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Reuben Hersh's diatribe in HMNJ #12 describes a world which I, for one, do not recognize. It ignores calculus and other reforms (with their strong emphasis on collaborative learning and complex student projects), organizations such as Mathematicians and Education Reform, the burgeoning (exploding?) field of research in post-secondary mathematics education, major NSF initiatives, and the plethora of experimentation in and rethinking of post-secondary mathematics courses and programs going on in institutions ranging from two-year college to major research universities. For many years the sessions on education have been among the best attended at the Joint Mathematics Meetings, and in 1996 there were so many sessions, panels, and minicourses on education—sponsored by AMS as well as AMA — that most time slots had at least one, and one time slot had seven. I suggest that Professor Hersh find out what is going on before complaining that nothing is.

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Dear Reuben,

That was a great article in HMNJ #12. You are right on target. I agree wholeheartedly. I think the college math community is the most narrow minded and most difficult to move of any group of people I have had to deal with. It seems that what is taught and, as you stated, how it is taught is as though all the students are future mathematicians. What is going on in college mathematics classes and what is needed and desirable is diverging rapidly. They're not only "teaching the wrong stuff" but teaching it wrong. What would Morris Kline say now? By the way, have you read Keith Devlin's editorial in the December 1995 issue of FOCUS? He has some very good points.

Lynn Steen is concerned about losing half of the students in mathematics courses each year. Need we wonder why? I was at a meeting where Zaven Karian was talking about the introduction of computer modeling (some rather sophisticated stuff) into the math curriculum. He said the "good" students catch on just like that, but others are completely lost. I asked if that wouldn't exacerbate the situation of losing students in math classes, and he said, "of course". Of course, these days those who will be mathematicians will need that, but what of others? Other than mathematicians, it seems to me that those sort of things are better taught in the disciplines in which they will be used. Will math professors know enough about other disciplines to teach meaningful applications using computer modeling? There is concern about the amount of math being taught outside the math departments (and the corresponding decrease in math enrollments in higher level courses), but if math is taught as though all students will be mathematicians, this will increase. Also, I'm not so sure that is bad.

The best teacher of mathematics I had, in my opinion, was meteorologist Vernor Suomi. He presented the material in the concise, precise, definitions, postulates, theorem, proof manner that we math majors learned to love so well, but he added the motivation beforehand and interpretation of the results of the model in terms of the application after. I learned my vector calculus from him in the theoretical meteorology courses. The college math community needs to decide between very small departments that train only mathematicians and departments that offer core courses for all students and have their faculty versed in other disciplines where they can teach in or in cooperation with faculty in those disciplines that use mathematics extensively.

Please forgive my rambling. I wish you luck in "belling the cat". Now that I'm retired, it is up to you working folks to do it. Although, there are very few of you who are concerned.

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