FORBIDDEN Knowledge

Medicine, Science, and Censorship in Early Modern Italy

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This book is dedicated to Morgan MacLeod
with my deepest gratitude.

INTRODUCTION

The Paradox of Censorship

When the Italian doctor Francesco Redi wrote to Leopoldo de' Medici in 1670, he rhapsodized about the intense allure of books in biblical terms: "I believe that my soul will certainly be lost to perdition on account of prohibited books. If instead of creating Adam God had created me in Eden, and if instead of prohibiting me from eating that fig and that apple he had prohibited me from reading books, I am so weak that I surely would have done worse than Adam."[1] Redi's insatiable bibliophilia, described with a substantial degree of humor and self-deprecation, deftly raises several important themes about prohibited books and early modern physicians that are central to this study.

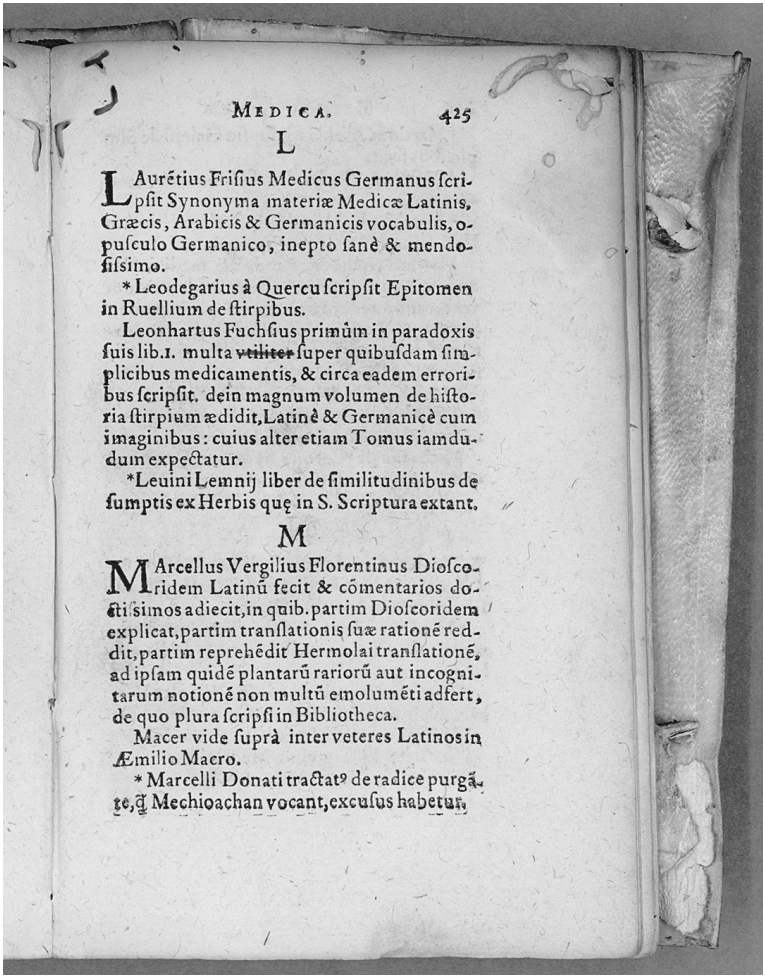
First, Redi was quite open with his patron, de' Medici, about reading prohibited volumes. While prohibited religious texts remained off-limits, prohibited professional books in medicine, law, and astronomy could still be used and read through a vast and visible Catholic censorship system that involved petitions, expurgations, and licenses. Indeed, Redi had a license issued by the Roman Inquisition to keep many prohibited books in his library.[2] A professional like Redi would have had to substantially circumscribe his medical practice if he could not access prohibited books in support of his work as a physician. Prohibited texts were part of physicians' personal libraries, on the shelves of public libraries, and circulating in secondhand book markets. The practice of reading proscribed texts was far more widespread among learned and elite society in early modern Italy than we previously understood. In this book, I tell the story of how prohibited medical texts came to be such an open and integrated part of Catholic society by the end of the seventeenth century.

Redi's reflection also presents prohibited books as fundamentally irresistible. Surely Redi's inability to refrain from reading books may have

been due in part to his personal curiosity, but he was also part of a professional community that had demonstrated a need for prohibited texts. Over the previous century, physicians had developed a broad, flexible discourse about the utility of prohibited medical books. Church officials and physicians explicitly debated which prohibited medical books were useful and which parts needed to be removed to render them safe for circulation in the eyes of Catholic authorities. The context of censorship forced physicians to articulate the utility of these books to their profession and the utility of their profession to Catholic society. The compromise of expurgation resulted in libraries with shelves of medical books that bear physical signs of censorship and generations of readers, like Redi, who were licensed to use these books openly. In the following pages, I describe the process by which physicians living a century before Redi came to read banned medical texts, and I explore the motivations that led them to do so. These early modern physicians repeatedly justified this practice through claims that prohibited books contained useful knowledge that was necessary to their work.

In this book I take the concept of scientific utility as a distinct historical subject and detail the essential and shifting valences of the important category of medical utility in relation to Catholic censorship. Take for example the copy of Paschal Le Coq's *Bibliotheca medica* (*Medical Library*) printed in 1590 and pictured here (figure I.1). Although Redi did not own Le Coq's book, his library did include the competing volume published by Israel Spach in 1591.[3] This page from Le Coq's bibliography is an evocative example of the ways that prohibited books circulated after expurgation and a telling piece of evidence about how the concept of scientific and medical utility was shaped by physicians' encounters with ecclesiastical censorship. Most of the Catholic censors described in the following pages focused primarily on evaluating the content of Leonhart Fuchs's texts and then on removing Fuchs's name from books like this one, damning the memory of the important Protestant physician. However, in this case, the censor was drawn to a different problem. Following the instructions for expurgation given in the Spanish Index of 1612, he crossed out the word *useful* from Le Coq's entry which read, "Leonhart Fuchs wrote in his *Paradoxes* book one, many things in a useful fashion about medicinal simples and about errors concerning those medicines."[4] The censor struck the word *useful* because the idea of utility in early modern Catholic Europe had become a declaration of piety in addition to a general, positive remark about the ends of knowledge.

In the second half of the sixteenth century, censors and doctors dis-



MEDICA. 425

L

LAurẽtius Friſius Medicus Germanus ſcripſit Synonyma materiæ Medicæ Latinis, Græcis, Arabicis & Germanicis vocabulis, opuſculo Germanico, inepto ſanè & mendoſiſsimo.

*Leodegarius à Quercu ſcripſit Epitomen in Ruellium de ſtirpibus.

