

15th-century Practical Medicine in Print: Beyond the Profession, towards the *miscere utile dulci*

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Abstract

By drawing on a comprehensive bibliographic census (ISTC) this article offers a mapping of printed medical-scientific production in 15th-century Europe, with an eye to the manuscript tradition, the authorship status, and the use of Latin and vernaculars in a century of transition that was not merely linguistic. It identifies in some titles from the *practical medicine* category – namely books on *materia medica*, *regimina sanitatis* booklets and short medical poems – the crucial contribution of proto-typography to the wider dissemination of medical knowledge. In regard to some long-lived titles (*Regimina Sanitatis Salernitana*; *Il perché* by Girolamo Manfredi; *Cibaldone*), this paper explores the evolution of their material forms in the early modern centuries in the direction of a more enjoyable style that was far from being only professional, while new methodological research paths are suggested. The sheer variety of actual readers is focused in the case of printed herbals and of the *Cibaldone*. The popularity of such genres is ultimately couched within the lively context of household medicine in the early modern era.

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Keywords: practical medicine; knowledge dissemination; book history

1. A Revolution from the Margins, a Bit Anonymous and Very Pseudonymous¹

The advent of the printing press with movable type revolutionised the medical-scientific culture in Europe. However, to avoid any optimistic exaggeration, we should point out from the outset that this did not happen by way of great works by equally great authors published for their innovative potential.

It is a fact that the publication of medical-scientific texts during the second half of the fifteenth century included hardly any classical editions purged of the adulterations of tradition and ready to stimulate new

¹ The first paragraphs of this article refer back, in summary, to part of “La stampa medico-scientifica nell’Europa del XV secolo. Con cenni sulla fruizione dei libri di *materia medica* e ricettari,” in *Printing R-Evolution and Society, 1450–1500. Fifty Years that Changed Europe*, ed. Cristina Dondi (Venice: Edizioni Ca’ Foscari, 2020), 199–251.

research.² This absence has led historians of medicine to dismiss the first fifty years of printing as completely lingered over the Middle Ages on the one hand, and to recognise only the 16th-century output as actually heralding innovation, on the other. In *Medical Renaissance* studies, indeed, references to printed medical-scientific texts always start from the second decade of the sixteenth century, assuming as *caesura* first editions of the original Greek texts – *in primis* the 1525 Greek edition of Galen – which supplanted the Latin translations of Arab versions of the ancient texts;³ and many thematic studies dedicated to the early modern age, albeit useful, have almost always ignored the incunabula editions of the titles they dealt with.⁴ It is certain and proven that the philological recovery of classical medical thinking, whose aim was *learned medicine*, took place from the early sixteenth century onwards.⁵ But this awareness does not exonerate us from taking into consideration the print output during the second half of the fifteenth century, to verify whether unique features can be seen that distinguish it from the centuries that preceded and followed it. Moreover, relegating early print production to the limbo of the expectations of the fruits of *humanism* and of the *medical renaissance* that was to come, means embracing the same attitude as the humanist detractors of the previous Arab-Latin tradition, with a lack of perspective that, while understandable for the protagonists of the events, does not befit a historical perspective.

Vivian Nutton has perceptively called the 15th century *the missing century* with regard to investigations into the history of medicine.⁶ He has provided a crucial key for our reading of this century, sketching a lively culture dedicated to the *practice* of medicine, even if he attributes these characteristics more to the production of manuscripts rather than printed publications.⁷ However, it suffices to consider the path-breaking overview provided by Paul Slack on the vernacular medical literature between 1486 and 1604 to disprove this, taking into account the fact that English incunabula production was rather limited.⁸ But similar beliefs inexplicably apply to other investigation contexts as well. In her impressive work on *regimina sanitatis* from the 13th to the 15th century, Marilyn Nicoud dismisses as “chaotique et tardive” the diffusion of the genre via the first

² The rare exceptions will be indicated in the appropriate place.

³ A brief mention of the role of the advent of the printing press may be found in the last chapter (“The Medical Renaissance”) by Nancy Siraisi, *Medieval & Early Renaissance Medicine: An Introduction to Knowledge and Practice* (Chicago; London: The University of Chicago Press, 1990), 224. The medical renaissance is traditionally considered to begin from the 16th century, cf. Andrew Wear, Roger French, and I. M. Lonie, eds., *The Medical Renaissance of the Sixteenth Century* (Cambridge: CUP, 1985) until the more recent studies of Ian Maclean.

⁴ Es. Samuel Cohn, *Cultures of Plague. Medical Thinking at the End of the Renaissance* (Oxford: OUP, 2011).

⁵ Ian Maclean, “The Diffusion of Learned Medicine in the Sixteenth Century Through the Printed Book,” in his *Learning and the Market Place. Essays in the History of the Early Modern Book* (Boston: Brill, 2009), 59–86.

⁶ Vivian Nutton, “Medicine in Medieval Western Europe, 1000–1500,” in *The Western Medical Tradition: 800 BC to AD 1800*, ed. Lawrence I. Conrad, Michael Neve, Vivian Nutton, Roy Porter, and Andrew Wear (Cambridge: CUP, 1995), 198–200 (chap. “The Missing Century”).

⁷ In a more recent paper, however, Nutton downplays the role of practical medicine that was the first to go into print, remaining anchored to the usual reading keys that have the innovation in the medical-scientific sector coincide exclusively with the edition of the classics, cf. Vivian Nutton, “The Transmission of Medical Knowledge in Script and Print,” in *Transmission of Knowledge in the Late Middle Ages and the Renaissance*, ed. Outi Merisalo, Miika Kuha, and Susanna Niiranen (Turnhout: Brepols, 2019), 73–83.

⁸ Paul Slack, “Mirrors of Health and Treasures of Poor Men: The Uses of the Vernacular Medical Literature of Tudor England,” in *Health, Medicine and Mortality in the Sixteenth Century*, ed. Charles Webster (Cambridge: CUP, 1979), 237–273, based on the *Short Title Catalogues* of the British Library available at the time. Subsequent works by Mary Fissell for the following centuries are cited in Sandra Cavallo’s essay.

European printing presses.⁹ Certainly, a great number of texts continued to circulate in handwritten form and a great deal never got into print, but there are numerous titles and genres of a *practical nature* that flourished in the form of incunabula. We shall therefore analyse such texts from the second half of the fifteenth century, with a brief discussion of the works that enjoyed especial popularity during the Cinquecento and successive centuries.

To grasp the practical impact of the medical-scientific texts produced during this half century, we should not so much look at the *opera omnia* of well-identified authors, who in any case tend to appear when the book market is mature enough to welcome them – as was the case, for instance, of the *princeps* by Arnaldo di Villanova (Venice 1504). Instead it is necessary to consider the myriad slender works, many of them partial editions of texts both in Latin and the vernacular, that were reworked and assembled by often anonymous contemporary editors, or perhaps launched by proto-typographers under pseudonyms.¹⁰ Book production during the second half of the fifteenth century is indeed distinguished by a high rate of anonymous and pseudonymous titles, the latter attributable to the commercial strategies that aim to appeal to a vaster public, ascribing the titles to traditional and very well-known *auctoritates* – an emblematic case is the Neapolitan typographer Del Tuppo who, in his 1492 edition of the successful encyclopaedic work *Il libro del Perché* by the renowned physician Girolamo Manfredi, preferred to attribute it to Alberto Magno instead of to its legitimate author, because the latter represented an evocative and impactful author whose name would be known to the medium-low and less well-informed reader.¹¹

Apart from striking cases of pseudo-authors emerging based on commercial calculations, the fifteenth century is characterised by its high number of anonymous titles. It is worthwhile to approach them indulgently, bearing in mind that the status of authors at the time was *weak*, a far cry from the conscious use of authorship that was made by many of them – including physicians – beginning in the subsequent century to consolidate their own professional careers.¹² What the proto-typographers had before them was often an array of antique and late medieval texts whose manuscript tradition was made up of multiple and stratified interventions during which the individual author tended to disappear. In fact, it was thanks to the invention of moveable type that

⁹ Marilyn Nicoud, *Les régimes de santé au Moyen Âge. Naissance et diffusion d'une écriture médicale en Italie et en France, XIIIe-XVe siècle* (Rome: École Française de Rome, 2007), vol. 1, esp. 506–524: 523.

¹⁰ Ian Maclean, “Reception of Medieval Practical Medicine in the Sixteenth Century: The Case of Arnau de Vilanova,” in his *Learning and the Market Place. Essays in the History of the Early Modern Book* (Boston: Brill, 2009), 87–106, decline the practical category in the print reception of Villanova starting from the *princeps* of his *opera omnia*, expanding the concept of incunabulum to 1520. It is worthwhile, however, stimulating studies that take into consideration the Latin and vernacular editions of single works by Villanova or circulating under his name printed in the 15th century, which reveal a great deal about the medical and scientific attitudes in the different European countries. Symptomatic is, for instance, the geography of his incunabula editions: while Italy dedicated itself to the Latin works (*De arte conoscendi venena e Breviarium practicae medicinae*) aiming at a European diffusion (of the *Breviarium* of 1497 for instance only 6 copies of the 50 reaching us are conserved in Italy – certainly not all expatriated for collecting), France published the *Regimen senum* and the *De somniorum interpretatione* and Spain the *Antidotarium* alone; instead in Germany (including Strasbourg) there were many editions of the *De vinis* in German with an extremely practical approach.

¹¹ Antònia Carré and Lluís Cifuentes, “Girolamo Manfredi’s *Il Perché*. II. The *Secretum Secretorum* and the Book Publishing Success,” *Medicina & Storia* 10, nos. 19–20 (2010): 39–58. Other examples of pseudonymity are in the article by Sandra Cavallo in this collection.

¹² Authorship exasperated by the Romantic exaltation of the Ego, entering a crisis in the 19th century and much debated today. See, for instance, Lucy O’Meara, “Killing Joke: Authorship from Barthes to Nothomb,” *L’Esprit Créateur* 55, no. 4 (2015): 101–17.

from the late 15th century the secure status of the author that we take for granted today started to develop.¹³ If we take all of this into account, it is possible to see with greater understanding the anonymous titles published in the 15th century, separating them from value judgements and slightly altering the traditional bias against the declarations of typographers, which has led some eminent scholars to erroneous conclusions.¹⁴

It is also necessary to trawl through the works on practical medicine published in the late 15th century with a watchful eye for the various marginal outputs, genres little studied and never contextualised, herbals of uncertain authorship and recipe books of various sorts, *regimina sanitatis* and anonymous productions in verse that, considering parameters such as the number of surviving copies and/or the density of annotations that characterise them, had a more extensive and capillary dissemination than the academic or exclusively professional medical titles.¹⁵

What could be the significance of such a form of output, one in which neither authors nor apparently innovative texts stand out? In recent decades the idea of a scientific revolution as the fruit of innovation by a few great protagonists has been downsized, to be replaced by a more collective dimension in the construction of knowledge, with significant contributions by marginal works.¹⁶ We can regard the production of printed works during the second half of the 15th century as a vast, disorganized pool in which even the (frequently anonymous) reprinting of old texts – corrupted or cobbled together but always reviewed by contemporaries – was the premise necessary for new studies and the re-elaboration of past knowledge that an ever greater number of readers could carry out. In this context, some of the medical works in verse were positioned at the extreme opposite of the summit represented by *learned medicine*, and possessed the capacity to involve the general public in the understanding of scientific themes. Finally, illuminating this marginal production of practical medicine allows us to understand the contribution made by the production of such texts on a large scale that allowed many, and not only professionals, to test their own notions of medicine and thus gain familiarity with this knowledge.

Moreover, in the light of the consolidated studies carried out on sixteenth-century medical texts, we could provocatively ask whether the changes brought about by the printing press were not often the fruit of titles that were hardly striking or innovative, genres that emerged and spread stealthily, consisting at times of just a few sheets (or even one loose leaf) but which enjoyed a wide distribution. These were probably typographic products that shaped and modified the mental habitus of the age, creating the premises for the scientific turning points to come. Andrea Carlino has explained, for instance, that instead of the opus magnum of Vesalius, *De humani corporis fabrica* (1543) – a costly product artistically packaged but fiercely contested by the academic élites – it was the more modest output that changed the cultural climate and laid the groundwork for the reception of *Fabrica*. Vesalius' *Tabulae anatomicae* was an immediate success when it

¹³ Documents proving the 'artisanal' and material origins of the privilege granted to authors of texts are edited in Sabrina Minuzzi, ed., *The Invention of the Author. The Privilegio di stampa in Renaissance Venice* (Venice: Marsilio, 2017); on book privileges in general, see Erika Squassina and Andrea Ottone, eds., *Privilegi librari nell'Italia del Rinascimento* (Milano: FrancoAngeli, 2019).

¹⁴ See below the case of Pietro da Montagnana.

¹⁵ See note 21.

¹⁶ Harold J. Cook, "The History of Medicine and the Scientific Revolution," *Isis* 102, no. 1 (2011): 102–108.

was published in 1538, so much so that it was copied, reproduced and plagiarised across Europe. Of even greater impact were the anonymous anatomical sheets whose content was conservative and repetitive but from the early years of the 16th century to the end of the 17th century helped to create a diffuse climate of acceptance towards the anatomy of man not only among specialists but also among the tiers of medium-low and semi-literate users, to be regarded as a thing of beauty produced by the divine Creator.¹⁷

Similarly from the 15th century onwards printed material such as single-leaf wall calendars, almanacs, ephemerides (tables of daily planetary positions), lunar tables and eclipse forecasts contributed to the expansion of the publishing market and played a direct role in the early history of astronomy – as Robert Westman has skilfully demonstrated.¹⁸

In short, the moment has come to study in greater detail the dawn of the whole medical-scientific press, and the first step is to map the neglected century.

2. Mapping the ‘Never-never Land’ Century: Latin and Vernacular, Medieval, Classical and Contemporary texts

The wide-ranging and exhaustive repertoires compiled by William Osler and Arnold Klebs in the 1980s remain a fundamental resource for studies in this area.¹⁹ But today scholars also have at their disposition a database of incunabula that is almost complete and is constantly being updated, the *Incunabula Short-Title Catalogue* realised by the British Library, which surveys the holdings of around 4,000 institutions, most of which are public.²⁰ Up to now, ISTC has registered over 30,000 editions for a total of about 500,000 items, and constitutes the most valid instrument to explore the production of published material on medical-scientific subjects in 15th century Europe. Naturally, we have to consider that the analysis rests on data that is not and cannot be complete because, based on the most optimistic reckoning, up to 30% of the editions have been lost, the slimmer ones and/or most successful ones soon after having been printed, and during the subsequent

¹⁷ Andrea Carlino, *Paper Bodies, Paper Bodies: A Catalogue of Anatomical Fugitive Sheets, 1538–1687* (London: Wellcome Institute for the History of Medicine, 1999). In spite of the fact that the public dissections were envisaged starting from the early decades of the 15th century, the powerful novelties of the *De humani corporis Fabrica* by Andrea Vesalio (1543) struggled to be affirmed in the university courses, see Andrea Carlino, *La fabbrica del corpo. Libri e dissezione nel Rinascimento* (Turin: Einaudi, 1994), in particular chap. 1 (“Rappresentazioni”) and 230–240.

¹⁸ Robert S. Westman speaks of the “long sixteenth century,” from the 1490s to the 1610s, in his *The Copernican Question: Prognostication, Skepticism, and Celestial Order* (Berkeley etc.: University of California Press, 2011).

¹⁹ William Osler, ed., *Incunabula medica. A Study of the Earliest Printed Medical Books, 1467–1480* (Oxford: Bibliographical Society; OUP, 1923); Arnold Klebs, *Incunabula Scientifica et medica* (Bruges: St Catherine Press, 1938). Further bibliography and general repertoires are indicated in Nutton’s article and in Nicoud’s work.

²⁰ Karen Limper-Herz, John Goldfinch, “The Incunabula Short Title Catalogue (ISTC): Past, Present and Future,” in *Printing R-Evolution*, 898–909.

centuries many others.²¹ However, ISTC makes the 15th century the one for which we have the most complete mapping, which allows for quite accurate quantitative and thematic classifications as to what has survived.²²

In terms of quantity the medical publications of the 15th century turn out to be a little over one-fifth of those of law (Fig. 1), the sister university discipline and ‘rival’ with which the comparison is naturally made.²³ This quantitative difference can be attributed first of all to the greater absolute number of law students and thus of the texts published for their use. To this may be added the differing relationship with the book-object in the two professions.²⁴ As Ian Maclean noted, while the jurist received (and still receives) his client in a private office lined with books that made a positive impression on the clientele, the physician’s consultations came about outside his office and more often than not at the patient’s bedside.

Fig. 1 15th-century European publications

If we add to this the fact that a significant part of the medical treatment was transmitted in the field via gestures and experiences that imply verbal exchanges and the involvement of the senses, it will be clear that the discipline of medicine is not limited to the sum of the knowledge learned from books at university, and thus in the editorial production of texts. A consequence of these disciplinary peculiarities is that medicine, more than law, would lend itself immediately to fuelling an intense production characterised by a strongly practical vocation; and, as we shall see, the hygienic (*regimen sanitatis*) and pharmacological (*materia medica*) fields as well would contribute to the practical shape of the discipline, leading it to forms that we can describe as scientific dissemination.

To provide a more exhaustive picture of the whole of the medical-scientific production, I am also including the titles that fall within the category of *Philosophy-Natural* relative to the sciences of nature in a broad sense, which during the second half of the 15th century must still be codified in autonomous disciplines, such as botany, physics, physiology, alchemy/chemistry etc. Instead, I have decided to exclude the subject *Astrology-Astronomy*, more than 1,000 of which are predictions and almanacs: this is a portion of titles that

²¹ Attempts to quantify the loss of antique editions go from the studies of Neil A. Harris, “Marin Sanudo, Forerunner of Melzi,” *La Bibliofilia* 95, nos. 1–2 (1993): 1–37, 101–145; 96 (1994): 15–42 and his “La sopravvivenza del libro ossia appunti per una lista della lavandaia,” *Ecdotica* 4 (2007): 24–65; to the work focused on incunabula by Jonathan Green e Frank McIntyre, “Lost Incunable Editions: Closing in on an Estimate,” in *Lost Books. Reconstructing the Print World of Pre-Industrial Europe*, ed. Flavia Bruni and Andrew Pettegree (Leiden: Brill, 2016), 55–72. As regards the way of recovering at least the news of the incunabula that existed (*notitia librorum*), see the contribution by Falk Eisermann, “The Gutenberg Galaxy’s Dark Matter: Lost Incunabula, and Ways to Retrieve Them,” in the same *Lost Books*, 31–54.

²² The team of researchers of the 15cBOOKTRADE Project (<http://15cbooktrade.ox.ac.uk/>), ERC directed by Cristina Dondi, Oakeshott Senior Research Fellow in the Humanities and Secretary of the Consortium of European Research Libraries (CERL), has associated to each of the incunabula editions of ISTC a principal thematic category and a series of *Keywords* that further define the texts contained, also in relation to their variations from one edition to the next. Altogether, 22 *Subjects* have been assigned and almost a hundred *Keywords*. All citations from the Web, both here and hereafter, were double-checked in December 2020.

²³ A trend that would continue in the following century, see, limited to learned production, Maclean, “The Diffusion of Learned Medicine,” 67.

²⁴ Giovanna Murano, *Opere diffuse per exemplar e pecia* (Turnhout: Brepols, 2005).

deserve – and sometimes have already received – study in themselves, both on the authors (some were written by physicians, but most of them were anonymous) and on the medicinal component present therein.²⁵

As a whole, the titles categorised under *Medicine* (both practical and theoretical) and part of *Philosophy-Natural* are 1,171: Italy, Germany and France hold a leading role in their production (Fig. 2).

Fig. 2 Incunables of a medical-scientific nature in various European countries

It is interesting to read the same data distinguishing between productions in Latin and in the vernacular language (Fig. 3). The histogram clearly shows an imbalance in the case of Italy on the side of Latin production that makes up 90% of its titles, followed by France with a more balanced ratio (67% in Latin) and Germany, which published in Latin less than 50% of its medical-scientific titles. Interesting, even if with far more contained absolute figures, is the production in the vernacular in Spain and England, while Belgium and Switzerland are rather aligned in preferring the language of erudition – and thus a circulation extending to international markets.

Fig. 3 Medical production in Latin and the vernacular in some European countries

The different proportions between Latin and the vernacular languages reflect the situation of bilingualism that characterised Europe from the 14th century onwards: Latin, or better Latins, seeing that every country used a Latin with its own peculiar features, which slowly gave way to the Romance languages and to local languages, and above all with different timescales from country to country, reserving for Latin the function of the language of supra-national communication for a shorter or longer length of time.²⁶ As regards Italy, the overwhelming prevalence of Latin had two main motivations, one the result of the linguistic-cultural situation of the peninsula, the other functional to the commercial demands of the new typographic product. Unlike the other European languages, vernacular Italian was an oral language that was late in evolving into a form of expression that allowed for great literature. Indeed, whereas beginning in the 14th century other countries saw a growing script production in the vernacular at almost every level, in Italy *diglossia* was more rooted, reserving a prestigious role for Latin in written culture – although the situation with regard to the

²⁵ Besides an interchangeable use of the terms *astrology* and *astronomy*, in the study of the stars of the 15th century we can recognise a theoretical and practical dimension. In the classification of the ISTC titles, the one that we now define as astronomy – the theoretical dimension of the study of the stars, connected with the natural sciences, mathematics and medicine, that is the astrology that was taught at the university – was made to fall within the broad category of *Philosophy-Natural*; while to the subject *Astrology* was reserved the titles that deal with the influx of the stars in the most practical declinations of the subject, in which only a small component of medicine is distinguishable. In the latter all the texts of *astrologia iudicialis* are traceable, which in 1586 would be banned by the bull of Pope Sixtus V, in that they were deemed detrimental to the free will of the individual. See Darrell H. Rutkin, “Astrology” and in particular the paragraph “Astrology circa 1500. Intellectual and Institutional Structures,” in *The Cambridge History of Science*, ed. Katharine Park and Lorraine Daston, vol. 3, *Early Modern Science* (Cambridge, UK: CUP, 2006), 541–561 and the classical Eugenio Garin, *Astrology in the Renaissance: The Zodiac of Life* (London: Routledge, 1983).

