

NANCY G. SIRAI SI

# Taddeo Alderotti and His Pupils

*Two Generations of Italian Medical Learning*



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AND HIS PUPILS



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MEDICAL LEARNING

NANCY G. SIRAI SI

PRINCETON UNIVERSITY PRESS

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IN MEMORY OF MY FATHER



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*December 9, 1979*

## ABBREVIATIONS AND SHORT TITLES

### ABBREVIATIONS

- BAV      Biblioteca Apostolica Vaticana.
- Comm.    Commentary on the text following.
- CLM      Codex latinus monacensis (Munich, Bayerische Staatsbibliothek).
- DSB      *Dictionary of Scientific Biography*, 14 vols., ed. Charles C. Gillispie (New York, 1970-1976).
- Klebs     Arnold C. Klebs. *Incunabula scientifica et medica: Short Title List* (Bruges, 1938).
- NLM      National Library of Medicine, Bethesda, Md.
- q.        *Quaestio* or *questio*.
- SF        Mauro Sarti and Mauro Fattorini, *De claris archigymnasii Bononiensis professoribus*, 2 vols., ed. Carlo Albicini and Carlo Malagola (Bologna, 1888-1896).
- TK        Lynn Thorndike and Pearl Kibre, *A Catalogue of Incipits of Mediaeval Scientific Writings in Latin* (2d ed., Cambridge, Mass., 1963).

### SHORT TITLES OF FREQUENTLY CITED EDITIONS

- Dino, *Canon 2*                      *Expositio Dini super canones generales de virtutibus medicinarum simplicium secundi canonis Avicenne*, printed with Dino, *Dilucidatorium* (Venice, 1514).
- Dino, *Chirurgia*                      *Expositio super III, IV, et parte V Fen [quarti Canonis] Avicennae* (Ferrara, 1489; Klebs 336.1).
- Dino, *De natura fetus*                *Scriptum Dini super libro de natura fetus Hypocratis*, printed with Jacopo (Giacomo) da Forlì, *Expositio . . . supra capitulum Avicenne De generatione embrionis . . .* (Venice, 1502).
- Dino, *Dilucidatorium*                *Dyni florentini super quarta fen primi Avicenne preclarissima commentaria: que diluci-*

ABBREVIATIONS AND SHORT TITLES

- xii *datorium totius practice generalis medicinalis scientie nuncupatur . . .* (Venice, 1514).
- Guglielmo, *Practica* *Excellentissimi medici Guielmi brixienensis aggregatoris dictorum illustrium medicorum ad unamquamque egritudinem a capite ad pedes practica . . .* (Venice, 1508).
- Taddeo, *Aphor.*;  
 Taddeo, *Isagoge*;  
 Taddeo, *Pronost.*;  
*and*  
 Taddeo, *Reg. acut.* *Thaddei Florentini Expositiones in arduum aphorismorum Ipocratis volumen, In divinum pronosticorum Ipocratis librum, In preclarum regiminis acutorum Ipocratis opus, In subtilissimum Joannitii Isagogarum libellum* (Venice, 1527).
- Turisanus, *Plusquam* *Turisani monaci plusquam commentum in Microtegni Galieni* (Venice, 1512).

## A NOTE ON NAMES AND ORTHOGRAPHY

In general, personal names of Italian origin appear in the present work in their Italian form. In a few instances, where the Latin forms are more familiar or where the Italian forms are uncertain, Latin forms have been used. I have adopted the usage Taddeo Alderotti, rather than Taddeo degli Alderotti or Taddeo Alderotto, because it appears to be sanctioned by modern Italian authors. The names of persons who are not Italian appear in whatever form seems most familiar to English-speaking readers. Wherever Latin is used, medieval orthography has been retained.

For the sake of simplicity, the author(s) of the ancient Hippocratic corpus is referred to as "Hippocrates"; works attributed to Hippocrates only in the Middle Ages are termed pseudo-Hippocratic.



## INTRODUCTION

**T***addeo Alderotti of Florence and Bologna rose from humble origins to wealth, professional distinction, and learning. As self-made men are apt to be, he was both an innovator and a skillful adapter.*

Bologna was an ancient and celebrated seat of learning, especially in law, and had begun to be a center of medical education before ever Taddeo arrived there; yet Taddeo was a pioneer in establishing at Bologna what may be thought of as the “new medicine” of the late thirteenth century—a tightly organized, secular profession whose members (mostly, in Italy at any rate, married laymen like Taddeo himself) studied their discipline within a university faculty of “arts and medicine.” The education of physicians in such a faculty, at Bologna as elsewhere, involved close attention not merely to medicine itself but to all the scientific and philosophical learning of the day. Taddeo himself appears to have been chiefly responsible for the introduction to the public *studium* of Bologna not only of a curriculum of Hippocratic and Galenic studies already developed at Salerno and certain schools in northern Europe, but also of Aristotelian philosophy and natural science. He and his pupils used this material to carry on the task, begun in the West only about a generation before Taddeo began to teach in the 1260s, of analyzing the differences between Aristotle’s mammalian biology and Galen’s physiology.

Taddeo’s students, who came to him from Florence, from Padua, and perhaps from farther afield, included some of the foremost Italian physicians of the early fourteenth century—outstanding examples of successful university training for one of the two great learned professions. Subsequently they carried their learning to Florence, Siena, Paris, Avignon, and elsewhere.

Yet the learning of this group of men was neither exclusively academic nor classroom bound. Taddeo and his pupils had among their patients several popes, the Emperor Henry VII, and a doge of Venice. Furthermore, these physicians carried on an already established Bolognese tradition of surgical study and practice, and two of them, Bartolomeo da Varignana and Mondino de’ Liuzzi, are famous as pioneers of autopsy and of anatomical dissection for purposes of study. Contemporary society

perceived in these medical masters a highly esteemed combination of scientific learning and professional skill, and it rewarded them accordingly, with glowing eulogies, teaching positions in major *studia*, clients of high standing, and considerable wealth.

Given this range of activities by Taddeo and his fellows, it is not surprising to learn that some of their achievements have at different times attracted the attention of social historians, university historians, historians of philosophy, historians of medicine, historians of Italian language and literature, and specialists in the early Italian Renaissance, as a glance at the periodical articles in the Bibliography will show. Furthermore, the milieu in which Taddeo and his associates taught has been the focus of studies as diverse as Bullough's account of medical professionalization at Bologna and the scholarly investigations into the rise of Bolognese Averroism by Grabmann, Maier, Ermatinger, Kuksewicz, and others. (For works by scholars mentioned in the Introduction, see Bibliography.) Yet perhaps this very diversity of interest has hitherto provided a barrier to any unified study of the group as a whole. For although such aspects of Taddeo's learning as his vernacular writings, his *consilia* for individual patients, and his references to contemporary philosophical disputes at Paris have received due notice, no systematic survey of his entire output, and particularly of his Latin commentaries on authoritative medical works, has, as far as I know, ever been attempted.

This diffusion of scholarship is not peculiar to studies of Taddeo and those associated with him. In general, the content and the philosophical context of the learning of academic physicians in the medieval schools of Italy remains largely unexplored even today. Although major contributions to the study of the subject have been made—the names Thorndike, Kristeller, Kibre spring to mind—much of the enormous written output of Italian teaching physicians between the later twelfth and the fifteenth centuries remains unanalyzed and unread.

The reasons for this neglect are not difficult to find. In themselves, the main outlines of the Hippocratic, Galenic, and Arabic medical theories taught in medieval medical schools are fairly well known to historians of science and medicine. Moreover, despite a general recognition of the importance of the institutional and intellectual links between arts, philosophy, and medicine in the Italian university centers, medicine remains at best a peripheral topic for most historians of philosophy or culture. And

social historians and historians of medicine, insofar as they have concerned themselves with medicine in medieval and early Renaissance Italy, have tended to concentrate upon its professional and practical aspects. Furthermore, although the continuing demand in the fifteenth- and sixteenth-century universities for old, established medical textbooks ensured that a substantial number of older treatises and commentaries appeared in early printed editions, much of the output of medieval learned physicians remains in manuscripts written in the cramped and hurried hands of scholars more concerned with the rapid flow of their own or of a lecturing or disputing master's ideas than with the comfort of future readers. *Many of these works do much to justify the strictures laid upon medical scholasticism: lengthy, inordinately repetitive, and replete with obscure technical terminology, they make the well-known aversion of certain humanists for this type of learning immediately and readily comprehensible.*

Yet the major role played by learned medicine in the Italian *studia*, the weighty social and intellectual influence in the fourteenth and fifteenth centuries of university-trained physicians, and the interactions between medicine, liberal arts, and philosophy in faculties "of arts and medicine" all suggest that learned medicine deserves a more prominent place in the intellectual and scientific history of the age than it usually gets, and that the writings of scholastic physicians merit something better than the hasty, and it must be said contemptuous, dismissal they are still often accorded. As the reader will see, learned physicians expended much energy in debating whether medicine was or was not a branch of natural philosophy. Although they reached varying conclusions, it is nevertheless plain, from our present standpoint, that their medical learning has a place in a larger philosophical, intellectual, and scientific context. Moreover, medical learning was itself no more static and unchanging than learning in any other field; so our studies of its history need to be placed within specific times and places as well as within a general intellectual context. The vehicles of medical discussion were principally commentaries appended to lemmata from authoritative texts (such as works of Hippocrates, Galen, or Avicenna) and disputed *questiones*. Furthermore, numerous *questiones* or *dubia* were also incorporated within the commentaries themselves. Works cast in these forms were ideally suited for the comparison of conflicting authorities and the expression of different and

changing opinions. While it is true that some arguments tended to take standard forms and became repetitive, the overall picture is one of development and debate.

It has seemed to me, therefore, that a systematic survey of the written works as well as of the careers and medical activities of Taddeo and those he trained might constitute a modestly useful adjunct to our understanding of medieval science in its intellectual and social setting. Such a survey the present work is designed to provide.

As I studied the works of Taddeo and the other authors, a number of topics especially engaged my interest. Among these were the theoretical concepts held by members of the group about the nature of medical learning and the place of medicine among the sciences (chapter five), as compared (and sometimes as contrasted) with the uses actually made in medical teaching of material drawn from natural philosophy (chapters six and seven); the extent of Taddeo's and his students' knowledge of Galen and their role in curricular development (chapter four); the relationship in their life's work and writings between medical theory and medical practice (chapters eight and nine); the use of scholastic *questiones* as tools of practical as well as abstract and speculative medical teaching (chapter eight); the place of written *consilia* for individual patients in their teaching and practice (chapter nine). Chapters one, two, and three concern the setting in which they taught, their biographies, and their contributions to moral philosophy, vernacular learning, and civic life. In an attempt to make clear their own priorities, I have compiled and arranged by subject a cumulative index of the titles of the questions discussed in their commentaries, which appears as Appendix One.

Of the problems involved in writing this work, by no means the least was that of determining which masters could legitimately be regarded as having learned from Taddeo. I have included all authors (known to me) of surviving written works who, on the basis of evidence dating from no later than the fourteenth century, can be shown to have been Taddeo's pupils, or to have had personal contact with him as younger professional colleagues, or both. Using these criteria, contemporary documentary records of the *studium* of Bologna yield Bartolomeo da Varignana and the master of arts Gentile da Cingoli; a contemporary letter by Engelbert of Admont produces Guglielmo da Brescia; a description of Taddeo as a teaching practitioner in one of the works of Mondino de' Liuzzi gives Mondino; and the collection of Florentine biographies by

Filippo Villani gives two more: Dino del Garbo and Turisanus (for references, see chapter two). All of these men (other than Mondino de' Liuzzi) were originally identified as Taddeo's pupils by external evidence, rather than by signs of response to Taddeo's intellectual influence within their written works. Yet that this group was perceived by its contemporaries and successors, as well as by myself, as constituting an intellectual as well as a professional community is interestingly suggested by a passage in one of the medical *questiones* of Gentile da Foligno (d. 1348), one of the most prolific and learned medical authors of the fourteenth century. Before proceeding to give his own views on "the reduction of medicine to act" (that is, on how medicine works in the body), Gentile summarized the views of previous authorities. He named eleven recent writers who had discussed the problem, most of them being associated with the Bologna faculty of arts and medicine; eight of the eleven are Taddeo Alderotti, all six of his pupils listed above, and a pupil of a pupil (Pancius of Lucca, follower of Guglielmo da Brescia).<sup>1</sup>

It should be emphasized, however, that I make no claim that the masters treated in the present study constituted a school of thought: one cannot say that either many or highly significant ideas were peculiar to them as a group. Taddeo's pupils and associates were exposed to other influences besides his; and, while some of them made their entire careers teaching at Bologna, others went far afield. In general, the very nature of medieval intellectual life—the ready interchange of both men and ideas between different centers of learning, and the widespread reliance upon a common body of authoritative texts in any given discipline—means that historians should exercise the greatest caution in attempting to demonstrate that particular concepts were the exclusive property of any one *studium* or group of masters, and that they should be aware that such efforts are often foredoomed to failure. Yet, while many of the concepts, pedagogical methods, and practices espoused by Taddeo and those exposed to his teaching might be paralleled elsewhere, it would probably not be easy to find another group of six or seven medical masters from

<sup>1</sup> Gentile da Foligno, *Questiones et tractatus extravagantes clarissimi Domini Gentilis de Fulgineo . . .*, q. 46, fols. 63r-65v. Turisanus is referred to throughout as *Plusquam commentator*, a title derived from his chief work, the *Plusquam commentum* on Galen's *Tegni* (*Microtechnè*). The other recent writers named by Gentile are Antonius (probably Antonio da Parma; see next note), the Paduan professor of medicine and philosophy Peter of Abano (*Conciliator*, Petrus de Abano, Petrus Aponensis), and a master Martinus whom I have not succeeded in identifying.

the crucial period when the Italian universities of arts and medicine were taking shape whose personal contacts, common training, and institutional background are so well documented, whose reputation among their contemporaries stood so high, and whose writings survive in such quantity. These considerations, to me, more than justify the study of these men as a group.

A number of other masters who may have fallen within the orbit of Taddeo's influence have for various reasons been excluded from the present work. Although it seems highly likely that all faculty members and students in arts and medicine at Bologna in Taddeo's lifetime knew him and were to some extent influenced by him, none except those named above are included here, because specific evidence of personal association is lacking. The most important figure omitted on these grounds is probably Antonio da Parma, who seems to have taught medicine at Bologna before 1323, and who therefore may have studied under Taddeo.<sup>2</sup> Pupils and colleagues mentioned by name in Taddeo's own writings, but by whom no works are known to have survived, are debarred for lack of evidence concerning their thought and careers. Space and time limitations have dictated the omission of the pupils of Taddeo's pupils, several of whom were professors of medicine at Bologna in the first half of the fourteenth century (notably Giuliano, Bertruccio, teacher of Guy de Chauliac, and Alberto da Bologna, all of whose works merit further study).<sup>3</sup> Finally, no effort has been made to discuss the various fourteenth-century

<sup>2</sup> A detailed account of the philosophical contribution of Antonio da Parma, who produced a commentary on part of the *Canon* of Avicenna and a medical compendium in addition to philosophical writings, is to be found in Zdzislaw Kuksewicz, *De Siger de Brabant à Jacques de Plaisance*, pp. 315-452. Kuksewicz denies any connection between Antonio and Bologna and unquestionably demonstrates the close dependence of his philosophical ideas on Parisian sources. Antonio's "*recollections*" on *Canon* 1.1 were, however, taken down "per me Albertum Bononiensem" (BAV, MS Vat. lat. 4452, 14c, fol. 47v; and similarly in a Munich manuscript—see TK 759). As far as is known, the academic career of Alberto took place entirely at Bologna. Perhaps, having studied and taught philosophy at Paris, Antonio taught medicine at Bologna.

<sup>3</sup> On them, see SF 1:251, n. 2, and 1:562; George Sarton, *Introduction to the History of Science*, vol. 3, pt. 1, pp. 842-845; M. Morris, *Albertus de Zancarius*; and Lynn Thorndike, "Some Medieval Medical Manuscripts at the Vatican," *Journal of the History of Medicine and Allied Sciences* 8 (1953):267. In his introduction to Mondino's *Anatomia*, Lino Sighinolfi notes (p. 16) that Alberto, then described as doctor of *physica*, and Bertruccio, described as doctor of medicine, were among the witnesses to Mondino's will in 1326. Giuliano was the *reportator*, in 1310, of Dino's commentary on the *De natura fetus* ascribed to Hippocrates (BAV, MS Vat. lat. 4464, fol. 124r); Guy de Chauliac stated that Mondino had been the teacher of Bertruccio.

physicians who are asserted to have been Taddeo's pupils by authors writing after the close of the fourteenth century. These assertions may be based on fact, even though contemporary supporting evidence cannot be found; but one suspects Taddeo's fame sometimes led to the conferment of the honor of having been his pupil on physicians who had no right to it. Thus Gentile da Foligno is excluded from consideration, despite the claim in a variety of secondary sources that he studied under Taddeo, because there appears to be no contemporary or nearly contemporary evidence to that effect, and because the chronology of their lives makes it unlikely (although not impossible).<sup>4</sup>

The nature of the sources presents problems of a different kind. For biographical information I have relied largely on documents already in print. Chiefly owing to the industry of the historians of Bologna and its university, there is a relatively large body of printed documentation about the six men with whom we are concerned. Doubtless, however, further search of archives of the various cities and institutions where Taddeo's pupils taught and practiced would turn up a few more documents. No such research has been attempted for this book, since its main focus is on the writings of members of the group.

<sup>4</sup> Taddeo probably began to teach in the 1260s and died in 1295; Gentile's birthdate is unknown, but his death in 1348 is well documented (he was the author of a *consilium* on the plague and perished during the 1348 epidemic). The last survivor among the pupils of Taddeo discussed herein was apparently Dino del Garbo, who died in 1327. The earliest documented date in Gentile's career is 1322, when he was teaching at Siena; see Carl C. Schlam, "Graduation Speeches of Gentile da Foligno," *Medieval Studies* 40 (1978):97, citing the Siena *Chartularium*. Furthermore, at that time Gentile was receiving a salary of 125 gold florins a year (with a supplementary payment of 60 florins a year), which rose to 180 florins in 1324. In 1321, Dino del Garbo was making a salary of 350 gold florins a year, with a 100-florin supplement for teaching at Siena; see *Chartularium Studii Senensis*, 1:169, 239-240, 243, 283-284, 313 (nos. 169, 195, 197, 228, 229, 249). Since Gentile's subsequent fame certainly came to rival that of Dino, the implication is that in the 1320s Gentile was still a young man at the beginning of his career, whereas Dino was a mature and established scholar (see Dino's biography in chapter two, below). As just noted, Gentile unquestionably knew the writings of Taddeo and his pupils well; so it seems very likely that he was a pupil of a pupil—possibly of Dino himself, whom he praised effusively in the passage cited above. Dino's son Tommaso denigrated Gentile (see note 48 to chapter eight, below), whom he may have regarded as a rival for Dino's intellectual and professional inheritance. For a discouraging glimpse of the accretion of legend around Gentile da Foligno, and the difficulties of authenticating biographical detail about him, see Fausto Bonora and George Kern, "Does Anyone Really Know the Life of Gentile da Foligno?" *Medicina ne' secoli* 9 (1972):29-53. These authors, however, appear to accept (pp. 33-34) the story of Gentile's education under Taddeo, although adducing no evidence other than assertions in earlier secondary works.

