Remembering Martin Gardner

Martin Gardner, who made mathematics seriously entertaining for a generation of readers, died on May 22 in Norman, Oklahoma. He was 95. Through his books and especially his columns in *Scientific American*, Gardner made mathematics accessible to many, including some who have gone on to significant work on mathematics and mathematical exposition. We have asked four people to share with us their memories of Gardner and his influence.

Peter Renz

When we met in 1974, Martin had been a columnist for *Scientific American* for fourteen years. He loved it. Each month he explored a fresh topic and wrote it up for an audience roughly a million strong.

Consider the pressure. The subjects were technical; getting them right and making them appealing was no mean feat. For the first eleven years, Martin was a freelancer—no commitment beyond considering his submission for each issue. The magazines publisher and editor never specified length or subject, nor did they recommend any changes. They loved what they got, as did we.

He loved it.

Martin was an explorer of ideas, a student of how the mind works. He was a magician's magician, an expert on close-up magic. He knew how people fooled themselves and others. He was interested in what made people think as they did, whether the driving force was the logic and evidence of science or the illogic of pseudoscience.

Consider what he wrote. I read Martin's *Fads and Fallacies in the Name of Science* and stories such as "The No-Sided Professor" in the early 1950s. His most successful book is *The Annotated Alice* (1960, 1999). His favorite was *The Whys of a Philosophical Scrivener* (1983). He gave *Whys* a scathing review in *The New York Review of Books*—under the pseudonym George Groth. (Read it on the web.) Martin's semi-autobiographical novel *The Flight of Peter Fromm* is a window into his development. Dana Richards's *Martin Gardner: A "Documentary"* is wonderful, on the web, and not to be missed.

Martin enlisted *Scientific American*'s readers as participants. He drew from the best and engaged the best. "Hexaflexagons," December 1956, reported work of Arthur. H. Stone, Bryant Tuckerman, Richard P. Feynman, and John Tukey. A web search under "flexagons" will show how the work continues to this day.

Many things took off after Martin covered them: the Game of Googol, aka the Secretary Problem (2/1960), the art of M. C. Escher (4/1966), Conway's Game of Life (10/1970), Mandelbrot's fractals (12/1976), Penrose tilings (1/1977), public-key cryptosystems (8/1977), Douglas Hofstadter's *Gödel, Escher, Bach* (7/1979), and A. K. Dewdney's *Planiverse* (7/1980). I especially liked Martin's puckish columns: for example the April Fool's column "Six sensational discoveries" (4/1975) and "The Laffer curve" (12/1981). (Find most of these essays at *http://www.maa.org/pubs/FOCUS/mg.html.)*

Martin was witty, generous, and a joy to work with until his dying day. His heritage goes beyond essays and books; he left a community of magicians, mathematicians, and wits carrying things forward and delighting in it all.

Peter Renz taught at Reed, Wellesley, and Bard colleges. Since 1974 he has worked in publishing, helping to launch the Scientific American Library.

John Derbyshire

I can date the beginning of my acquaintance with Martin Gardner precisely by the Green Flash.

During the Christmas holidays when I was 14½, I rode with a family friend and my mother 40 miles to Oxford because I was at a loose end. There, at one of the university bookstores, I purchased a copy of *Scientific American*, the first I had ever seen. It was the January 1960 issue with a cover story on the Green Flash—an optical phenomenon produced when the sun is very low and atmospheric conditions are right.

I was already more a math geek than a science geek. I had recently discovered the fun side of math via a battered, dusty old copy of W. W. Rouse Ball's 1892 classic *Mathematical Recreations*. Here this fellow Martin Gardner offering the same fare. I was hooked.

The subsequent fifty-year acquaintance had several high points. I especially recall the September 1964 issue of *Scientific American* that focused on "Mathematics in the Modern World." Just to be contrarian, Martin did word games and puzzles, forsaking mathematics. (Though not mathematicians: In a section on anagrams, he told us that "Augustus de Moran" anagrammatizes as "O Gus! Tug a mean surd!" —a thing that has stuck in my mind ever since for some unaccountable reason.)