Leonhartus Fuchſius primùm in paradoxis ſuis lib. 1. multa ~~vtiliter~~ ſuper quibuſdam ſimplicibus medicamentis, & circa eadem erroribus ſcripſit, dein magnum volumen de hiſtoria ſtirpium ædidit, Latinè & Germanicè cum imaginibus: cuius alter etiam Tomus iamdudum expectatur.

*Leuini Lemnij liber de ſimilitudinibus de ſumptis ex Herbis quę in S. Scriptura extant.

M

MArcellus Vergilius Florentinus Dioſcoridem Latinũ fecit & cõmentarios doctiſsimos adiecit, in quib. partim Dioſcoridem explicat, partim tranſlationis ſuæ rationẽ reddit, partim reprehẽdit Hermolai tranſlationẽ, ad ipſam quidẽ plantarũ rariorũ aut incognitarum notionẽ non multũ emoluméti adfert, de quo plura ſcripſi in Bibliotheca.

Macer vide ſuprà inter veteres Latinos in Æmilio Macro.

*Marcelli Donati tractat⁹ de radice purgãte, q̃ Mechioachan vocant, excuſus habetur.

Fig. I.1. Paschal Le Coq, *Bibliotheca medica* (Basel, 1590), 425, showing the word *utiliter* (useful) crossed out from Leonhart Fuchs's entry by a Catholic censor. BH MED 96, Biblioteca Histórica de la Universidad Complutense de Madrid.

cussed utility in relation to the contribution of medicine and physicians to the health of society. However, by the seventeenth century, when the pictured copy of Le Coq's bibliography was expurgated, the concept of utility itself had taken on a religious meaning as well. Following the rules for expurgation, painstakingly formalized in the sixteenth century, this censor, who may even have been a physician himself, dutifully crossed out the praise describing the Protestant Fuchs's books as "useful," because

what was useful was pious and Catholic, and Fuchs was neither by the standards of the theologians who wrote the 1612 *Index of Prohibited and Expurgated Books*. Over the course of the sixteenth and seventeenth centuries, physicians confronted an extensive system of ecclesiastical censorship by repeatedly, explicitly, and creatively defining what it meant for medical books and the medical profession to be useful. While Redi, in the second half of the seventeenth century, was too weak to resist the pull of prohibited books, he also did not have to. Over the past one hundred years physicians had labored within and against Catholic censorship regimes to create a place for these useful books in their libraries, and Redi could take advantage of these systems.

Finally, Redi's letter to Leopoldo de' Medici shows him to have been delightfully aware of the timelessness of the problem of forbidden knowledge. Since Eden, people have been reaching for knowledge that authorities sought to deny them, whether on the branches of trees or the shelves of libraries. I examine the age-old theme of forbidden knowledge through the censorship of medical texts in early modern Italy, a story that culminates in the society in which Redi wrote. The history of the ecclesiastical censorship of science in Italy has traditionally been told as a Galilean struggle between faith and science, destined to end in conflict.[5] However, the Catholic censorship of medical books that I describe took place largely in the years before the Galileo affair, with important—and different—emphases and consequences.

THE PARADOX OF CENSORSHIP

Censorship was a ubiquitous fact of intellectual life in early modern Europe, and it took many forms.[6] Systems of prepublication censorship and review sprang up across Europe in an attempt to control the spread of political and religious ideas in the new age of mass media facilitated by the invention of moveable type. Early modern authors even exercised varying degrees of self-censorship before a book reached the stage of licensure to be printed, so as to ensure that their works would be published.[7] This book deals primarily with the restrictions placed on books after they had already been printed and were in circulation in Europe. As we shall see, postpublication Catholic censorship in the early modern period was different in several fundamental ways from the modern systems of state-sponsored censorship that seek to remove ideas completely from public view.[8]

In the aftermath of the Reformation, various Catholic communities published Indexes of Prohibited Books—lists of books that Catholics were

not permitted to read. These lists were read aloud from pulpits, nailed to the doors of cathedrals, and distributed to booksellers. The first was the Paris Index of 1544, which was soon followed by the Indexes of Louvain, Venice, Spain, Portugal, and finally Rome in 1559. While the lists differed in particulars, they all initially banned religious works by Protestant leaders such as Martin Luther and John Calvin, books written anonymously, and even books written by Protestants that did not discuss religion. In so doing, the Indexes of Prohibited Books tied Protestant authors' religion to their scientific works, and the fate of those works to the intricacies of Catholic censorship.

Censorship was but one of the Catholic Church's responses to the Protestant Reformation, which also included councils, inquisitions, and pastoral reforms.[9] Scholars have increasingly come to understand the Catholic Church and its sixteenth- and seventeenth-century agents as functioning as a network of actors with distinct goals and motivations for controlling thought and behavior.[10] The same view holds true for our understanding of censorship. While censorship prohibited many books from being read in Italy, the normative prescriptions for book control diverged significantly from the experiences of readers.[11] Furthermore, Catholic rules about censorship were constantly being revised and would eventually allow for the accommodation of texts through expurgation and licensing rather than total prohibition. An examination of the full range of Catholic censors' activities, not just the burnings of books and authors, is essential for understanding the goals of the Counter-Reformation Church with respect to regulating both people and knowledge. As the Congregation of the Index of Prohibited Books reiterated in letters sent throughout the Mediterranean world, Catholic censorship was the business of "prohibiting, permitting, correcting, and printing books."[12]

From the Middle Ages onward, the Catholic Church relied on the pope, universities, and local inquisitorial tribunals to censor books. In the early modern period in Rome, responsibility for censorship was divided between the Master of the Sacred Palace (the pope's theologian), the Roman Inquisition, and, beginning in 1572, the newly formed Congregation of the Index of Prohibited Books. The functioning and effects of these regulatory bodies on Italian society are vast subjects that have been a source of intense scholarly debate for many years. From Adriano Prosperi's tribunals of conscience to Carlo Ginzburg's story of the burning of the miller Menocchio and Gigliola Fragnito's accounts of the burning of Italian Bibles, we are well aware of the insidious and violent acts of the Italian Inquisitions.[13] Paul Grendler's account of how censorship affected Venetian booksellers

presents us with a different image of Catholic attempts at intellectual control in the cosmopolitan city on the lagoon, where it seemed banned books were always hidden under a bookseller's bench or being surreptitiously tossed into a canal moments before an inquisitor's arrival.[14] There is truth to all of these accounts, and since the opening of the archives of the Roman Inquisition and the Congregation of the Index to researchers in 1998, we are in a better position than ever before to assess the early modern Church's mechanisms of social and intellectual control.