Modern editions of works by Taddeo and his pupils are few and far between. Those that have appeared in the twentieth century include Taddeo's *Consilia*, the medieval Italian version of Mondino's *Anatomia*, and a Latin commentary by Dino del Garbo on a vernacular lyric of the *dolce stil nuovo* (for details, see Bibliography). The vast bulk of their output, however, including all their medical commentaries, disputed questions, and remedy collections, remains available only in manuscript or in fifteenth- or sixteenth-century printings. To attempt to survey such a mass of material in the absence of critical editions is obviously to run grave risks of inaccuracy or imbalance.

We may note, in particular, some hazards regarding the use of *questiones* in commentaries and the use of medical recipes. As already remarked, medical commentaries by our authors normally incorporated large numbers of *questiones* on topics of traditional or current interest, or both. Obviously, such a format is extremely susceptible to interpolation; and so long as the arguments were living ones, the likelihood of subsequent emendation was no doubt fairly high. One can only admire the copyist of the commentary of Alberto da Bologna on the collection of Galen's treatises on disease known in the Middle Ages as *De accidenti et morbo* for the scruples that led him to remark, "the aforementioned doctor said many things in lecturing on this book that, saving his reverence, I do not believe to be true; and therefore what he said I have not changed, but immediately afterwards or in the margin of the book have sometimes put forward certain objections," while wondering how many other learned copyists or editors were less conscientious in the manner in which they made and acknowledged emendations.<sup>5</sup> Nonetheless, in the absence of specific evidence to the contrary, I have assumed that all *questiones* and arguments incorporated into a commentary bearing the name of one of the masters with whom I am concerned were in fact his work. Similarly, many collections of medical recipes and lists of herbal remedies circulated inside (and outside) the medieval *studia*. The names of famous physicians, including Taddeo Alderotti, Dino del Garbo, and Mondino, were attached to such collections, but the same

<sup>5</sup> "Et in hoc terminetur sententia libri de accidenti et morbo recollecta sub magistro Alberto bononiensis et correpta cum scriptoque ipsemet alias scripsit propria manu. . . . Multa autem dixerat legendo hunc librum predictus doctor que salva reverentia esse vera non credo, et ideo que dixerat non mutavi sed post immediate vel in margine libri quandoque reprobavi . . . ," BAV, MS Vat. reg. lat. 2000, 14c, fol. 73r. The commentary begins on fol. 28r.

questions of authenticity of attribution and of subsequent interpolation are usually unresolved.

In consulting those works by Taddeo and members of his circle that are available only in manuscript, I have not attempted any systematic critical comparison of different manuscript traditions. (Some works, in any case, appear to survive only in a single copy.) Where early printed editions exist, I have made use of them, while referring to the manuscripts from time to time; but I have not made any systematic analysis of the transmission from script to print.

Problems of the kind indicated above are not only confined to the writings of Taddeo and the other physicians who are the subjects of this book, but also affect our knowledge of some of their own sources. These masters inherited an ancient tradition of medical learning that reached them in a variety of forms. The history, and in particular the textual history, of this process is still far from completely known, although a number of scholars are currently engaged in adding to our understanding of it. Of the proposed *Galenus latinus* we now have one volume, Richard Durling's edition of a twelfth-century translation of *De complexionibus*; a catalogue of medieval Hippocratic manuscripts and commentaries is currently being published in serial parts by Pearl Kibre; Paul Oskar Kristeller has unraveled important aspects of the formation of the collection of Hippocratic and Galenic texts known as the *ars medicinae* in the late twelfth and early thirteenth century, but a number of early commentaries on works in this collection have still to be analyzed; Jerry Stannard, John Riddle, and Michael McVaugh have begun to disentangle some of the complexities of the transmission of texts and content in the medieval pharmacological tradition.

Given this situation, I can only beg the reader's indulgence for my temerity in attempting, on however small a scale, a synthesis of the kind contained in the present volume. Some of the imperfections in this book reflect lacunae in our current knowledge of medieval learned medicine; more of them, no doubt, reflect the manifold inadequacies of the author. It has nonetheless seemed worthwhile to attempt a reconstruction, even if flawed, of the thought and activities of a group of men whose lives were touched by—and who, in however small a measure, helped to shape—so many of the significant trends of their age: the growth of secular professions, the development of scientific learning, the rise of universities, and the flowering of Italian civic life.



TADDEO ALDEROTTI  
AND HIS PUPILS



## CHAPTER ONE

### THE SETTING

**T**his book is about a group of men who were simultaneously scholars and teachers, highly successful practitioners of a learned profession, and members of a politically and socially influential urban elite. Holders of senior professorships in the burgeoning north-Italian *studia*, medical advisers to popes and an emperor, and active members of the vigorous citizen class of the north-Italian municipalities, Taddeo Alderotti and his pupils reflected in their lives many aspects of the richly complex society in which they moved. To place them properly in their setting would require a history of the whole political, social, economic, and cultural world surrounding them. The description of this world, which was also the world of Dante, has been the task of many scholars. It will not be attempted afresh here. But of Bologna and its *studium*—the city and group of academic institutions that played the leading roles in the intellectual, cultural, and scientific formation of Taddeo and his colleagues and students—some introductory account must be given. So far as can be determined, Taddeo Alderotti (d. 1295) spent his entire academic career, as both scholar and master, at Bologna; and although some of his pupils went far afield (being variously credited with teaching or practicing in Padua, Siena, Florence, Genoa, Paris, and Avignon), they too not only developed their intellectual capacities at Bologna, but also, with a solitary exception, taught there for substantial periods of time.<sup>1</sup>

As is well known, the academic institutions and the delineation of fields of study that developed at Bologna served, in many respects, as a model for other medieval university centers in southern Europe, but differed sharply from arrangements usually prevailing north of the Alps. Typical of the southern European *studia* were the formation of student universities (rather than the universities of masters of arts found in the north), curricular emphasis upon law and medicine, the lay status of numerous masters and students, the tardy appearance of public teaching

<sup>1</sup> See the biographies in chapter two, below.

of theology, and the teaching of liberal arts and philosophy in close institutional and intellectual association with medicine. Not all these characteristics were fully developed when Taddeo Alderotti first came to Bologna; but it seems fair to say that Bolognese education was, from an early date, more directed toward the secular learned professions than that provided at, say, Paris or Oxford. This secular emphasis, as much as anything else, serves to explain the superior status and productivity achieved in the late thirteenth and early fourteenth centuries by the faculties of medicine at Bologna and the similarly oriented *studia* of Padua and Montpellier. It would be a mistake, however, to suppose that scholars associated with the Italian schools inhabited a different intellectual universe or subscribed to a wholly different value system than did those in the north. Trends in thought spread freely from one side of the Alps to the other; so intellectual currents cannot easily be identified as peculiar to the Italian schools, peculiar to Bologna, or peculiar to any particular group of masters at Bologna or elsewhere. Nonetheless, Bologna was in fact the matrix of the learning and of the professional training of Taddeo and his pupils, and it is conditions at Bologna that will be described in this chapter.

When Taddeo first came to Bologna from his native Florence some time in the middle years of the thirteenth century, the former city was already an ancient and renowned seat of learning. Schools of liberal arts existed in Bologna in the early Middle Ages, and the city had become a center for the teaching and study of law by the end of the eleventh century. In the course of the twelfth century, the masters of Bologna intensively cultivated the fields of canon and civil law, attracting students from all over Europe and producing a great efflorescence of legal studies. Meanwhile, the position and prestige of the jurists of Bologna steadily advanced. Irnerius, traditionally (although probably not in fact) the founder of legal studies at Bologna, enjoyed the protection of Matilda of Tuscany; and from the Emperor Frederick Barbarossa came in 1158 the celebrated *authentica habita*, an imperial decree that guaranteed a wide range of scholarly privileges.<sup>2</sup>

Not only did the law schools continue to flourish, but teachers and students of other subjects, most notably of rhetoric and medicine, began to flock to Bologna in increasing numbers. The rise of medical teaching at

<sup>2</sup> Gina Fasoli, *Per la storia dell'Università di Bologna nel Medio Evo*, pp. 82-91, 117-132; Pearl Kibre, *Scholarly Privileges in the Middle Ages*, pp. 18ff.

Bologna will be considered below; here it is sufficient to say that medical teachers and students were present in the city in the first two decades of the thirteenth century. Early in the thirteenth century, too, Bologna became a notable center for the teaching of the practical rhetoric of the *ars dictaminis* (the art of letter writing) under such famous teachers as Boncompagno da Signa (d. after 1235) and his approximate contemporary, Bene of Florence.<sup>3</sup> But despite its importance as an adjunct or introduction to the study of law and the notarial art, thirteenth-century Bolognese rhetoric was never exclusively practical or vocational. Much evidence has been gathered that bears witness to the study of Latin poets, and Boncompagno himself cited a number of classical authors.<sup>4</sup> Moreover, the intimate involvement of the *ars dictaminis* with the problems of government, politics, and law in urban society meant that in Bologna, as elsewhere in northern Italy, some teachers of Latin rhetoric were much interested both in the development and use of the vernacular, and in outlining the moral attributes conducive to good government and appropriate for citizens in public life. Thus, for example, Guido Faba, or Fava, a teacher of the Latin *ars dictaminis* at Bologna from the 1220s, produced, in addition to several Latin works on rhetoric, a collection of sample letters and political discourses in the vernacular. The contribution of the schools of Bologna certainly supports the contention that the activities and interests of thirteenth-century Italian rhetoricians helped to set the scene for the early Italian Renaissance.<sup>5</sup>

In the middle years of the thirteenth century, then, Bologna was a major center not only for vocational training in the professional disciplines of law and medicine and in Latin grammar (the essential pre-

<sup>3</sup> A valuable account of the teaching of rhetoric and the *ars dictaminis* at Bologna in the first half of the thirteenth century is contained in Helene Wieruszowski, "Rhetoric and the Classics in Italian Education of the Thirteenth Century," in her *Politics and Culture in Medieval Spain and Italy*, pp. 589-601, where the earlier literature on the topic is also noted and discussed. See also her "'Ars dictaminis' in the Time of Dante," *ibid.*, pp. 359-377.

