

PREFACE

This book originated in late 1996 when members of the Commission on the Future of the Standards of the National Council of Teachers of Mathematics (NCTM) recognized that the document they were tentatively calling *Standards 2000* would need to give more attention to the scholarly literature than previous NCTM Standards documents had done. In two lively, well-attended sessions at the research pre-session of the annual meeting of the NCTM in Minneapolis in April 1997, Mary Lindquist (chair of the Commission on the Future of the Standards), Joan Ferrini-Mundy (chair of the Standards 2000 Writing Group), and Jeremy Kilpatrick (a member of the Commission) led a discussion in which teachers and researchers shared their thoughts about perspectives from theory, research, and practice that ought to guide *Standards 2000*.

Although the pre-session participants were virtually unanimous in asking for some articulation of those perspectives, most seemed to consider explicit statements of theory or reviews of research as content that should not appear in the document but that could be referenced there. In response, Jeremy Kilpatrick proposed to the National Science Foundation (NSF) a project entitled “Foundations for School Mathematics” to convene a small working conference of mathematics educators, mathematicians, teachers, and educational theorists and researchers, together with the Standards 2000 Writing Group leaders, to lay out the various perspectives and consider how they ought to be portrayed. The papers produced for the conference and subsequently revised in light of discussions there would both guide the writers of *Standards 2000* and yield a document that would serve as a companion to it. Funding was received from NSF, and the conference was held in March 1998 in Atlanta.

During the first half of the three-day conference, the participants, who had received draft papers in advance, heard a brief presentation from each paper’s author and then discussed in plenary their reactions to each paper. The papers were presented by Anna Sfard, Jim Greeno, Ellice Forman, and Bob Siegler, each of whom laid out theoretical foundations for the standards effort. The participants also wrote individual reflections on that theme. During the second half of the conference, the participants broke into groups to discuss changes needed in school mathematics and how those changes might be addressed in *Standards 2000*. They discussed the proposed companion document on research, identifying underdeveloped themes and relevant literature. The writers of *Standards 2000* had already met in summer 1997 to delineate the project and discuss the issues involved, and they were grateful to have draft papers from the conference to use when they met in summer 1998 to produce a discussion draft.

During the months in which the conference was being planned and held, the NCTM Research Advisory Committee (RAC), chaired by Paul Cobb, was commissioning some so-called white papers on specific research topics that would also guide and assist the writers of *Standards 2000*. When the writers met in summer 1998 to draft the updated document, they had drafts of white papers and the papers from the Atlanta conference.

In 1999, with encouragement from NSF to use available project funds to expand the proposed research companion document, Jeremy Kilpatrick began working with Gary Martin, the Standards 2000 project director, and Deborah Schifter, the new RAC chair, to obtain reviews and revisions of the existing papers as well as to commission and get reviews and revisions of additional papers to fill in some gaps in the collection. Reviewers were drawn primarily but not exclusively from the RAC membership as well as from the membership of NCTM’s Instructional Issues Advisory Committee and its Professional Development and Status Advisory Committee. This book contains the complete set of revised papers.

The editors are grateful to the many people who worked to bring this project to fruition: the authors, some of whom had to wait patiently while other chapters were being written, reviewed, and revised; the participants at the Atlanta conference (listed below), whose comments were instrumental in shaping the final versions of the conference papers; the reviewers, who offered numerous useful suggestions for improving the papers; the RAC, for encouraging NCTM to publish this volume; and the editorial staff at NCTM headquarters, particularly Harry Tunis, Jean Carpenter, Debra Kushner, Ann Butterfield, Glenn Fink, and Rebecca Totten, who worked diligently to make the book both readable and attractive.

Jeremy Kilpatrick
W. Gary Martin
Deborah Schifter
 Editors

Participants in the Conference on Foundations for School Mathematics

March 1998, Atlanta

Sadie Bragg	Patricio Herbst	Henry Pollak
Gail Burrill	James Hiebert	Barbara Reys
Alverna Champion	Jeane Joyner	Alan Schoenfeld
Jere Confrey	Jeremy Kilpatrick	Anna Sfard
Joan Ferrini-Mundy	Glenda Lappan	Robert Siegler
Ellice Forman	Mary Lindquist	Edward Silver
Enrique Galindo	Gary Martin	Judy Sowder
James Greeno	Douglas McLeod	George Stanic
Gila Hanna	David Pimm	James Stigler