²⁶ Trine Arlund Hass and Johannes Ramminger, eds., *Latin and the Vernaculars in Early Modern Europe*, 2010 (Renaissanceforum, 6); Jan Bloemendal, ed., *Bilingual Europe. Latin and Vernacular Cultures. Examples of Bilingualism and Multilingualism, c. 1300–1800* (Leiden: Brill, 2015), in particular Bloemendal’s Introduction.

spoken language was different. The vernacular was vital for practical and personal uses (mercantile, homiletic, chancery, diaristic etc.), but typically Latin was preferred when the purposes were culturally or politically elevated.²⁷ With the exception of Florence and Tuscany – where before elsewhere the question was how to infuse the vernacular with literary dignity and where a fundamental role was played by the tradition of Dante, Petrarch, and Boccaccio – in the rest of the peninsula and for most of the 15th century the production of the book in the vernacular was limited by the weight of the humanist book in Latin.²⁸ And all of this, while it is still to be verified with an exhaustive census of the manuscript production, is evident at the level of incunabula production.²⁹

Basically, while in Italy the humanists were engaged in reviving classical Greek and Latin, other European countries were already dealing with literary productions of translations into their respective vernacular languages.³⁰ Moreover, the peninsula also suffered from a political fragmentation that had repercussions on the extreme variety of spoken parlances. In the first fifty years of printing it was problematic even to raise to the level of a literary language one of the many vernacular dialects that were spoken – an issue, that of language, already described by Dante Alighieri and that dragged on all the way to the 19th century literary giant Alessandro Manzoni and beyond. It is understandable, then, that the proto-typographers, who were often not even Italian, saw Latin as the ideal solution for the choice of the earliest titles to be put into print; as the language of the European elite, Latin guaranteed an international market and broad circulation for their printed product. This was all the more true for medical texts, whose first addressees were the learned: physicians, with certain exceptions, proved well into the 16th century to be rather unwilling to the use the written language of the *non litterati*.³¹

However, as we will see from some readers' traces, even those who only possessed an elementary literacy could use the books written (and printed) in a plain Latin enriched by images. Ordinary intercourse during this period was made up of an endemic blend of Latin and vernacular, evident above all in preaching

²⁷ Vittorio Formentin, "La 'crisi' linguistica del Quattrocento," in *Storia della letteratura italiana*, ed. Enrico Malato, vol. 3, *Il Quattrocento* (Rome: Salerno, 1996), 159–210; with regard to the Italian 14th century, Giovanna Frosini in her "Volgarizzamenti" speaks of the "century of silence," in *Storia dell'italiano scritto*, vol. 2, *Prosa letteraria*, ed. Giuseppe Antonelli, Matteo Motolese, and Lorenzo Tomasin (Roma: Carocci, 2015), 63; also helpful is Mirko Tavoni, *Storia della lingua italiana. Il Quattrocento* (Bologna: Il Mulino, 2015).

²⁸ Carlo Dionisotti, *Gli umanisti e il volgare fra Quattro e Cinquecento* (1st ed. 1968; Florence: Le Monnier, 2017); Armando Petrucci, *Letteratura italiana: una storia attraverso la scrittura* (Rome: Carocci, 2017), anthology of the writings of the great palaeographer and historian, of which see in particular "Il libro manoscritto" and "Storia e geografia delle culture scritte."

²⁹ Recently important surveys have been started on the handwritten production in the vernacular, not by chance in the area of Tuscany: Marisa Boschi Rotiroli, *Codicologia trecentesca della Commedia: entro e oltre l'antica vulgata* (Rome: Viella, 2004) and the two volumes edited by Sandro Bertelli that survey *I manoscritti della letteratura italiana delle origini: Firenze, Biblioteca Nazionale Centrale* (Florence: SISMEI, 2011).

³⁰ Marianne Pade, "Humanist Latin and Italian Identity. *Sum vero Italus natione et Romanus civis esse glorior*," in *The Role of Latin in the Early Modern World: Linguistic Identity and Nationalism, 1350–1800*, ed. Alejandro Coroleu, Carlo Caruso, and Andrew Laird (Copenhagen: Forum for Renaissance Studies, 2012), and Alexander Wilkinson, "Vernacular Translation in Renaissance France, Spain, Portugal and Britain: A Comparative Survey," *Renaissance Studies* 29, no. 1 (2015): 19–35. As regards the 'popular' medical literature in English, Paul Slack calculated that one third of the 153 titles published in England between 1486 and 1604 comprised foreign works, "Mirrors of Health and Treasures of Poor Men," 237, 242.

³¹ Sandra Cavallo, Tessa Storey, *Healthy Living in Late Renaissance Italy* (Oxford: OUP, 2013), chap. I: "Print and a Culture of Prevention," in particular 41–42.

and in epistolary exchanges;³² furthermore in Italy, the symbiosis between Latin and vernacular began with primary education, elementary textbooks being written in Latin.³³

Fig. 4 Titles of medico-scientific incunabula distinguished by the chronological-cultural collocation of their authors and/or titles

A final angle from which to read comprehensively the data relating to the medical-scientific editions of the second half of the 15th century, is provided by their chronological-cultural afference.³⁴ What stands out is the ample portion of medieval production that Italy and France have in common (66% and 67%) distinguishing them from Germany (51%) which instead presents a far more radical investment in contemporaneity (39% as compared with 22% and 24% of the first two) and in German. The Italian and French figures, which are associated with the prevalence of Latin (Fig. 4), are not however to be read exclusively in terms of a legacy from the medieval past, but also, unlike what might be thought, as the fruit of a diffuse humanistic culture that influenced the choices of the early printers and publishers. Indeed, alongside titles that are specifically from the early Middle Ages, those percentages also include works of authors from the early 15th century who had died a few years before (like the authors of the *Consilia*), whose manuscripts close to the original were more easily obtained, if not the autograph: choices perfectly in line with what was prescribed by philological humanism and that the curators of the editions or the publishers themselves studied to underline in the prefaces of many incunabula.³⁵

3. *Strictly Professional Practical Medicine*³⁶

We shall not focus our attention on the production destined for university education, to which we can ascribe roughly one-third (34.9%) of the titles of a medical-scientific character (Fig. 5), a non-negligible portion but much less than the 50% of law titles with the same destination.³⁷ Instead we shall look at the titles dealing with the discipline from a practical standpoint, and that offer early clues as to the novelty of the impact of moveable type printing within the scope of medical-scientific culture. Printing indeed acted as a sounding board for some

³² See below the case of printed herbals exemplars. Formentin, “La ‘crisi’ linguistica del Quattrocento,” 164–169; Bruno Migliorini, in his “Latino e volgare nel Quattrocento,” *Lettere italiane* 6, no. 4 (1954): 321–335.

³³ Cf. note 89.

³⁴ The research group of the 15cBOOKTRADE has also assigned to each of the ISTC records, one of four categories (Classical, Medieval, Contemporary, Humanist) that allow us to distinguish between titles that channelled classical, medieval, contemporary humanistic texts – that is the fruit of the pen of some contemporary author endowed with humanistic stature and intellectual interests.

³⁵ See the declarations of conformity to the original or the autograph taken from the prefaces of incunabula of medicine and natural history printed in Italy and in France in Maurizio Campanelli, “Autografia e filologia alle origini della stampa,” in *‘Di mano propria’*. *Gli autografi dei letterati italiani*, ed. G. Baldassarri et al. (Rome: Salerno, 2010), 256–257.

³⁶ Books on surgery (just 37 titles, because only a few universities – Bologna, Padua and Montpellier - taught the discipline at the time), the first texts of paediatrics and *regimina* for pregnant women, usually in the vernacular if published in German-speaking countries, and in Latin if from Italy or other countries, are discussed in Minuzzi, “La stampa medico-scientifica,” chap. 4. “Medicina per professionisti,” 212–216.

³⁷ 15th century law books for universities are examined by Alessandra Panzanelli, “Printing the Law in the 15th Century. With a Focus on *Corpus iuris civilis* and the Works of Bartolus de Saxoferrato,” in *Printing R-Evolution and Society*, 67–197.

late-medieval attitudes and concerns, such as the steady focus on the *particularia* and descriptive practice, the enhancement of operative medicine and *practica*, the attribution of epistemological value to empiricism – namely the valorisation of its fact-finding function:³⁸ all components that can be recognised in the substantial group of printed works that fall into the category of *practical medicine*. These represent some 60% of the total titles of a medical-scientific nature (1,171), and include medieval (64.6%), contemporary (25.1%) and a few classical (1.3%) texts (and authors).

Fig. 5 Distribution of titles in practical medicine, 15% of which overlap with university texts, plus a residual 5.1% of other titles

Apart from a small portion absorbed by university teaching alone, two typologies of texts stand out the most within the realm of *practical medicine*: the ones prepared for strictly professional use and others designed for a wider circulation than for the specialists alone. Among the former, namely texts at the intersection between practical and university medicine, we should recall the *Articella*,³⁹ the medical *consilia* – a peculiarly Italian genre that above all saw the light in the university cities⁴⁰ – and works of Europe-wide success like the *Fasciculus medicinae*, a medical-surgical handbook featuring xylographic tables that explained in just a few pages the reading of urine and bloodletting regulated by the stars, provided recipes for treating wounds and the most widespread diseases, summarised the knowledge of anatomy and surgery, etc.⁴¹ The latter title warrants some clarification in regard to its author.

After circulating in manuscript form in the German area between the late 14th and early 15th centuries, the *Fasciculus* was published for the first time in Venice in 1491; very soon it was translated into Italian (1494) and Spanish (1494), and in the 16th century into German – with up to 14 editions – and into Dutch, apart from being reprinted in Italian, Spanish and Latin.⁴² Given the importance of the work in the international context, the *Fasciculus* unleashed rivers of ink among modern historians for the attributions to Johannes Ketham and Pietro da Montagnana, variously cited as authors in the editions. While the identity of the former still remains

³⁸ Gianna Pomata and Nancy Siraisi, eds., *'Historia'. Empiricism and Erudition in Early Modern Europe* (Cambridge, MA: The MIT Press, 2005).

³⁹ Medieval agglomerate of classical texts for university teaching that, after a clumsy initial Paduan attempt (1476) saw the succession of up to 6 Venetian editions until the end of the century. Cf. Jon Arrizabalaga, *The Articella in the Early Press, c. 1476–1534* (Cambridge; Barcelona: Cambridge Wellcome Unit for the History of Medicine, 1998) to which we should add the edition attributed to the year 1500 and surviving in a single copy in Assisi (ISTC ia01147500). On the fortunes of the text, see also Tiziana Pesenti “Editoria medica tra Quattro e Cinquecento: l’*Articella* e il *Fasciculus Medicinae*,” in *Trattati scientifici nel Veneto fra il XV e XVI secolo* (Venezia: Neri Pozza, 1985), 1–29.

⁴⁰ Pavia, Padua and Bologna are the major publishing centres, the university professors are often the curators of the editions, students and professionals the user pool of the market. Appearing for the first time in the 13th century, the collections of *consilia* supplied a compendium of the practical solutions before a wide range of pathological cases, cf. Chiara Crisciani, “Consilia, responsi, consulti. I pareri del medico tra insegnamento e professione,” in *Consilium. Teorie e pratiche del consigliare nella cultura medievale*, ed. Carla Casagrande, Chiara Crisciani, and Silvana Vecchio (Florence: SISMEL-Edizioni del Galluzzo, 2004), 259–280; Jole Agrimi and Chiara Crisciani, *Les Consilia médicaux Les Consilia médicaux* (Turnout: Brepols, 1994).

⁴¹ Pesenti, “Editoria medica”; Tiziana Pesenti, *Il Fasciculus medicinae ovvero le metamorfosi del libro umanistico* (Treviso: Antilia, 2001), 2 vols.; Christian Coppens, *De vele levens van een boek: De fasciculus medicinae opnieuw bekeken* (Brussel: Koninklijke Academie voor Geneeskunde van België, 2006).

⁴² ISTC ik00013000, ik00017000, ik00018000, ik00018300, ik00015000, ik00016000, ik00014000, ik00017600; of the six editions of the 16th century published in Italy (5 in Venice and 1 in Milan), two continued to be in Latin.

obscure, authoritative scholars have firmly denied that the latter ever existed or, by stretching things tortuously, overlap his identity with that of the grammarian and priest Pietro Floriani da Montagnana.⁴³ In actual fact, the physician Petrus de Montagnana existed and was very active as a practicing physician, a lecturer at the universities in Padua and Ferrara, where he taught anatomy and anatomical drawing, and in publishing.⁴⁴ He can be identified with Pietro del Min (or Min, Mini, Mino), a physician living in Montagnana, whose biography remains to be investigated, above all from the point of view of his activity as a scientific disseminator via proto-publishing, a collaboration that was not limited to the *Fasciculus Medicine*.⁴⁵

However, apart from the small section of practical medicine destined primarily – albeit not exclusively – for a university and quite select readership, the distinction between a professional readership and one extending to the non-specialists became ever less marked in the case of three medical genres (that at times were interwoven with one another) and a literary genre: *regimina sanitatis*, recipe books, works of *materia medica*, and medicine in verse.

4. Beyond the Profession. *Regimina sanitatis*

In the European print production of the 15th century there are 262 titles pertaining to the genre of the *regimina sanitatis* and 173 to *materia medica* (herbals, pharmacopeia, works of an encyclopaedic nature on the three natural realms), which in various cases appear to be mingled with medicinal recipes for the preservation of health and/or the treatment of diseases based on the manipulation of natural substances (vegetable, animal and mineral). The practical medicine of these texts lent itself to a very broad readership, even if not always as extensive as was hoped for in their forewords by the curators/authors/publishers who assembled or wrote the texts.

The roots of the preventative paradigm date back to antiquity: Hippocrates and Galen had discussed in various passages of their works the proper lifestyle habits to maintain a good state of health. Then the Arab physicians systematised the reflections around the six categories of the so-called non-natural factors. Indeed, according to the humoral vision of the individual, the preservation of health was the fruit of a complex equilibrium of the primary qualities of warm/cold, dry/humid that was created in the individual following the interaction between internal factors (blood, phlegm, yellow and black bile) and external or non-natural ones, in the sense of non-intrinsic: air, solid and liquid nutrition, repletion and evacuation, exercise and rest, sleep and wakefulness, moods of the soul.⁴⁶ The six non-natural external factors were indeed the only ones on which the individual could intervene to maintain the healthy equilibrium of the internal fluids. Between the 11th and

⁴³ As for Ketham, see Coppens, *De vele levens van een boek* and for Montagnana grammarian see also Pesenti, *Il Fasciculus medicinae*.

⁴⁴ Stefano Tosato, *Palazzo Bolis Valeri a Montagnana (Padova). Relazione* (Venice: Soprintendenza Belle Arti e Paesaggio, 2009).

⁴⁵ The homonymy has also been clarified by Eleonora Gamba, “Pietro da Montagnana. La vita, gli studi, la biblioteca di un *homo trilinguis*” (PhD diss., University of Padua, 2016), 83–84; and, finally, DBI, *ad vocem* (E. Gamba). In preparation by the author is a short publication that will clarify, in the wake of archival documents, the identity and important role of Pietro del Min in the Italian edition of the *Fasciculus*, as well as in other publishing activities.

⁴⁶ See Marilyn Nicoud’s introduction to her two volumes of *Les régimes de santé*, 1–28.

12th centuries, the Arab works on the subject were translated into Latin, mostly in Spain and Italy, making a massive contribution to the Western manuscript tradition. During the Middle Ages the *regimina sanitatis* were shaped around the figures of princes and the nobility in general – secular and ecclesiastic – thus presenting themselves as elite products dedicated to them. It was indeed thanks to moveable type printing that the *regimen sanitatis* started to evolve to suit the common man and became consolidated as a medical-scientific genre. In the 15th century some *regimina* specialised in the stages of life (infancy, old age, child birth), others on health emergencies (e.g. the plague or, in the final years of the century, syphilis), while most were concentrated on the management of the everyday, contributing the diffusion of a preventative medical paradigm that would fuel an intense print genre at least until the early decades of the 17th century.⁴⁷

The geographic and linguistic distribution of the *regimina* and correlated treatises is of interest, showing that Germany, Italy and France were among the leading producers. The three countries accounted for 83.5% of this genre of medical books, while the remaining 13.5% was divided between Belgium (20 titles), England (4 titles), Switzerland, Spain, the Netherlands, Portugal and Austria. A very significant datum is the linguistic one, which saw 62% of the production of *regimina* and related items in German, followed by just 30,9% in Italian and 29,1% French, respectively. England stands out with its 4 titles all in English.

Fig. 6 Production of *regimina* in Latin and in the vernacular in the three main centres of book publishing

Germany and – on a smaller scale – England appear to be the countries that invested the most in a local readership and in medical-scientific dissemination. If, however, the use of the vernacular is undoubtedly an indicator of a local destination – with variable boundaries, coinciding with the population that speaks that language – it is not automatically synonymous with medical-scientific dissemination. Consider for instance the first print treatise of a *regimen* in a time of plague, which is owed to a physician from Ulm, Heinrich Steinhöwel (1412-1482), whose *Büchlein der Ordnung* or ‘Healthy Behaviour Booklet’ was written in German in 1446 and published in 1473.⁴⁸ In his foreword Steinhöwel declares he had composed it for the ‘common man’ (*gemein man*) and for the professionals just starting out; in the subsequent 5 incunabula editions we can perceive a certain evolution in the *mise-en-page* in the direction of simplification and airiness in the distribution of the text, which nonetheless posed difficulties for the average reader. In fact, albeit written in the vernacular, the *Büchlein der Ordnung* makes abundant use of Latin citations and theoretical reflections, which were undoubtedly more comprehensible and appreciated by professionals than by the ‘common man’. It is not by chance that in the only exemplars reproduced online one can come across *marginalia* penned in Latin and not

⁴⁷ Sandra Cavallo and Tessa Storey, *Healthy Living in Late Renaissance Italy* (Oxford: OUP, 2013) and introduction by Cavallo, Storey, eds., *Conserving Health in Early Modern Culture. Bodies and Environments in Italy and England* (Manchester: MUP, 2017).

⁴⁸ ISTC is00762800 (Ulm, Johann Zainer, 11 Jan. 1473). Subsequent editions: is00762900 ([Esslingen: Conrad Fyner], 1474); is00763000 ([Ulm: Johann Zainer, about 1482]); is00764000 (Ulm: Conrad Dinckmut, [about 1482]); is00764500 ([Nuremberg: Printer of the 'Rochus Legende', about 1482-84]). See Erik Heinrichs, *Plague, Print, and the Reformation: The German Reform of Healing, 1473–1573* (New York and London: Routledge, 2017).

in German, symptom of a still rather professional circulation notwithstanding the linguistic choice (Fig. 7).⁴⁹ As we shall see in more detail for Italian medical books, the vernacular can also be difficult to some extent from a syntactic, lexical etc. point of view.

Fig. 7 München, Bayerische Staatsbibliothek

Fig. 8 In-4° *Regimen* by Jacobi in English

There were numerous short *regimina sanitatis* published on the occasion of epidemic waves, and almost always without typographical notes – possibly so as not to render out of date the remainders between one epidemic outbreak and the next. A title of extraordinary European success was the booklet by Johannes Jacobi (that is, Jean Jacmé, d. 1384) who was a professor of medicine at Montpellier (the French incunabula editions were attributed to the Swede Benedictus Kanuti, Bishop of Västerås (fl. 1460), perhaps for commercial reasons or perhaps by mistake).⁵⁰ From the late 1470s Jacobi's *Regimen contra pestilentiam* was published in Latin (22 times), in French (6 times; the first edition was published in verse in 1476), in English (3), German (1) and Portuguese (1), counting up to 33 editions by the year 1500⁵¹ and many more by the 1530s. A slender publication that could range from 12 to 8 and then 6 sheets in 4° format, and more rarely in 8°, with its text reduced to the bare essentials and a highly practical format featuring many lists, the *Regimen* was suitable for a broad readership, above all the editions in the national languages, which indeed survive with an average of 1.5 exemplars per title, a quantity inversely proportional to their effective use.⁵² The *Regimen* by Jacobi proves how being written in the vernacular was a necessary, but insufficient condition for a title to overstep professional sectors. It also had to be accompanied by adequate textual and paratextual choices, that is, by a text with a plain and perhaps repetitive style, preferably with a limited number of pages (Fig. 8). It was never translated into Italian, and there are no known copies of any Latin edition conserved in public or private institutions.⁵³

In Germany, besides an edition in German of the *Regimen* by Jacobi, many anonymous loose leaves were also produced in the vernacular that gave summary instructions for a proper *regimen* in times of plague: the *Pestblätter*, often adorned with a woodcut, of which only 6 rare exemplars of incunable editions survive to this day.⁵⁴

⁴⁹ The exemplars of the Harvard Library di Boston (MA) ([https://iif.lib.harvard.edu/manifests/view/drs:7554114\\$8j](https://iif.lib.harvard.edu/manifests/view/drs:7554114$8j)) and of the Bayerische Staatsbibliothek of München (<https://daten.digitale-sammlungen.de/~db/0003/bsb00032075/images/>, can be consulted online).

