The essays contained in this volume are the fruit of two conferences held in 1992 and 1993 at the University of Oklahoma. They were organized by Steven J. Livesey and F. Jamil Ragep in conjunction with the second leg of a five-year program of Rockefeller Foundation Postdoctoral Fellowships whose purpose was to encourage research that integrated history of science within the broader framework of cultural history. During the first three years, the program focused largely on Western European science since the Renaissance. But beginning in 1990, the theme of the program shifted to the interplay between European and non-Western science, largely before the early modern period.

The 1992 conference focused on mathematical traditions in Greek, Islamic, Jewish, and Latin Christian cultures and their interconnections. The theme was an outcome of the research interests of our 1991–92 Rockefeller fellows, Sonja Brentjes and A. George Molland, both historians of medieval mathematics. For two days, scholars who work within different cultural contexts had a lively exchange of viewpoints and shared information across those cultural divides.

The success of this venture in cross-cultural exchange encouraged us in our efforts to hold a larger gathering in 1993 of historians of premodern and early modern science to discuss the transmission of the sciences, broadly conceived, between different cultures and their consequent transformation.\(^1\) The organizing principle for this three-day meeting was A. I. Sabra’s 1987 discussion of transmission, appropriation, and naturalization in Islamic science, now itself appropriated to the larger field of science in Antiquity, the Middle Ages, and the early modern period, and ranging from South-Central Asia to the Middle East and the Mediterranean basin as well as

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\(^1\) This expanded range coincided well with the interests of our 1992–93 Rockefeller fellows, Paul Lettinck and Marina Tolmacheva, who, respectively, are engaged in research on Islamic natural philosophy and geography.
Eastern and Western Europe. In addition to the reading of papers and commentaries, this conference too allowed for its own cross-cultural transmission across academic and other boundaries.

Yet another purpose of the 1993 conference was to celebrate and honor the work and career of A. I. Sabra. Over his long and illustrious career, Professor Sabra has been, and continues to be, a central figure in the discourse surrounding the problem of transmission, providing both editions and analyses of some of the most seminal works of Islamic science and philosophy, as well as path-breaking studies of transmission itself. Those who know Bashi immediately recognized that providing a forum in which his ideas could be explored, critiqued, and extended, and in which he himself could have a chance to respond, was a fitting way to honor him.

The original intention of the organizers was to publish the papers from each conference separately. It was subsequently decided, however, to combine the two sets into a single volume. One happy discovery of this decision was that Sabra's paper could be used to unify the proceedings of both conferences, which is reflected both in the introduction and in the organization of the papers in this collection.2

The essays themselves are in most cases close revisions of the papers presented at the conferences.3 Unfortunately, the size of the book has precluded the inclusion of the very fine commentaries to the 1993 sessions as well as the spirited discussions that contributed so much to both conferences. It should be noted, however, that the proceedings of the papers, commentaries, and discussions were recorded on audio tape and are available in the History of Science Collections at the University of Oklahoma.

It gives us great pleasure to express our gratitude to the many organizations and individuals who made the conferences and this publication possible. First, we must thank the Rockefeller Foundation, and its executive staff, Alberta Arthurs, Lynn A. Szwaja, and Tomas Ybarra-Frausto, whose funding and support permitted the postdoctoral fellowship program and the two conferences. Additional support for the conferences was obtained from the Oklahoma

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2 The original conference programs are reproduced on pages 553ff. For updated addresses and affiliations of contributors and commentators, see pages 557ff.

3 We regret that it has not been possible to publish the papers of three participants, Warren Van Egmond, John Murdoch, and Amos Funkenstein. Professor Funkenstein's recent death is deeply lamented.
Foundation for the Humanities and, at the University of Oklahoma, the College of Arts and Sciences, the Office of Research Administration, and the Department of the History of Science. Funds were also provided by the Rockefeller Foundation and the College of Arts and Sciences to defray the costs of publication. The staff of the History of Science Collections, and in particular the Curator, Marilyn B. Ogilvie, the Librarian, Marcia Goodman, and Michael Keas, prepared special exhibits associated with the conferences and assisted in conference preparations. Mark Eddy, Deborah Kay, and Aaron Poffenberger assisted in various stages of preparing the papers for publication. We gratefully acknowledge permission granted by Professor Michael Hoskin and Science History Publications to reprint A. I. Sabra’s paper, and that granted by Dr. Sayyid M. Syeed on behalf of the American Journal of Islamic Social Sciences to reprint J. L. Berggren’s article. We also wish to thank Peter Barker for his helpful comments and suggestions. We owe an especial debt of gratitude to Steve Livesey who, due to other obligations, was regrettably unable to continue as coeditor. Although he could not see the volume to fruition, his many contributions have left their mark throughout. Any remaining shortcomings, of course, are the sole responsibility of the present editors.

This book is dedicated to A. I. Sabra as a small token of affection from the coeditors and, more importantly, in recognition of what the participants and the field owe this great scholar and teacher.

FJR and SPR