Humanistic Mathematics Network Journal

Issue 17 Article 3

5-1-1998

Robert Davis: In Memoriam

Carolyn A. Maher
Rutgers University

Robert Speiser
Brigham Young University

Robert Davis: In Memoriam

A recurring theme throughout Bob Davis's writings was the difficulty of using words. He wrote extremely carefully, often with poetic eloquence. As his chapter heading "Neither Words nor Pictures" indicates, mathematics seems to lie somewhat beyond the reach of images and language, no matter how precise we try to be. The same holds true, he emphasized, of most ideas worth writing about. Bob's subtlety was daunting to some readers, like his hesitation to make snap pronouncements, his discomfort lest a major issue become flattened by superficial thoughts or words. Facts and dates can never sum a person up, but still they tell us something.

Robert B. Davis was born in Fall River, Massachusetts, a son of the late Benjamin Franklin Davis and the late Ethel (Reed) Davis. He received his doctorate in mathematics at MIT in 1951. Early in his career, as a faculty member at Syracuse, Bob founded and led the Madison Project, an innovative school mathematics program, based on children's thinking and strong teacher participation. The Madison Project's materials, as well as its ways of working, have had decisive influence on the profession as a whole. Named after the inner-city school in Syracuse where the work began, the project helped to pioneer a pedagogy which emphasized careful and attentive response to how students thought about the mathematics they explored. It soon had impact nationwide, and then beyond.

The theme of helping disadvantaged children threads through Bob's whole life. So does careful thinking about learning and cognition, investigated through beautiful and seminal case studies. As we read these, even decades later, we can hear the voices of the children whom he cared so much about. As Director of the Madison Project, Davis would lead up to ten week-long seminars each summer, teaching between 100 and 1000 teachers each week in cities from New York to Chicago to San Francisco. The methods and materials developed by the project were designed, and later demonstrated to be successful, for children from all walks of life. These materials, and others based on them, are still in use throughout the world.

Bob worked at Syracuse University, at Webster College in Missouri, and at the Center for Research in Education at Cornell before moving to the University of Illinois in 1972. There he was Professor of Education, Associate Director of the computer-based Education Research Laboratory, and Director of the Curriculum Laboratory. At Illinois he continued his fundamental work on mathematical cognition, especially through a series of important studies of learners' mathematical thinking and problem solving. This theoretical orientation, based on key ideas of cognitive science, informs his later work.

He also served on the Research Advisory Cominittee for the National Council of Teachers of Mathematics, as a member of many National Science Foundation Advisory Committees, including the NSF continuing panel on the Educational Uses of Computers, as an advisor on mathematics programming to Children's Television Workshop, and as advisor to many state education departments.

In 1971, together with Herb Ginsburg, Bob founded the Journal of Children's Mathematical Behavior, which he edited until his death. The first issue described its unique focus, on what mathematical thought means with children, how it develops, and how one might attempt to study it. The second word in the Journal's title soon seemed too restrictive, and eventually was dropped. The Journal soon became, and has remained, an important sounding board for new ideas in mathematics education.

Bob's work helped to define the field of mathematics education, and his insight opened new ways of thinking about how people learn and do important mathematics. From the start, Bob's focus was on people: how they thought, what they did, how they learned from their experience, and most especially —recorded with precision, analyzed with knowing, sympathetic care — how they expressed themselves and their ideas. Bob taught, in fact, the way he did research: mainly by listening. As he listened, both he and those who spoke with him would change.

Bob's book, *Learning Mathematics: the Cognitive Science Approach*, which appeared in 1984, laid out a new agenda for research in mathematics education. This agenda, elaborated in the JMB, in part through pa-

pers of his own, in part through editorials on other people's work, continues to unfold. The resulting ferment of perspectives and ideas was heightened by Bob's move, in 1988, to Rutgers. His later work took place within what had now become a wide discussion among collaborating teachers, research scholars, and educational activists, sparked by his continued research on the development of mathematical ideas in children and adults. The communities that evolved around his work found voices, listened, and responded to each other.

Bob often reminded us that strong communities survive their founders, by finding ways to keep on growing. Now we need to demonstrate this truth by how we put it into practice. Bob resisted sentiment in place of honest passion and clear, committed thinking. He didn't want to see his life and work compressed to sound bites, chunks, or easy summaries. We miss him everyday. We miss the power of his listening. We miss his happy laugh, his deep, unflinching care for people, his graceful modesty. When he really liked something, he would say, "This is gorgeous!" and his face would shine. We miss his pleasure in the work of others.

Survivors include a son, Paul of Ann Arbor Michigan; a daughter, Alexandrea Davis-Hay of Bradenton, Florida; his wife, now Rose Garcia of Apopka, Florida; a brother, Edward of Leverett, Massachusetts; a special friend, Mary Howard of Highland Park, New Jersey; and many thousands of young people, most of whom have likely never heard Bob's name, whose lives he cared about, and touched, and changed.

Carolyn A. Maher
Graduate School of Education
Rutgers University

and

Robert Speiser
Department of Mathematics
Brigham Young University

Co-Editors, Journal of Mathematical Behavior

MATH POEM

Math is easy as A, B, C
It deals with all numbers
like one, two, and three

It's simple and easy and fun and it's great
I can multiply see!
Two times four equals eight

With angles and shapes and parallelograms and more
How many right angles in a square?
I know! It is four!

Denominators, numerators, fractions galore
Math is so fun, it's never a bore
With so many things to know and explore!

Beth Corridori

THE POEM OF MATH

I saw a circle in my book,
It was so round I had to look.

On the next page was a square,
Its four sharp sides gave me a scare.

A triangle fell out loose,
I do believe it was obtuse.

Now the next page was angley,
Then it was very tangley.

Then I realized it was an angle,
So I named it very very tangle.

A cylinder popped out of my book,
It was round I had to take a look.

Michelle Wang