<sup>4</sup> Wieruszowski, "Rhetoric and the Classics," in *Politics and Culture*, pp. 596-598 and 603-604.

<sup>5</sup> Wieruszowski, "'Ars dictaminis,'" in *Politics and Culture*, pp. 370, 376-377; on the general relationship of medieval Italian rhetoric to developments associated with the Renaissance, see Paul Oskar Kristeller, "Humanism and Scholasticism in the Italian Renaissance," in his *Renaissance Thought*, pp. 92-119; on the contribution of the *studium* of Bologna in this regard (not only as concerns rhetoric), see *idem*, "The University of Bologna and the Renaissance," *Studi e memorie per la storia dell'Università di Bologna*, n.s. 1 (1956): 313-323.

requisite for serious study in any field during the Middle Ages), but also for education in both practical and, to a lesser extent, literary rhetoric. The beginnings of a vernacular literary culture and of a concern for moral philosophy viewed in the context of civic life were also evident. Thus, the interest of Taddeo and some of his pupils in vernacular letters and in civic morality and affairs (see chapter three), like their medical learning, drew upon and carried forward existing Bolognese traditions.

It seems probable, too, that some teaching in logic was available at Bologna by around the mid-thirteenth century, since professors of logic were to be found at Arezzo in 1255 and at Padua in 1262 (and perhaps at Padua and Vercelli in 1228). The earliest public teaching in logic that can be documented at Bologna, however, appears to be that of Master Theodosius of Cremona and Master Reginaldus de Melanto in 1273. It is not known when Taddeo's own teaching of logic began, although it was before 1287; but since logic was often taught by men who were themselves still students of one of the higher disciplines, it may have been much earlier in his career.<sup>6</sup> No master at Bologna seems to have made any significant independent contribution to the subject before Taddeo's pupil Gentile da Cingoli (active at Bologna after about 1295); so it may perhaps be assumed that, in the thirteenth century, logic was taught only as a routine preparatory methodology.

Astronomy and astrology, too, formed part of the Bolognese learned tradition from an early date, no doubt in part because of the universal belief in the importance of astrology for medicine. The famous Michael Scot is said to have been asked by the ruling elite of Bologna to make astrological predictions in 1231; another well-known astrologer, Guido Bonatti (d. after 1282), spent much time in Bologna and almost certainly

<sup>6</sup> Wieruszowski, "Arezzo as a Center of Learning and Letters in the Thirteenth Century," in *Politics and Culture*, pp. 404-405; dialectic may, however, have been taught only in private schools as a preparatory course in Arezzo at this time. Master Tredecinus, "in loica providus indagator et doctor," was one of ten regent masters at Padua who attended the solemn public reading of the *Cronica* of Rolandino of Padua in 1262; see Rolandino, *Cronica in factis et circa facta Marchie Trivixane* 12.19, ed. A. Bonardi, *Rerum italicarum scriptores* (new ed. Città di Castello, 1905-1908), vol. 8, pt. 1, pp. 173-174. In 1228, seceding students from Padua made a contract with the commune of Vercelli that required the latter, among other provisions, to pay the salaries of two professors of logic; it is not known whether or not the contract was put into effect, nor to what extent it reflected the current pattern of arts teaching at Padua. See Nancy G. Siraisi, *Arts and Sciences at Padua*, pp. 17-18, and bibliography there cited. For Theodosius and Reginaldus, see SF 1:593; on Taddeo as a teacher of logic, see note 60 to this chapter.

taught there, probably beginning in the 1230s. Of the other mathematical arts, geometry and arithmetic were certainly taught in 1279, and possibly earlier. It is unlikely that music, the fourth art of the quadrivium, was wholly absent when the other three were present. In this connection, it may be noted that Bologna early became a center of the music of the *ars nova*, and that among those interested in polyphonic innovation was the learned physician Giovanni della Luna (fl. 1298-1303).<sup>7</sup>

In the years when Taddeo first arrived there, however, Bologna does not appear to have been particularly noted as a center for the teaching of philosophy. When and how scholars at Bologna first participated in the great intellectual revolution of the thirteenth century, namely the reception of the *libri naturales* (and *morales*) of Aristotle as basic textbooks in the schools, remains largely unknown.<sup>8</sup> Whether or not the Emperor Frederick II did, as claimed, send works of Aristotle to the scholars of Bologna around 1230, some natural philosophy was no doubt early studied in connection with medicine (see chapter five).<sup>9</sup> It is probable, however, that the *studia* of the various orders of friars played an important part in introducing the "new Aristotle" and scholastic method to the schools of Bologna. The first such *studium* to be established was that of the Dominicans, which was founded in 1218 and declared in 1248 to be

<sup>7</sup> Lynn Thorndike, *Michael Scot*, p. 38; idem, *History of Magic and Experimental Science*, 2:827-828; B. Boncompagni, *Della vita e delle opere di Guido Bonatti astrologo del secolo decimo terzo notizie* (Rome, 1851), pp. 21-23. Guido Bonatti disputed the assertion of Fr. Giovanni da Scho, O.P., that astrology was neither an art nor a science, which perhaps suggests that the subject was indeed treated as a learned discipline at Bologna in the 1230s, when Fr. Giovanni was present in the city (Boncompagni, *Della vita*, p. 101). For Master Johannes, who taught geometry and arithmetic in 1279, see SF 1:586-587. On Giovanni della Luna, see Nino Pirrotta, "Due sonetti musicali del secolo XIV," in *Miscelanea en homenaje a Mons. Higinio Anglès* (Barcelona, 1958-1961), 2:657.

<sup>8</sup> A convenient summary of the stages of the reception of Aristotle is contained in Fernand Van Steenberghen, *Aristotle in the West*. A careful study of manuscripts of Aristotle's works of Bolognese provenance or ownership, such as P. Marangon, *Alle origine dell'Aristotelismo padovano*, now provides for Padua, would probably be useful.

<sup>9</sup> The claim is made in a letter in the epistolary collection of Frederick's chancellor Petrus de Vineia, which contains many apocryphal items and was used as a manual of *dictamen*; furthermore it is very similar to a letter supposedly sent by Manfred to the University of Paris. The question is discussed and the authenticity of the letter of Frederick to the scholars of Bologna maintained in Roland de Vaux, "La première entrée d'Averroès chez les Latins," *Revue des sciences philosophiques et théologiques* 22 (1933):205-206. Authentic or not, the letter refers to works of Aristotle and other Greek and Arab philosophers "in sermone et mathematicis disciplinis," and could therefore describe Aristotle's works on logic together with Arab treatises on astronomy and astrology, just as well as the Aristotelian *libri naturales*.

one of the six *studia generalia*, which were second only to the Parisian house in the order's hierarchy of schools.<sup>10</sup> According to Tommaso da Celano, an attempt to found a Franciscan house of studies in Bologna in about 1221 had drawn down the wrath of Saint Francis himself; the latter said to the founder, Johannes de Sciacca, who was "highly educated" ("*valde litteratus*"): "You want to destroy the order! I desired and wished, following the example of my Lord Jesus Christ, that my brothers should rather pray than read [or lecture—*legere*]."<sup>11</sup> Perhaps the saint later changed his mind, since Saint Anthony of Padua lectured on theology in the Franciscan convent at Bologna in about 1223-1224 and apparently did so with Saint Francis' approval. A Franciscan *studium* had certainly been established by 1236, when the archbishop of Ravenna gave his permission and encouragement to the Friars Minor to move closer to the center of the city so that their "schools and sermons" might be more readily accessible to "clerks and scholars." The Franciscans did not officially rank their *studia* into different categories until 1336, when Bologna was declared to be among the *studia generalia* of the order.<sup>12</sup> The Augustinian house in Bologna was also recognized as a *studium generale* by the general chapter of that order in 1287,<sup>13</sup> and a Servite house of studies had come into being before 1293.<sup>14</sup>

The houses of friars in Bologna were from their beginnings in close contact with the major intellectual currents of the day. For example, in the middle years of the thirteenth century, Franciscans from Bologna were regularly sent to study (and a few of them also taught) at Paris, then the chief center of theological and philosophical learning in Europe.<sup>15</sup> As we shall see, Taddeo Alderotti also left a bequest to finance the Parisian studies of Franciscan friars from Bologna. Although the details of the curricula offered in the *studia* of the friars of Bologna at that time cannot now be reconstructed, it is clear that the main purpose of these schools was to teach theology and the art of preaching (*ars predi-*

<sup>10</sup> Guido Zaccagnini, "Le scuole e la libreria del Convento di S. Domenico in Bologna dalle origini al secolo xvi," *Atti e memorie della R. Deputazione di storia patria per le provincie di Romagna*, 4th ser. 17 (1926-1927):230, 232.

<sup>11</sup> "Tu vis destruere ordinem! Desiderabam et volebam, exemplo Domini mei Iesu Christi, fratres meos magis orare quam legere," quoted in Caelestinus Piana, O.F.M., ed., *Chartularium Studii Bononiensis S. Francisci (saec. XIII-XVI)*, p. 11\*.

<sup>12</sup> *Ibid.*, pp. 11\*-13\*.

<sup>13</sup> *Ibid.*, p. 9\*.

<sup>14</sup> In that year Taddeo Alderotti bequeathed to the Servites books on philosophy.

<sup>15</sup> Piana, *Chartularium*, p. 38\*.