The flood of new sources available since the opening of the Roman archives has recently led to a revisionist and conflicted historiography about ecclesiastical censorship in Italy.[15] Much of this literature is framed by a debate about the "effectiveness" of Catholic censorship and looks to case studies of individual books or subjects as evidence.[16] I reframe the question about the effectiveness of censorship to ask instead: What were the cultural and scientific products of censorship?

Through analysis of archival sources from across Italy and the Vatican, I argue that the effects of ecclesiastical censorship were both material and discursive. The Catholic censorship of medical books was a form of promulgation, albeit limited, and a Catholic endorsement of a discourse about the utility of scientific knowledge. The Indexes of Prohibited Books catalyzed a conversation about medical texts and, paradoxically, convened a learned forum in which physicians and ecclesiastics discussed and analyzed prohibited texts and recorded and archived their opinions about these works. Indeed, this is the paradox of censorship in early modern Europe. Catholic censorship succeeded in repressing the circulation of some texts while simultaneously creating a structured arena for discussion and debate about scientific knowledge. Both projects drew on the professional expertise of ecclesiastics and lay scholars and created a select, elite readership of prohibited medical books on the Italian peninsula. This account compliments Gigliola Fragnito's conclusion that the systematic prohibition of devotional texts written in the vernacular had the effect of creating two separate "registers of communication," an elite register for those with a classical education and a lower register for those ignorant of Latin.[17] However, in the case of medical texts, elite physicians were also afforded avenues to continue to engage with prohibited materials. Catholic censorship thus sought to delineate particular forms of texts, to authorize the terms of readership, and to articulate legitimate contexts for prohibited books, in addition to keeping them out of the hands and beyond the understanding of large portions of European society.

Focusing on the stark paradox of censorship reveals the complex recep-

tion histories of many prohibited texts in Catholic Italy. These histories are usually described as either nonexistent, on the basis that the books were removed from circulation, or heterodox, on the basis that readers continued to access these books through the black market and with nonorthodox intentions. By considering ecclesiastical censorship as a limited form of promulgation and giving equal attention to processes of expurgation and licensing as to prohibition, I trace Catholic reception histories of medical books that were prohibited in Counter-Reformation Italy. Examining the process by which books by authors such as Girolamo Cardano, Conrad Gessner, and Leonhart Fuchs remained crucial parts of Catholic libraries reveals how early modern physicians evaluated the utility of these works and facilitated their continued circulation with the oversight of Catholic authorities. The censorship of medical knowledge is a particularly interesting subset of the larger history of censorship because physicians were so vocal about the utility of their profession and the utility of their books for maintaining a healthy Catholic society. The scientific and religious stakes of medicine were inextricably connected through this highly developed discourse of utility, to which the Catholic Church and Galileo would both turn in the conflict over Copernicanism in the seventeenth century.

PHYSICIANS AND THEIR USEFUL BOOKS

During the period of censorship discussed in this book, physicians became increasingly professionalized. Although university-trained practitioners represented only part of early modern medical practice and healing, over the course of the sixteenth century physicians were actively consolidating their position as social and intellectual elites.[18] From the elevated status of the learned expert, physicians debated the boundaries of prohibited knowledge with ecclesiastics. Physicians' engagement with the Catholic Church through censorship contributed to the recognition of medical knowledge as an independent realm of professional expertise.[19] This expertise placed the authority of physicians over that of other medical practitioners and separate from, though not equal to, that of ecclesiastics. The legal scholar Frederick Schauer has theorized that the very ontology of censorship is that of expertise, professionalism, and separation of authorities.[20] Significantly then, my consideration of the conflict between religion and science proceeds with the recognition that religious regulation played a role in establishing the professional credentials of practitioners of early modern science.

Learned medicine in the sixteenth century was also an international enterprise. Italian universities, in particular at Padua and Bologna, were arguably the two most important sites of medical learning in sixteenth-century Europe. Swiss, German, English, and French physicians flocked to these cities on a *peregrinatio medica*, or medical travel, where they studied with Italian scholars and met physicians from across Europe.[21] William Harvey, the English physician who came to Padua to study under Girolamo Fabrici d'Acquapendente and then went on to describe the circulation of blood through the body, was but one of the famous medical travelers on the Italian peninsula. In addition to matriculated students like Harvey, medical travel also included scholars' short-term visits to places and people within the European world of medical learning. These personal connections and the shared culture of Latin scholarship formed the basis for what has been described as the medical republic of letters.[22] Sixteenth-century Catholic censorship, however, would drive a wedge into a community that was at once personal and professional, and entangled a multiconfessional, transnational community of scholars in an era of religious conflict.

When Catholic censorship and medical scholarship first came to loggerheads in Italy following the publication of the Pauline Index of Prohibited Books in 1559, the formal systems of expurgation and licensed reading had yet to be established. With its Index of Prohibited Books, the Catholic Church created its own ideal universe of proper Catholic learning in which Protestant scholars played no part.[23] However, many Catholic physicians throughout Italy complained to local ecclesiastical officials that the prohibitions interfered with their work. Physicians then became involved in a negotiation with the Church that came to define the boundaries of what was important and which authors and professionals were at the center of useful knowledge. Debate about the censorship of medical knowledge was a struggle between the inexpertly dictated regulations of the Index and the necessity of scientific knowledge to Catholic society.

In both the universities and the medical republic of letters, the study of medical texts in ancient Greek and Latin (medical humanism) was particularly widespread.[24] Many of the best new editions were edited or translated in the first half of the sixteenth century by Protestant, humanist physicians in Northern Europe including Leonhart Fuchs, Conrad Gessner, and Janus Cornarius. When the Catholic Index of Prohibited Books banned works written or even edited by Protestants, it inadvertently denied physicians licit access to the best translations of ancient texts. This was an

extremely problematic outcome for humanist scholars in Catholic Europe who put a premium on accurate textual editing and precise translation.

Complicating matters still further, in the sixteenth century scholars of varying religious beliefs, some of which were incompatible with the Counter-Reformation Church, had produced a unique and highly useful body of literature, almost all of which would be prohibited in Catholic Europe over the course of the century. Books describing plants and pharmacology written by Protestant physicians—including Otto Brunfels, Gessner, and Fuchs—were considered the best references available based on the knowledge they gathered and the precision of their images. Paracelsus's iconoclastic forays into chemical medicine earned him first a great deal of scorn and later interest from both Protestant and Catholic scholars. The seven hundred medical cases collected by the Portuguese physician and crypto-Jew Amatus Lusitanus were indispensable references, even though the author was vocal about his skepticism regarding clerical celibacy. Catholic censorship condemned all of these texts and, in so doing, forced Catholic physicians to confront the religious contexts of these authors in addition to the content of their works.

