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Bill Rosenthal

Ursinus College; Michigan State University

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Toward a Philosophy of Humanistic Mathematics

Bill Rosenthal

Department of Mathematics and Computer Science

Ursinus College

College of Education/Department of Teacher Education

Michigan State University

It has been an hour since I finished Sherman Stein's essay "Toward a Definition of Humanistic Mathematics". Over two years since I read in *Newsletter #4*, "Within the community of mathematicians and mathematics educators who identify with the term, 'humanistic mathematics,' an agreement on its meaning is still under negotiation." Five years since Alvin White did the Martin Luther bit by nailing his analogue of the "96 Theses" to the door of the first *Newsletter*. Six years since the Claremont conference, which I'd describe as the Fort Sumter of humanistic mathematics—if warlike metaphors didn't compromise the life-affirming spirit of our lifework. Eighteen years since Alvin published "Humanistic Mathematics: An Experiment" in *Education*. Thousands of years since Plato identified mathematics with *episteme*—with human knowledge itself, thus with the very essence and existence of humanity.

And still we can't agree upon a definition of our reformulation of the so-called Queen of Sciences, this Reformation in the putatively perfect language of nature. Still, those of us to whom the two little words "humanistic mathematics" resonate, invite the scorn of those who declaim our oxymorony, who excoriate us for oh-so unmathematically developing our discipline before defining our terms.

What is this thing called "humanistic mathematics"? More pertinent, what to do about defining this thing?

Stein says in "Toward a Definition" that after the Claremont conference he "pondered the meaning of 'humanistic mathematics' without arriving at a definition." Instead, he "decided to capture the mood of the meeting." Yes. I applaud Stein's wise and courageous decision. I think he's on to something. Perhaps the energies of those who struggle to define "humanistic mathematics" are better devoted to pondering the meanings of our

embryonic endeavor. Perhaps we can serve ourselves and our students most faithfully by posing as amateur anthropologists who strive to describe the moods, the senses, and the cultures birthed at the confluence of mathematics and humanism. Perhaps the felt need to define "humanistic mathematics" is antithetical to its spirit, which cries for an expansiveness, even and infinitude of meaning rather than the constriction and delimitation of a definition.

I believe that the desire to define humanistic mathematics (no more the self-effacing quotation marks!) arises from the values of a culture rooted in an ideology of *theory*. As conceived and practiced by canonical mathematical culture, theory requires that we unambiguously define any term prior to so much as whispering it in a sentence. The theory-über-alles imperative of mathematical schooling takes this unnatural, denatured conception one misstep further: mathematicians are initiated into a subculture of *theorem-ists* who march in lockstep to the linear beat of Definition,

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Theorem, Proof. My nightmare: Will a definition of humanistic mathematics be followed by theorems and proofs, technical lemmas and corollaries, generalizations and abstractions? Will there be such 21st-Century bastardized offspring as advanced, applied, universal, and homological humanistic mathematics? How about the the ultimate mathematical-culture accolade: a Bourbaki

volume? Is this an absurdist apocalyptic fantasy? Sure. But stranger things have happened to other well-intentioned reformers who too narrowly defined the scope of their movements only to sink in the quicksand of the mainstream.

Pondering the meaning. I offer our community—our gelatinous subculture of humanistic mathematicians and mathematical humanists—the unoriginal idea that to ponder meaning is to practice *philosophy*, not theory. Maxine Greene, the mother of all present-day philosophers of education, draws upon Hannah Arendt to tell us that “to do philosophy means to pose the kinds of questions that empower us ‘to think what we are doing.’” By positing that “philosophic thought is that which bears on questions rather than answers,” George Steiner recently seconded this emotion. I now bring this notion to you, to us. Inspired by Greene, Arendt, and Steiner, I propose that we engage in the devotion of a philosophy of humanistic mathematics by pondering and questioning its multitudinous meanings and what we are doing with them. May we seek to refine, expand, and characterize rather than to define, constrain, and circumscribe. Let us be mathematical-pedagogical Talmudists who inscribe our shifty and ever-shifting understandings in an infinity of questions and answers and question and....

Let's ponder the meanings of humanistic mathematics by weaving an unbounded quilt of questions. Let's wander about and wallow in its indeterminate, undeterminable senses and our partial results. Let's acknowledge and *celebrate* the

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reality that humanistic mathematics is to remain an eternal dilemma, not a proven lemma.

Let's do philosophy. And let's be proud of our choice to ponder, question, create, problematize, negotiate, amend, and mediate meanings in lieu of pandering to a positivism that mandates the yoke of a precise, taken-for-granted, non-negotiable definition.

Humanistic mathematics can and should be: a movement devoted to sociocultural synthesis of knowledge; a paradigm founded on the accumulation of differential experience; a world view whose images are formed by inversion of the usual lenses. If we have the courage to resist the invitation to lie in the definitional bed, it can be all these and more. I'm talking indefinite integration, which is a process with no limits. A philosophy of humanistic mathematics—a *humanistic mathematics of philosophers*—will inspire and organize an infinite indefinite integration of humanism, mathematics, and philosophy and now unforeseen, now unforeseeable.

Let the word go forth to all students, teachers, educationalists, administrators, researchers, reformers, liberals, liberators, radicals, reactionaries, humanists, mathematicians, and other life forms. Humanistic mathematicians are philosophers. Humanistic mathematicians make love with wisdom.

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