*candi*), but that some preliminary training in arts, and perhaps also in philosophy, was also available. Thus, the Franciscan Johannes de Parma, who studied at Paris and was a *lector* at Bologna before 1247, is said to have been “a good grammarian and a master in logic” before his entry into the order; and in 1269 Friar Raymundus de Verona, *lector*, had in his possession philosophical books.<sup>16</sup> Logic and *natura* (presumably natural philosophy) were taught in the convent of the Friars of the Sack in 1270. The teacher, Master Lapus, seems not to have been a member of the order, and is, no doubt, to be identified with Lapus de Florentia, who was apparently teaching medicine publicly in 1268.<sup>17</sup> That the interests of some of the friars at Bologna included both philosophy and learned medicine in 1293 is indicated by Taddeo Alderotti’s own bequests of books on those topics to the Servites and the Franciscans. (As we shall shortly see, medicine of a more practical variety flourished among the Dominicans in the shape of the surgeon Theodoric of Lucca [Teodorico Borgognoni, d. 1298].) The teaching of logic and philosophy were certainly well established among the friars by the first years of the fourteenth century; instruction in logic is recorded at the Servite convent in 1305, and a set of questions on the nature of created beings, disputed by Master Alexander de Alexandria, OFM, between 1303 and 1307, shows an extensive familiarity with the *libri naturales* of Aristotle, with philosophical topics similar to those debated in thirteenth-century Paris, and with techniques of scholastic argument. Some have also conjectured that Duns Scotus may have taught briefly at the Franciscan convent in Bologna in 1303-1304.<sup>18</sup>

The *studia* of the friars were open to clerics who were not members of the mendicant orders, but it is not certain whether or to what extent laymen were permitted to attend lectures and disputations in the thirteenth and early fourteenth centuries.<sup>19</sup> In the later Middle Ages, however,

<sup>16</sup> *Ibid.*, p. 4, no. 3; p. 6, no. 6.

<sup>17</sup> Contract between Master Lapus and the syndic of the friars, printed in Francesco Cavazza, “Le scuole dell’antico studio di Bologna,” *Atti e memorie della R. Deputazione di storia patria per le provincie di Romagna*, 3d ser. 11 (1894):117; the contract provides Lapus with food, drink, and a salary. Lapus was the teacher of the first scholar recorded to have received a public *laurea* in medicine at Bologna.

<sup>18</sup> Piana, *Chartularium*, pp. 9\* and 112\*-116\*, where Fr. Alexander’s questions are edited; for the suggestion about Duns Scotus, see p. 62\*.

<sup>19</sup> *Ibid.*, pp. 83\*-85\*; Zaccagnini, “Le scuole e la libreria del Convento di S. Domenico,” p. 247.

the Franciscans of Bologna maintained close relations not only with the public college of theology (founded 1364), but also with the university of arts and medicine, many of whose members were laymen. The statutes of the university of arts and medicine compiled in 1405 reveal that the convocation of the university was regularly held in the chapter house or schools of the Franciscans; and the same statutes command scholars and masters, especially of philosophy, to attend disputations given by the *lectors* of the orders of friars.<sup>20</sup> In view of the career of Master Lopus, alluded to above, and Taddeo Alderotti's own personal and intellectual connection with the Franciscans of Bologna, it seems likely that close contacts between the *studia* of the friars and those who studied and taught philosophy and medicine in the secular schools of Bologna have a continuous history stretching from 1405 back to the thirteenth century.

It is, however, extremely difficult to trace the emergence of public teaching of natural and moral philosophy in the secular schools. According to John of Salisbury, one of his teachers, Master Albericus, who was outstanding "*in phisicis studiis*," taught at Bologna, presumably in the middle years of the twelfth century. The nature of Master Albericus's exposition is unknown, however, as is that of Moneta of Cremona, who is said to have given instruction in philosophy about 1220.<sup>21</sup> Since Master Lopus, referred to above, taught "*natura*" in the convent of the Friars of the Sack in 1270, he may have included similar instruction along with his public medical teaching. The earliest philosophical *works* associated with Bologna appear to be Taddeo's own translation of the *Nicomachean Ethics* and a treatise on happiness by Jacopo da Pistoia written before ca. 1300 (see chapter three). In the history of secular philosophical teaching at Bologna, therefore, the generation of Taddeo takes on a particular importance.

The early institutional history of the secular academic corporations of Bologna has been extensively treated.<sup>22</sup> The following summary account

<sup>20</sup> Carlo Malagola, ed., *Statuti delle Università e dei Collegi delle Studio bolognese*, pp. 232, 260, 265-266.

<sup>21</sup> SF 1:586-591; John of Salisbury, *Metalogicon*, ed. Clement C. Webb (Oxford, 1929), 2.10, 867c-d.

<sup>22</sup> See especially SF; F. Hastings Rashdall, *The Universities of Europe in the Middle Ages*, 1:87-268, and older bibliography there cited; Albano Sorbelli, *Storia dell'Università di Bologna*; Fasoli, *Per la storia*; Kibre, *Scholarly Privileges*, pp. 18-53; Celestino Piana, *Nuove ricerche su le Università di Bologna e di Parma*; Giorgio Cencetti, *Gli archivi dello*

is designed merely to draw attention to aspects of that history that have particular significance for the careers of Taddeo and his pupils. The establishment in Bologna of formal academic organizations, namely student universities and doctoral colleges, appears to have taken place long after the city's emergence as a major center of intellectual life. As J. K. Hyde has pointed out, the development of academic societies in Bologna both paralleled and was intimately involved with the emergence of political, social, and economic associations among the citizens. The Bolognese appear to have formed a commune by 1116, and some kind of general assembly of the academic community was probably in existence by 1186. But just as more complex forms of political, economic, and social organization developed in the thirteenth century (in the shape of the *societas populi*, guilds, and military companies of Bologna), so too, from the late twelfth century, academic associations became more specialized in their functions. Thus certain foreign students of law were already joined in fraternal societies for religious and welfare purposes in the 1190's; by 1205 universities of foreign students of law had been formed and were electing their own rectors.<sup>23</sup>

The functions and powers of the student universities have been described many times; their members constituted a corporation that elected its own officials, made its own statutes, and claimed to regulate both curriculum and faculty. Many of the professors were, however, Bolognese citizens, and as a group enjoyed considerable political influence. Moreover, some professors were, from about 1280, salaried by the municipality, and many of them had, in any case, an independent source of income as legal consultants. Furthermore, the faculty retained control of the examination procedures leading to the doctorate. In these circumstances, the effectiveness of student regulation of the faculty, and perhaps also of the curriculum, was probably never complete, and tended to become more limited over the course of time, especially under the signorial governments of the fourteenth century. But the universities undoubtedly served

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*Studio bolognese*; and idem, "Studium fuit Bononie," *Studi medievali* 7 (1966):781-833; G. Rossi, "'Universitas scholarium' e commune," *Studi e memorie per la storia dell'Università di Bologna*, n.s. 1 (1956):173-266; and Manlio Bellomo, *Saggio sull'università nell'età del diritto comune*. Documents pertaining to the early history of the studium are edited in SF, vol. 2; Malagola, *Statuti*; and *Chartularium Studii Bononiensis*, cited hereafter as *Chart. Bon.*

<sup>23</sup> J. K. Hyde, "Commune, University, and Society in Early Medieval Bologna," in *Universities in Politics*, pp. 17-46; and Fasoli, *Per la storia*, pp. 133-135.

to protect students of non-Bolognese origin and to secure them a bargaining position vis-à-vis the Bolognese municipal authorities.<sup>24</sup>

Relations between the universities and the commune were far from being always harmonious; as is well known, secessions of masters and scholars from Bologna, in defiance of Bolognese prohibitions, contributed to the formation of university centers at Padua, Arezzo, and elsewhere.<sup>25</sup> Nonetheless, various communal statutes made in the course of the thirteenth century confirmed the legal privileges of scholars and extended further protection to them, especially after the regime of the *popolo* was established.<sup>26</sup> Successive popes also interested themselves in the regulation of academic life at Bologna. In general, and as might be expected, given the accepted role of the church as protector of scholars and of learning, papal intervention tended to support the scholars in their disputes with the Bolognese authorities. Honorius III affirmed both the ultimate ecclesiastical authority over learning and the autonomy of the educational process in 1219, when he decreed that the right of bestowing the *licentia docendi* (license to teach) should belong to the archdeacon of Bologna, but that such license should be given only to candidates who had been diligently examined.<sup>27</sup> In practice, as noted, the examination of candidates was the prerogative of the teaching faculty. That the supervisory role of the archdeacon was nevertheless no mere legal fiction, at any rate in the thirteenth century, is suggested by two sample letters included in an *ars dictaminis* of that period by the Bolognese notary Matteo de' Libri. In one of these, the archdeacon is petitioned to appoint to a professorial chair the writer's relative, who is stated to have studied the arts continuously and to be worthy of the position; in the other, the archdeacon invites his correspondent to take up a professorship.<sup>28</sup>

Little is known of the origins of the colleges, or societies, of doctors of civil and canon law in Bologna, since the oldest surviving statutes of these bodies date, respectively, from the late fourteenth and the fifteenth

<sup>24</sup> Kibre, *Scholarly Privileges*, pp. 18-53; Bellomo, *Saggio sull'università*, pp. 25-52, 81-112, 149-169, 212-217. Bellomo (pp. 40-42) specifically associates the rise of student universities with the thirteenth-century rise of the *popolo* in Bologna.

<sup>25</sup> Rashdall, *Universities*, 1:168-171; regarding Arezzo, however, see also Wieruszowski, "Arezzo as a Center of Learning," in *Politics and Culture*, passim.

<sup>26</sup> Hyde, "Commune, University, and Society," pp. 43-44; Bellomo, *Saggio sull'università*, pp. 40-42, 91-93, 103.

<sup>27</sup> Rashdall, *Universities*, 1:221, 231.

