

# Text production reproduction and appropriation within the abbaco tradition: A case study

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## I Introduction

In this paper we present a chapter on algebra from an abbaco treatise on arithmetic. The abbaco tradition of teaching arithmetic and algebraic problem solving is situated between two major works of the Italian Middle Ages: the *Liber Abbaci* of Fibonacci (1202) and the *Summa di Arithmetica et Geometria* of Lucca Pacioli (1494). Peculiar of abbaco texts is their strong similarities and coherence within that period of almost three centuries. We will argue that this feature stems from the way texts were produced and appropriated. Problems and problem solving play a central function in abbaco treatises and the way problems were 'invented' and adapted determines this process of text production and appropriation. We will illustrate this with one chapter from a family of several manuscript copies of a single treatise, providing a critical edition and an English translation. We will also discuss the relation with other abbaco texts before and after the creation of our text. With the possible exception of Høyrup's recent book on the abbaco tradition, who calls his transcription semi-critical, all publications of abbaco texts have been based on a single manuscript though several copies are usually available. We believe that a critical edition in line with the Latin scholarly tradition provides us with the necessary insights in the way the production of abbaco texts functioned.

## II Abacus algebra: a brief characterization

With some exceptions, algebraic practice was completely absent from the scholarly tradition or university curriculum before the mid-sixteenth century.<sup>1</sup> It took until the late seventeenth century before algebra became taught at universities. Instead,

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<sup>1</sup>There are some lectures or publications where the scholarly tradition displays a knowledge of algebra. One such case is the *Quadripartitum numerorum* of Jean de Murs (1343) [15], which provides evidence that algebra, as known from Fibonacci's *Liber abbaci*, was studied in scholarly circles in Paris. However, it is unlikely that it was ever taught within the *quadrivium*.