Inspiring Mathematical Experiences

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Mark used to love playing computer games that helped him build his mathematical skills as a kid. Gizem spent years hooked on Tetris and credits all the (still somewhat limited) spatial reasoning skills she has to the game. However, mathematical video games that go beyond simple drills are few and far between. In the first article of this summer issue, Laura Broley, Chantal Buteau, and Eric Muller introduce us to *E-Brock Bugs*, an epistemic computer game designed for teaching mathematics that goes beyond practicing basic skills and aims to develop the more elusive mathematical intuition.

Jennifer Clinkenbeard presents a study of how liberal arts mathematics courses might affect students' later attitudes towards mathematics. Following that comes a devilish (or angelic?) pursuit by John Choi and Nicholas Pippenger of the generating functions that enumerate the angels and devils in M.C. Esher's *Circle Limit IV*. Milos Savic then takes us through a look at the overlap and differences between proving and problem solving and how expert and novice provers might approach the task of proof differently.

Man Keung Siu raises the question of whether reintroducing morality to mathematics education could make it more relevant to today's students. G.H. Hardy certainly had his own views on mathematics and morality, and about many other things. Hannah Elizabeth Christenson and Stephan Ramon Garcia tell the story of how one of his simplest pieces of work became his most famous (outside of mathematical circles, anyway) in the context of some of his thoughts on mathematics.

Ryan Rosmarin tells us about an exciting way to experience mathematics: hands-on at the MoMath (National Museum of Mathematics in New York City). Math Circles help mathematicians and students to connect and share a mathematical experience outside of traditional curricular constraints; Diana White and Lori Ziegelmeier share with us their personal experiences with and reflections on successful examples.

Valery Ochkov and Andreas Look provide examples of mathematics in classical literature from across several genres of works. Of course, writing mathematics is difficult, and Byung-In Seo covers some of the challenges inherent in teaching students how to write mathematics effectively.

So how do others experience mathematicians? There's usually a dollop of eccentricity involved, and Robert Haas presents a light hearted look at just why this might be so.

There are two book reviews in this issue. Our first comes from Judy Grabiner, who explores Mazur's recent book on the history of mathematical notation. Ruben Hersh then gives us a review of Stanley and Lehman's new book on evolutionary artificial intelligence.

We next turn to our poets. We are delighted that mathematical poets have welcomed the *Journal of Humanistic Mathematics* as an exciting outlet for their work; we have in our archives and in our current database a wealth of poetry submitted over the last few years. Some of the exceptionally prolific have inspired us to create a new type of manuscript category called a *Poetry Folder*. Robin Chapman, whose work is the first to be showcased in this format, takes us across several lives of math education. In our traditional poetry section, Terry Trowbridge gives us an ode to that most magnificent of numbers: zero, Alex M. Walsh combines love and mathematics, while Tristan Miller partners with illustrator Jin Wicked to tell some Greek tales. Janice Dykacz gives us a combination visual and prosaic poem, while Robert J. Boucher closes out our poetry section with music and mathematics.

Our fiction this issue is brought to us by Nora Culik, who weaves together a tale of triangulation and music. Lawrence Lesser then gives us a mathematical polemic in proof form. This issue closes with an announcement of *The User's Guide Project*, a new approach to mathematical communication that will hopefully provide a counterpoint to the classical journal style article.

Enjoy this eclectic collection of humanistic and mathematical experiences!