<sup>28</sup> Paul Oskar Kristeller, "Matteo de' Libri, Bolognese Notary of the Thirteenth Century, and His *Artes Dictaminis*," in *Miscellanea Giovanni Galbiati*, 2:291, 316.

centuries. Whether, or to what extent, the teaching masters of law (who, unlike many of their students, were normally Bolognese citizens) felt the need to organize themselves into any kind of formal association before the end of the twelfth century is unclear. It seems likely that a doctoral college (or colleges) was already in existence by 1259, when the Bolognese citizen professors of law had to be restrained by the municipal government from preventing doctors of foreign origin from taking up professorial chairs to which they had been elected by the student universities. Subsequently, the city government intervened on at least three occasions (1295, 1299, and 1304) to prevent the doctors of civil law from reserving professorial appointments for members of their own families. These actions suggest the existence of a strongly organized legal caste, linked by ties of blood as well as by collegiate organization.<sup>29</sup> The jurists were of course also members of the guild of judges and notaries, which from about 1272-1274 came, for a time, to dominate the political life of the city.<sup>30</sup> The political importance of the professors of law is indicated by the insistence of the city government in 1295 that appointees to professorial positions be members of the dominant party of the Geremei.<sup>31</sup>

Thus, by the second half of the thirteenth century the jurists of Bologna, both masters and students, had achieved highly effective forms of institutional organization that added to their status, dignity, and actual political and economic power. Moreover, the *studium* of Bologna shone throughout Europe as the center par excellence of legal studies and hence of precisely those skills that were of the greatest possible practical value in the increasingly complex governmental, administrative, and juridical arrangements that characterized both ecclesiastical and secular life in that period.

It is against this background that the rise of Bologna as a prominent center of medical learning, and the institutional organization there of the teaching of medicine in association with liberal arts and philosophy, must be understood. To the physicians of Bologna, the position of the jurists stood as a continuing example of the possibilities inherent in the organization of a learned profession.<sup>32</sup>

<sup>29</sup> Rashdall, *Universities*, I:213-214.

<sup>30</sup> V. Franchini, *Le arti di mestiere in Bologna nel secolo XIII*, p. 158.

<sup>31</sup> Rashdall, *Universities*, I:214, n. 3.

<sup>32</sup> On the professionalization of medicine at Bologna, see Vern L. Bullough, "Medieval

The presence of numerous physicians and surgeons is recorded in Bologna throughout the thirteenth century. Moreover, there are a number of indications that medicine was fairly widely taught and studied as well as practiced there quite soon after 1200.<sup>33</sup> One of the most noteworthy of these indications is the prohibition laid by Pope Honorius III in 1219 upon the study of medicine in the schools of Bologna by certain categories of clergy.<sup>34</sup> Private teaching of surgery, and probably also of medicine, was certainly carried on from early in the thirteenth century. For example, the *medicus* Ugo Borgononi da Lucca, who was engaged by the Commune of Bologna as a municipal surgeon in 1214, taught the members of a small circle deliberately restricted to his own sons and perhaps a few apprentices.<sup>35</sup> According to his son Theodorice, author of a well-known work on surgery, Ugo usually imposed an oath of secrecy upon those to whom he imparted his methods,<sup>36</sup> and he left no written works.

The contrast to public teaching in a *studium generale* could hardly be sharper. Yet the relationship between Ugo and his sons and apprentices in some ways parallels the oldest and simplest form of academic association, that between an individual master and his own *socii*, that is: his pupils and assistants. A teacher and his students shared not only, ideally, a bond of mutual loyalty and common intellectual concerns, but also, like a craftsman and his apprentices, certain economic interests. An apt pupil could hope to take over his master's teaching or, if he were a physician, practice, on the latter's retirement, or at any rate to benefit from his reputation.<sup>37</sup> Even after the establishment of a student university and

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Bologna and the Development of Medical Education," *Bulletin of the History of Medicine* 32 (1958):201-215, and idem, *The Development of Medicine as a Profession*.

<sup>33</sup> Vincenzo Busacchi, "I primordi dell'insegnamento medico a Bologna," *Rivista di storia delle scienze mediche e naturali* 39 (1948):128-144.

<sup>34</sup> Sorbelli, *Storia*, 1:108.

<sup>35</sup> His contract with the city is printed in SF 2:214-215. On his career, see Mario Tabanelli, *La chirurgia italiana nell'alto Medioevo*, 1:196-198, and bibliography there cited.

<sup>36</sup> *The Surgery of Theodorice*, 2 vols., trans. C. Campbell and J. Colton (New York, 1955-1960), 1:110-111.

<sup>37</sup> The *Rhetorica Novissima* of Boncompagno (d. after 1235), who, as noted, achieved fame by his teaching of the *ars dictaminis* at Bologna, contains a sample "exordium for masters who establish their disciples as their successors in teaching," in which the younger master is referred to as "fratrem et socium nostrum"; Boncompagno, *Rhetorica Novissima* 6.1, in A. Gaudenzi, *Bibliotheca Iuridica Medii Aevi Scripta Anecdota Glossatorum* (Bologna, 1892), 2:273. The warm gratitude of a model *socius* to his master was expressed

doctoral college of arts and medicine at Bologna, therefore, masters and their *socii* continued to form groups cutting across the lines of the larger organizations. The relationship between master and *socius* was an intimate one, and its souring could lead to great bitterness, such as occurred when Taddeo Alderotti came to believe that his former *socius* and present colleague Bartolomeo da Varignana was deliberately luring away his (Taddeo's) students.<sup>38</sup>

To return to Ugo da Lucca, teaching was certainly no part of his official duties. The commune granted him a money fief (*feudum*) of 600 Bolognese lire per year, in exchange for which he agreed to reside in Bologna for six months of each year and throughout any periods of civil war; to treat resident Bolognese citizens gratis and inhabitants of the Bolognese countryside at a fixed scale of charges; and to accompany Bolognese military expeditions in order to treat the wounded. The fief was intended to be hereditary. However, if Ugo should have no son with appropriate medical or surgical skills, then his heir would receive only 400 lire per year and would owe the Commune of Bologna such services as "other vassals are held to owe their lords."<sup>39</sup>

In fact, no fewer than three of Ugo's sons became *medici*, the fief and the position of city surgeon being inherited by Franciscus.<sup>40</sup> As late as 1289, some twenty years after the establishment of public medical teaching and of academic associations of masters and scholars of medicine, Franciscus was engaged in private teaching of surgery by private contract.<sup>41</sup>

Another of Ugo's sons, Theodoric, produced one of the earliest of an important series of surgical treatises by writers associated with Bologna in the thirteenth century. His *Chirurgia*, written before 1266, has been praised by modern historians of medicine for its practicality and good sense.<sup>42</sup> It is a pragmatic work, emphasizing the treatment of wounds and making reference to the methods espoused by Ugo da Lucca. The

by Boncompagno's pupil Rolandino of Padua; see Rolandino, *Cronica* 10.4, ed. Bonardi, *Rerum italicarum scriptores*, new ed., vol. 8, pt. 1, p. 135.

<sup>38</sup> SF 2:223.

<sup>39</sup> SF 2:214.

<sup>40</sup> SF 1:544-545; Guido Zaccagnini, *La vita dei maestri e degli scolari nello Studio bolognese nei secoli XIII e XIV*, p. 111.

<sup>41</sup> Guido Zaccagnini, "L'insegnamento privato a Bologna e altrove nei secoli XIII e XIV," *Atti e memorie della R. Deputazione di storia patria per le provincie di Romagna*, ser. 4, 14 (1923-1924):261, 290-291, where the contract in question is printed.

<sup>42</sup> On Theodoric and his work, see SF 1:537-542; and Tabanelli, 1:198-207.

Bolognese tradition of surgical writing was continued by Guglielmo da Saliceto, whose *Chirurgia* appeared in two versions in 1258 and 1275,<sup>43</sup> and Lanfranco, author of a *Chirurgia magna* written in 1296.<sup>44</sup> The career of Theodoric, who was both a member of a religious order and a bishop, is also of interest as an illustration of the caution with which claims for the "secularization," or secularizing force of the medical and surgical professions in the thirteenth century, should be advanced. The growth of medicine as a learned profession was one of a cluster of factors in later medieval urban and academic society whose ultimate effect was profoundly secularizing. Nonetheless, one should beware of concluding too readily, at any rate as regards the thirteenth century, either that the clergy shunned medicine, or that learned physicians were particularly predisposed to religious heterodoxy or indifference. It is true that the prohibition of Honorius III referred to above was only one of several attempts made by the papacy in the twelfth and early thirteenth centuries to discourage priests and members of religious orders from attendance at secular medical schools.<sup>45</sup> And it is also true that by this time many *medici* in Italy were married laymen, some of them members of veritable medical dynasties. But the prohibitions on clerical medical studies were partial, subject to exemption, and substantially modified in the late thirteenth and early fourteenth centuries. Moreover, even in Italy (and to a much greater extent in northern Europe), some members of the clergy continued to study medicine and surgery and to engage in consultant practice of the former, and in some cases perhaps also the latter.<sup>46</sup> Theodoric himself joined the Dominican order as a young man. He was later elevated to the bishopric of Bitonto, near Bari, and subsequently to that of Cervia, near Ravenna. He does not appear to have resided permanently in either see, and he spent the latter years of his life in Bologna, where he died in 1298.<sup>47</sup> His *Chirurgia* was written while he was Bishop of Bitonto and was dedicated to a fellow bishop.<sup>48</sup> He practiced "his

<sup>43</sup> Tabanelli, *Chirurgia*, 2:499-521.

<sup>44</sup> *Ibid.*, 2:803-811.

<sup>45</sup> Darrell W. Amundsen, "Medieval Canon Law on Medical and Surgical Practice by the Clergy," *Bulletin of the History of Medicine* 52 (1978):22-44.

<sup>46</sup> Kibre, *Scholarly Privileges*, p. 33, and Amundsen, "Canon Law," pp. 37-38, for the revocation of the prohibitions. For evidence of the predominance of the clergy in the medical profession in England, even in the late fourteenth century, see Huling E. Ussery, *Chaucer's Physician: Medicine and Literature in Fourteenth-Century England*, Tulane Studies in English, 19 (New Orleans, 1971), pp. 29-30, 35-38, 40.

<sup>47</sup> SF 1:537-539.

<sup>48</sup> *Surgery of Theodoric*, trans. Campbell and Colton, 1:3.

science" for monetary reward both after his entry into the Dominican order and after he became a bishop.<sup>49</sup> These activities, somewhat surprising for a person of his ecclesiastical status, have led some historians to suppose that the bishop, the author of the *Chirurgia*, and the son of Ugo da Lucca could not possibly have been one and the same. The question has been thoroughly canvassed and need not be gone into here.<sup>50</sup> Suffice it to say that not only has Theodoric's identity as a bishop, surgical author, and Ugo's son been established, but also that he had the sanction of his religious superiors for his way of life. A papal license granting Theodoric as bishop permission to retain his medical earnings for himself explains that after his entry into the Order of Preachers his income, although acquired by the exercise of his own skill, had been passed on to that order.<sup>51</sup>

The connections of the tradition of Bolognese surgical writing established by Theodoric and the other surgical writers with the development of Bologna as a center of learned medical teaching remain unclear. Both the well-known interest in anatomy of some of the learned physicians in Taddeo's circle and the ultimate inclusion of surgery in the academic curriculum in "arts and medicine"<sup>52</sup> suggest that it would be unwise to assume a sharp dichotomy between the two fields. For example, Guglielmo da Saliceto, according to the explicit in a fifteenth-century manuscript of his work, wrote his *Chirurgia* for the benefit of students, and he described surgery as a *scientia specialis* requiring intellectual as well as manual skill.<sup>53</sup> It is perhaps also worthy of note that in his last years the household of Theodoric included his personal *medicus*, Master Pancius of Lucca.<sup>54</sup> Pancius was described as a subtle and speculative medical author,<sup>55</sup> and as such he was associated with Taddeo and other members of

<sup>49</sup> According to the *curatores* of his will, Theodoric was sought out for his fame and industry "ante ingressum religionis Fratrum Praedicatorum, post ingressum dicti ordinis, ac postquam adeptus fuit episcopatum," SF 1:539, document dated January 14, 1299. A papal privilege granting Theodoric permission to retain his own earnings states: "multa perquisivit mediantibus laboribus et peritia suae scientiae et valde multa collata sibi fuerant a magnis baronibus et praelatis aliisque personis," *ibid.*, 1:539-540.

<sup>50</sup> For the bibliography of this controversy, see Tabanelli, *Chirurgia*, 1:203-208.

<sup>51</sup> SF 1:539-540.

<sup>52</sup> Malagola, *Statuti*, pp. 247-248. On anatomy and surgery in Taddeo's circle, see further below, chapters four and nine.

<sup>53</sup> Tabanelli, *Chirurgia*, 2:517.

<sup>54</sup> Will of Theodoric of Lucca, printed in SF 2:233-237.

<sup>55</sup> SF 1:541.

his circle by the fourteenth-century scholastic physician Gentile da Foligno; and Theodoric himself was the owner of medical books.<sup>56</sup>

As the thirteenth century wore on, more and more of the medical men who congregated in Bologna ceased to apply to themselves the very general title *medicus*, a term that, as we have seen, could be used both for the pragmatic surgeon Ugo da Lucca and for the “subtle and speculative” medical author Pancius. They began to assume the titles of *magister*, *doctor*, and sometimes *professor*, while some of them began to describe their art as *scientia physicalis*.<sup>57</sup> This development suggests that the ancient tradition linking medicine with natural philosophy and with the other disciplines studied in the schools of arts (see chapter five) was increasingly coming to shape the direction of medical study and teaching at Bologna.

Up until the last four decades of the thirteenth century, however, the regulation or organization of medical teaching appears to have been haphazard. It is possible that the physicians of Bologna may have had some form of association before the 1260s, but, if so, no information concerning it is known to have survived. The barbers, who included phlebotomists, and therefore perhaps some surgeons among their number, apparently attempted to secure civic recognition as a guild in 1233, but were at that time unsuccessful. (They seem to have had better fortune in 1288, but the statutes they are known to have made in that year are lost.)<sup>58</sup> The relative lack of regulation and organization no doubt offered a good deal of scope for individual enterprise and for the self-definition of medical qualifications. It was in such circumstances that Taddeo Alderotti rose to fame. The creation of an institutional framework for medical study, which structured the social, intellectual, and scientific role played by his successors, was, at least in part, his work.

Those of the *medici* of thirteenth-century Bologna who chose to associate themselves with the masters of arts and to participate in the creation of academic institutions “of arts and medicine” were pursuing very real practical advantages. As an intellectual discipline, learned, theoretical medicine had a tradition of impressive antiquity and, by the thirteenth century, a substantial corpus of authoritative Latin texts available for academic study. Medicine was therefore perfectly viable as a branch of

<sup>56</sup> SF 2:233-237. For Gentile da Foligno's mention of Pancius, see Introduction, above.

<sup>57</sup> Busacchi, “I primordi,” pp. 133-134.

<sup>58</sup> Franchini, *Le arti di mestiere*, pp. 32-33, 36.

higher education at the university level. In association with the masters of arts, the medical masters could hope to achieve an institutional position comparable, if never quite equal, to that of the jurists—a position they were unlikely to attain as members of a nonacademic guild of *medici*, *chirurgi*, or the like. In general, the degree of political and social influence exercised by any medieval craft or professional guild was proportionate to the extent to which the activity in question was crucial to the economic well-being of the community; the *studium* was not only the glory of *Bononia docta*, it was also the city's chief economic resource. Both the prestige attached to learning and economic factors combined to assure that a medical professoriate would occupy a more exalted position than would practitioners who were not organized as members of a learned profession.<sup>59</sup>

The institutional organization of public medical teaching and its association with the teaching of liberal arts and philosophy appears to have taken place at Bologna during the last forty years of the thirteenth century. Taddeo himself taught logic as well as medicine.<sup>60</sup> A college of doctors, made up of professors who examined candidates for a public *laurea* (degree) in medicine, and no doubt also in arts, seems to have been in existence by 1268, when a scholar contracted to give his master a gift worth twenty-five Bolognese lire upon graduating and receiving his "public [degree] in medicine." The agreement was signed in Taddeo Alderotti's house and Taddeo was a witness to it.<sup>61</sup> In 1292 the college of doctors (*collegium magistorum*), together with the archdeacon's vicar, imposed penalties upon Bartolomeo da Varignana for his all-too-successful attempt to attract the medical students of the aging and ailing Taddeo.<sup>62</sup> That the membership of the college included masters of arts as well as physicians, and that some of the latter were primarily practitioners rather than teachers, is indicated by a document of 1298. In that year Master Boninsegno, a doctor of *physica* (that is, medicine) and as-

<sup>59</sup> See further the works cited in note 32, above.

<sup>60</sup> Ugolino Nicolini, "Documenti su Pietro Ispano (poi Giovanni XXI?) e Taddeo degli Alderotti nei loro rapporti con Perugia," in *Filosofia e cultura in Umbria tra Medioevo e Rinascimento, Atti del IV Convegno di Studi Umbri, Gubbio 22-26 maggio, 1966*, pp. 283-284, document no. 5, dated April 5, 1287, in which Taddeo is described as "medico et professore loice et medicine."

<sup>61</sup> Busacchi, "I primordi," pp. 135-136; "[lauream] publicam in medicina" (editor's brackets), *Chart. Bon.* 8:22, document dated February 22, 1268.

<sup>62</sup> See note 38, above.

tology, petitioned for appointment as a municipal physician and for admission to the college of *medici*, doctors and masters "of the said arts," despite the fact that he had not yet attained the requisite age of thirty. In 1298, too, a group of four professors of *physica* swore obedience to the archdeacon while promising not to receive into the schools, either publicly or privately, any scholar who rebelled against the archdeacon's authority. It is not clear whether these four, whose number included Taddeo's associate and later rival, Bartolomeo da Varignana, constituted the entire publicly teaching medical faculty at the time, or only its senior members.<sup>63</sup>

The election of a "*doctor et rector in fisica*" in 1268 may indicate that some form of association of scholars in arts or medicine, or both, was then in existence. Whatever the case, by 1295 non-Bolognese scholars of arts and medicine had formed a university and had begun, greatly to the annoyance of the scholars of law, to elect their own rector; their right to do so was officially confirmed in 1316.<sup>64</sup>

Scholarly privileges were first formally extended to professors and scholars of medicine by the city government in a series of decrees issued some time between 1274 and 1288.<sup>65</sup> Apparently the civil disorders resulting from the feud between the Geremei and the Lambertazzi factions in Bologna made it necessary to offer various inducements to masters and scholars to stay in the city.<sup>66</sup> Among these were tax exemptions and legal protection, at first granted to Taddeo Alderotti and his pupils, and subsequently extended to all professors and scholars of medicine who were not

<sup>63</sup> SF 2:232-233. Regarding the oath of Liuzius, Maglius de Sulimanis, Bartolomeus de Varignana, and Johannes de Parma, "omnes Fixice professores," to Archdeacon Guido Baisio, see Giovanni Fantuzzi, *Notizie degli scrittori bolognesi*, 1:318.

<sup>64</sup> Busacchi, "I primordi," pp. 136-137; Cavazza, "Le scuole dell'antico Studio," p. 76. "*Fisica*" usually means "medicine" in a thirteenth-century Italian context; "*doctor et rector*" does not necessarily refer to the rector of a student university (on this question, see Busacchi, "I primordi," pp. 135-136). In 1289 a rector "ultramontanorum medicine" was elected; see Carlo Malagola, *Monografie storiche sullo Studio bolognese*, p. 136.

<sup>65</sup> A. Gaudenzi, "Gli antichi statuti del Commune di Bologna intorno allo studio," *Bullettino dell'Istituto storico italiano* 6 (1888):118, 121, 125, 130. The suggestion that the privileges may be dated in the 1270s is Gaudenzi's; Kibre, *Scholarly Privileges*, notes however that a threatened migration of scholars led the municipality to promise to uphold a variety of privileges in 1284. The scholarly privileges were incorporated, no doubt with some emendations and perhaps additions, as Book 8 of the Bolognese law code of 1287-1288; see G. Fasoli and P. Sella, eds., *Statuti di Bologna dell'anno 1288*, where the privileges accorded to Taddeo Alderotti appear at 2:102.

