From Healer to Pharmacist: Healing Practices in Italy between the 15th and 16th centuries

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From Healer to Pharmacist: Healing Practices in Italy between the 15th and 16th centuries

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Spring 2021

Abstract

In Italy, the role of the healer between the 15th and 16th century changed and evolved according to new scientific discoveries and a stronger organization developing around what a healer could be or not. For the common people, the healer had many faces, from folk healers to monks to pharmacists. For the rich, healers were doctors who studied at universities. All of them had an important role outside and inside the Italian cities' limits. Therefore, my research question was if the evolution of the healer through these centuries shows the beginnings of a scientific approach to healing, something that would be better defined later with the coming scientific revolutions. All this with a stronger focus on the role of the pharmacist, the middleman of all social classes. My research answers that yes, that is exactly what is happening even if slowly. It is not as scientific as it is in present day, but the more changes happened in the world of health, the more method was applied to the culture of medicine.

Dedication

To Lino, my cat, an ever-present figure while I was writing this work.

Acknowledgements

Thank you, mom and dad, you helped me the most in this academic adventure. Thank you for listening to my ramblings and for being patient with me through the years.

Thank you, Professor Conti, you have taught me a lot about history and the world of European witchcraft. A class that was a joy for me to follow, a little less for my parents. Thank you for teaching me how to write as an historian. You were my first history professor at John Cabot.

Thank you, Professor Ogle, you also taught me how to become a better writer, with kind words and strict methods. Thank you for listening to me during our advising periods and for showing me a bigger world of history. You were the very first professor I had ever met at John Cabot.

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1. Introduction

When considering the Renaissance centuries, the first elements that come to mind about this remarkable period are the great artists of the past such as Leonardo Da Vinci or Michelangelo Buonarroti and the changes that were happening to the Roman Church. There is a tendency to think of the great artistic developments as the only interesting and positive aspect of the Renaissance with the only important religious event being the birth of the Protestant movement splitting from the Catholic Church, and the following reaction the Church had towards it. Indeed, the division of the Christian world into Catholic and Protestant churches had set in motion many wars and conflicts that still represent part of the history of Europe, greatly influencing also other continents, such as the Americas. The discovery of the Americas caused the European view of the world to expand and have greater interest in importation and exportation of raw materials, such as gold and silver, or slaves from Africa.[1]

However, the 15th and 16th century are not just about art, faith, war, and exploration. There are other developments to consider that will also greatly affect future events and the new mindsets that will appear in the era of reason, the Enlightenment, that will forever change humanity's understanding of nature and cosmos. One of these developments, on which this thesis is focused, concerns medical thought and practice, and more generally the shaping of a proto-scientific mentality. In particular, it seems to be promising to concentrate on different medical figures active in Europe between the 1400s and the 1500s, and their constant new strategies for

[1] John Thornton, *Africa and Africans in the Making of the Atlantic World, 1400-1800*, Second Edition (New York: Cambridge University Press, 1998), 43–71.

survival in a historical period where the separation between medicine and magic was very little in order to see the cultural and scientific seeds that they were able to bring forth in the 17th century and onwards.

Before continuing with what this work focuses on, the figure of the healer between the 15th and 16th centuries, there is a need to explain what the definition of modern science is and how it differed from the medicine of the 1400s and the 1500s, and what the general background of this century was from the scientific point of view. In modern times and according to the Collins dictionary "[science] is the study of the nature and behavior of natural things and the knowledge that we obtain about them."[2] This understanding of science started developing in the 1700s with the Enlightenment movement that claimed that reason governed all aspects of life. In particular, the most basic revolutionary change in scientific studies was the creation of the scientific method, meaning the creation of a system all scientists had to follow to adhere to true science. It was first defined and written by Francis Bacon (d. 1626) and he described it as a "new method which would help [people] find out about the natural world."[3] He was heavily influenced by the Italian astronomer Galileo Galilei (d. 1642), a close contemporary of his, who was able to observe and prove heliocentrism, a concept first proposed by Copernicus (d. 1543) but never officialized until Galilei.[4]

This scientific movement that began thanks to the efforts of Galileo Galilei and Francis Bacon, that was later solidified in the Enlightenment era, was however not science in modern terms. That was, in fact, called natural philosophy. This branch of philosophy was extremely

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[2] "Science Definition and Meaning | Collins English Dictionary," n.d., https://www.collinsdictionary.com/dictionary/english/science.
[3] