

Muriel Seltman
Robert Goulding

Thomas Harriot's *Artis Analyticae*
Praxis

An English Translation with Commentary

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Preface

The *Artis analyticae praxis* was published in 1631 in Latin. Until relatively recently, an English edition would not have been considered necessary since most of the people who might have been expected to be interested in the text would have been able to read it in Latin. That is no longer the case and it is fitting that an English edition should be published.

It is also the case that a considerable proportion of the readership of the present volume will not be professional mathematicians, so we have tried to produce a translation that makes the mathematical content accessible to the modern reader. This is not because the algebra is intrinsically difficult but because it is not the kind of mathematics which is a part of today's secondary school curriculum.

A further problem lies in the fact that the book in the form in which it was published in 1631 may very well not conform to Harriot's intentions for the publication of his mathematical manuscript papers. This is why the book is accompanied by a Commentary which attempts to compare it with the appropriate passages in the surviving manuscript papers.

The present work is a translation of the original text and not intended as a facsimile. The original has well over 300 errors (there may very well be more) and we have listed these at the end. In the interests of mathematical accessibility we have tried to produce a mathematically "clean" copy.

Again, for ease of reading (and printing) we have altered Harriot's sign for equality in his manuscripts to the modern version and omitted the two vertical lines between the parallels. Where it has been necessary to use the inequality signs seen in Harriot's manuscripts, we have used the modern version for the same reasons. Similarly, we have not included the ubiquitous dots appearing in the original work, which were common at the time and which separated the numerical from the literal part of an algebraic term, thus $2.x$ for the modern $2x$.

The translation was the responsibility of Robert Goulding and Muriel Seltman was responsible for the Commentary. Both the translation and the Commentary were originally based on an M.Sc. Dissertation presented at University College, London by Muriel Seltman, but as work proceeded these influences have disappeared without trace and the present book is totally new.

We would like to acknowledge the assistance of the British Library, Lambeth Palace Library (London), and Liverpool University Library. Our grateful thanks are due to Dr. J. V. Field who read the entire commentary and made valuable suggestions. The *Praxis* relied less on formal proof than on the immediate evidence of the equations arranged on the page. We have taken pains to preserve the visual impact of the *Praxis* — and this would not have been possible without William Adams' expertise in L^AT_EX. In particular, he typeset the most challenging part of the *Praxis*, the Numerical Exegesis.

At an early stage of the project, Mordechai Feingold offered invaluable advice and support, and encouraged us to submit our manuscript to Springer for publication in the series in which it now appears. This turned out to be an excellent fit for our book, and we are also grateful to the series editor Jed Buchwald and to Mark Spencer, our editor at Springer.

Above all, we would like to express our thanks to the British Society for the History of Mathematics and the Harriot Seminar. Each provided a generous grant which not only helped financially but was also valuable as a moral support for our work.

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