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Another milestone was in late 1970, when Martin's column introduced the world to John Horton Conway's Game of Life, an early two-dimensional cellular automaton. I was doing computer work

at the time, and we wasted many rolls of paper tracking the life cycles of Conway's automata with Martin's column on the desk beside us.

Nobody can estimate what the world owes to this quiet, courteous man. I only know my own debt: a half-century of instruction, amusement, kindness, and food for deep thought.

John Derbyshire is the author of Prime Obsession, *an account of the Riemann Hypothesis and its history that won the Euler Book Prize in 2007, and other books.*

Don Albers

I regret that I knew Martin Gardner for only thirty-two years. Like so many people in mathematics, I first encountered him in his column "Mathematical Games" in *Scientific American*. I was a high school student in a small North Dakota town and had strong interests in mathematics and physics. There were no bookstores in town, but there was a good library. The appearance of Gardner's monthly column was a great complication, for other students also discovered it and I no longer was assured of easy access to a library copy of *Scientific American*. I mentioned the problem to my father, who told me to get a subscription to the magazine. Through his column, Martin continued to nurture my mathematical interests and regularly dazzle me with beautiful exposition of new ideas.

Martin continued to nurture my mathematical interests.

In 1978 I was named editor of the *College Mathematics Journal*. Martin was one of the first people I called about advice. He asked a number of questions: Who are your readers? What is the purpose of the journal? What changes do you have in mind? He went on to tell me to learn more about the readers, to not lose sight of the purpose, and to introduce changes with care. We talked frequently, and he always had news of developments and people that I should learn more about.

A few years later, I started *Math Horizons*, a new magazine for students. Martin was enthusiastic about *Math Horizons* and agreed to write a column, "Gardner's Gatherings." He always submitted typewritten columns with revisions in pencil. I would have been happy to get them even if he had written them with crayons on lined paper.

It was not until 2000 that we finally met in person at his home in Hendersonville, North Carolina. For most of the day we talked in his library about his life, ideas, and books. I was also treated to a few magic tricks. By late afternoon, he said that it was time go upstairs and join our wives in the living room, where he proudly demonstrated his ability to prepare martinis.

Martin's great contributions to mathematics, children's literature, philosophy, debunking pseudoscience, and close-up magic were complemented by his kindness, generosity, modesty, and gentle manner.

Don Albers is MAA Books editorial director. His interviews with Gardner in North Carolina in 2000 and 2001 were published in the College Mathematics Journal.

Ian Stewart

In my mid-teens, one of the high points of each month was the latest Martin Gardner column in *Scientific American*. He had a wonderful knack of homing in on a really interesting aspect of mathematics, and then explaining it with impressive clarity. You couldn't help but be infected by his enthusiasm as he reveled in the subject. Although he wasn't a professional mathematician, he understood what good mathematics looked like. Even though his main brief was to entertain his readers, he also informed them. At that stage of my life, I learned more about mathematics from Martin, not in terms of technique, but overall viewpoint, than I did from any other source.

The most important message that came over was that new and interesting mathematics is constantly being created. No one else taught me that. I also learned that mathematics is much broader and more diverse than I had imagined. And, of course, no one could fail to realize from his columns that it is possible to *enjoy* doing mathematics. I've always considered Martin's column to be one of the two or three biggest influences that led me to become a mathematician. I know several other professional mathematicians who say the same thing.

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A series of fortunate coincidences allowed me to fulfill a childhood ambition, by becoming the fourth person to write the "Mathematical Recreations" column, as it had then become. I wrote ninety-six columns between 1990 and 2001. I realized from the start that there was no way I could possibly emulate Martin's style, or match his readability. So I tried to develop my own way of making mathematics attractive and enjoyable. My biggest problem was that so many of the best topics were denied to me—because Martin had already been there, done that, bought the tee-shirt, surfed the wave.

Ian Stewart is emeritus professor of mathematics at the University of Warwick. His latest book is Cows in the Maze, *reviewed on page 28 of this issue.*

Samples of Martin Gardner's writing, which delighted readers for more than a quarter of a century, can be found at *http://www.maa.org/pubs/FOCUS/mg.html.*