In the context of the Counter-Reformation, discussion of the religious status of medical knowledge was fundamentally confessionalized. My research is part of a larger historiographical conversation that is reconsidering learned medicine in an explicitly religious context.[25] Much of this literature has focused on reassessing the impact of the Reformation on medical learning and practice with particular attention to heterodox thought.[26] One of the goals of this book is to turn our focus from cases of heterodoxy to better understand the world of Catholic physicians.[27] Catholic physicians devised strategies, both intellectual and logistical, to navigate the culture of censorship in which they lived and worked. In the following pages, we will meet Catholic physicians involved in book smuggling, self-censorship, and both pious and devious expurgation. Throughout, I will draw attention to these doctors' attempts to justify and explain their engagement with prohibited books, as Redi's quote exemplifies in the opening lines of this introduction.

One such strategy for validating and obtaining access to prohibited books was a persistent and explicit discourse about the utility of medical knowledge, which emerges repeatedly from the wealth of archival evidence documenting physicians' interactions with Catholic censorship. While discussions about the utility of medical and scientific knowledge were hardly new, the concept of utility came to take on new meanings

in Counter-Reformation Italy. We are familiar with a traditional, cynical concept of medical utility that points to how physicians expected to make money from their practice. As Petrarch ferociously held forth in his 1355 *Invectives against a Physician*, "Your medicine has money as its goal, is subordinate to it, and exists for its sake. Draw the conclusion, O dialectician: Therefore, medicine is the servant of money."[28] From this remark Petrarch moves on seamlessly to a critique of the skills and subjects "useful and necessary" for medicine. Katherine Park has shown how fifteenth-century Florentine physicians drew on the term *utility* to refer to their ability to make money in their chosen profession.[29] For Renaissance Florentines, the concept of medical utility had long been tied to less than high-minded goals.

Other fields of knowledge also laid claim to utilitarian justifications, though perhaps more high-mindedly than fourteenth- and fifteenth-century physicians. Mathematics and its allied discipline of astronomy were described in terms of their utility.[30] Encomiums written by Renaissance scholars of astronomy detailed the many applications of astronomy for the calendar, medicine, agriculture, navigation, and pedagogy.[31] The technical arts, in general, had a special claim to the direct application of knowledge, a discourse which became central to the value of experience in early modern natural philosophy.[32] Even within the realm of literature, Horace had described the best poetry as pleasant and useful. This description of good writing as useful prompted the seventeenth-century Spanish censor Juan Caramuel to instruct censors to not only correct errors in faith in texts, but also to fix errors in grammar, mathematics, and historical fact.[33] Situated firmly at the intersection of theoretical, practical, and literary knowledge, early modern medicine had a claim to each of these utilitarian traditions.

Additionally, as the medical humanists of the Renaissance read, translated, edited, and commented upon Galen, they encountered an explanation of their craft as both utilitarian (healing the sick and preserving health) and fundamentally philosophical and theological. In his *De usu partium* (*On the Usefulness of the Parts of the Body*), Galen drew connections between the actions that specific parts of the body performed and their underlying utility. For the anatomist of Pergamon, it was not sufficient to understand the way the hand worked in order to heal it; one also needed to grasp the functions that the hand performed. The usefulness of each part of the body was "related to the soul," as Galen understood it, since "the body is the instrument of the soul."[34] Indeed, Galen laid out the theological and philosophical implications of the study of anatomy in

the final, seventeenth book, the "Epode," which he named specifically to liken it to the closing section of a hymn of praise to the gods:

> Then a work on the usefulness of the parts, which at first seemed to him a thing of scant importance, will be reckoned truly to be the source of a perfect theology, which is a thing far greater and far nobler than all of medicine. Hence such a work is serviceable not only for the physician, but much more so for the philosopher who is eager to gain an understanding of the whole of Nature.[35]

Caring for and closely studying the body could be an act of piety, as even the ancient Greek Galen described it.

In Counter-Reformation Italy, physicians and ecclesiastics alike repeatedly invoked the utility of medicine, most often as a justification for making books available selectively to certain readers, rather than burning them in their entirety. This justification operated on two levels. Physicians described medicine as a useful discipline and described their books as necessary to that endeavor. They also extended this reasoning to define themselves as part of a profession that was fundamentally useful to Christian society. The work of physicians included the theory of medicine, the practice of the medical arts, and the pious act of understanding and caring for the human body. Calling attention to the utility of a prohibited book or describing the medical profession as useful rationalized the contribution of scientific studies to Catholic society.[36]

Utility has long been considered an important discourse of the Scientific Revolution and Enlightenment, drawing inspiration in particular from the works of Francis Bacon.[37] This book takes the concept of medical utility as a central focus of historical study and argues that we must work harder to understand the many valences of this touchstone concept in its specific historical contexts. I confront this broad, flexible category of utility in each chapter to trace how medical professionals and ecclesiastical officials explained the particular roles of medicine and physicians in their society. Ecclesiastical censorship, which necessitated justifications for the continued use of prohibited medical knowledge despite Catholic bans, had the effect of amplifying and confessionalizing a discourse of medical utility.[38] As utility became central to European conversations about the value of medical and scientific knowledge, we should remain attentive to the surprising ways that the Catholic Church participated in shaping this discourse through censorship.

Finally, my research positions the history of medicine as integral to

understanding the cultural forces shaping the so-called Scientific Revolution in astronomy and mechanics.[39] Medicine is a particularly well-documented realm of early modern censorship that ultimately had great influence on the more famous encounter between science and religion in the seventeenth-century debates about Copernicanism. From censorship, professionalization, and utility in the history of medicine, I will move in the epilogue to reveal how these powerful labels were leveraged in the Catholic Church's ban on Copernicanism in 1616 and in Galileo's responses. The censorship of medical books was an especially well-articulated part of a broader contemporary discourse about the social, political, and economic stakes of scientific knowledge.

DEFINING MEDICINE IN EARLY MODERN EUROPE

This book examines the censorship of medical books in Italy by the Catholic Church in the sixteenth and seventeenth centuries. But what exactly did learned medicine encompass in this period? Throughout this study, I adopt an early modern understanding of medicine and medical knowledge that includes many texts that we would be hard-pressed today to describe as pertaining to medicine. In addition to books about anatomy, surgery, therapeutics, or materia medica, in the sixteenth and seventeenth centuries, the field of medicine also encompassed astrology, botany, natural history, and chemical medicine, reflecting the broad interests and studies of early modern doctors.

