

The sociology and philosophy of mathematics revisited: Personal reflections

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This symposium is designed to stimulate discussions at the intersection of the sociology of mathematics, the philosophy of mathematics, and mathematics education. Our objective is to provide a forum that will focus the theory and research in sociology and philosophy of mathematics on practical issues facing classroom teachers of mathematics. If audience numbers and interest warrant, we will be prepared to address issues in classroom ethnography facing graduate students undertaking dissertation and thesis research. To facilitate and ground the symposium, each of the co-presenters will offer his/her reflections on the sociology and philosophy of mathematics, and how s/he has come to address issues and problems in mathematics education. These reflections have their roots in work in mathematics education and with mathematics educators over many years on four continents. These reflections will serve as catalysts for a general and open discussion that will identify topics, issues, and questions to be addressed in small group workshops. Once workshops are formed, the co-presenters will circulate between the groups as resource persons and facilitators.

The symposium is offered on the assumption that there is a continuing need for a dialogue between researchers and theorists in the sociology and philosophy of mathematics and mathematics teachers. At issue are the practical and ethical implications of the now widely accepted conjecture that mathematics is a social construct. This conjecture has increasingly been linked to the concept of mind itself as a social construct, and to the somewhat more accepted notion that the self itself is a social construct. These ideas often seem transparent to persons educated in the postmodern world of the late twentieth century. Yet, our experience is that there are continuing problems with the ways in which these ideas are understood and applied.

We anticipate discussions around some of the following topics:

- classroom ethnography;
- class, race, and gender in mathematics textbooks and the mathematics classroom;
- social construction of mathematics;
- relevance of philosophy to teaching mathematics in the lower grades;
- why the social construction perspective recommends changes in how we teach and write about mathematics.

The agenda is open and will be determined by the interests of the participants in combination with the resources represented by the symposium organizers.

Who are we

Wenda Bauchspies (sociology, anthropology, and science studies) will bring expertise on the sociology and anthropology of science and mathematics based on research in West Africa and Brazil. She is a skilled ethnographer and social theorist, and her interests focus on the cultural dimensions of mathematics and mathematics education, and the relationships between mathematics educators, students, and communities.

Jean Paul Van Bendegem (philosophy and logic) is the former editor of *Philosophica*, co-editor of *Theory and Experiment*, and author of *Finite, Empirical Mathematics*. He has written widely on the philosophy and sociology of mathematics, championing a focus on mathematical practice as the grounds of mathematical knowledge.

Sal Restivo (sociologist, anthropologist, science studies) is a pioneer in the development of the sociology of mathematics who has published and lectured in this field for more than twenty years. He is a social theorist, has carried out a number of ethnographies of science, and is currently doing research on the nature of mind and thinking.

References

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- Paul Ernest, *Social Constructivism as a Philosophy of Mathematics* (SUNY Press, 1998).
- Leone Burton (ed.), *Learning Mathematics: From Hierarchies to Networks* (Falmer Press, 1999).