⁵⁰ An up-to-date survey of the studies on the real and the fictitious author and on the tradition of the will soon be available in Lori Jones' PhD diss., "Time, Space, and The Plague: Re-reading English and French Plague Tracts, 1348–175" (Montreal etc.: McGill-Queen's University Press, forthcoming). See also Karl Sudhoff, "Der Pesttraktat des Magister Johannes Jacobi zu Montpellier (1373) und seine spätere Überarbeitung," *Archiv für Geschichte der Medizin* 17 (1925): 16–32; Heinrichs, *Plague, Print, and the Reformation, ad indicem*.

⁵¹ Search with 'Johannes Jacobi' in ISTC and see the available reproductions.

⁵² See note 21 above.

⁵³ Coherently with the most limited use of the Latin editions, these are preserved with an average of 7 exemplars each.

⁵⁴ ISTC ip00363000 ([Augsburg 1472-74]), ip00363300 ([Augsburg 1482]), ip00363600 ([Reutlingen 1482]), ip00363400 ([Bamberg 1482-85?]), and in low German ip00364000, ([Cologne 1488-1500]), ip00363500 ([Ulm 1490]). The genre is treated in *pendant* to other 'emergency' productions on a loose leaf in Jan Marr, "Kriege und Seuchen: spätmittelalterliche Katastrophen und ihre Reflexion in den deutschen Einblattgedrucken von 1460 bis 1520" (PhD diss., University of Trier, 2010), cf. <https://ubt.opus.hbz->

One attempt made in Italy to create a text in the vernacular on the plague that could be understood by anyone, so that they could take adequate measures and make their own medicinal remedies without needing to resort to professionals, was that of the Bolognese physician Girolamo Manfredi (ca. 1430–1493).⁵⁵ In 1478 Manfredi wrote and published in Italian what was meant to be a “short and sententious” work to teach “succinctly” how to deal with the health emergency: the *Trattato della pestilenza*.⁵⁶ Far from his “pious” (as Manfredi himself called them) intentions, the treatise consisted of 54 densely written pages weighed down by frequent references to *auctoritates* of the past, and the style was so rhetorical and argumentative that it is hardly surprising that it was never reprinted (Fig. 9). The story of the work indeed closed with a Latin translation of the *Trattato* upon request of colleagues and scholars who spurned the language of the unlearned “quoniam, ut aiunt, vulgares sermones qui ad indoctos pertinent legere dedignantur.”⁵⁷ In short, it seems that in the first fifty years after the advent of printing Italy was still unwilling to fully exploit the disseminating potential of the print medium in association with the vernacular language. The situation completely changed in the following century, when the vernacular won acceptance and Italy began to excel in the publication of academic texts.⁵⁸

Fig. 9 Girolamo Manfredi, *Trattato della pestilenza* [Bologna: Johannes Schriber, de Annunciata, after 5 Dec. 1478],
^{4°} Su concessione del Ministero dei Beni e delle attività culturali e del turismo – Biblioteca Naz. Marciana – Divieto di riproduzione dense page layout went hand in hand with Manfredi’s rhetorical style, making it pretty unattractive to a non-professional audience

5. Beyond the Profession. Books of *materia medica*

Among the titles that fall within the scope of practical medicine a considerable number were represented by those that variously deal with *materia medica*, that is the therapeutic properties of the substances of the three natural realms, and in particular the vegetable one, which since antiquity was the source par excellence of the raw materials processed to obtain medicinal remedies.⁵⁹

The percentages confirm the leadership role of three European countries – Italy, Germany and France – with the usual limited investment of Italy in vernacular texts in favour of an international public of *litterati* or learned readers; France was balanced in the publication of works in Latin and the vernacular, while Germany was far more inclined to satisfy the demands of a German-speaking public (Fig. 10).

Fig. 10 Production of *materia medica* incunabula in Latin and the vernacular in the three main typographical centres

nrw.de/frontdoor/index/index/docId/381, accessed June 2020. For the German loose-leaf production we now dispose of the precious Falk Eisermann, *VE15: Verzeichnis der typographischen Einblattdrucke des 15. Jahrhunderts im Heiligen Römischen Reich Deutscher Nation*, 3 vols (Wiesbaden: Reichert, 2004), encompassed in ISTC.

⁵⁵ Biographical profile edited by Anna Laura Trombetti in DBI, *ad vocem*.

⁵⁶ [Bologna, after 5 Dec. 1478], ISTC im00197000, see the author’s foreword.

⁵⁷ [Bologna, after 31 Dec. 1479], ISTC im00196000, cf. *Prohemium*.

⁵⁸ For the publications in the vernacular on the plague in the 16th century cf. Cohn, *Cultures of Plague*.

⁵⁹ Jerry Stannard, “The Herbal as a Medical Document,” *Bulletin of the History of Medicine* 43, no. 3 (1969): 212–220.

As regards the first print production of books on *materia medica* Elizabeth Eisenstein's enthusiastic evaluation of the impact of the *printing revolution* can certainly be shared.⁶⁰ However, once again the production of incunabula has been somewhat underestimated, because the history of this scientific genre was written mostly by botanists who tended to focus on print production from 1530 onwards, by which time some errors of identification and representation of the plants had been corrected and the groundwork of the discipline of botany had started to be laid.⁶¹ In actual fact, the incunabula editions constituted the ineluctable premise for the progress of knowledge tied to the *materia medica*, because they provided the opportunity for comparisons, experimentation and the implementation of botanical and pharmacological knowledge both at the professional level and in a more unassuming and everyday dimension, stimulating a diffuse interest in the revisions that would be made in the 16th century.⁶²

Among the classics the proto-typographers proposed the monumental *De Materia medica* by Dioscorides (1st century AD), which would have an extraordinary influence from the Renaissance onwards and throughout the modern era, first of all from the pharmacological and then the botanical standpoint.⁶³ Published in Colle Val d'Elsa in 1478, in the Latin translation from the original Greek, in folio format and with no illustrations, the edition was the re-elaboration of a codex produced in Italy in the 10th century: the reorganisation of the contents in alphabetical order transformed it into the first *reference work* of a pharmaceutical nature.⁶⁴ However, this edition was never republished, and in 1499 was supplanted by the Manuzian edition of the Greek text of Dioscorides that completely revolutionised the textual tradition and prepared it for its sixteenth century success in the European languages.⁶⁵

More than by Dioscorides, the scene during the second half of the fifteenth century was dominated by many German titles that drew upon the medieval manuscript tradition. A work reprinted six times was the *Buch der Natur* (Augsburg 1475), a compilation in the vernacular of more ancient sources realised around the mid-fourteenth century by Konrad von Megenberg (1309–1374).⁶⁶ The folio edition was accompanied by an early attempt at illustration represented by a full-page woodcut placed at the beginning of each section: the human body, the skies with the four elements, terrestrial animals, birds, monstrous creatures, marine animals,

⁶⁰ Elizabeth Eisenstein, *The Printing Revolution in Early Modern Europe* (Cambridge: CUP, 1983).

⁶¹ Agnes Arber, *Herbals: Their Origin and Evolution. A Chapter in the History of Botany, 1470–1670* (ed. orig. 1938; Cambridge: CUP, 1990) in the Italian edition *Erbari: origine ed evoluzione, 1470–1670* (Sansepolcro: Aboca, 2019) enriched by an essay of Lucia Tongiorgi Tomasi.

⁶² Brent Elliott in "The World of Renaissance Herbals," *Renaissance Studies* 25, no. 1 (2011): 24–41, also explains how the golden age of the herbalists stretches as far as the mid-17th century, to then be supplanted, also in the frontispieces, by the accomplished 'botanical' science and thenceforth relegated to a more popular readership.

⁶³ Jerry Stannard, *Herbs and Herbalism in the Middle Ages and Renaissance*, ed. Katherine E. Stannard and Richard Kay (Aldershot: Ashgate Variorum, 1999).

⁶⁴ Colle Val d'Elsa, Johannes de Medemblick, July 1478 (ISTC id00261000). Holger Funk, "The First Printed Latin Editions of Dioscorides' *De materia medica* (1478, 1512): An Inventory-based Re-evaluation," *Archives of Natural History* 43, no. 2 (2016): 237–254.

⁶⁵ ISTC id00260000 (Venice: Aldus Manutius, Romanus, post 8 July 1499).

⁶⁶ Ulrike Spyra, *Das 'Buch der Natur' Konrads von Megenberg: Die illustrierten Handschriften und Inkunabeln* (Cologne etc.: Böhlau, 2005).

insects, cultivated plants, and wild plants.⁶⁷ The natural kingdoms and their properties were the protagonists of the text but the collective depictions (land animals/birds/plants etc. of different species all together) did not create a univocal correspondence between text and image.

The first entirely illustrated herbal came out in Italy, following the initiative of Giovanni Filippo De Lignamine, a Sicilian with aristocratic antecedents who frequented humanistic circles and in 1470 moved to Rome where he established himself as a publisher specializing in medical and scientific texts.⁶⁸ In late 1482/early 1483 Lignamine brought out the *Herbarium Apulei*, which was based on a 9th-century manuscript copy of the *Pseudo-Apuleius Herbarius*, a compilation of Greek medical texts assembled by the Salerno school of medicine around the 4th century AD that remained a reference work throughout the Middle Ages.⁶⁹ Printed in a quarto format, Lignamine's work was ground breaking because it featured around 130 woodcuts, one for each chapter describing the properties of a medicinal plant. Within the limits of a stylized and rudimentary depiction, Lignamine was attempting for the first time to make the text correspond to an image. But the enterprise that sought editorial success had not been well calculated and in the 15th century the *Herbarium* was no longer in print. The failure is probably due to the fact that the treatise was in Latin, and hence addressed firstly to a public of professionals who were, however, accustomed to far more sophisticated and naturalistic depictions that were true to life. And indeed in Italy, unlike elsewhere, the production of manuscript *herbaria* illustrated with botanical drawings or paintings continued intensely in the second half of the fifteenth century, alongside herbals with agglutinated plants or impressed with ink, capable of satisfying the demands of a medium-high public.⁷⁰

In Germany, instead, also thanks to the vernacular text, the early books of *materia medica* were accessible to a generally broad public that was willing to accept the poor quality of the woodcuts, which nevertheless steadily improved in accuracy over time. Particularly prolific was Peter Schöffer (1425–1503), a refined copyist and printer whose name is tied to various successful editions in the area of *materia medica*. He published in Mainz in 1484 the *Herbarius latinus (with German synonyms)* also known as the *Herbarius Moguntinus*, an in-4° illustrated with 150 xilographies, attributing it to Arnaldo di Villanova although it was actually an assemblage of ancient and medieval sources that described plants originating from the German area or naturalised there, arranged in alphabetical order. Albeit in Latin, the edition provided at least the synonyms of the name of each plant in German, while subsequent editions supplied them in Dutch and in French as well, it being recognized that a multilingual nomenclature was fundamental for consultation purposes, but Italian

⁶⁷ ISTC ic00842000 (Augsburg 1475), ic00843000 (Augsburg 1478), ic00844000 (Augsburg 1481), ic00844500 (Augsburg 1482), ic00845000 (Augsburg 1482), ic00846000 (Augsburg 1499); to this day more than 80 manuscripts and fragments of works survive, in two variant editions. Spyra, *Das 'Buch der Natur' Konrads von Meigenberg* compared 30 illustrated manuscripts with the incunabula editions.

⁶⁸ DBI, *ad vocem* (by C. Alaimo).

⁶⁹ ISTC ih00058000; Dominic Olariu, "The Misfortune of Philippus de Lignamine's Herbal or New Research Perspectives in Herbal Illustrations from an Iconological Point of View" (Berlin: Max Planck Institute of the History of Science, 2015), *preprint*, 39–62.

⁷⁰ The observation, endowed with the citation of many manuscripts, is of Olariu, who however put the Italian search for perfectionism down to the adherence to scepticism of Pliny and Galen on the possibility of a faithful reproduction of the forms and colours of nature, "The Misfortune of Philippus de Lignamine's Herbal," 45–46, 54–58.

names were never introduced.⁷¹ In 1491 in Vicenza, Achates printed an almost identical edition of the *Herbarius Moguntinus*, including the erroneous attribution to Arnaldo di Villanova, but without Italian synonyms—the *Herbarius latinus* (*without synonyms*). This version as well was illustrated with 150 woodcuts, but different from those of the Schöffer edition.⁷²

Just one year after his first herbal, in 1485 Peter Schöffer produced an even more ambitious work, the *Gart der Gesundheit* edited by Johann von Cube (or Johannes Wonnecke von Kaub), an in-folio that described in the vernacular more than twice as many plants compared with the *Herbarius latinus*, as well as some animals and mineral substances, illustrated with no less than 379 elegant full-page woodcuts.⁷³ Its success was extraordinary, as is testified to by up to 12 successive editions, from regular publications to plagiaries.⁷⁴ A few years later another milestone in botanical publishing saw the light, once again in Germany, but this time in Latin for a European public: Jacob Meydenbach published in Mainz the anonymous *Hortus sanitatis* (1491), a Latin translation with variants of the *Gart der Gesundheit*; again in-folio and adorned with smaller illustrations, which, however, now exceeded a thousand or so. This work was reprinted 3 times and translated into French.⁷⁵ While titles such as the *Hortus sanitatis* were read and adopted by Italian physicians and apothecaries (as well as those in the rest of Europe), it would be necessary to wait for the subsequent century before Italy produced original illustrations of plants drawn from life to enrich a *materia medica* in Italian.⁷⁶

The traces of reading and use in surviving books on the *materia medica* is particularly revealing, as together with collections of recipes they are among the most frequently and heavily annotated of all printed works, and thus the most capable of disclosing the modalities of approach to the text and to the book-object on the part of the reader/user.⁷⁷ These two medical-scientific genres are inseparably bound, both in their editorial history and the histories of individual copies. In the text of many editions, medicinal recipes accompany and mark the descriptions of the natural realms and the therapeutic properties connected with the

⁷¹ *Herbarius latinus* (*with German synonyms*): ISTC ih00062000 (Mainz 1484) e ih00063000 (Speyer 1484); *Herbarius latinus* (*with Dutch synonyms*): ih00059000 ([Louvain after Feb. 1486]) and ih00060000 ([Louvain 1486]); *Herbarius latinus* (*with French synonyms*): ih00061000 ([Paris circa 1486]).

⁷² ISTC ih00068000; reprinted, again with synonyms, in Venice in 1497 (ih00068500) and in 1499 (ih00069000).

⁷³ Gundolf Keil, “Johann Wonnecke von Kaub (Johannes de Cuba),” in *Enzyklopädie Medizingeschichte* (Berlin; New York: de Gruyter, 2005), *ad vocem*.

⁷⁴ ISTC ig00097000 (Mainz 1485), ig00098000 (Augsburg 1485), ig00098500 ([Augsburg about 1485-86]), ig00099000 ([Strassburg about 1485-86]), ISTC ig00100000 (Augsburg 1486), ISTC ig00102000 (Augsburg 1487), ISTC ig00103000 (Ulm 1487), ISTC ig00104000 (Augsburg 1488), ISTC ig00105000 (Augsburg 1493), ISTC ig00106500 ([Basel about 1487-90]), ISTC ig00108000 ([Strassburg about 1485-89]), ISTC ig00109000 (in low German, Lübeck 1492), ISTC ig00107000 (Augsburg 1499).

⁷⁵ ISTC ih00486000, ih00487000 ([Strassburg 1497]), ih00488000 ([Strassburg 1497]); ih00490000 (*Le jardin de santé*, Paris [1499 and 1501/02]). A Venetian edition appeared, undated, after 1500, cf. ISTC ih00489500. On the ‘Kräutenbücher’ that is the German herbals, see Brigitte Baumann & Helmut Baumann, *Die mainzer Krauterbuch-Inkunabeln: Herbarius Moguntinus (1484), Gart der Gesundheit (1485), Hortus Sanitatis (1491)* (Stuttgart: Hiersemann, 2010).

⁷⁶ It will be the *Commentari* to Dioscorides of the physician and botanist Pietro Andrea Mattioli that successfully launched the print production in the vernacular, cf. Tiziana Pesenti, “Il ‘Dioscoride’ di Pier Andrea Mattioli e l’editoria botanica,” in *Trattati di prospettiva, architettura militare, idraulica e altre discipline* (Vicenza, 1985), 61–103; Sara Ferri, ed., *Pietro Andrea Mattioli (Siena 1501-Trento 1578). La vita e le opere. Con l’identificazione delle piante* (Perugia: Quattroemme, 1997); Paula Findlen, *Possessing Nature. Museums, Collecting and Scientific Culture in Early Modern Italy* (Berkeley-Los Angeles: University of California Press, 1994), *ad indicem*.

⁷⁷ As to the recurring practices of appropriation by readers of printed herbals see Andrea Van Leerdam’s article in this special issue.

constituents. Secondly, it often occurred that exemplars of the two genres ended up being bound in a single miscellaneous volume (Sammelbänd), or that the books of *materia medica* presented on the opening pages or tied in the final additional leaves medicinal recipes written by the reader.⁷⁸

Fig. 11 London, Royal College of Physicians, Shelf mark 1a(5), cc. a6r, k1r ©John Wiley & Sons, Inc. All rights reserved

Another singular example of this close connection may be found in a copy of the *Hortus sanitatis* now at Royal College of Physicians in London, whose 16th-century reader, a physician, has glued, in correspondence with some vegetable varieties, cartouches cut from a Swiss edition of the *Segreti medicinali* by the pseudonymous Alessio Piemontese (Girolamo Ruscelli) (Fig. 11).⁷⁹ Such amalgamations show a pattern of appropriation of practical medical knowledge in which highly popular works such as books of secrets and specialised texts such as printed herbals were contributing together to the advancement of professional know-how.⁸⁰

Even if the legacy of ancient and medieval knowledge still had to be verified and systematised, the descriptions of the natural realms, and in particular the plant world, stimulated a very active participation on the part of the readers at least until the early decades of the eighteenth century, which can be traced and outlined with the aid of recently developed digital tools.⁸¹ Actually, precisely the fact that many incunabula of *materia medica* were vehicles of incomplete or superseded knowledge acted as a stimulus for the reader to act upon the text, whether he was a physician or simply an individual with little learning who nonetheless was interested to know and use its therapeutic potential. The reader who studied these texts and woodcuts compared them with his own personal knowledge, based on direct experience (always) combined with the fruit of study (if any). And the dimensions of the book-objects – at times a bulky in-folio volume, at times a more manageable in-4°, lent themselves well to such analyses and comparisons. By virtue of the broad participation in the creation of the database *Material Evidence in Incunabula* (MEI), we should soon be able to conduct some quantitative analyses on the types of interventions made by past readers. For the time being, I will just give an example that illustrates the informative potential of a survey of the data on the readership of books on *materia medica*.

⁷⁸ See, among the many examples, <https://data.cerl.org/mei/02013034>, with reproductions.

⁷⁹ ISTC ih00489000 ([Strassburg, about 1507]), shelfmark 1a(5); at cc. k1r, p6r, x4r we can find excerpts taken from the edition *D. Alexii Pedemontani de secretis libri sex... Ex Italico in Latinum*, Basileae 1560.

⁸⁰ On books of secrets see the classical William Eamon, *Science and the Secrets of Nature: Books of Secrets in Medieval and Early Modern Culture* (Princeton: PUP, c1994); and for Girolamo Ruscelli cf. Paolo Marini and Paolo Procaccioli, eds., *Girolamo Ruscelli: dall'Accademia alla corte alla tipografia* (Manziana: Vecchiarelli, 2012).

⁸¹ The database *Material Evidence in Incunabula* (MEI), devised by Cristina Dondi and enriched in the last few years also on the basis of her ERC-Project 15cBOOKTRADE, allows us to place in time and space the trace of reading/use of a printed text (see <http://15cbooktrade.ox.ac.uk/reading-practices/> and <http://15cbooktrade.ox.ac.uk/distribution-use/>), allowing for an elaboration of the data that takes account of the two parameters. Researchers and cataloguers methodically survey the readers' interventions, and contextualise them geographically and chronologically: from the more customary underlining and marginal comments to the integrations to the text, to the supplements (texts and drawings), corrections, interventions of censorship and self-censorship, notes from academic lectures, stamps, bindings etc. I have thus been able to establish that in the incunabula of *materia medica* so far described in MEI, the manuscript interventions dating back to the 16th and 17th century are quantitatively more frequent and extensive, to then decrease and disappear in the early decades of the 18th century, when these books seem to be transformed from living texts for everyday consultation into objects of strictly antiquarian interest.