The breadth of early modern medicine can best be appreciated by examining the interests and publications of some of its leading practitioners. The life and work of Girolamo Cardano—the physician, mathematician, humanist, astrologer, philosopher, and occult enthusiast whose prohibited works were among the most popular and widely requested in Italy—encapsulates much that is intriguing and inherently complicated about the field of medicine in the sixteenth century. Reflecting on his career in November 1575, Cardano reckoned that he had probably made in total about five thousand suggestions for medical treatments, solved or investigated forty thousand problems, and composed another two hundred thousand minutiae! Based on numbers alone, he counted himself worthy of the title that the Italian jurist and humanist Andrea Alciati had bestowed upon him: "The Man of Discoveries."[40] Cardano's career was unique, but his accounting reflects the sense that knowledge, including medical knowledge, was increasing in leaps and bounds and physicians were contributing to and learning from this explosion in related and un-

related fields. By one calculation, the number of medical titles circulating in print increased by a factor of more than one hundred over the course of the sixteenth century.[41]

While Cardano was uniquely productive and perhaps uniquely self-reflective, he presents a typical problem for defining the field of learned medicine in early modern Europe: How should scholars separate the medical from the nonmedical in the career and work of physicians? Nancy Siraisi has suggested that we "reconceptualize the view of Renaissance medical learning to include elements that have hitherto seemed extraneous to either the social or the scientific history of medicine."[42] I build on Siraisi's study of history and medicine and Ian Maclean's studies of medical publishing and scholarship to define the amorphous category of the early modern learned medical book from three angles: based on readership, authorship, and early modern bibliographical categorizations.[43] Defining medicine over the course of the sixteenth century is actually a shifting task because the field was rapidly, and constantly, changing throughout this period.[44] However, each of these three approaches expands and delimits the categories of the medical in ways that early modern physicians would have found familiar. Ultimately, my definition of the medical book is capacious, encompassing what physicians read and wrote, as well as the social and professional capital that libraries provided. This approach attends to readership, authorship, and contemporary classifications to ground definitions within the realities of sixteenth-century physicians and their professional world.

One of the defining characteristics of early modern learned medicine was the enthusiasm of physicians for collecting knowledge, an undertaking that often resulted in large, varied, and widely appreciated libraries.[45] Ulisse Aldrovandi, the Bolognese physician, naturalist, and botanist, had an extensive library (in addition to his museum of plant samples and other curiosities) that he collected over the course of his life and donated at his death to the city of Bologna.[46] Achilles Pirmin Gasser was a physician and astrologer who had a remarkable book collection of his own and who also worked as an agent collecting books for the Fugger family of Augsburg.[47] Physicians were not only men of letters; they were bibliophiles and accomplished collectors who understood their libraries to be essential tools for their medical practice and teaching. Leonhart Fuchs justified his decision to turn down a position offered by Albrecht Margrave of Brandenburg in 1538 in part because it would have been inconvenient to move his children and his pregnant wife and in part because it would have been "impossible" to transport his books such a great distance. It would have been equally

impossible, in Fuchs's view, to leave the books behind "since I have to read medicine and give the public my services."[48]

Despite Fuchs's protestations, other physicians did choose to move with their libraries. In Italy after 1559, a physician's library often contained prohibited books that required special permissions to be transported. In 1595, when the physician and medical professor Girolamo Mercuriale moved from Bologna to Pisa to take up new positions teaching medicine at the university and working as a court physician for the Medici, he had to secure a license for his library to travel with him. Mercuriale wrote to Cardinal Giulio Santini in Rome, "Working in the profession that I do, in order to read it behooves me to have many books, and especially those I have studied."[49] Mercuriale's declaration of the necessity of his books indicated the importance, for a physician, not only of having a library but also of having one's own volumes available, perhaps to take advantage of manuscript annotations and corrections in the margins.[50] Physicians' libraries were repositories of books, notes, and notes in books, which serve now to document the intellectual work of these early modern practitioners of medicine.[51]

In addition to the medical texts in his library, Mercuriale believed that reading in classical literature was also vital for physicians. He advised medical students to read such authors as Homer, Lucretius, Virgil, Horace, Juvenal, Herodotus, and Strabo. "And do not be surprised that I propose poets and historians to you," Mercuriale admonished his students, citing Galen's precedent in turning to these unlikely sources to "shed no small authority and light on medical science."[52] Medical and nonmedical texts had much to offer aspiring physicians. Similarly, according to Mercuriale, the approach to reading medical and literary authors should be fundamentally the same: careful reading combined with excerpting passages into notebooks.[53] Cardano noted that reading history, philosophy, and Italian poetry, in addition to treatises on medical questions, ranked as things that gave him "extraordinary satisfaction" (other pleasing items of note included pens, gems, metal bowls, and rare books).[54] Physicians read broadly, both out of personal interest and as part of their professional identities.[55]

In chapter 5 I will trace readership of prohibited medical books individually and collectively by analyzing requests for licenses like that of Mercuriale. Based on the requests for reading licenses in the early seventeenth century, it becomes clear that physicians felt that their credentials qualified them to read prohibited books related directly to medicine and surgery, and also texts ranging from histories to natural histories, philosophy to philology, and banned books about astrology and iatrochemistry.

Early modern physicians' voracious personal and professional appetites for reading and collecting books and their relentless drive to read widely and to accumulate knowledge would present a huge challenge to the system of Catholic book censorship in the wake of the Reformation.

As Cardano's reflection on his life reminds us, physicians were producers of knowledge in addition to collectors of it. Widespread interest in medical humanism meant that many of the most popular texts written by physicians were editions of, or commentaries on, the works of classical authors, such as Hippocrates and Galen.[56] These texts often featured acerbic criticisms of the Arabic commentaries upon which European physicians had relied for much of the medieval period.[57] Nicolò Leoniceno's nearly eighty years of teaching in Ferrara trained generations of physicians who were concerned with carefully editing and retranslating medical texts from ancient Greek.[58] The next generation of prominent medical humanists were predominantly Protestant physicians from Northern Europe, including Leonhart Fuchs, Conrad Gessner, and Janus Cornarius, among many others. Physicians sought their editions, translations, and commentaries throughout the sixteenth century.