<sup>66</sup> Gaudenzi, "Gli antichi statuti," p. 118.

of Bolognese origin.<sup>67</sup> The municipal government soon began to pay stipends to professors in the faculty of arts and medicine. Taddeo himself was probably salaried, as well as privileged, by the commune. By 1305 the city was paying the salaries of professors of *physica* (medicine), grammar, and the notarial art.<sup>68</sup> In 1324 two professors of philosophy (one specializing in the *Parva naturalia*, *De celo*, and *Meteora* of Aristotle—that is, in natural science), a professor of practical medicine, and a professor of *astrologia* (that is astronomy and astrology), all elected by the student university of arts and medicine, were on the public payroll at annual salaries of 100 Bolognese lire each.<sup>69</sup> This expansion of the publicly supported arts and medical faculty reflects both the growth of the medical school under Taddeo and his pupils and the closely connected development of philosophical studies at Bologna: the professor of practical medicine was Taddeo's pupil, the anatomist Mondino de' Liuzzi; and one of the professors of philosophy was Angelo d'Arezzo, a pupil of Taddeo's pupil Gentile da Cingoli. The professor of *astrologia* in 1324 was the notorious Cecco d'Ascoli, soon to expiate his astrological determinism with his life. Ten years later, the municipality of Bologna reaffirmed its commitment to pay the salaries of professors of philosophy, practical medicine, and *astrologia*, while reducing the salary of the profes-

<sup>67</sup> "X. De privilegio magistri Thadei doctoris fixice et scholarium eius. Rubrica. Ordinamus, quia inveniamus sic reformatum in consilio sexcentorum et populi, quod magister Thadeus condam Aldegrotti [*sic*] de Florentia et sui heredes sint immunes et exempti ab omnibus collectis et servitiis realibus et personalibus civitatis Bononie.

"Item quod pro aliqua possessione quam emet ipse magister Thadeus vel alio modo vel titulo quereret, non teneatur pro ipsa solvere aliquam collectam; salvo quod non possit emere a bannitis vel confinatis communis Bononie et non possit cogi ipse magister Thadeus ire ad videndum aliquos vulneratos, vel aliquam relationem de vulneratis facere: et sit tanquam forensis magister et scholaris in protectione communis et populi Bononie, et eodem modo tractetur et habeatur, sed libere possit exercere artem suam prout eidem placuerit ubilibet exercere. . . ." *Ibid.*, p. 130.

"XI. De privilegio scholarium magistri Tadei et aliorum doctorum fixice. [Rubrica] Statuimus quod scolares forenses qui audiunt vel audient in futuro fixicam a magistro Tadeo et aliis doctoribus fixice gaudeant omnibus et singulis privilegiis quibus gaudent scolares qui student vel studebant in civitate Bononie in iure civili vel canonico ex forma alicuius statuta vel reformationis vel ordinamenti communis vel populi Bononie," *ibid.*, p. 130; and Fasoli and Sella, *Statuti di Bologna*, 2:102.

<sup>68</sup> Rashdall, *Universities*, 1:239.

<sup>69</sup> Elia Colini-Baldeschi, "Per la biografia di Cecco d'Ascoli," *Rivista delle biblioteche e degli archivi* 22 (1921):71, document no. 2, January 23, 1324. Colini-Baldeschi points out (p. 67) that this document corresponds closely to a list of professors, faculties, and salaries of the early fourteenth-century provided in Cherubino Ghirardacci, *Della historia di Bologna*.

sor of *astrologia* to 50 Bolognese lire per year.<sup>70</sup> Perhaps Cecco d'Ascoli's condemnation by the Inquisition had lowered the value of the teaching of the last-named discipline in the eyes of the city fathers. For comparison, the annual endowment of a chair in law was 100 lire in 1324 and 150 lire in 1334.

Those of the arts and medical faculty who were professors of medicine did not entirely have to depend either upon obtaining one of the municipal salaried chairs or upon the modest fees they were permitted to collect from individual students. The rewards of a successful consultant practice, such as Taddeo Alderotti's were many times greater than those of teaching.<sup>71</sup> Moreover, teachers of *astrologia* could practice their art, either by preparing predictions for private clients or by entering the service of a prince. The latter course is said, for example, to have been chosen by the famous Guido Bonatti (d. after 1282), who was probably a professor at Bologna. Later professors of *astrologia* at Bologna were obliged, by university statute, to provide individual "judgements of the year" without charge for scholars of the university of arts and medicine, a requirement that may indicate that professors normally prepared such judgments for other clients for a fee.<sup>72</sup>

Archival evidence regarding the internal organization of the faculty of arts and medicine at Bologna in the late thirteenth and early fourteenth centuries is almost entirely lacking. The earliest extant statutes of the College of Doctors of Arts and Medicine and of the University of Scholars of Arts and Medicine date from the late fourteenth and early fifteenth centuries.<sup>73</sup> It seems likely, however, that many of the arrangements reflected in the doctoral college statutes of 1378, 1395, and 1410, and in the student university statutes of 1405, may also have prevailed at an earlier date.

Judging from the content of the statutes of the college of doctors, the main function of this body, apart from jealously guarding the interests of its members and gathering for religious devotions, continued to be the conduct of the examinations leading to the degree officially conferred by the archdeacon or his vicar.<sup>74</sup> To this prerogative the college had by 1378

<sup>70</sup> Gaudenzi, "Gli antichi statuti," pp. 134-135; Rashdall, *Universities* 1:210-211.

<sup>71</sup> Taddeo left the sum of 10,000 lire Bolognese in various religious, charitable, and educational bequests; his will is printed in SF 2:223-230. See further below, chapter two.

<sup>72</sup> Malagola, *Statuti*, p. 264.

<sup>73</sup> Cencetti, *Archivi*, pp. 45, 47, 53, 68.

<sup>74</sup> Malagola, *Statuti*, pp. 425-522; Rashdall, *Universities*, 1:221-229.

added the licensing of all medical and surgical practice in the city.<sup>75</sup> Thus, its members determined and administered the process of admission to the learned profession of medicine in Bologna. In one important respect the qualifications required for membership in the college of doctors evidently became more stringent as time went on. In 1378 the members of the college were required both to be Bolognese citizens by birth themselves and to be the sons of Bolognese citizens by birth,<sup>76</sup> a regulation repeated with minor modifications in subsequent sets of statutes. By contrast, several of the leading professors of medicine in the first years of the college, most notably Taddeo Alderotti himself and his pupils Dino del Garbo and Turisanus, were Bolognese only by adoption.<sup>77</sup> The members of the college, limited in 1378 to fifteen in number, not only tried to monopolize the senior professorial positions in the faculty of arts and medicine themselves, but also legislated to oblige non-Bolognese candidates for the license to teach medicine to swear not to lecture in the morning hours, not to attempt to join the college, and not to present candidates for examination.<sup>78</sup> The impression that the college developed into a preserve of the Bolognese citizen class is strengthened by the existence of a provision allowing the admission of the sons or brothers of members even when all fifteen places were filled.<sup>79</sup> The medical profession, like other occupations open to laymen, tended to run in families. A close network of blood and marriage relationships already bound together various members of Bologna's medical elite in Taddeo's day, as a glance at the biographies in the next chapter will indicate.

No statutory description of the arts and medical curriculum at the *studium* of Bologna is known to survive from the period when Taddeo and his pupils taught there. It is clear from their works that at Bologna, as elsewhere in Europe, the arts curriculum had come chiefly to emphasize the study of philosophy and natural science found in Aristotle's works on physics, the soul, the heavens, animals, and so forth, and that this curriculum was studied not only by those pursuing a degree in arts as their final goal, but also by all those intending to proceed to the study of medicine. Of the liberal arts, logic and *astrologia* were regarded as particularly important preparatory studies for medicine and therefore continued to flourish. The survival, and indeed the fresh development, of

<sup>75</sup> Kibre, *Scholarly Privileges*, p. 50.

<sup>76</sup> Malagola, *Statuti*, p. 426.

<sup>77</sup> See chapter two, below, for biographical details.

<sup>78</sup> Malagola, *Statuti*, p. 431.

<sup>79</sup> *Ibid.*, p. 438.

rhetorical, literary, and humanistic interests in academic circles in Bologna after the institutionalization and association of arts teaching with scholastic natural philosophy and with medical science is demonstrated by the appointment in 1321 of the celebrated classicist Giovanni del Virgilio to lecture on the major Latin poets, namely Virgil, Ovid, Statius, and Lucan.<sup>80</sup>

Taddeo himself probably played an important part in adapting the more or less standard thirteenth-century curriculum in Aristotelian natural philosophy to the needs of the newly established public faculty of arts and medicine at Bologna. He was the first author associated with Bologna to produce major works making extensive use of Aristotle's teachings and of scholastic method, and the growth of the now well-known school of radical Aristotelian philosophy among masters of arts at Bologna owed much to Taddeo's pupil Gentile da Cingoli. Similarly, significant innovations in medical teaching at Bologna, including the addition to the curriculum of major works of Galen and of the *Canon* of Avicenna, appear to have originated with Taddeo and younger professors who had studied under him. Detailed discussion of the probable contributions of this group of masters to the shaping of the Bolognese medical curriculum and of their conceptions of medical learning is therefore reserved for more extended treatment in chapters four and five below. Much of the significance of the men with whom we are concerned lies precisely in the fact that their careers spanned the crucial period when the institutionalization of medical learning in association with arts and philosophy was taking place at Bologna. Taddeo and his pupils helped both to shape a singularly durable form of university medical teaching and to carry it to other centers far beyond Bologna, and indeed beyond Italy. It is now time to turn to an account of their lives and work.

<sup>80</sup> Rashdall, *Universities*, 1:239-240; Paul Oskar Kristeller, "Un 'ars dictaminis' di Giovanni del Virgilio," *Italia medioevale e umanistica* 4 (1961):182, no. 5; Wieruszowski, "Rhetoric and the Classics," in *Politics and Culture*, pp. 619-626.