The same plant may be found in three different editions owned by three different individuals with very different levels of education. One-tenth of the copies of the 1497 Strasbourg edition of *Hortus Sanitatis* are now in Italy, demonstrating that German publishers of books on *materia medica* were also supplying the European market.⁸² Among these copies, one in the Biblioteca Nazionale Marciana is extensively annotated by an early 16th-century hand.⁸³ Although the annotator is anonymous, the Latin text is sprinkled with words in the local dialect, at times couched in an Italianising *pastiche*. Combined with this are references to customs and habits in the Veneto-Venetian area, demonstrating that the reader was a Venetian or at any rate someone from the Veneto area. Marginal comments, recipes of his own testing or suggested to him by acquaintances and annotated in the margins, and above all 16 densely handwritten pages bound at the end of the volume, the dosages of substances at times expressed with professional symbols, all of these clues allow us to deduce that the owner was an apothecary. Quite often he supplements the woodcuts with harmonious drawings in pen and ink and at times he adds drawings of new plants not included in the *Hortus*.

Fig. 12a Venice, Biblioteca Nazionale Marciana, Inc. 333

Fig. 12b Venice, Biblioteca del Museo Correr, Inc. G 048

One detail links the anonymous apothecary to the owner of a copy of *Herbarius Latinus* (*without synonyms*) published in Vicenza by Achates in 1491. The latter was also from Veneto, but was much less well read and his herbal contains few annotations.⁸⁴ However both added to their herbals a drawing and description of the ‘*Lunaria grassola*’, popularly known as the *moneta del Papa*, a herbaceous plant that was missing from both the *Hortus Sanitatis* and the *Herbarius Latinus* (Figs. 12a-b) – but would appear in 16th-century editions of Dioscorides’ *De materia medica* under the name of *Elatine* or *Nummolaria*.⁸⁵

What is striking is the botanical knowledge shared by two anonymous readers, in spite of the cultural gap: alongside the herb drawn with confident stylized line and stylized, the Venetian apothecary adds a detailed description in Latin of the characteristics of the *lunaria* and instructions for a medicinal preparation that has an “effectum mirabile” (Fig. 12a). The other reader limits himself to writing next to his drawing – which, although slightly naïve, was clearly drawn from life - that the “Lunaria M. [=minor] se troua j[n] fosse e loçi [=places?] auastrini [corrected by hand into: *aquastrini*, i.e. acquitrini or marshes; Lunaria Minor can be found in ditches and marshy places]” (Fig. 12b). A very important fact emerges from this comparison, that is, a Latin text like the *Herbarius Latinus* could be consulted and annotated even by a reader whose mastery of his own vernacular was limited. Thus, just as we must not take for granted the power of scientific dissemination for all the vernacular texts, a Latin text was not necessarily impenetrable to the uneducated. In Italy elementary levels

⁸² The datum can be drawn from the *Advanced search* in <https://data.cerl.org/istc/search>.

⁸³ Inc. 0333, ISTC ih00487000, cf. MEI <https://data.cerl.org/mei/02013034>, with reproductions.

⁸⁴ Biblioteca del Museo Correr, Inc. G 048, ISTC ih00068000, cf. <https://data.cerl.org/mei/02010600>. This is one of the few manuscript interventions by the anonymous.

⁸⁵ Suffice to consult one of the numerous editions of the 16th century – Italian or Latin – curated by Pietro Andrea Mattioli, cf. *supra* the relevant bibliography.

of education were acquired by memorising prayers and short texts in Latin, and the religious functions that an individual took part in were always celebrated in Latin.⁸⁶ Therefore a certain familiarity with Latin must have been more widespread than might be assumed. Books such as the *Herbarius Latinus* that were characterised by very simple texts and a formulaic structure (first a description of the plant and its qualities, then its therapeutic applications and instructions for its use) and always featuring an illustration (albeit stylized) of the plant, made it possible for barely literate individuals to make use of its contents.

The addition of the *Lunaria* can be found in the copy of another *Herbarius Latinus* (with German synonyms) now in Vienna, made in much the same period by the German-speaking owner writing in a bastard Gothic script (Fig. 12c).⁸⁷ He was probably a physician, who added to the copy in his possession 19 leaves written in his own hand in which he listed the contents of the *Herbarius* alphabetically by pathology, with references to the chapter of the plant/s that could cure it.

Fig. 12c Wien, Österreichische Nationalbibliothek, Ink 34-18 Part 3 ...

The three herbals discussed above are traces of everyday life that provide the real boundaries of the distribution of knowledge of *materia medica*. While the published editions represent the natural realms of the manuscript tradition going into print, the annotations of the readers reveal the actual state of knowledge and medical practice at the time. Certainly, the medicinal uses of *lunaria* must have been familiar to all three readers despite their coming from such different backgrounds, so much so as to induce the apothecary, the physician, and the layman to add the plant to a printed book. The publication of botanical-medical texts offered the opportunity for evaluation, comparison and the honing of knowledge not only at the level of outstanding professionals like Mattioli who themselves would contribute to the dissemination of knowledge through print, but also at the lower level of the local professionals – the anonymous physician and apothecary – as well as the most ordinary layperson with only rudimentary reading skills. Books on the *materia medica* provided the occasion for recording new knowledge, re-ordering and presenting traditional knowledge, and at times a starting point for an album of plant specimens, an instrument for building up a personal *hortus siccus*, as suggested by a certain number of exemplars found that were used to dry herbs between their pages.⁸⁸

⁸⁶ Piero Lucchi, “La Santacroce, il Salterio e il Babuino libri per imparare a leggere nel primo secolo della stampa,” *Quaderni storici* 13, no. 38 (1978): 593–630 and Piero Lucchi, “Nuove ricerche sul Babuino: l’uso del sillabario per insegnare a leggere e scrivere a tutti in lingua volgare (sec. XV–XVI),” in *Lesen und Schreiben in Europa, 1500–1900: vergleichende Perspektiven*, ed. Alfred Messerli and Roger Chartier (Basel: Schwabe & Co., 2000), 201–234; Cristina Dondi “From the Corpus Iuris to ‘psalterioli da puti’, on Parchment, Bound, Gilt... The Price of Any Book Sold in Venice 1484-1488,” in *Printing R-Evolution and Society*, 577–99.

⁸⁷ ISTC ih00066000, Wien, Austrian National Library, Ink 34-18 Part 3, cf. <https://data.cerl.org/mei/02108046>. The cataloguer’s comment to leaf 86v: ‘[a] section on the use of Lunaria (Kurrent, 16th century)’ and about an ownership note on leaf a1, says “‘Jo. Fabri’ (perhaps the Tübingen doctor, 1571-1620?).”

⁸⁸ London, Linnean Society Library, BL 783; see also the post of Andrea van Leerdam available at the address <http://bc.library.uu.nl/densely-annotated-and-richly-illustrated-famous-herbal-dutch-translation>. I am detecting now many more exemplars-*horti sicci* of 16th-century editions of *materia medica*, within my Project “MAT-MED in Transit”, which also provides for an extension of the database *Material Evidence in Incunabula* to the 16th- and 17th-century copies, thus joining the research into the 15th century with that of the subsequent centuries.

Systematic studies of such exemplars, already in progress or about to begin, will reveal much regarding the use of the *materia medica* and the contribution that hundreds of ordinary readers made to the renewal of medical-pharmacological knowledge.⁸⁹

6. Beyond the Profession. *Pharmacopoeias and Recipe Books*

After the mid-15th century a few official pharmacopoeias were published to which apothecaries had to abide in the preparation of medicines for sale, and many collections of recipes that anyone could use in the privacy of their own homes.⁹⁰ The production of recipe books intended for the layman and even ‘the poor’ formed a prelude to the so-called *books of secrets* that would triumph in 16th-century publishing.⁹¹

Italy distinguished itself in the publication of texts bridging the *materia medica* and recipe collections, above all thanks to the very popular *Liber aggregationis seu Liber secretorum de virtutibus herbarum, lapidum et animalium quorundam*. Consisting of 20 to 50 leaves without illustrations bound in a slender quarto format, *Liber aggregationis* describes in short, pared-down sentences the therapeutic properties of various plants, minerals and animals, providing indications for the preparation of very simple remedies. An alphabetical index of the contents of the booklet based on the therapeutic properties of each plant was provided to ease consultation. *Liber aggregationis* was a compilation (‘aggregatio’) of texts of different provenance that was attributed to Albertus Magnus in the 15th century based on the appeal exerted by the personality of the 13th-century German philosopher, theologian and man of science.⁹² Precisely at that time the *Liber aggregationis* started to circulate in manuscript form, first in Latin, then in early English and French translations, and from the late 14th century also in Italian and German. Between the advent of printing and the dawn of the 18th century there were over 120 editions, some 80 of which in vernacular languages.⁹³ Published for the first time in what was then German-speaking Strasbourg in 1475, soon it also came out in Ferrara (1477), to then gradually its diffusion spread across Europe. ISTC has catalogued 54 incunabula editions from Italy (21), Germany (11), France (10) and other countries – amongst which Belgium, Spain, Austria, Switzerland and England. Italy provides a singular and surprising case, for only there was it almost always published in the vernacular (10 out

⁸⁹ There are now several researches also based on the examination of the manuscript interventions on copies of botanical titles, such as the one in progress of Julia Heideklang, “Botanics in the Making (1500–1700): Communication and Construction of the Botanical Science in Early Modern Europe” (<https://www.geschichte.hu-berlin.de/en/bereiche-und-lehrstuehle-en/wissenschaftsgeschichte-en/faculty/m-a-julia-heideklang>).

⁹⁰ For a broader review of the recipe books appearing in 15th-century Europe see Minuzzi, “La stampa medico-scientifica,” and Cavallo’s article in this volume.

⁹¹ A rather well-studied genre, starting from the classical study by William Eamon, *Science and the Secrets of Nature: Books of Secrets in Early Modern Culture* (Princeton: Princeton University Press, 1994) up to the more recent Elaine Leong and Alisha Rankin, eds., *Secrets and Knowledge in Medicine and Science, 1500–1800* (Aldershot: Ashgate, 2011). See the contribution by Sandra Cavallo in this volume.

⁹² Isabelle Draelants, *Le Liber de virtutibus herbarum, lapidum et animalium (Liber aggregationis): Un texte à succès attribué à Albert le Grand* (Firenze: SISMEL-Edizioni del Galluzzo, 2007).

⁹³ Draelants, *Le Liber de virtutibus herbarum*, 10–11.

of the 11 editions in the ISTC database); moreover, unlike the titles hitherto encountered, the 15th-century editions of the other European countries were in Latin.⁹⁴

Italian publishers made a specialty of printing collections of medicinal recipes. One outstanding example is the *Thesaurus pauperum* by the Portuguese scholar Pietro di Giuliano or Petrus Hispanus (1210 ca.–1277), who became Pope John XXI in 1276.⁹⁵ Published for the first time in Florence in 1492, the text is a distillation of medicinal knowledge packaged to offer to those who did not have access to a physician the chance to concoct medicines for themselves using natural plant, animal and mineral substances that were created by God and placed at man's disposition. Of the six editions printed in the 15th century, 5 are in Italian and just one is in Latin.⁹⁶ This time the publishers' intentions are confirmed by the evidence of use of the surviving exemplars. The annotations are almost exclusively in Italian and can be traced back through their spelling, syntax and contents to a lay readership with no professional preparation. Readers in the 15th–17th (and at times even the 18th)⁹⁷ centuries sought in *Thesaurus pauperum* cures for the disorders they were afflicted by (one reader has underlined and collected all the remedies for gout, another for problems of the spleen, etc.), often adding recipes tested either by them personally or by acquaintances. Some systematically read the whole text, extracting the key words from it; some censored the text by deleting from it passages that they disagreed with, demonstrating the familiarity with which they treated the printed text.⁹⁸ Many booklets underwent paper washing, a sign of maquillage that until a few decades ago meant an increase in their value in the antiquarian market, and that indirectly indicates now the reader's inclination to leave behind personal signs on this genre of medical publishing.⁹⁹

7. Towards the miscere utile dulci: Medicine in Verse. The Origins and Afterlife of Cibaldone

A typology of publication in part ignored and never considered as a whole is that of medicine in verse, of which we can count 83 editions of twenty or so titles conveying knowledge of practical medicine.¹⁰⁰ The distribution of the editions confirms the leadership of the three countries already cited for other types of publications: Italy with 32, Germany with 25 and France with 15; these are followed by Belgium with 5

⁹⁴ The only other edition in the vernacular is that in Catalan which appeared in Barcelona in 1499. The various editions can be consulted in ISTC by searching the Latin title.

⁹⁵ See the introduction by Stefano Rapisarda to the critical edition of Petrus Hispanus, *Il "Thesaurus pauperum" in volgare siciliano* (Palermo: Centro di studi filologici e linguistici siciliani, 2001).

⁹⁶ ISTC ij00242000 ([Firenze 1492]); ij00243000 (Venezia 1494); ij00244000 ([Firenze 1497]); ij00245000 (Venezia 1500) in 8°; ij00246000 (Venezia 1500) in 4°; fu riedito nel XVI sec.: [1510], 1518, 1531/32, 1543. The Latin edition is in folio, printed in Antwerp (ij00241000, Thierry Martens, 22 May 1497).

⁹⁷ The Vatican library exemplar (Stamp. Ross. 1892) presents a layering of annotations that brushes the 18th century, cf. <https://data.cerl.org/mei/00201745>, among the most annotated.

⁹⁸ Es. <https://data.cerl.org/mei/02124300> e <https://data.cerl.org/mei/02124541>. Generally speaking, these are remedies concerning the sexual and magical sphere, which would later be banned by the Church.

⁹⁹ Among many, see <https://data.cerl.org/mei/02124463>; <https://data.cerl.org/mei/02013526>.

¹⁰⁰ I refer to work completely (or almost) in verses, also annotated with comments in prose, whereas I omit works elaborated only partially in verses.

editions, and Switzerland and Spain with 3 editions each.¹⁰¹ These are titles that to varying degrees contaminate the *materia medica*, *regimen sanitatis* and medicinal recipes. About 40% are in Latin, and hence destined for a relatively wide diffusion, primarily among students, professionals and individuals of medium-high social extraction; far more varied also in a socially downward direction was the use of medicine written in vernacular verse.

The significance of the publication of works in verse on medical-scientific themes in the 15th century can only be fully understood by studying medieval developments in the context of their roots in antiquity and taking account of the contributions of Arab culture. The ancient and cult models of didactic poetry – Hesiod’s *Works and Days*, Virgil’s *Georgics* and Lucretius’ *De rerum Natura* – are well known. Less familiar now are the fruits of late classicism such as *Carmen medicinale*, composed in the 3rd or 4th century AD by a certain Sereno Sammonico who remains difficult to identify. In 1107 hexameters – the meter par excellence of the didactic poem – remedies to cure 64 ailments and disorders are proposed based above all on the euphoristic pharmacopeia produced with easy-to-find local natural substances.¹⁰² Read and studied as a treatise on medicine and an example of prosody by physicians and clerics, in the 9th and 10th centuries *Carmen medicinale* enjoyed considerable success all over Europe and its popularity was revived in the humanist age, when it was printed in Italy for the first time in 1474 and in 1487, preparing it for an equally successful European print out.¹⁰³

Throughout the Middle Ages, recourse to metric forms in many fields of knowledge was far more frequent in the West than might be imagined today.¹⁰⁴ To this we should add the contribution of the Arab world, which at the time was a lively centre of technical and scientific inquiry. Poetry was the quintessential didactic instrument among the Arabs, whose greatest masters often summarised in verse what they had written beforehand in prose, so that they could be used to make their students’ reading more pleasurable (and at times these works might even be recited in public).¹⁰⁵ Recent studies conducted on the medieval manuscript heritage are casting light on just how pervasive the penetration of Arab scientific poetry was in the production of verse (often) and prose in Latin at the time in the West. Indeed, numerous codices are still conserved with complete

¹⁰¹ The ISTC numbers will be indicated in the subsequent notes.

¹⁰² The first 42 chapters deal with diseases that concern the single parts of the body, from the head to the feet, the remaining pathologies that affect the whole organism (e.g. fevers, epilepsy etc.), cf. K. Smolak, “Sérénus (Quintus Serenus),” in *Nouvelle Histoire de la littérature latine*, ed. Reinhart Herzog and Peter Lebrecht Schmidt, vol. 5 (Paris: Brepols, 1993), § 556, 361–66; Paolo Mastandrea, “Sereno Sammonico: *res reconditae* e dati di fatto,” *Lexis* 30 (2012): 506–517; useful also is Valentina Giampieri, “Il *Liber medicinalis* di Sereno Sammonico in the Tradition of the Didactic Genre” (Magistral Diss., University of Macerata, 2015/16).

¹⁰³ ISTC is00469000 ([Venice? 1474 ca.]) e is00470000 (Roma, 1487). It was reprinted several times alone or together with the work by Cornelio Celso until the eighteenth century. For the manuscript tradition of over twenty or so testimonies prior to 1200 and a dozen from the early modern era, cf. R. H. Rouse, “Quintus Serenus,” in *Texts and Transmission: A Survey of the Latin Classics*, ed. Peter K. Marshall and Leighton Durham Reynolds (Oxford: Clarendon Press, 1981), 381–385.

¹⁰⁴ Suffice to think to the anonymous *Speculum hominis*, treatise in verses on the diseases, cf. Marco T. Malato and Concezio Alicandri-Ciuffelli, *Lo “Speculum hominis”: poema anonimo di etimologia medica del XIII secolo* (Rome: Istituto di storia della medicina dell’Università di Roma, 1960), and the short article by Paul Gerhard Schmidt in *La Scuola medica Salernitana. Gli autori e i testi*, ed. Agostino Paravicini Bagliani and Danielle Jacquot (Firenze, SISMELE-Edizioni del Galluzzo, 2007), 437–446.

¹⁰⁵ Avicenna wrote the *Canon* in prose and subsequently summarised its contents in verses in what, translated into Latin prose by Armengaud de Blaise in 1294, was entitled the *Cantica*, cf. Charles Burnett, “Learned Knowledge of Arabic Poetry, Rhymed Prose, and Didactic Verse from Petrus Alfonsi to Petrarch,” in *Poetry and Philosophy in the Middle Ages: A Festschrift for Peter Dronke*, ed. John Marenbon and Peter Dronke (Leiden: Brill, 2001), 45, 47. The *Cantica* was published alone and in coda to the *Canon* starting from 1483 (ISTC ia01429000) in Venice, and in the following century, apart from in Venice, also in other European countries.

Latin translations or anthologies of Arab poems on meteorology, astrology, alchemy and *materia medica*.¹⁰⁶ As regards the *materia medica* in particular, it has been shown that the *Liber graduum* (The Book of Degrees) by Constantine the African, an 11th-century Cassinese monk who taught the West to attribute the Galenic qualities of warm, cold, moist, and dry to ordinary plants and minerals, also constituted the basis for the composition of many Latin works written in verse.¹⁰⁷

Among these was the widely read *De viribus herbarum carmen* by Macer Floridus, the pseudonym of Odo Magdunensis, who lived in Meung-sur-Loire between 1070 and 1112: 2700 hexameters in a late Latin described the medicinal properties of 77 plants, 65 of which were liberally drawn from the *Liber graduum*, albeit without citing the source.¹⁰⁸ *De viribus herbarum* formed part of the medieval university curriculum for the training of physicians and survives today in over a hundred codices, translated into most of the vernacular European languages.¹⁰⁹ *Carmen* was published for the first time in 1477 in Naples, then in Milan in 1482, and in three editions in Geneva before the end of the century, reflecting the areas of major concentration of the manuscript tradition. These would be followed by twenty or so subsequent editions.¹¹⁰ From an initial investigation of the incunabula exemplars of the Macer Floridus herbal, it appears that they were studied by professionals and students, but also read by enthusiasts on the subject, between the 15th and 16th centuries; indeed they often survive in composite miscellanies, bound with other short works of a literary and not just a medicinal nature, and at times they are annotated with comments that do not appear to have been written by physicians or students.¹¹¹ However, most of the copies still need to be systematically examined, and they will certainly reveal some surprises when they have been studied.

A small part of the *De viribus herbarum* was integrated into some print editions of the renowned *Regimen sanitatis Salernitanum*, which started to be assembled at the medical school of Salerno around the mid-13th century and was augmented, in the early print editions, by a commentary attributed to Arnaldus de Villanova.¹¹² Both the manuscript tradition (consisting of some one hundred witnesses) and the print tradition, both of which flourished from the 15th century until the end of the 18th century and then – with different

¹⁰⁶ Burnett, “Learned Knowledge of Arabic Poetry.”

¹⁰⁷ Winston E. Black, “‘I will add what the Arab once taught’: Constantine the African in Northern European Medical Verse,” in *Herbs and Healers from the Ancient Mediterranean through the Medieval West: Essays in Honor of John M. Riddle* (Farnham: Ashgate, 2012), 153–85.

¹⁰⁸ Black, “‘I will add what the Arab once taught,’” 162 and *passim*.

¹⁰⁹ Bruce Flood, “The Medieval Herbal Tradition of Macer Floridus,” *Pharmacy in History* 18, no. 2 (1976): 62–66; Bernhard Schnell and William Crossgrove, eds., *The German ‘Macer’, Vulgate version. With an Imprint of the Latin Macer Floridus ‘De viribus herbarum’* (Tübingen: de Gruyter, 2003); David Moreno Olalla, “The Textual Transmission of the Northern Macer Tradition,” *English Studies* 94, no. 8 (2013): 931–57.

