images are expressed in language. Inability to relate features of the practical, real world to numbers and formulas. Unshakable belief that abstract, formalistic arguments are inhuman and prevent the use of common sense.

Symptoms: Glazing of eyes when formulas are presented. Breaking out in sweat and general nausea when such words as formulas, mathematics, statistics, algebra, algorithm, calculus are mentioned.

Prognosis: Cautiously guarded unless early treatment is applied.

Math for the Millions

Ernst Mach, the great Austrian physicist and philosopher, once said that the advantage of science is that it empowers the or-

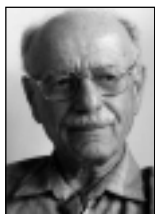
inary person to use the sciences. It took Newton to discover the law of gravity; today any well-trained engineer can apply it. It took the creative talents of a mathematician like von Neumann to invent the computer, and today Clarice has no problem applying it to her job at the grocery store.

But how do we teach Clarice math in the classroom? In most instances, we start with proofs and theorems. It's understandable that we should start with pure math, because that's where our heart is. Mathematician S. M. Ulam once estimated that 200,000 proofs are published yearly by mathematicians. Most of these proofs are published not for the discovery of new theorems, but for the discovery of more beautiful proofs of already proven theorems.

Like many math teachers, my passion certainly influenced the way I originally approached the classroom.

I was first smitten by math in the Hungarian lycée, when I was 14 years old. The U.S. has no equivalent to the lycée, which is a combination of high school and the first two years of college. One day a fellow classmate showed off a magazine published by one of our instructors. Each issue contained a math problem targeted to students. If you submitted a perfect solution, then your name would appear in the next issue. If you became a frequent contributor, you received the honor of having your photo published at the end of the school year. On this particular day, I saw my friend's photograph in the magazine and realized that I couldn't rest easy until my face graced those pages.

In no time at all, I lost interest in everything but math (and girls). Each month I waited breathlessly to see if the magazine mentioned my name. The race was on. During my four remaining years at the lycée, my photo appeared every year and I became the national champion. By my 18th birthday, it was obvious to everyone that I was slated to become an internationally known professor of math in one of the clas-



Andrew Vazsonyi

is an internationally recognized author, researcher and educator. He is the author of over 70 technical articles, and seven textbooks, in English, German, Spanish, French, Russian, Japanese and Hungarian. Dr. Vazsonyi received

a Ph.D. from the University of Budapest. He is currently an emeritus professor at San Francisco University and has 20 years of teaching experience. Prior to becoming an educator, he served for 25 years in industrial positions. These days he focuses on books and articles that apply Microsoft Excel and VBA to production and operations management.

Dr. Andrew Vazsonyi

156 Oak Island Dr.

Santa Rosa, CA 95409

(707) 539-0272

fax: (707) 537-1833

compuserve: 102113,1352

email: avazsonyi@compuserve.com

sical universities of Europe. I had all the qualifications. I had even discovered a new theorem, the theorem of "N Points."

But I was also becoming aware of another side to mathematics. Real-life math.

I recall a frustrating experience when an instructor once declared solemnly: "Euclid proved in the 4th Century BC that the sum of the angles of a triangle add up to 180 degrees." He followed by giving a practical problem in descriptive geometry. "Draw an accurate ink triangle, measure the angles, and calculate the sum."

I went home and carefully drew the triangle, thinking to myself, "This is ab-

surd. It will never add up to 180 degrees." All night I measured with no success. The next day I turned in my results and received a grade of zero. When I complained, he said, "You, of all people, ought to know that the sum is 180 degrees, and not 180.5 degrees."

Later I fumed to my friends, "What does he want me to do? Lie? That's the sum I got."

Later I learned from advanced math books that my instructor had no idea how math relates to the physical world. I also found out, much later, that most people don't understand either. When trying to

explain this to a friend recently, he exclaimed in a state of disgust, "Then why are we taught Euclid if it's all lies?"

Rx for Mathphobia

When I became a business professor in the U.S., these early experiences became very useful. I stopped introducing math as a pure world of ideas, and began leading off with math's practical advantages. By solving everyday problems with computers first, students gradually overcame their mathphobia, and, in some instances, found pure math an easier pill to swallow. ■

BOARD OF DIRECTORS

President Terry R. Rakes (Virginia Polytechnic Institute and State University) chaired the Board of Directors meeting that was held on Saturday, January 23, 1999, in Key West, Florida. The following is a report of the actions taken by the Board and matters brought to its attention. The Executive Committee also met on January 22. Its recommendations to the Board are included in the items reported below.

1. The minutes of the November 1998 Board of Directors meeting were approved.
2. The Western regional budget for FY1998-1999 was accepted.
3. The following reports were accepted for review:
 - a) Alpha Iota Delta Liaison Committee
 - b) Case Studies Committee
 - c) Development Committee for Excellence in the Decision Sciences
 - d) Doctoral Student Affairs Committee
 - e) Executive Committee
 - f) Fellows Committee
 - g) Information Technology Committee
 - h) Innovative Education Committee
 - i) Investment Advisory Committee
 - j) Member Services Committee
 - k) Nominating Committee
 - l) Programs and Meetings Committee
 - m) Publications Committee
 - n) Regional Activities Committee
 - o) Regionally-Elected Vice Presidents

- p) Strategic Planning for International Affairs Committee
- q) Ad hoc Committee on a Teaching Journal
- r) *Decision Line* Editor
- s) Doctoral Student Consortium Coordinator
- t) New Faculty Development Consortium Coordinator
- u) Coordinator of Job Placement Services
4. Prentice Hall's proposal to co-sponsor the Instructional Innovation Award was accepted.
5. Several recommendations from the Development Committee regarding processes for the assessment and performance measures of the Institute's goals and initiatives were approved, and will be placed in the Policies and Procedures Manual.
6. The Doctoral Student Affairs Committee's recommendations for the year 2000 Doctoral Student Consortium Coordinator, and Doctoral Dissertation Coordinator were accepted for referral to year 2000 Annual Meeting Program Chair Gary Ragatz (Michigan State University) in his appointment of these positions.
7. The Member Services Committee's recommendation for gauging our success in the acquisition and retention of members based on yearly statistical data compiled at the Home Office was accepted.
8. Discussion of the status of the Campus Representative Program resulted in the decision to dismantle the program, and to encourage the Member Services Committee to

work with the regions for member recruitment.

9. A recommendation was approved to appoint the Job Placement Coordinator to serve as an ex-officio member of the Member Services Committee, beginning this year.
10. The recommendation from the Publications Committee to reappoint Barbara Flynn (Wake Forest University) to serve a second three-year term as Editor of *Decision Line* was accepted.
11. The Publications Committee's recommendations regarding color plates in *Decision Sciences* was accepted.
12. Revised wording of the Background and Objectives sections for *Decision Line* in the Policies and Procedures Manual was accepted.
13. Recommendations for chairperson appointments for the 1999-2000 committees, and new members of the Case Studies and Innovative Education Committees were approved.
14. The proposed contract agreement between Georgia State University and the Institute was reviewed and accepted.
15. The following reports were accepted:
 - a. 1998 Annual Meeting Program Chair's Report
 - b. Report on the *Decision Sciences* Journal
 - c. Results of the 1998 Member Services Survey ■