In addition to editions of classical texts, Fuchs and Gessner also published lavishly illustrated botanies and wrote extensively on preparing medications. Gessner dabbled pseudonymously in publishing on distillation, which was useful for manufacturing medications, and in the genre of medical secrets, for which his student Levinus Lemnius was best known.[59] Physicians also wrote illustrated anatomies like those published by Jacopo Berengario and later Andreas Vesalius, who advocated that physicians not only write anatomy books but also conduct their own dissections.[60] Physicians wrote pedagogical materials in addition to hefty volumes, including lecture notes and commentaries on pathology and therapeutics.[61] Lest we think that students only purchased the books on their syllabi, some new medical texts proved to be wildly popular. The Polish physician Joseph Struthius's *Ars sphygmica* (*The Art of the Pulse*, 1555) is said to have sold eight hundred copies in a single day.[62] The other clearly medical genre in which physicians published prolifically in both manuscript and print in the sixteenth century was the short treatise on topics such as the plague written in both Latin and vernacular languages.[63]

Sixteenth-century physicians also wrote and published many books that were not primarily medical.[64] Thomas Erastus wrote extensively on the relationship between religion and the state.[65] Hadrianus Junius worked as a physician in the Netherlands and published lexicons, an octolingual dictionary, annotations on classical works, heraldic analysis, andteven

religious poetry.[66] François Rabelais was trained as a physician but is best known for his satirical *La vie de Gargantua et de Pantagruel* (*The Life of Gargantua and of Pantagruel*). Though Rabelais's prologue to this work suggested that wrapping the book in warm cloth with a poultice of dung would be more effective than the remedies of physicians, the rest of the content is certainly not in the traditional genre of therapeutics.[67] Girolamo Rossi, the physician and censor from Ravenna who features in chapters 3 and 4, was most famous for having written a history of his native city from documents he consulted as a young adult in the Vatican Library while traveling as a humanist scribe.

Nancy Siraisi has extensively explored the generic and epistemological connections between historical and medical writing, highlighting the deep connections across genres of books in this period.[68] In addition to history there are a number of other mixed-genre books written by physicians in the sixteenth century. Girolamo Fracastoro's work on syphilis, for example, is famously written in the form of an epic poem.[69] Girolamo Cardano's *De vita propria liber* (*Book of My Life*) is at once biographical, medical, and bibliographical, interspersed with accounts of the historical and political events of his own life.[70] Cardano is also the supreme example for exploring the overlap between medical and astrological writing, as Nancy Siraisi and Anthony Grafton have shown, though he was far from the only physician publishing in astronomy and astrology.[71] We need only to think of Nicolaus Copernicus and his disciple, Georg Joachim Rheticus, both of whom were trained as physicians and who wrote on astronomy.[72] The genre of anthropologies, written by physicians but also by natural philosophers and theologians, examined how the body and soul were connected and how the body revealed religious and moral truths.[73] In addition to the many arts of which medicine was comprised, physicians' writings were as broad and varied as their reading.

How, then, did early modern physicians classify their work and the medical discipline at large? The early modern period was characterized by a proliferation of learned information, and scholars relied on management systems to make the search, storage, and retrieval of that information possible.[74] Further, early moderns were conscientious about classifications. Let us turn now to how the medical bibliographers of the sixteenth century described the contours of this field. These very bibliographies, the lists of titles and authors, would also become targets for censorship over the course of the sixteenth century.

The overlap between early modern medicine and information manage-

ment is best personified in the life and work of Conrad Gessner. Gessner was the most prolific bibliographer of the early modern period. He was also a physician with wide-ranging interests that force us to think carefully about how one might classify the part of his studies and output that was, strictly speaking, medical.[75] We might also start by considering that Galen served as Gessner's model both for understanding how to diagnose and treat disease, and for considering the role that books and authorship played in medicine. Galen wrote his treatise *De libris propriis* (*On My Own Books*) to curb the circulation of books with his name listed as the author but which he had not actually written. His autobibliography provided inspiration for Gessner's universal bibliography (the *Bibliotheca universalis*) and certainly served as a model for Girolamo Cardano's account of his own books.[76]

Gessner's *Bibliotheca universalis* was more ambitious than Galen's personal bibliographical account. Over 1,200 folio pages, it included the authors and titles of all known books in Latin, Greek, and Hebrew. As a consummate humanist and philologist, Gessner knew his Galen. His entry on Galen's books in the *Bibliotheca universalis* emphasized that the works of the great physician of Pergamon were necessary not only for medicine but for other disciplines as well, a fact that Gessner noted in the margin of his own copy of the book.[77] Gessner summarized Galen's broad definitions of medicine by remarking merely, as Galen had in the title of one of his own works, that "the best physician is also a philosopher." The universal approach to knowledge in the *Bibliotheca universalis* reflected a long tradition of physicians' broad understanding of their own discipline.

Gessner followed the publication of the *Bibliotheca universalis* with companion volumes called the *Pandectae* (1548–49), in which he sorted the original alphabetically ordered entries into subjects and schemas. The volumes, organized by subject, were to serve as tools for scholars so that they would be more familiar with what had already been written on a given subject. According to Gessner, this awareness would, in turn, combat the "silliness of useless writings in our time" and "forestall the production of further useless books."[78] However, when Gessner, reader and bibliographer of Galen and physician-scholar extraordinaire, finally sat down to define the expansive field of early modern medicine, he came up short. When the *Pandectae* was published, it contained blank folio numbers for the sections on medicine and theology which were to appear separately. In 1549, the volume on theology appeared, but the bibliography of medicine never followed. We might imagine that Gessner, who was especially aware of

the essential interdisciplinary nature of medicine and the rapid changes taking place in the field, found himself too overwhelmed to definitively catalog his own discipline as he had so many others.

Nevertheless, the *Pandectae* offers a few insights on the subjects that Gessner might not have classified as medicine, since he placed certain books under other headings. Despite Mercuriale's reading recommendations, according to Gessner, grammar, literature, and poetry were their own fields, and despite the historical writings of many physicians, history, too, was its own distinct discipline. Gessner maintained a distinction between philosophy and medicine, and he divided works of astrology and astronomy both from each other and from medicine, although contemporary medical practice included substantial overlap with the astrological arts at courts and universities.[79] Gessner's *Pandectae* also created a miscellaneous field of "Different arts, mechanics, and other things useful to human life," which included mechanical arts and engineering.[80] By describing these kinds of applied knowledge as useful arts, Gessner casts light on another discourse of utility: the art, or applied nature of the work. Medicine was a distinct theoretical discipline with access to philosophical truth, and the physician's work was also a practical applied art that was a source of utilitarian knowledge.[81]

In addition to Gessner's classifications, his *Pandectae* also provides us with another source for examining early modern book categorizations. Gessner was a superlative giver of thanks, and he strategically included many dedications in his published volumes.[82] In the *Pandectae*, Gessner dedicated every section to a different printer-publisher, the enterprising men who facilitated public conversation and castigation in the republic of letters. In addition to the dedication, Gessner reproduced a recent book list for each dedicatee, providing free advertising for the many volumes each bookman was selling. The booksellers' catalogs in the *Pandectae* represent another, though much narrower, view of the production and consumption of physicians. These lists featured primarily texts by and commentaries on classical and medieval medical authorities (Hippocrates, Galen, Celsus, Avicenna, Rhazes) in addition to manuals on plague, plants, anatomy, and diet.[83] This array of subjects represents the books that medical students were likely to purchase, including printed materials that were not books, such as tables of the veins and arteries.[84] The medical titles on Johannes Frellon's list are all printed in small formats (listed as octavos and sextodecimos), and Sebastian Gryphius's catalog includes only a few listings in quarto, none in folio, and the vast majority in octavo or smaller.[85] These medical books were not collectors' editions but were aimed at a broad

cross section of practicing physicians. They were textbooks and the kinds of medical books that the physician could carry in a pocket to the university or to a patient's bedside. Booksellers defined the realm of medicine based on a low risk assessment of what they thought would sell at a reasonable price to the masses of trained scholars and professionals. Their classifications never strove to document medicine's complexity with the theoretical sophistication that Gessner's *Pandectae* might have if he had ever finished it.