¹¹⁰ Henri Delarue, “Les éditions genevoises du ‘Macer Floridus’,” *Genava* 2 (1924): 177–86.

¹¹¹ At present only ten or so exemplars are described in MEI, three of which are to be found bound in composite volumes, cf. <https://data.cerl.org/mei/02012568>, <https://data.cerl.org/mei/02137725> (the owner, identified in this case, is a student of Collège de Cluny), <https://data.cerl.org/mei/02128787>.

¹¹² The master of Montpellier had written a *regimen* for the King of Aragona, perhaps for this reason he was attributed with the comment to that of Salerno. Besides the fundamental studies of Salvatore De Renzi, see Paul Oskar Kristeller, *Studi sulla scuola medica Salernitana* (Napoli: Istituto per gli studi filosofici, 1986); the updated illustration of the major textual issues is in Marilyn Nicoud, “Il ‘Regimen sanitatis Salernitanum’. Premessa ad un’edizione critica,” in *La scuola medica salernitana. Gli autori e i testi*, 365–84.

purposes – uninterruptedly until the 20th century,¹¹³ were characterized by an extremely varied textuality, ranging from precepts on the six non-naturals and descriptions of *materia medica* to notions of anatomy, physiology, and semeiotics, descriptions of pathologies and therapies, nosology and the medical arts. These were presented in versions that could range from a few dozen verses – with the related textual omissions – to over 3,500.¹¹⁴ Written in a peculiar verse form called *leonine* – made up of rhymes or assonances between the first and the second hemistich of each verse, which aided memorisation – this *summa* of medical notions couched in a Latin with a paratactic rhythm, relaying concepts that could be captured in the space of a verse or little more, was addressed to students of medicine and professionals with an eminently didactic aim, as already hypothesized by De Renzi.¹¹⁵ If from the reconnaissance of Marilyn Nicoud it does not seem that the work was present in the libraries of 63 medieval physicians, an initial examination of the annotations in the exemplars of incunabula instead confirms that the readers correspond to the profile of the average professional and student, together with some learned individuals without particular medical-scientific competencies.¹¹⁶ All the contemporary and 16th- and 17th-century annotations are in Latin and in different formal book hands by readers who competently studied or simply annotated the text. Rarely are the annotations written both in Latin and in the vernacular, but always by the same hand, namely by a single bilingual reader. In the case of editions printed in German with an interlinear German translation, in the *marginalia* there is a greater alternation between Latin and German, albeit always tilted in favour of Latin.¹¹⁷

The contribution of the celebrated *Regimen sanitatis Salernitanum* to the dissemination of medical-scientific knowledge deserves to be described in some detail. At least for the first century of its existence in print, it was primarily read by professionals and scholars. Afterwards the corpus of the *regimina Salernitana* – because we have to speak of a plurality of texts under the same title – would undergo a *downwards* enlargement of the *palette* of users, facilitated by a number of factors. From the 16th century translations of prose and verse into the vernacular languages of Europe started to spread, with the inclusion of new passages and the recomposing of traditional texts, characterised by a simple style and often paratactic syntax.¹¹⁸ The work was popularized, circulating from 1640s in a version in burlesque verse in editions printed in a small format on more or less second-rate paper, culminating with its publication in the *Bibliothèque Bleue* of Troyes

¹¹³ Still lacking is a reliable computation of the print editions that some scholars reckon to be 246, even if an excellent starting point is the list of Salvatore De Renzi in vol. 5 of the ‘Collectio Salernitana’, the *Flos medicinae Scholae Salerni* (Napoli, 1859), 148–169, preceded by that of the manuscripts known till them.

¹¹⁴ The edition curated by De Renzi, vol. 5, 1–104, counts 3520 verses.

¹¹⁵ The leonine recalls the description of the Arab verses translated by Abelard of Bath (assonances between hemistichs) in Burnett, “Learned Knowledge of Arabic Poetry,” 38.

¹¹⁶ Marilyn Nicoud, “Aux origines d’une médecine préventive: les regimina sanitatis en Italie et en France du XIII^e au XV^e siècles” (PhD diss., Paris, EPHE, 1998), II, 429–42 and III, 559–72. For the examination of the exemplars of incunabula see MEI (https://data.cerl.org/mei/_search, with research key `data.hostItem.title: “regimen sanitatis salernitanum”`), in which 54 have now been described, among which I should mention <https://data.cerl.org/mei/02012848>; <https://data.cerl.org/mei/02012805>. A more exhaustive study can be made in the future with the progressive implementation of the database.

¹¹⁷ E.g., <https://data.cerl.org/mei/02010924> and <https://data.cerl.org/mei/02012815>.

¹¹⁸ In Italy the first edition in vernacular prose is dated 1549: *Opera utilissima di Arnaldo di Villanoua di conseruare la sanita, pur hora tradotta di latino in buona lingua italiana* (In Venetia: per Michele Tramezino, 1549), 8^o (<http://id.sbn.it/bid/BVEE006136>). Apart from De Renzi’s now outdated list, a useful, even if incomplete, enumeration of the Latin, German, Italian, French and English editions is in https://www.uniposms.it/wp-content/uploads/2019/05/regimen_sanitatis.pdf.

in 1714.¹¹⁹ The use of a comic-burlesque register – whose effect is perceived only when one is familiar with the reality being ridiculed – dating back to the mid-17th century is an indicator of a deep assimilation of the original text that underlies and goes hand in hand with the search for the pleasure that other 17th-century editions of the *regimen sanitatis Salernitanum* present.¹²⁰ These are all undeniable signs of its greater diffusion, but also of a gradual weakening of the didactic-scientific aim with which the texts were approached. In 18th- and 19th-century publications, the philological concerns of editors would prevail, although complex textual issues still remain unsolved today. Alongside a critical edition, it would be desirable to conduct a systematic study of the evolution of the material aspects of the editions – format, *mise-en-page*, paper, etc. – and of the traces of use in the surviving exemplars, from the most ancient to those of the 17th and 18th centuries in Latin and the vernacular languages. The *regimina Salernitana* indeed offer a magnificent European case study of the evolution of the contents, text, paratext and patterns of consumption in the arc of a multi-secular existence, handwritten and printed.¹²¹

A key figure among the authors of verses published in the 15th century was Gilles de Corbeil (Aegidius Corboilensis, 1140 ca.–1224 ca.), who, after having studied medicine in Paris, specialised at the school of Salerno and finally returned to Paris as a professor. With a strongly pedagogical intent, for his students de Corbeil composed his earliest and most successful works, the *De pulsibus* and the *De urinis* in hexameters, which were adopted as study texts by the Faculty of Paris, and printed until the early decades of the 16th century.¹²² In the preface he explicitly declared that he used verse as a mnemonic expedient because it allowed for the utmost conceptual synthesis, whereas prose was more verbose and thus dispersive, tending in his opinion to engender confusion in the learner.¹²³

Humanistic interests and poetic ambitions are reflected in an array of contemporary authors. The Mantuan physician Battista Fiera (1465–1538) penned *Coena, sive De cibariorum virtutibus* in elegiac couplets (ISTC if00167000), which enjoyed European diffusion in the subsequent century.¹²⁴ The physician

¹¹⁹ Alfred Morin, *Catalogue descriptif de la bibliothèque bleue de Troyes* (Geneva: Droz, 1974), n. 249: *L'escole de Salerne en vers burlesques* (A Troyes, & se vendent a Paris: chez la veuve Nicolas Oudot, [1714]). The Bibliothèque Bleue was characterised for its bindings in azure-blue and the very contained costs. Previous editions: 1649, 1650 (4°), 1651 (12°), 1653 (4°), 1664 (12°). See also *L'escole de Salerne avec traduction française en vers burlesques escrit en 1643* (Anvers: chez A. de Tavernier fils, 1917).

¹²⁰ Apart from the first edition in vernacular verse in 1587, in 1630 it was translated into Italian in “pleasing vernacular” tercets and reprinted several times: *La scola Salernitana per acquistare, e custodire la sanità, tradotta fedelmente dal verso latino in terza rima piacevole volgare dall'Incognito Accademico Vivo Morto* (In Venetia: appresso Carlo Brogiollo, 1630), 8° (<http://id.sbn.it/bid/CAME010988>); reprinted in 1662, 1666, 1677.

¹²¹ The first step is the exact computation of the European editions, now perfectible also thanks to the new instruments available online (censuses, collective catalogues, bibliographies). For the fifteenth century e.g., Nicoud, “*Il 'Regimen sanitatis Salernitanum'*”, 366n, reports 19 incunabula editions, in actual fact ISTC records 39 of them, which rise to 45 including some *sine data* that specific investigations have revealed to be imprinted after the year 1500.

¹²² Mireille Ausécache, “Gilles de Corbeil ou le médecin pédagogue au tournant des XII^e et XIII^e siècle,” *Early Science and Medicine* 3, no. 3 (1998): 194–95. Corbeil also wrote an antidotary in hexameters, which remained unpublished until the Eighteenth century, cf. Gilles de Corbeil, *Liber de virtutibus et laudibus compositorum medicaminum*, ed. Mireille Ausécache (Firenze: SISMEL-Edizioni del Galluzzo, 2017). The success of the handwritten and print version of the two works in verse was substantial, in Italy, Spain and France. For the incunabula cf. ISTC ia00093000 (Padova, 1483), ia00092000 (Padova, 1484), ia00094000 (Venezia 1494/95), ia00096400 ([Venezia, 1505]); ia00096000 ([Lyons, 1503/4]), ir00067550 (Salamanca, [1496ca.]) e ir00067550 ([Salamanca, 1500 ca.). The Lyonnaise edition and a Venetian one without typographical notes, once believed to be incunabula, in actual fact were imprinted at the dawn of the Sixteenth century.

¹²³ Passages cited and translated in Ausécache, “Gilles de Corbeil ou le médecin pédagogue,” 195–96.

¹²⁴ Cf. the biographical profile of Angela Asor Rosa, in DBI, *ad vocem*.

and herbalist Johannes Derrames (m. 1506)¹²⁵ wrote the *Carmina de conditionibus medicinarum solutivarum*, 53 epigrams describing the morphological qualities of substances which could be used as natural antidotes (ISTC id00141000). The German Burchard von Horneck (1440-1522), physician to princes and notables, authored the *Carmen de ingenio sanitatis* in elegiac couplets; this work was re-printed twice in the 16th century and was then translated from Latin into German.¹²⁶ A short work in Latin hexameters by the physician and humanist Theodoricus Ulsenius also survives, the *Vaticinium in epidemicam scabiem*. Printed as a broadsheet, it represents a unique example of this typology, which leads us to acknowledge that there was a production of ephemera in Latin as well as the vernacular. In Ulsenius' work we find a hundred or so hexameters arranged in two columns separated by a central woodcut that has been hand coloured in watercolor in both surviving exemplars, which adds to its attraction.¹²⁷

Nevertheless, 60% of the print production in verse was in the vernacular languages, in which rhyme endings in various combinations replaced the singsong rhythm of the succession of short and long syllables of the hexameters and elegiac couplets. Poems in Latin often paved the way for shorter compositions, such as the booklet of the *regimen* by Johannes Jacobi (Jean Jacmé, d. 1384) which was turned into verse by an anonymous French poet and printed in Lyons,¹²⁸ or the broadsheets decorated with a woodcut coloured by hand, such as the two editions of the *Pestregiment* by the contemporary physician Hans Andree from Geislingen an der Steige in southern Germany.¹²⁹ Compared with works in Latin, the recourse to illustrations was more frequent in works in the vernacular, publishers making a greater investment on the side of the *dulce*, in keeping with the Horatian precept of *miscere utile dulci*. These works enjoyed a wide readership; they were short, yet scientifically reliable, a pleasure to read thanks to their verse format, and appealing to the eye with their modest illustrations, which might be coloured by hand on the initiative of the same typographical workshop. The illustrated broadsheet also lent itself to collective use, as it might be read aloud for the benefit of the unlettered public.

Equally inclined to the *dulce* were the short poems by the prolific poet and hymn writer Heinrich von Laufenberg (m. 1460), chaplain of the parish church of Freiburg who after a laudable ecclesiastic career retired to the Johanniterkloster Zum Grünem Wörth in Strasbourg. During the first half of the century he had composed a medical-astrological *regimen*, the *Versehung des Leibes* (Augsburg, 1491), which contained instructions on the six non-naturals, a calendar, medical recipes, and a separate *regimen* to deal with the plague, the *Contra pestem Regiment* (Strassburg, 1500).¹³⁰ Written in rhyme and embellished with a woodcut, the

¹²⁵ He was born in Cyprus in the early fifteenth century to a French-Cypriot family de Rames or Rame, feudatory of that reign; after transferring to Padua, he graduated in arts and medicine, he was a primary physician of Alexander VI and became cardinal, cf. Tiziana Pesenti in DBI, *ad vocem* (Derrames, Giovanni).

¹²⁶ E. T. Nauck, "Burchard von Horneck," *Zeitschrift für die Geschichte des Oberrheins* 109 (1961): 285–303.

¹²⁷ ISTC iu00059200 (Nuremberg: [Hans Mair], 1 Aug. 1496) e iu00059300 ([Augsburg: Johann Froschauer, about 1496]). Both of the exemplars reproduced online were water-coloured.

¹²⁸ ISTC ij00013900 (Lyons: Guillaume Le Roy, about 1476)].

¹²⁹ *Pestregiment 'Vil menschen weren der pestelentz frey'*, ISTC ia00690090 ([Augsburg 1472]) and ia00690100 ([Augsburg 1476-78]).

¹³⁰ ISTC ih00013000 and ih00012000.

former with a significant contemporary manuscript tradition, mostly illustrated as well.¹³¹ Besides that, the *Contra pestem Regiment* offers the rhyming text enclosed by xylographic borders arranged on the two sides of each page, designed to make the visual aspect of the edition and the reading of the text all the more appealing.

Italy and Spain also saw the publication of a couple of medico-scientific treatises in octaves, fruit of the pen of contemporary authors. The so-called narrative octave in rhymed hendecasyllables honed to perfection by Boccaccio in the 14th century allowed for expositions of varying length ranging from the elevated and refined to the popular and exerted a considerable appeal over a broad public.¹³² In Florence three of the four editions of *Philosomia degli uomini* were published, a short poem (printed on 4 leaves) on the subject of physiognomics that drew on the *Régime du corps* by Aldobrandino da Siena (d. 1287), a physician active in Provence.¹³³ In the face of the substantial manuscript tradition of the *regimen*, translated into Italian vernacular in 1310 by Zuccherò Bencivenni, only one complete French edition of 70 in-folio leaves was produced around 1481:¹³⁴ publishers preferred to circulate a 'lighter' product than the original work, both in terms of length and enjoyment, no doubt because it could have had a wider circulation in the print market. The fourth part of the *Régime* was transformed into octaves by the Macerata physician Battista Caracino, who lived between the 15th and 16th centuries, and in the opening of some editions was decorated with a woodcut portraying either the medical-astrologist with a student or an anatomical image. It offers quite pleasant reading in rhyme even today, as it traces the physical traits of an individual back to his inclinations in terms of character.¹³⁵

A true and proper poem in 439 octaves was written by Francisco López de Villalobos (1473–1549), a Jewish convert to Catholicism, the descendant of a family of physicians, and himself a physician who trained at Salamanca and dedicated his career to serving the Spanish nobility, including King Ferdinando from 1509 and the emperor Charles I from 1518.¹³⁶ At just 25 years of age he published in Castilian verse *El sumario de la medicina con un Tratado de las pestifera bubas*, a distillation of preventive and curative medical knowledge, expressed “en estilo legiero”¹³⁷ to make it more accessible to physicians who were not well versed in Greek and Latin. It is a poem modelled on the *Canon* by Avicenna and bore the same aim as the Persian polymath’s *Cantica* – teaching with enjoyment. The influence of the Arab model on the organisation of the subject matter as well as the syntax and lexis of Villalobos’ work is extraordinary, and would continue to be seen in many of

¹³¹ Heinz H. Menge, *Das ‘Regimen’ Heinrich Laufenbergs: textologische Untersuchung und Edition* (Göppingen: Kümmerle, 1976); Bernhard Schnell and Marlis Stähli, eds., *Heinrich Laufenberg. Regimen der Gesundheit* (Munich, 1998).

¹³² Pietro G. Beltrami, *La metrica italiana* (Bologna: Il Mulino, 2011), 112–114.

¹³³ The *Régime*, divided into four parts, dealt with: general hygiene, organ health, dietetics and physiognomy, cf. Rossella Baldini, “Zuccherò Bencivenni, *La sanità del corpo*. Volgarizzamento del *Régime du corps* di Aldobrandino da Siena (a. 1310) nella copia coeva di Lapo di Neri Corsini (Laur. Pl. LXXIII 47),” *Studi di lessicografia italiana* 15 (1998): 21–300. Some 74 French and 50 Italian manuscripts were penned up to the 15th century, cf. Elizabeth W. Mellyn, “Passing on Secrets: Interactions between Latin and Vernacular Medicine in Medieval Europe,” *I Tatti Studies in the Italian Renaissance* 16, no. 1 (2013): 291. On the wide-ranging manuscript success of the *Régime* by Aldobrandino see Nicoud, *Les Régimes de santé*, 435–39, 505n, 539, 543, 546–47, and *passim*.

¹³⁴ ISTC ia00368500 ([Lyon, Martin Huss, about 1481]).

¹³⁵ ISTC ia00368700 ([Firenze 1489]), ia00368800 ([Firenze 1492]) ia00368900 ([Firenze 1492-1500]), ia00369000 ([Rome or Venice 1500]). Caracino was also the author of the short epic poem in octaves *Il libro chiamato el Thebano* (Venezia, 1503).

¹³⁶ Luis Sánchez Granjel, *Vida y obra de López de Villalobos* (Salamanca: Universidad de Salamanca, 1979); Jon Arrizabalaga, “Francisco López de Villalobos (c.1473–c.1549), médico cortesano,” *Dynamis* 22 (2002): 29–58.

¹³⁷ From the first octave of the Salamanca edition, 1498, ISTC il00286000, of which five exemplars have been recorded.

the medical texts produced in Castille.¹³⁸ No further editions of the *Sumario* would be published, however; evidently it did not find supporters in such large numbers as to justify the reprinting of such a long poem.

A far more successful title, indeed the most successful medical text written in verse to appear in the 15th century was the *Libro tertio d'Almansore overo Cibaldone*, an unusual *regimen* in verses dedicated to the description of plant and animal substances on the basis of their health-giving and nutritional properties (in tercets) and of the so-called non-natural factors (in sestets). This was didactic poem originally written in the 15th century, mentioned in contemporary manuscripts, and continually in print until the 17th century, but that has not yet been thoroughly studied by scholars. The *Cibaldone* (in the sense of *zibaldone*/commonplace book) was an anonymous short work composed by a poet from the Veneto area in the second half of the 15th century based on a Florentine version in the vernacular of the *Liber medicinalis ad Almansorem regem*, with occasional interpolations from Bencivenni's Italian translation of Aldobrandino's *Régime du corps*. In particular, it is a poetic re-elaboration of the third book of *Almansore*, couched in an updated technical-scientific language that is in some passages more precise than the 14th-century prose version.¹³⁹ Each description in tercets begins with the galenic qualities of the substance (warm/cold, moist/dry), thus taking for granted a public capable of understanding the associations and their implications for the human organism, and continues with the indications of their positive and/or negative effects on the individual's health. The short poem conveyed both practical medical knowledge but also theoretical notions, albeit of the most basic kind. Between 1472 and the year 1500 the *Cibaldone* was published in no less than 14 Italian editions, of which now only about thirty exemplars survive, which can be attributed to the relatively modest dimensions of the booklet (from 20 to 6 leaves, depending on the format) and the extraordinary diffusion/consumption that it enjoyed.¹⁴⁰ These were followed by just one 16th-century edition, imprinted in Brescia around 1533.¹⁴¹

Apart from these editions, however, nobody has realised until now that from 1474 the *Cibaldone*'s section in tercets on various foodstuffs circulated – and continued to circulate until 1678 – even within the *Liber de homine ovvero Libro del Perché* of the Bolognese physician Girolamo Manfredi, a genuine medical encyclopaedia that appeared in about thirty editions in Italian, and was translated into Catalan and Castilian.¹⁴²

¹³⁸ María Concepción Vázquez De Benito, "La herencia árabe del Sumario de la Medicina," in *Francisco López de Villalobos, Sumario de la medicina (1498)*, ed. Luis Sánchez Granjel et al. (Salamanca: Universidad-Real Academia de Medicina, 1998), 163–177. Other examples of Arab influence in Castilian medicine in Vázquez De Benito, "Influencia de la medicina árabe en la medieval castellana," *Azafea: estudios de historia de la filosofía hispánica* 1 (1985): 369–75.

¹³⁹ Rosa Piro, "Il lessico medico dalla prosa alla poesia: il terzo libro dell'*Almansore* e lo *Cibaldone*," in *Prospettive nello studio del lessico italiano*, ed. Emanuela Cresti (Firenze: FUP, 2006), 157–64. Rosa Piro, ed., *Almansore: volgarizzamento fiorentino del XIV secolo* (Firenze: SISMEL-Edizioni del Galluzzo, 2011). The *Liber medicinalis* was the Latin translation of the medical encyclopaedia in 10 books concluded in 908 by the Persian philosopher and alchemist Abu Bakr Muhammad ibn Zakarya ar-Razi (Mohammed Rhasis), the *Kitāb*, which made him famous all over the Islamic world and then in Europe.

¹⁴⁰ See in ISTC (simple search) with *Cibaldone*.

¹⁴¹ Described in <http://id.sbn.it/bid/CNCE051966>, unique exemplar now in the Biblioteca Trivulziana (Milan).

¹⁴² The incunabula editions are three in number (ISTC im00191000, im00192000, im00193000) and 25 are the ones imprinted between 1514 and 1678, retrievable in SBN. Carré and Cifuentes, "Girolamo Manfredi's *Il perché*: II. The 'Secretum secretorum' and the Book's Publishing Success." The short dietetic poem is not present in the incunabula Catalan translation (ISTC ia00263700), while in the Castilian one it was put into prose at the end of Manfredi's work, cf. Antònia Carré and Lluís Cifuentes, "*Quesits* (Barcelona, Pere Posa, 1499). Una traducció catalana desconeguda del *Liber de homine* (Il *Perché*) de G. M. amb filtre napolità," *Arxiu de textos catalans antics*, no. 20 (2001): 543–60; by the same authors see "Éxito y difusión de la literatura de problemas en la Castilla del siglo XVI: La

Very different in terms of size compared with the *Cibaldone*, Manfredi's work is in prose and is structured into questions and answers along the lines of the pseudo-Aristotelian *Problemata*; one after the other the answers illustrate in a first part the six non-naturals (air, food and drinks, evacuation, physical exercise, sleep and wake, passions of the soul) and in the second the physiognomic characteristics of the human body. The verses on foodstuffs are inserted in the first part, without interruption, between the treatise on foods and the one on beverages, as though the author were Manfredi himself. It is quite likely, however, as we shall see, that Manfredi limited himself to englobing pre-existing verses, reworking them on his own account.

Let us try, then, to figure out who were the potential addressees of the *Cibaldone* and who were the actual readers, investigating the metric form, the *mise-en-page* of the edition, and the traces of use present in the print exemplars that have come down to us.

The *Cibaldone* is a product of its times, the fruit of the 15th-century metric experimentalism that, above all in the Veneto-Paduan and Tuscan areas, was intensively practiced on the traditional metrics that matured between the 13th and 14th centuries.¹⁴³ A first part of the short poem, which described the characteristics of fruit, herbs, bread and cereals, legumes, wines and milk, meat and fish, is composed in tercets consisting of a free verse and a rhyming couplet, with a rather unusual pattern (ABB, CDD, EFF etc.), different from the tercets with a chain rhyme canonized by Dante (ABA, BCB, CDC, etc.). The choice was clearly dictated by the contents and intended to be as functional as possible: while the interlocking rhyme accommodates the continuity of a discourse that can be articulated at length (one need only consider the duration of a canticle), the free verse which opens each tercet creates a break with what came before, and the subsequent rhyming couplet makes the tercet more memorable and pleasing, producing many short independent segments that englobe the brief descriptions of the foodstuffs in the space of three verses.

As we shall see, the tercets in the *Cibaldone* are the pieces of a mosaic that perfectly respond to the game of deconstruction-recomposition that characterises this short work in the print and manuscript tradition. The text then continues in sestets with the description of the non-natural factors, with chain rhymes and rhyming couplets (in general with the scheme ABABCC, DEDEFF etc.), here too a functional vehicle for concepts that are born and dealt with exhaustively in the compact space of six verses. The technical analysis of the metric structure of the *Cibaldone* is capable of saying a lot in regard to the historical-social context in which the short poem is positioned: in both cases it is a *serventese* – in full *terza rima* at first and then with a refrain (sestets).¹⁴⁴ Denoting the boundary between the Provençal *sirventés* and northern Italian poetry, the *serventese* was extraneous to the *lirica d'arte* and instead bound up with the production of didactic, narrative, moral and satirical works (also popularly called *sermontese* from “sermon” owing to the didactic-moralising pedantry with which it was associated in the collective imagination).¹⁴⁵ While the Provençal *sirventés* was

traducción castellana de *Il Perché de Girolamo Manfredi (Zaragoza, 1567)*,” *Asclepio* 58, no. 1 (2006): 149–96. On Manfredi and the *Liber de homine* see also the contribution of Sandra Cavallo in this issue.

¹⁴³ Francesco Bausi, Mario Martelli, *La metrica italiana. Teoria e storia* (Firenze: Le Lettere, 2010), 117 etc.

¹⁴⁴ I wish to thank Tiziano Zanato for his fundamental help in this analysis; cf. Beltrami, *La metrica italiana*, 103–04, 302–08: 303 (A4 e G2).

¹⁴⁵ Affinities and differences in the classical Wilhelm Theodore Elwert, *Versificazione italiana dalle origini ai giorni nostri* (Florence, Le Monnier, 1989), 141–42.

formally a song, the Italian *serventese* was characterised by a plurality of metric forms and for the accentuated variability of the combinations of rhymes and the length of the verses (often hendecasyllables, but also quinarys, septenaries, etc.).¹⁴⁶ The first to analyse the *serventese* describes it as a poem “suited to everyone, even to those who do not have a particularly refined intellect, like the men who perform practical activities and farmers [...]; it is more comprehensible and easier.”¹⁴⁷ And the *Cibaldone* is indeed characterised for its being a short poem of a didactic nature, very easy to get to grips with thanks to its paratactic and fragmented style, and naturally pleasant thanks to the rhyme. The verses are mostly but not exclusively hendecasyllabic, the at times imperfect rhymes do not rigorously follow the chosen scheme, as is proper to a poem that is more didactic than artistic.

The verses present in the editions of the *Liber de homine ovvero del Perché* by Manfredi have the same characteristics, which however only employs the *serventese* in tercets,¹⁴⁸ with a list of the food substances and their therapeutic or harmful qualities, but with many inversions in the succession of the descriptions with respect to the booklet. Unlike the *Cibaldone*, the verses of the *Perché* begin, in the early editions, with bread and cereals, then continue by describing legumes, meat and fish, milk and dairy products, fruits, vegetables, spices and lastly wine and water. The work then picks up on the thread of the prose divided into questions and answers on foodstuffs, with further analysis of a doctrinal kind.¹⁴⁹ A part of the *Cibaldone* is thus found lodged within a prose work rather different from the booklet itself – as we noted, one suitable for all palates, even if with a respectable medical-scientific content, aligned with the knowledge of the era. Effectively, in spite of the expedient of the elementary question/answer structure, the *Perché* is not a text endowed with great communicative power. Apart from the contents in part theoretical, Manfredi’s Italian is stylistically complex, the long periods rich in subordinates (hypotactic), its technical lexis mingled with Latinisms, Tuscanisms and some more popular terms – an evolving language, substantially in search of a specialist language for professionals, academics, cultivated circles.¹⁵⁰

Fig. 13 Bologna, Biblioteca comunale dell’Archiginnasio, 16.O.11.19

Fig. 14 Bologna, Biblioteca comunale dell’Archiginnasio, 16.O.11.19

As confirmation of the limited disseminating function of *Il Perché* is the fact that many incunabula turn out to be annotated in Latin by 15th- and 16th-century readers that even, in their *marginalia*, translate some

¹⁴⁶ The variety of forms taken on by the *serventese* is listed in Beltrami, *La metrica italiana*, 303–04.

¹⁴⁷ Dalla *Summa* di Antonio da Tempo (1332), citation reported in the original Latin and translated by Beltrami, *La metrica italiana*, 103.

¹⁴⁸ These are not leonine verses (rhyming hemistichs) as reported by Tommaso Duranti, *Mai sotto Saturno. Girolamo Manfredi, medico e astrologo* (Bologna: Clueb, 2008), 76.

¹⁴⁹ In the subsequent editions the text in verses will start with the characteristics of the meats.

¹⁵⁰ See the thorough analysis by Fabio Foresti, “Il lessico medico e il volgare nel *Perché* di Girolamo Manfredi,” in the re-edition of the *Liber de homine – Il Perché*, ed. Anna Laura Trombetti Budriesi and Fabio Foresti (Bologna: Luigi Parma, 1988), 41–51. In general: Rita Librandi and Rosa Piro, eds., *Lo scaffale della biblioteca scientifica in volgare, secoli XIII–XVI* (Firenze: SISMEL Edizioni del Galluzzo, 2006).

passages of interest in Latin: and this happens both for the part in prose and for that in verse.¹⁵¹ There are however also copies of *Il Perché* carefully examined by non-professionals who annotate in the vernacular (but with a highly *litteratae* hand and language) and who demonstrate a great interest in the practical knowledge that they can gain from the text. This is the case of the 16th-century owner of an exemplar now in the Biblioteca dell'Archiginnasio of Bologna.¹⁵² The anonymous writer annotated the text in verses much more systematically than that in prose, transcribing in the margins and numbering the food substances with therapeutic properties; at times he adds the peculiar effects that they have on him, e.g. “For me rice with milk is not good,” “bad for me are small beans” etc. (see Figs. 13-14 and related legends). Manfredi’s work was used to construct a personal nutritional handbook, with numbered items to map the ‘good’ foods, not only in general but with reference to the owner’s constitution and easily retrieved for every need he/she might have. A little after the end of the verses, the annotations to the text in prose become fewer and then disappear. This is a sign that shows how important it was to broaden the *palette* of the users to non-professionals by the insertion of a text in verse like the *Cibaldone* within a work of medicine featuring a certain degree of complexity.

Given its extraordinary and enduring publishing success after the 15th century, it remains to be seen whether the difficulty with Manfredi’s language was smoothed over in the course of over two centuries during which *Il Perché* was reprinted – perhaps following linguistic revisions apart from the editing of the contents¹⁵³ – or if the perception of the level of difficulty changed among the readers. At first sight it seems as though both factors played a role: in the mid-16th century the preface that was in Latin was also translated into Italian, while the prose underwent changes in the direction of actualisation, simplification and lightening.¹⁵⁴ Changes, all these, in line with the material appearance of the text that evolved over the course of the years: only two 15th-century editions came out in folio, then they would all be in 4° format, and ever more often from the 16th century in 8°, with the frontispiece at times decorated with a charming woodcut or small xylographic initial letters, reaching the format 12° in the 17th century. From its very first elegant and somewhat luxurious appearance, with illuminated initials (Fig. 15a), *Il Perché* would increasingly take on the characteristics of a “libretto” (booklet, and it is defined as such in the Italian preface), handy in size and affordable for many people (Figs. 15b-c). It would be interesting to investigate analytically the evolution of the language and systematically the typology of annotations over the centuries, which definitely underwent changes – probably towards a widening of the range of users well beyond the professionals, to include some who were lower down in social rank, so as to move the readership from those of ‘high’ educational attainment to full-fledged dissemination among highly varied lower class social groups.

Fig. 15a Bologna, Biblioteca comunale dell'Archiginnasio, 16.O.11.19

¹⁵¹ E.g.: <https://data.cerl.org/mei/00200914>, <https://data.cerl.org/mei/02013527> (with reproduction of the exemplar attached); <https://data.cerl.org/mei/00200778> (Latin translations).

¹⁵² Bologna, Biblioteca comunale dell'Archiginnasio, 16.O.11.19 (described in <https://data.cerl.org/mei/02140071>).

¹⁵³ These being made for different purposes, see the observations of Sandra Cavallo in this issue.

¹⁵⁴ Comparing, for instance, only the beginning of the 1497 edition with that of 1596 there emerges an understandable orthographic adaptation to the language spoken one century later, but also the deletion of Latinisms such as ‘egritudine,’ replaced with ‘infirmità’ or with periphrasis. A systematic comparison would allow for further observations in this direction.

Fig. 15b London, British Library

Fig. 15c München, Bayerische Staatsbibliothek, Shelfmark Path. 802 oc

That of *Il Perché* is an evolution of the paratextuality that recalls very closely the changes of the *regimina Salernitana* and that also involves the *Cibaldone* – a booklet that, from the outset, given the language and the meter used, was also addressed to a non-specialist public. In the space of a few decades the layout of the editions of the *Cibaldone* changed a great deal: from the elegant in folio with verses in a single column that stood out between wide blank margins to the more reduced 4° format with the text compressed into two columns, but embellished with naïve but appealing woodcuts (Figs. 16a–16e). We can realise the material forms of the text becoming progressively both more attractive and poorer.

Fig. 16a Copenhagen, Royal Dutch Library

Of the thirty or so surviving exemplars a couple bear traces of elite users: a nobleman (Fig. 16b, with a coat of arms) and a learned man, at least. The Venetian Domenico Nigraro, for example, underwrote in Latin and in a perfect humanist hand the ownership of a *Cibaldone* in folio, threatening the damnation of the soul of anyone who might try unlawfully to take possession of the booklet: “Qui istum librum invenerit, domino Dominichi Nigrari dederit: peccatum non fecerit, anima eius salva erit” (Fig. 16a).¹⁵⁵ “Negrar,” by the way, is a place-name in the Verona area, so presumably the annotator was from the Veneto area; he does not call himself a doctor (or physician), but simply “dominus,” certainly he must have been a very well-off and learned person. Nigraro added on the blank *verso* of the last leaf a sonnet on a dietary theme that was then circulating in several 15th-century manuscripts, amongst them the *Codex Atlanticus* by Leonardo da Vinci – and indeed the sonnet has been erroneously attributed to him.¹⁵⁶ But the “*Çibaldone*” was actually one of Leonardo’s readings, together with works of medicine in the vernacular and in Latin – notwithstanding the fact that his mastery of Latin was rather shaky.¹⁵⁷ Leonardo was undoubtedly a genius in terms of his achievements and thus hardly representative of the average individual, but as regards the mingling of *high* and *low* readings and the coexistence of instruments of linguistic appropriation – Latin and the vernacular – he could be more representative of the diffuse figure of the artisan than one might think.

Among the surviving copies in 4° there are a few that have been elegantly decorated and annotated in an orderly fashion.¹⁵⁸ But in line with the evolution of the textual forms in their materiality, the traces left by

¹⁵⁵ MEI <https://data.cerl.org/mei/02013639>.

¹⁵⁶ Edmondo Solmi, “Le fonti dei manoscritti di Leonardo da Vinci,” *Giornale storico della letteratura italiana*, Supplement 11/12 (1908): 212.

¹⁵⁷ On Leonardo’s library, besides the fundamental studies by Carlo Dionisotti and Augusto Marinoni, see the updated online contribution of Fabio Frosini, *La biblioteca di Leonardo* (http://picus.unica.it/documenti/LdV_biblioteche_dei_filosofi.pdf), endowed with the transcriptions of the two lists of books that appear in the Leonardesque manuscripts with related bibliography. Obviously, we do not have Leonardo’s copy of the *Cibaldone*, but only the title in his personal library, together with a regimen sanitatis (“Conservation di sanità”), a “Fassiculum medicine latino,” “Montagnana de urina,” “Plinio,” “Piero Cressentio,” “Erbolario grande,” “Filosofia d’Alberto Magno,” “Secreti d’Alberto Magno,” “Albumasar,” “De chiromantia.”

¹⁵⁸ MEI <https://data.cerl.org/mei/02005665>, <https://data.cerl.org/mei/00201767>, with full reproduction and MEI <https://data.cerl.org/mei/00201640>.

scarcely literate readers seems to have increased. The exemplars at the end of the century are often without margins and worn out by use (Fig. 16d), and to judge from the nature of the comments, from their clumsy vernacular (Fig. 16c), and from the often very cursory and irregular annotations to the text up to the 17th century, it seems that we often find ourselves before an ordinary man without the least medical knowledge; that is, a not highly literate individual desiring to learn as much as possible from the short poem, while enjoying the nice aspect of the pamphlet adorned with woodcuts: printers had learnt how to widen still more the scope of their market.¹⁵⁹ Actually the *Cibaldone* was an affordable read for a great many people: on 3 April 1487 the book dealer Francesco de Madiis sold a copy in Venice for just 4 soldi, the price of a small book of elementary grammar (like the *Regole del Guarino*) or of an *Offizietto della Madonna*, a bestselling devotional text.¹⁶⁰ And, just to give some idea of the purchasing power of 4 soldi at the time, bear in mind that for such a sum one might buy a nice fat chicken or an excellent eel, which even a trainee labourer could have afforded, as the daily wage ranged between 12 and 17 soldi.¹⁶¹

In the 16th century copies of the *Cibaldone* were often bound in miscellaneous volumes together with poetic texts in Latin or short reports of contemporary events that could be written in Latin or the vernacular, proving the substantial bilingualism that characterised the Europe of the times.¹⁶² Among other things, the presence of the *Cibaldone* together with titles such as the *Poematia* of Lilio Gregorio Giraldi (1536), the *De raptu Cerberi* by the Ragusan Giacomo Bon (1538) and the tragedy *Progne* by Gregorio Correr (1558) is indicative of a reader who saw in the short medical poem both a work of intellectual recreation like the others in the volume, and a tool for learning to live a healthy lifestyle.¹⁶³ Finally, among the 18th-century owners of the *Cibaldone* were a large number of collectors, some of very high status such as Maffeo Pinelli and Antonio Magliabechi, because the didactic message progressively gave way to erudite and philological interests.¹⁶⁴

Fig. 16b [4 images in a Nuncius page]

Fig. 16c

Fig. 16d

Fig. 16e

¹⁵⁹ Cf. the annotated Vatican Library copy, described in <https://data.cerl.org/mei/00201692>; and <https://data.cerl.org/mei/02012724>; <https://data.cerl.org/mei/00201823>, with reproductions.

¹⁶⁰ Cristina Dondi, *Printed Books of Hours from Fifteenth-century Italy: The Texts, the Books, and the Survival of a Long-lasting Genre* (Florence: Olschki, 2016).

¹⁶¹ Cristina Dondi, ed., *Printing R-Evolution, 1450–1500: i cinquant'anni che hanno cambiato l'Europa = Fifty Years that Changed Europe* (Venice: Marsilio, 2018), 81–82. On the De Madiis ledger see Cristina Dondi and Neil A. Harris, "Best Selling Titles and Books of Hours in a Venetian Bookshop of the 1480s: the Zornale of Francesco de Madiis," *La Bibliofilia* 115, no. 1 (2013): 63–82.

¹⁶² In particular see the miscellany described in <http://www.inka.uni-tuebingen.de/?inka=48003091>.

¹⁶³ MEI <https://data.cerl.org/mei/02018082>.

¹⁶⁴ Maffeo Pinelli (<https://data.cerl.org/mei/00201627>), Antonio Magliabechi (<https://data.cerl.org/mei/00201767>) Thomas Croft (<https://data.cerl.org/mei/02018082>) a woman (<https://data.cerl.org/mei/00201768>), John Ker, third duke of Roxburghe (<https://data.cerl.org/mei/00201774>).

Examination of the traces of use in incunabula copies of the *Cibaldone* indicate that it came to represent over the decades an instrument par excellence for the dissemination of practical medical knowledge together with notions of theoretical medicine among noblemen and learned persons but also among artisans and the scarcely literate. The same verses inserted in *Il Perché* very probably helped to increase the dissemination of Manfredi's work which, at least during the first decades after its publication, needed quite a cultivated readership.

But to reconstruct the origin and circulation of a text such as the *Cibaldone* it is also opportune to explore its manuscript tradition, which has hitherto never been studied. One trail in the production of verses in the vernacular on the plant kingdom helps to demonstrate that the origins of the poem lie in central-northern Italy. Starting from the fourteenth century, thanks to many copyist-re-drafters, various of the so-called *Vanti* circulated between Tuscany and Veneto, in which the fruit, given a voice, described their own dietetic-therapeutic qualities in rhymed quatrains.¹⁶⁵ Among the *Vanti*, Lodovico Frati reported a miscellaneous volume of medical texts in the private library of the marquis Nerio Malvezzi de' Medici in which a *Vanto della frutta* is preceded by a short poem, "perhaps written by Girolamo Manfredi" in tercets and sestets, introduced by the title "*Questo libro ha nome Cibaldone [per Zibaldone] tracto [sic] de medicina.*"¹⁶⁶ Frati only transcribed the *Vanto*, but the description he gave of the short poem fully coincides with that of the *Cibaldone* of the print tradition.

As we await the rediscovery of the volume of medical miscellany from the Malvezzi library,¹⁶⁷ we can nonetheless cite other 15th-century manuscripts that contain the text of the *Cibaldone* or parts of it. A magnificent illustrated herbarium now at the Wellcome Library, Ms. 336, associates the verses with drawings of fruit plants (from c. 76r) and cereals (from c. 95r);¹⁶⁸ like the *Cibaldone* its tercets are composed in a free verse and distich with rhyming couplets (ABB, CDD etc.), albeit in a different order and at times giving way to a few lines in prose or just one line of text.

Here (Fig. 17a) is the water-coloured drawing of the fig, accompanied by two tercets describing the benefits of fresh and dried figs:

Fig. 17a London, Wellcome Library

¹⁶⁵ Francesco Pellegrini reported a dozen or so manuscripts, "Due poesie del sec. XIV 'La natura delle frutta'," *GSLI* 16 (1890): 341–352; Francesco Novati, "Di due poesie del secolo XIV su 'la natura della frutta'. Nuove comunicazioni," *GSLI* 18 (1891): 336–354, e Lodovico Frati, "La 'natura delle frutta' secondo un nuovo testo," *GSLI* 21 (1894): 206–209. Paolo Rosso connects this production also to the subsequent humanistic interest in the cataloguing of fruit, "Tra immagine e testimonianza. La frutta nella letteratura tardomedievale e umanistica," in *Le parole della frutta. Storia, saperi, immagini tra medioevo ed età contemporanea*, ed. Irma Naso (Torino: Zamorani, 2012), 185–220.