While Gessner never succeeded in definitively categorizing medical books, in the early 1590s two medical bibliographies appeared on the book market, drawing their information from Gessner's *Bibliotheca universalis*. Le Coq's 1590 *Bibliotheca medica* divided medical books by subject within the discipline. The book opened with a list of the 1,224 authors writing in Latin that he cited in the book; it also included authors who did not write in Latin but whose books had been translated into Latin. Next followed short biographical sketches of authors "who have illuminated the art of medicine with their writings." This generous list included editions of these authors' works and where they were printed, lavishing praise on the likes of Leonhart Fuchs, Janus Cornarius, and especially Gessner, whose work Le Coq admired greatly. Le Coq's tribute not only noted the books that Gessner wrote but also claimed that the concepts relevant to medicine (*argumenta*) came from "his admirable and incredible works."[86] This kind of praise of a Protestant author like Gessner would necessitate a careful expurgation of copies kept in Italian, Spanish, and Portuguese libraries.

Le Coq followed his bibliographical list with separate appendices of contemporary French, German, and Italian medical authors. The book then changed tack, turning to various medical subjects. The first subjects were ancient and medieval authors, each followed by a list of authors who had published editions or commentaries on their works. The appendices continued with traditional categories of medicine: surgery, anatomy, medical herbals, and pharmacopoeias. The final four appendices to the bibliography included sections on the practice of medicating, on medical consilia, and lists of authors who had written on plague and venereal disease. Several of Le Coq's lists were borrowed or compiled from lists Gessner had published during his life. The eighty pages on medical herbals and pharmacopoeias were actually an essay lifted directly from a preface Gessner had written for the 1552 edition of Hieronymus Bock's book on plants.[87]

Israel Spach's 1591 *Nomenclator scriptorum medicorum* (*Names of Medical Writers*) was published in Frankfurt a year after Le Coq's *Biblio-*

theca medica, and it took a completely different approach to classifying medicine.[88] Doing away with complete bio-bibliographies, Spach approached the problem of sorting medical books instead by grouping authors under lists of headings he considered important for medicine. Of course, many authors appeared under multiple headings. Spach's list of medical subjects represented a view of medicine that better reflected the state of the discipline by the end of the sixteenth century, whereas Le Coq's classification had more closely followed the approach of mid-sixteenth-century humanists like Gessner. Spach's classification included traditional headings such as the general "medicine" category and sections on therapeutics, anatomy, and surgery, but he also thought more specifically about the practices and tools of physicians and more broadly about the body. There are substantial sections of the bibliography about astrological and even chemical medicine.[89] Readers could find resources in Spach's volume for the study of the body by following headings on the humors, temperament, sleep, age, and dietetics (which included two separate sections on food and drink). A specific heading listed works about the physician ("Medicus") and another about signs for prognosis. The book concluded with an index of author names and an index of subjects that would direct readers, for example, to the subheading "urine" in the larger section on signs.

From Spach and Le Coq, we see that by the 1590s there were two mainstream systems for classifying medical books and defining the discipline. The first (represented by Le Coq's bibliography) focused on classical authors and their commentators, with additional sections for pharmaceutical and surgical/anatomical materials. This breakdown corresponded roughly to the interests of three groups of medical practitioners: physicians, apothecaries, and surgeons. The other classification, exemplified by Spach, defined the field of medicine as including books about the body and things that affected the body, such as chemical medicine and possibly astrology. These two distinct approaches testify to the nonsimultaneity of the spread of information and ideas in the print world. Scholarly networks facilitated the sharing of information, expertise, and books, but these two descriptions of medicine at the end of the sixteenth century also demonstrate that contrasting visions of the field of medicine existed contemporaneously at the turn of the seventeenth century. These bibliographies underscore the evolving field of medicine and the potential for scholarly resistance to change as well as excitement about innovation. At the same time that ecclesiastical authorities were intervening in physicians' reading, writing, and scholarly networks, physicians across Europe were grappling with immense changes internal to their field of study. The fixity of

interpretation and information that censorship sought to impose was fundamentally at odds with a field of scholarship in a radical state of flux.[90]

The works of classical and contemporary literature that physicians both wrote and read were not, strictly speaking, medical under either Le Coq's or Spach's classification of the field. Nor were the still more difficult to classify natural histories of birds, animals, and fish, which were the lifelong projects of many physicians, including Gessner. However, both classical works and contemporary projects were fundamental to physicians' libraries and the ways in which they spent their time and engaged with the broader learned community. These aspects of social presentation and scholarly sociability were essential parts of what it meant to be a learned physician in the early modern world.[91] Not every physician was a Gessner or a Cardano in scope of thought or breadth of scholarly connections, but many learned physicians participated in communities of learning that facilitated their interaction with the world of printed books in their own libraries. Books that were essential to the social world of physicians were at some level also medical books.

Throughout this book we must bear in mind these changing genres and the broad interests of physicians. I am inclined to be as humanistic in my approach to medical learning as the physicians of this period. I have adopted a broad definition of *medical books* to include all those texts that early modern physicians considered to be relevant to their work as doctors and to the role of physicians in society. This broad definition makes space for both Le Coq's and Spach's models of medical bibliography and also gives us the opportunity to take seriously Mercuriale's prescription that doctors should read poetry, Galen's belief that doctors should be philosophers, and Fuchs's assertion that it would be impossible to do his job without his library. Medical books were books that physicians used for their work as doctors and to consolidate that professional position in society. As Janus Cornarius explained, conceding the universality of medicine's goal, "Medicine truly seeks the particular nature, the disposition from boyhood, the doctrine of language, literature, philosophy, mathematics, and all knowledge."[92] If early modern medicine was a discipline that sought to master all knowledge, Gessner's *Bibliotheca universalis* (*Universal Library*) might indeed have been the only definition of medicine that encompassed this vast realm. Yet, both Gessner's works and his ecumenical approach to knowledge were at odds with Catholic censorship. Regardless of medicine's universal goal, the reality of practicing learned medicine in the Catholic world is better represented by Francesco Redi's self-admonishment and the expurgated copy of Le Coq's bibliography. The

desire for forbidden knowledge may have been timeless, but the practices, strategies, and evasions to which physicians resorted to read prohibited medical books reveal the particular challenge that the universal conception of medical knowledge presented in Counter-Reformation Italy.