¹⁶⁶ Frati, "La 'natura delle frutta'," 206.

¹⁶⁷ A part of the marquis' library entered the Biblioteca comunale dell'Archiginnasio, but there was no lack of dispersions in the antiqués market. I wish to thank Dr. Maria Grazia Bollini of the Archiginnasio in Bologna for the thorough checking of the special Malvezzi de' Medici Fond, which unfortunately confirmed the non-existence of the miscellany reported by Frati.

¹⁶⁸ There is an undergraduate dissertation whose subject is the transcription of the manuscript, for now not consultable, realised with the supervision of Prof. Alessandro Vitale Brovarone.

Ms. 336 establishes a close connection between the *Cibaldone* and the genre of the herbal, but in the Wellcome collection is another manuscript (Ms. 682) that contains the text in tercets of the *Cibaldone* in unabridged form (including the descriptions of plants, meats, legumes). Two tercets, that again follow the ABB, CDD rhyming scheme (Fig. 17b), are dedicated to fresh and dried figs:

Fig. 17b London, Wellcome Library

A third 15th-century copy of the *Cibaldone* is preserved in the Biblioteca Riccardiana in Florence in Ms Ricc. 2154 (Fig. 17c). Preceded by a recipe book and followed by two *regimina sanitatis*, a further recipe book and a surgery tract, the text deals with the nature of fruits, meat, fish and spices. The miscellaneous volume itself warrants a closer study of the compiler's aims; he introduces the text on fruits like this: "Qui appresso farò richordo della natura di molti frutti elloro virtù et acche appropriate [sono], e prima comincerò."¹⁶⁹ The text is not in rhyming verse, but in a prose that translates the tercets resorting to short periphrasis, synonymous and explicative concepts of the verses, perhaps believed to be hard to comprehend in their extreme synthesis. The result leads to some change in meaning, even if the arrangement of the descriptions is more similar to the succession that is also found in the print editions of the booklet, in which after the title, the incipit is given by the description of fresh figs and then dried ones.

Fig. 17c Firenze, Biblioteca Riccardiana

Lastly, here we have two tercets on figs in the in-folio *editio princeps* of the *Cibaldone* (Fig. 17d), which, as has already been said, open the short poem in its print editions in booklet format (but not inside *Il Perché*):

Fig. 17d Copenhagen, Royal Danish Library

Starting from this superficial comparison between three manuscripts and a printed version we realise that, even in the identity of the tercets, the linguistic variants are many – starting from the lexical and orthographic variations, each time the fruit of adaptation to the geographical area of provenance of the copyist–cum–re-elaborator.¹⁷⁰ There certainly exist, dispersed in Italian and European libraries, other manuscripts that contain a part or the full text of the *Cibaldone*. It would be useful to locate and systematically examine the manuscript copies – e.g. who penned these manuscripts and for what purpose? How did their style, text and paratext change over the centuries? Etc. – and the miscellaneous volumes conveying the text of *Cibaldone*, because, along with the study of the print tradition and its consumption, it would allow us to reconstruct in

¹⁶⁹ Mahmoud Salem Elsheit, *Medicina e farmacologia nei manoscritti della Biblioteca Riccardiana di Firenze* (Manziana, Rome: Vecchiarelli, 1990), 44. Ms 2154, f. 67r, rubricated: "Hereafter I will recall the nature of many fruits and their virtues, and what they are good for, and first I will begin." [translation is mine]. The compiler looks like a medical professional (apothecary?), but only a direct study of the manuscript may or may not corroborate the assumption.

¹⁷⁰ The linguistic variations will continue also in the print tradition, the alteration in the sequence of the descriptions is a lot less.

well-rounded fashion its actual power of dissemination of practical-scientific knowledge at the time. Indeed, growing international databases can support historical research also by looking at the printed and the manuscript book as historical sources per se.¹⁷¹

Furthermore, it is indeed texts like this, or the *Regimina sanitatis Salernitana*, which are almost impossible to harness in a critical edition, that tell us a great deal about the original weakness of the author, that is a plural authorship fragmented in time, in which every time a text was transcribed it was partially recreated. Girolamo Manfredi was definitely one of the various authors/diffusers of the *Cibaldone*'s tercets, but probably not the first inventor nor the author as we mean it today.¹⁷² In each edition the printing press would fix, crystallizing in a number of copies, one version of the text over the others and marginalizing the user's intervention—indeed restricting it to the *marginalia*—paving the way to the recognition of the originality of the (literary) invention as the exclusive privilege of one individual. It is almost a sort of role play in which the author and the reader in any case depend on each other: the strengthening of the author's profile is followed by a weakening in the reader/user's status. Once more there is the need, where possible, for an analysis both of the manuscript tradition of the texts and the print one with related interventions by the readers.

8. Conclusions

The practical medicine that went into print in the 15th century gave many more individuals than previously the chance to appropriate medical-scientific knowledge for themselves which, however elementary or to be updated, supplied them the tools with which to decode the book of nature, and more concretely, knowing the therapeutic or harmful qualities of the substances, to themselves produce medicinal remedies useful for preventing and curing disorders of various kinds. A lot of work still remains to be done – and not only on the 15th century: the study of the manuscript and print tradition of certain long-lasting titles such as *Cibaldone*, *Il perché* or the *Regimina sanitatis Salernitana*, along with the examination of the consumption traces of this production over the centuries should allow us to map and make sense of the changes of their contents, texts and paratexts. Even on a cursory initial inspection these elements suggest a growing capacity of dissemination of medical-scientific knowledge of such titles over time, well beyond the profession, and towards the pursuit of pleasantness in reading for an audience that was growing larger day by day.

Such long-term reconstructions/analysis would help us to understand the silently disruptive effects of proto-typography, which are to be seen not only in the texts of the classical authors or the *auctoritates* consolidated by the tradition, but also in the anonymous and pseudonymous texts that dealt with *materia medica*, in the recipe books and in the *regimina sanitatis*, or in the felicitous combinations of these genres. It was indeed these works of practical medicine, often slim, sometimes roughly illustrated, that fuelled the

¹⁷¹ In her study of the *regimina sanitatis* genre, Marilyn Nicoud has worked mainly on historical inventories of private and public libraries and on the direct examination of manuscripts; now we can enhance her approach through the examination of printed exemplars from the 15th century onwards, taking advantage of the increased availability of collectively implemented – and to be implemented by scholars and librarians - digital tools.

¹⁷² In regard to Manfredi's authorship of the same *Il Perché* and the previous debate on this issue, see David A. Lines, "When Is a Translation Not a Translation? Girolamo Manfredi's *De homine* (1474)," *Rivista di storia della filosofia* 2 (2019): 287–307.

domestic dimension of prevention and cure, contributing to creating patients ever more aware of their own choices before the plurality of the therapeutic provisions (physicians, apothecaries, empirics etc.), patients confident in the notions that they had acquired and ever curious to acquire new ones.¹⁷³ And at the summit of this type of publications there were compositions in verse like the *Cibaldone*, which declined in its own way the Horatian *miscere utile dulci*: an enjoyable read, linguistically and stylistically accessible, with reliable, albeit parcelled out, notions of practical as well as theoretical medicine.

Notions of preventative and curative medicine fell upon a fertile terrain of families accustomed for generations to make use of the local ingredients to manage their own health and that of their relatives, and thus to discover the potential of the natural realms that they still did not know about. In the city that saw print production triumph – 16th-century Venice – many among these people interested in nature – professionals but above all non-professionals – would push themselves to make from their own domestic recipes a small family-led commercial activity, that of the *segreti medicinali*, authorised by the local health office and at times even protected by the privilege that the author of an invention was awarded.¹⁷⁴ And it is important to recognise how the roots of this phenomenon also lie in the earliest printing of practical medicine.

Acknowledgments

I wish to thank both my peer reviewers for their insightful comments, and the intellectual and humane generosity of Hal Cook and Mario Infelise, supervisors of my current Project “MAT-MED in Transit. The Transforming Knowledge of Healing Plants,” Ca’ Foscari University (Venice), Brown University (Providence), Marie Skłodowska-Curie Project (Global) - H2020 (G.A. 844886).

Figures 7-9, 11-17:

¹⁷³ Illuminating is the synthesis, with further research, by Sandra Cavallo, “The Domestic Culture of Health,” in *The Routledge History of the Domestic Sphere in Europe, 16th to 19th Century*, ed. Joachim Eibach and Margareth Lanzinger (London: Routledge, 2020), 455–74.

¹⁷⁴ Sabrina Minuzzi, *Sul filo dei segreti: farmacopea, libri e pratiche terapeutiche a Venezia in età moderna* (Milano: Unicopli, 2016).

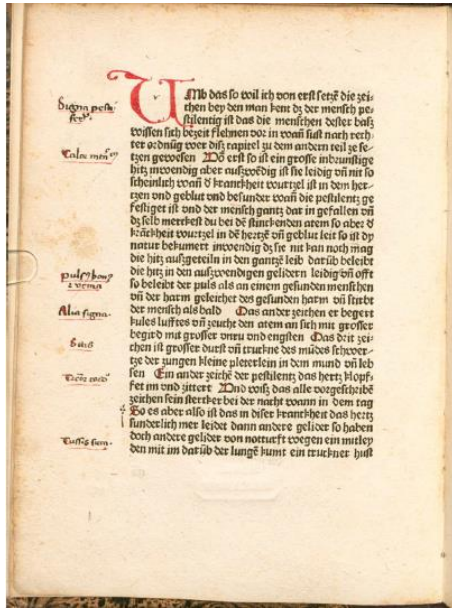


Fig. 7 *Büchlein der Ordnung* in German annotated in Latin (in-4° format)

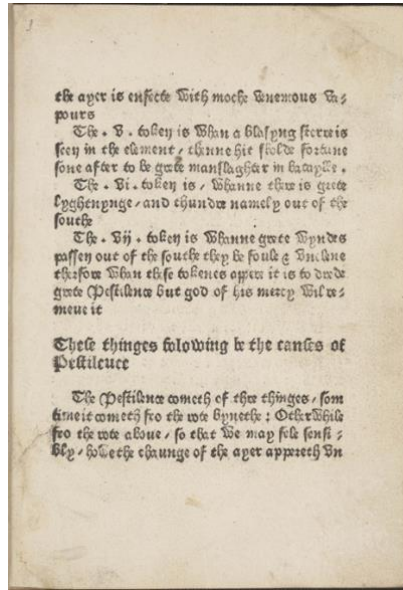


Fig. 8 *Regimen by Jacobi* in English, with a well articulated text and airy page (in-4° format)

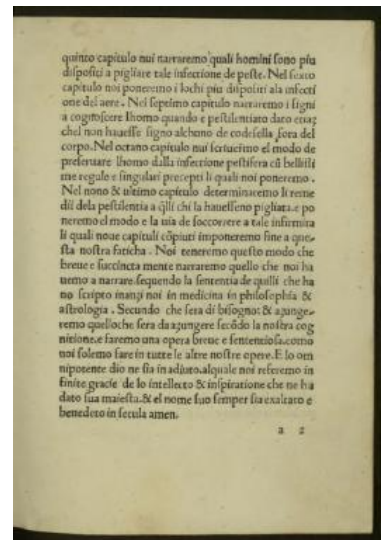
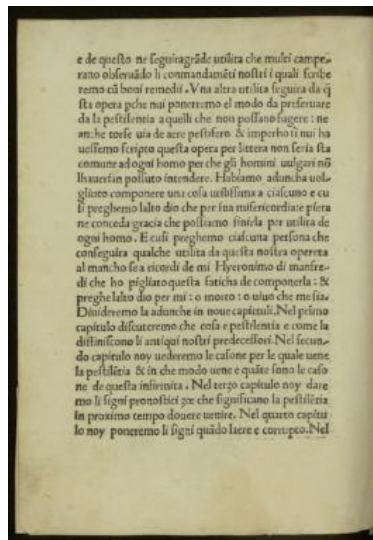
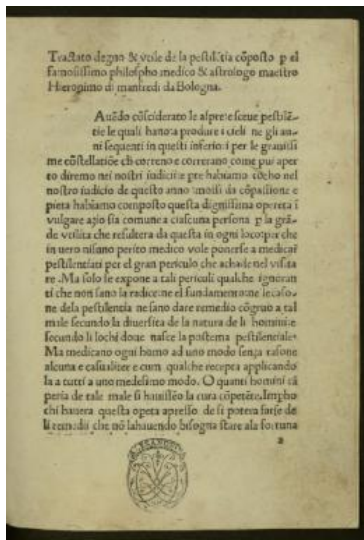


Fig. 9 Girolamo Manfredi, *Trattato della pestilenza* [Bologna: Johannes Schriber, de Annunciata, after 5 Dec. 1478], 4°



Fig. 11 London, Royal College of Physicians, Shelfmark 1a(5), cc. a6r, kir © John Wiley & Sons, Inc. All rights reserved Hortus sanitatis [Strassburg: Johann Prüss, about 1507, or Cologne: Heinrich Quentell, 1499] [ISTC ih00489000]

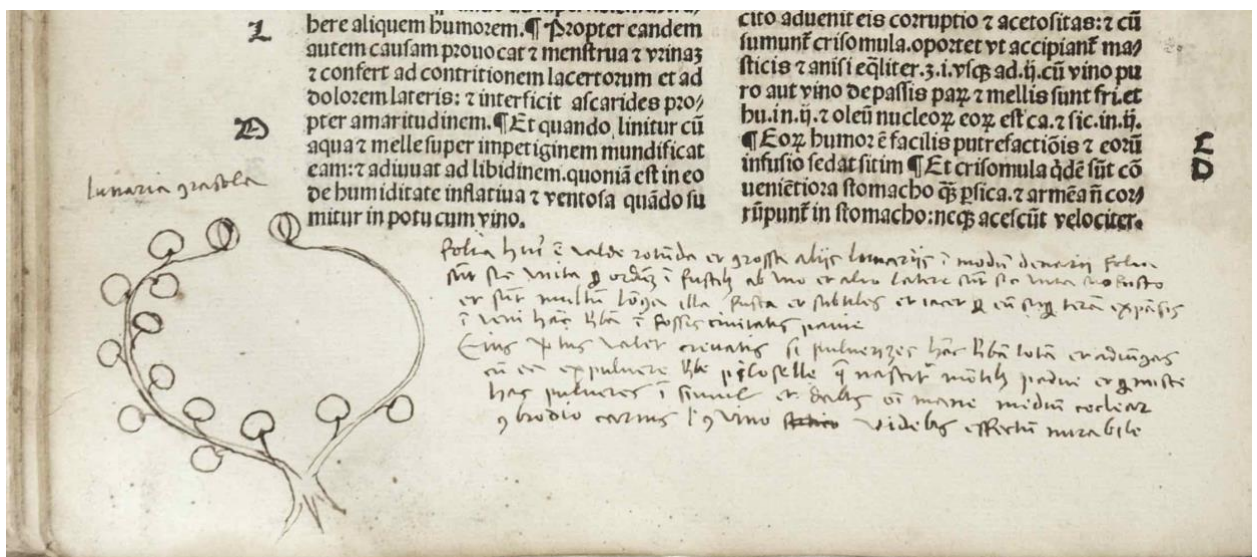


Fig. 12a Venice, Biblioteca Nazionale Marciana, Inc. 333 Hortus sanitatis, [Strassburg: Johann Prüss, not after 21 Oct. 1497], in-folio, c. [55]

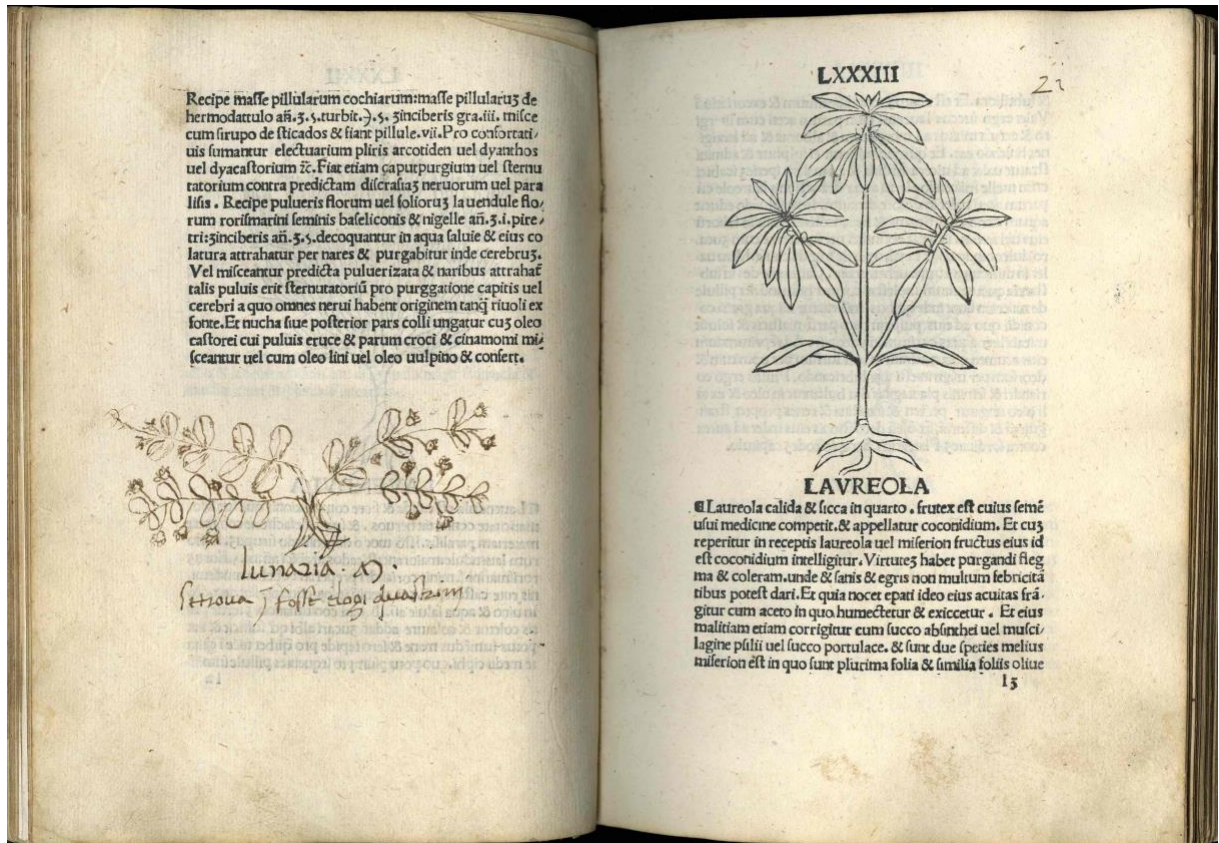


Fig. 12b

Venice, Biblioteca del Museo Correr, Inc. G 048

Herbarius latinus (without synonyms), Vicenza: Leonardus Achates de Basilea and Guilielmus de Papia, 27 Oct. 1491, 4°, c. 12v



FIGURE 12C. *Herbarius latinus (with German synonyms)* [Passau: Johann Petri, about 1486], 4°, fols. 86^v–87^r WIEN, ÖSTERREICHISCHE NATIONALBIBLIOTHEK, INK 34–18 PART 3

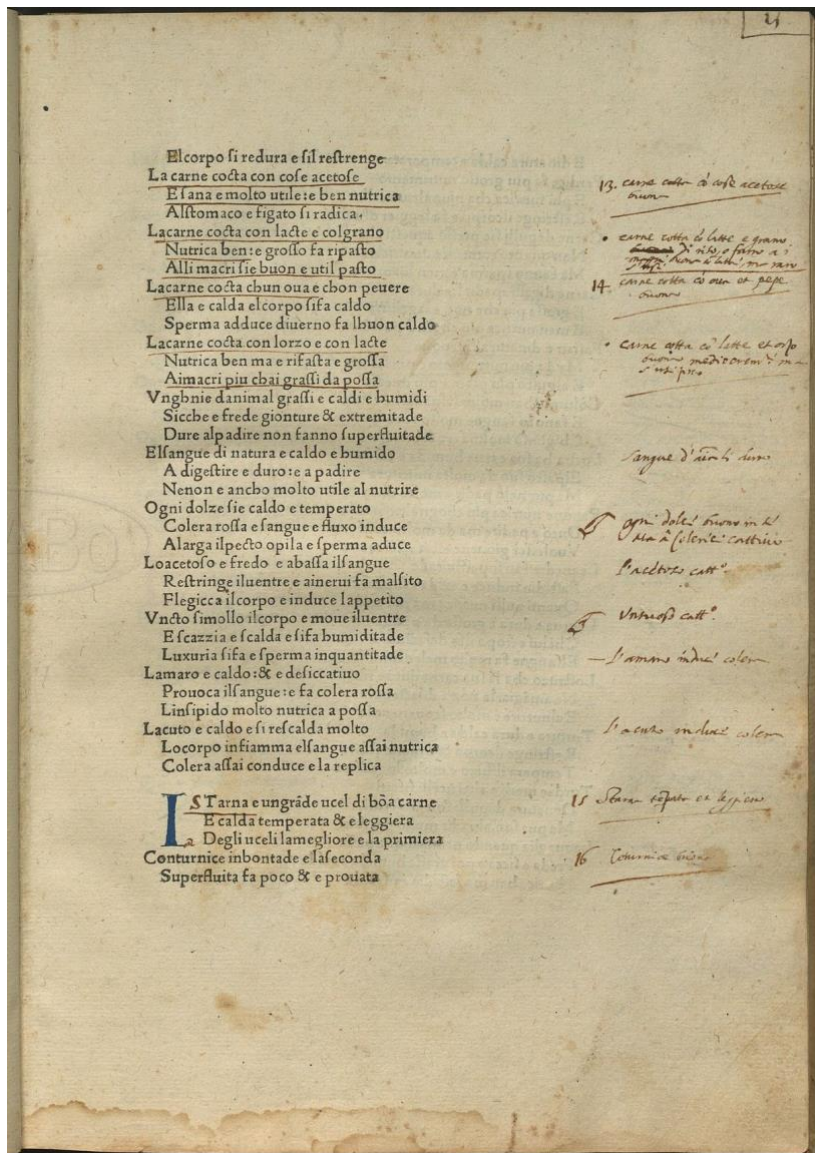


Fig. 14

Bologna, Biblioteca comunale dell'Archiginnasio

Girolamo Manfredi, Liber de homine [Italian] Libro del perché, Bologna: Ugo Rugerius and Doninus Bertochus, 1 July 1474, in folio [ISTC im00191000]

In all the pages in verses the reader transcribes in the margin, underlines and numbers the foodstuffs with positive qualities ("13. meat cooked with good vinegary things [...] 14. meat cooked with good eggs and pepper [...] 15. starna temperata et leggiera [...] 16. coturnice buona"); he comments on and highlights with *maniculae* foodstuffs and flavours that induce rage ("ogni dolce buono in sé, ma a colerici cattivo" "l'acetoso cattivo" "l'amaro induce collera" etc.).