OVERVIEW

My research draws on archival research conducted in libraries and archives primarily in Italy, the Vatican, and the United States. While documents in the Archive of the Congregation for the Doctrine of the Faith in Vatican City form the backbone of this project, the reception history that so interested me could not be told from only the administrative papers in the Vatican. I have followed leads from Vatican archives to scholars' private papers and books in public libraries across Italy, in towns from Lecce to Milan, with long sojourns in Rome, Venice, Padua, and Bologna. While the majority of the relevant libraries and archives are in Italy, most of the prohibited texts whose reception I am tracing were actually written and published in Northern Europe. Catholic censorship has made the libraries and archives of the Italian peninsula a particularly visible context for understanding a broader European culture of learning.

This book begins by examining the community of physicians in the sixteenth-century medical republic of letters and how this community was targeted and affected by the 1559 Pauline Index of Prohibited Books. Drawing on papal edicts, the correspondence of early modern scholars, and inquisition trial documents, chapter 1 reveals the personal networks to which Italian physicians turned to obtain editions of newly prohibited texts and maintain scholarly ties across religious divides in Europe.

Chapter 2 focuses on the period between 1596 and 1607, when the Catholic Church called on theologians and lay professionals throughout Italy to work together to develop official expurgations of useful prohibited books. Following the formation and subsequent unraveling of the local Congregation of the Index in Padua, the greatest center of medical learning in sixteenth-century Europe, we see how Padua's university professors evaded, undermined, and manipulated Rome's order that they aid in expurgating works of philosophy and medicine.

Although the lay censors at Padua subverted Catholic expurgatory efforts, a physician in Ravenna, Girolamo Rossi, diligently wrote, copied, and dispatched to Rome expurgations of over a dozen popular and useful prohibited books. Chapter 3 considers how Rossi saw his own participation in the expurgation of medical books as an opportunity to participate

actively in Catholic reform as a lay professional. In addition to his expurgations of prohibited books, Rossi's papers testify to his acts of self-censorship in which he took up his pen to purge his own writings of references to heretics. The expurgatory moment thus not only reconfigured texts, it also changed the culture of reading and interpretation in Italy, turning every lay reader into a possible censor and repurposing the tools of humanist study to the ends of the Catholic Church.

Conflicting bureaucracies and individual interests ultimately prevented the production of an official index of expurgations until the Master of the Sacred Palace, Giovanni Maria Guanzelli, spearheaded the effort on his own. Chapter 4 analyzes Rossi's expurgations and those of other Italian censors alongside the expurgations that were officially adopted in Guanzelli's 1607 *Index Expurgatorius*. The content of these expurgations focused primarily on astrology, demonology, and indications of confessional difference, although the different expurgations also reflect the priorities of individual censors.

While the pope, the Master of the Sacred Palace, the Holy Office of the Inquisition, and the Congregation of the Index all worked to detect and disrupt the circulation of prohibited books, they also simultaneously issued licenses to approved readers permitting them to "keep and read" books that were otherwise banned. Chapter 5 examines nearly six thousand requests for reading licenses, approximately 10 percent of which were granted to physicians. Using these licenses, we follow the impact and reception in Italy of important books of medicine, botany, astrology, and chemistry. Examining these licenses individually and collectively reveals the personal impetuses for physicians to read prohibited books and the collective trends in subjects and particular authors of professional interest. These licenses show that reading prohibited books was a widespread part of Catholic professional behavior in the sixteenth and seventeenth centuries.

The process of selective censorship and licensing resulted in a vast, dispersed archive of expurgated objects that have been "corrected" with pens, knives, glue, and paper. Copies of expurgated medical books are the primary source base for chapter 6, which explores how Catholic authorities understood the printed book as an intellectual threat and also a physical object that could be manipulated and regulated. Combining historical and bibliographical approaches, we can reconstruct the ways that readers encountered texts and negotiated the unstable relationships between reading, writing, and orthodoxy in the sixteenth and seventeenth centuries. The names removed from censored books in this chapter reflect a practice

of expurgating authors' names from texts as a form of *damnatio memoriae* (damnation of memory) that ritually remembered the desecrated memories of Protestant physicians.

Chapter 7, the final chapter, locates expurgated texts on the bookshelves and in the library catalogs of the Vatican Library, the Biblioteca Ambrosiana in Milan, and the Biblioteca Marciana in Venice, where they found homes in the seventeenth century. By the middle of the seventeenth century, Catholic authorities widely accepted that it was both possible and useful to rely on prohibited books to further Catholic learning.

In the epilogue, I turn from medicine to follow the themes of utility and professional expertise in the Catholic Church's response to Copernicanism in 1616 and in Galileo's reply to Copernicus's censor in his *Dialogue* of 1632. The decision to expurgate Copernicus's *De revolutionibus* centered on the work's perceived utility. Galileo was acutely aware of these contemporary medical and philosophical disputes concerning expurgation, expertise, and the professional utility of knowledge, and his responses to Copernicus's censors deployed these discourses. Ultimately, this discourse of the utility of scientific knowledge emerged from fraught encounters with ecclesiastical censorship and was employed as a justification for scientific works long before the Enlightenment and far outside the Protestant context of Baconian empiricism.

This study of censors and scholars, books and libraries, and above all the contested status of medical knowledge reveals the complex interplay between intellectual control and the demand for prohibited knowledge in Counter-Reformation Italy. Within this context, the utility of knowledge became an essential feature of discussions about the new and controversial developments in scientific thought. From the illustrated herbal of Leonhart Fuchs to the reconfigured revolutions of Nicolaus Copernicus, utility became the justification for keeping prohibited books circulating in Catholic society. Knowledge in an age of censorship was a product of ongoing negotiation between ecclesiastical authorities and learned scientific practitioners. By accommodating professional needs and recognizing the value of lay expertise, the Catholic Church developed a process of intellectual control which highlighted the ambiguities, contradictions, and paradoxes of censorship in a world enthralled by the possibilities of new knowledge. The study of censorship as a learned dialogue in Counter-Reformation Italy has much to teach us about medicine, about science more broadly, and above all about the utility of knowledge in the world of early modern learning.