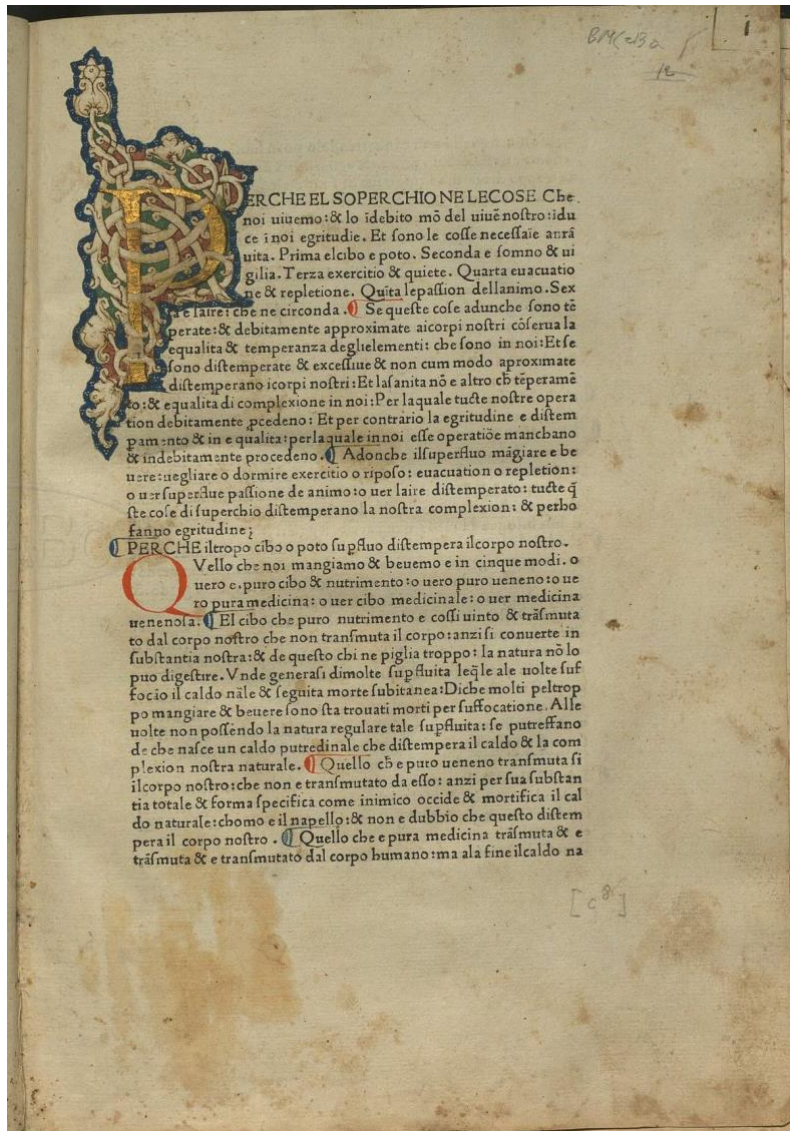


Fig. 15a

Bologna, Biblioteca comunale dell'Archiginnasio

Girolamo Manfredi, *Liber de homine* [Italian] *Libro del Perché*, Bologna: Ugo Rugerius and Doninus Bertochus, 1 July 1474, in folio [ISTC im00191000]

Initial 'P' illuminated with white vine-stems, according to the style of the central-northern area, which implies a higher price of the volume, usually put on sale with a space left blank for the initials, to be finished to suit the tastes (and the pocket) of the purchaser.¹⁷⁵

¹⁷⁵ On the topic, see the sharp and enjoyable article by Neil A. Harris, "Costs We Don't Think About. An Unusual Copy of Franciscus de Platea, *Opus restitutionum* (1474), and a Few Other Items", in *Printing R-Evolution*, 511-540.



Fig. 15b

London, British Library

Girolamo Manfredi, *Opera noua intitulata il Perché*, (Stampata in Venetia: per Benedetto di Bondoni, 1532 adi 13 settemb.), 8°



Fig. 15c

München, Bayerische Staatsbibliothek

Girolamo Manfredi, *Il nouo lume dell'arte ouero il Perché*, In Venetia: per Steffano Curti, 1678, 12°

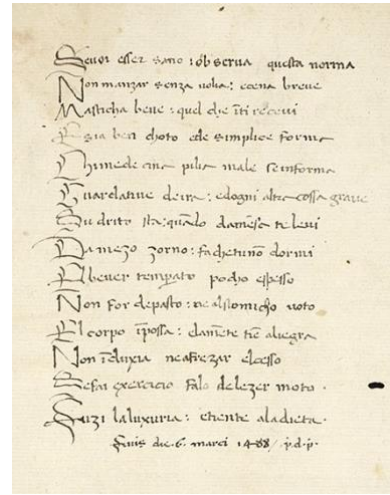
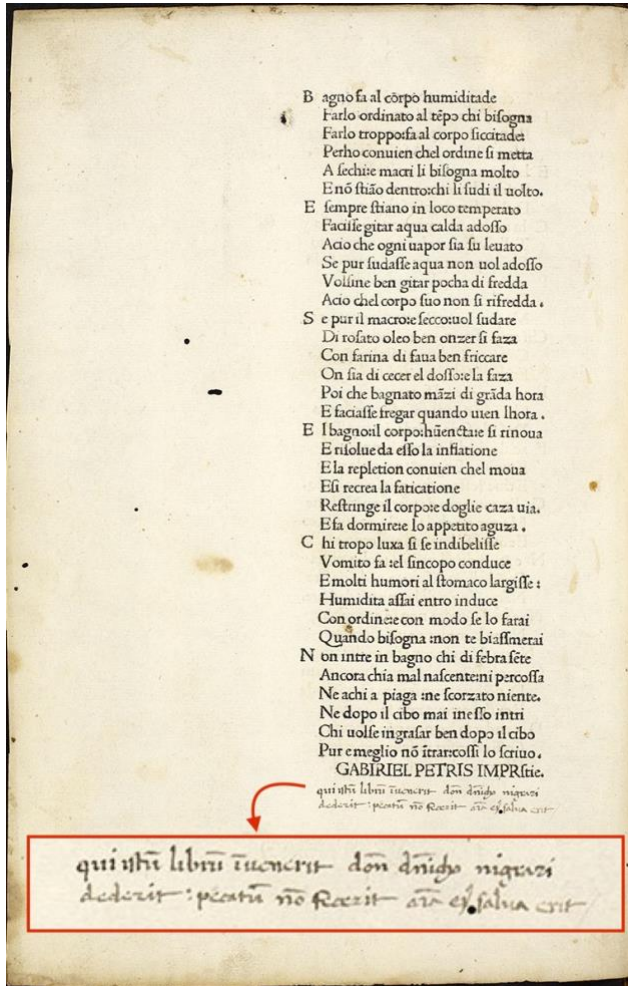


Fig. 16a
 Copenhagen, Royal Dutch Library, Inc. 3496
 Hystoria d'Almansore philosopho: Lber tertius ad Almansorem
 [Italian] Libro terzo d'Almansore, 'Cibaldone' (Venezia: Gabriele
 di Pietro, [1472-76]), in folio [ISTC iro0171600]

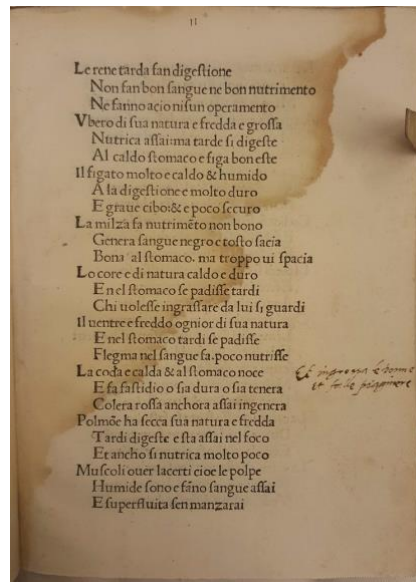
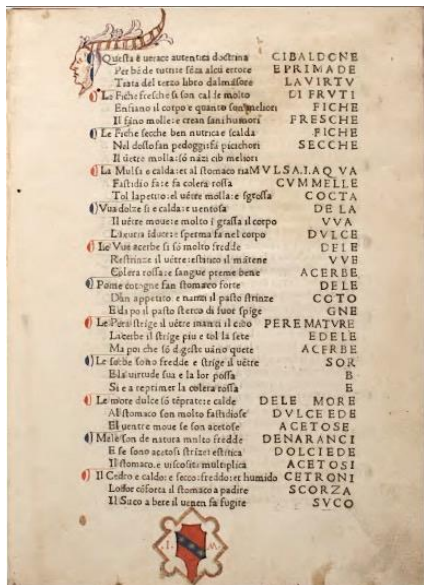


Fig. 16c

Fig. 16b

Milano, Archivio Storico Civico Biblioteca Trivulziana - ©Comune di Milano – tutti i diritti di legge riservati

Hystoria d'Almansore philosopho: Liber tertius ad Almansorem [Italian] *Libro terzo d'Almansore, 'Cibaldone'* [Turin?: Johannes Fabri Lingonensis?, about 1477], 4° [ISTC ir00171700]



Fig. 16d

Venezia, Biblioteca Nazionale Marciana

Hystoria d'Almansore philosopho: Liber tertius ad Almansorem [Italian] *Libro terzo d'Almansore, 'Cibaldone'* Venice: Johannes Tacuinus, de Tridino, [about 1500] [ISTC ir00174800]

London, Wellcome Library

Hystoria d'Almansore philosopho: Liber tertius ad Almansorem [Italian] *Libro terzo d'Almansore, 'Cibaldone'* ([Vicenza: Leonardus Achates de Basilea?, about 1480]), 4° [ISTC ir00172000] A reader observes, in regard to the cow's tail: "et ingrossa le donne e falle piagniere" ("... it fattens women and makes them cry").

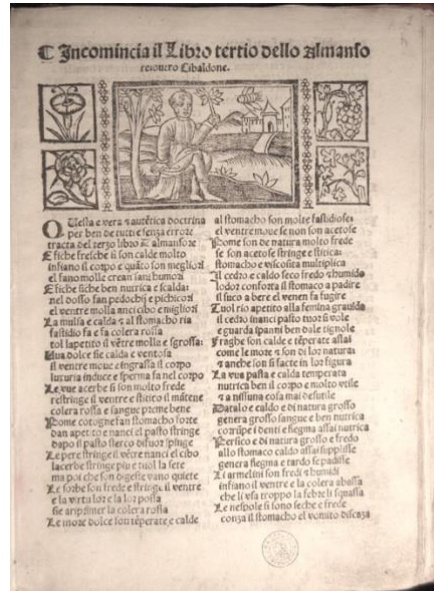


Fig. 16e

Milano, Archivio Storico Civico Biblioteca Trivulziana - ©Comune di Milano – tutti i diritti di legge riservati

Incomincia il Libro tertio dello Almansore: ouero Cibaldone (Brixiae: per Damianum et Iacobum Philippum, [1533]), 4° [EDIT16 CNCE 51966]



Fig. 17a

London, Wellcome Library

Ms. 336, c. 101v

Le fighe fresche son calde molto
Enfiano el corpo quanto son **miore**
E fan nel molo e zenerano assai **humore**

Le fighe secche ben nutrica el corpo
Nel dosso fanno vermi e **pizigori**
El ventre mola, anci cibo eno **miori**

Fresh figs are very warm, and the better they are the more they swell the body, soften the intestines and produce humors.

Dried figs well nourish the body, produce worms and soften the stomach; they are the best taken before meals (that is, on an empty stomach).

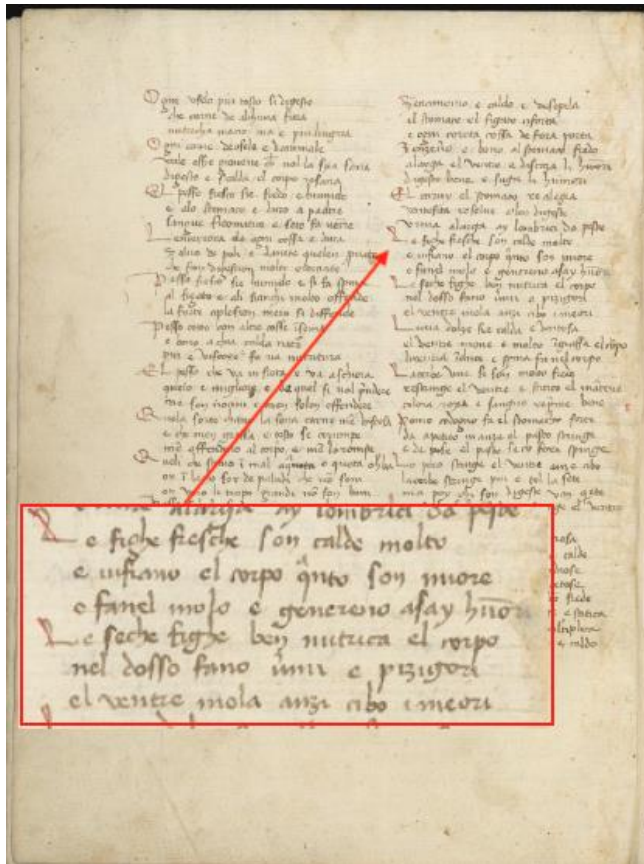


Fig. 17b

London, Wellcome Library

Ms. 682, c. iv

Le fighe fresche son calde molto
 E infiano el corpo quanto son miore¹⁷⁶
 E fan el molo e genereno asai humori.

Le seche fighe ben nutrica el corpo
 Nel dosso fano vermi e pizigori
 El ventre mola, anzi cibo è meori.¹⁷⁷

Fresh figs are very warm,
 and the better they are the more the swell the
 body;
 And they soften it and produce many humours.

Dried figs well nourish the body,
 They make worms come and itchiness
 They soften the stomach, and act better before
 meals [that is, on an empty stomach].

¹⁷⁶ Migliore.

¹⁷⁷ London, Wellcome Library, Ms. 682, c. [1]v.

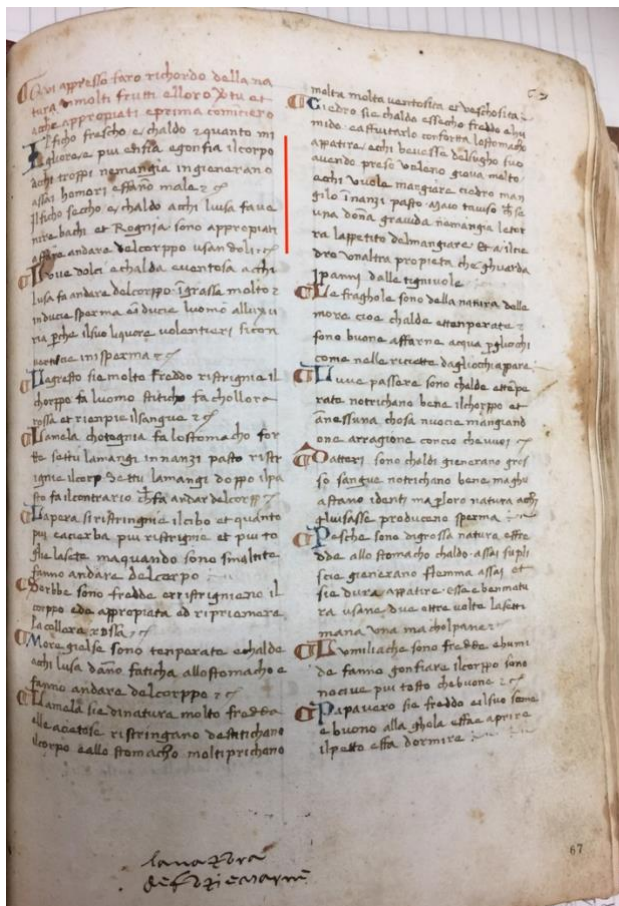


Fig. 17c

Firenze, Biblioteca Riccardiana

Ricc. 2154, c. 67r

Il ficho fresco è caldo, et quanto migliore e più enfia e gonfia il corpo; acchi troppi ne mangia ingenerano assai humori effanno male.

Il ficho secho è chaldo, acchi li usa fa venire bachi et rognia; sono appropriati affare andare del corpo usandoli etc.

The fresh fig is warm, and the better it is the more it causes the body to bloat; [the figs] produce many humours and harm those who eat them in excess.

The dried fig is warm; it causes worms and scabies in those who eat them often; they are suited to bowel movement after eating.

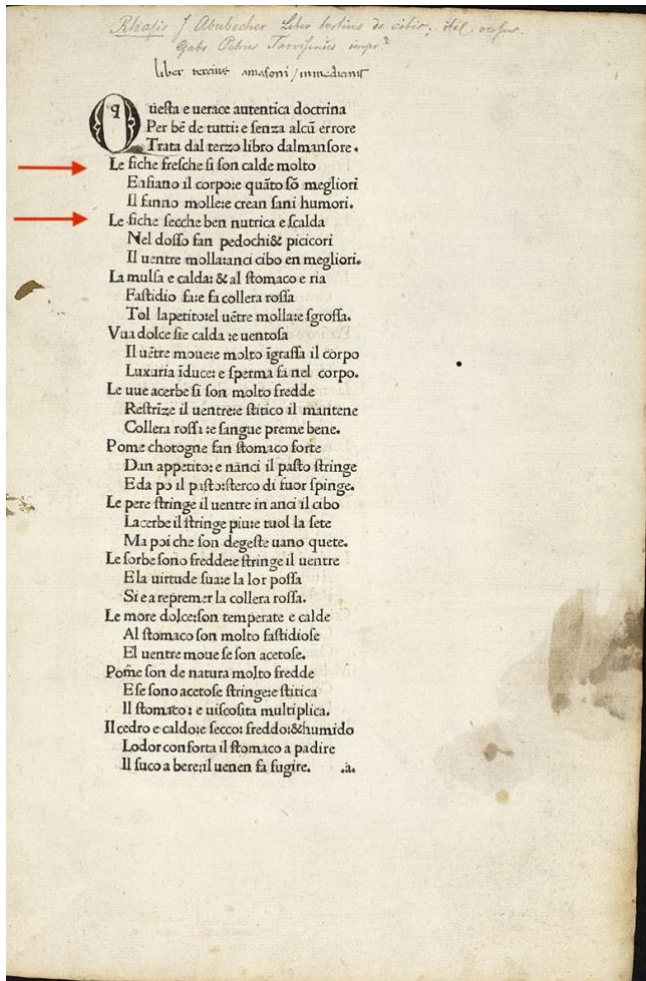


Fig. 17d

Copenhagen, Royal Danish Library
Inc. 3496

Hystoria d'Almansore philosopho: Lber
tertius ad Almansorem [Italian] Libro terzo
d'Almansore, 'Cibaldone' (Venice: Gabriele di
Pietro, [1472-76]), in folio [ISTC ir00171600]

c. 1r

Le fiche fresche sì son calde molto
Enfiano il corpore, quanto son migliori
Il fanno molle, e crean sani humori.

Le fiche secche ben nutrica e scalda
Nel dosso fan pedochi & picicori
Il ventre molla; anci cibo en migliori.

Fresh figs are very warm,
they swell the body, and the better they are
the more they relax it and produce healthy
humours.

Dried figs nourish well and warm the body.
They attract fleas and itchiness

They soften the stomach; they act better
before meals that is on an empty stomach].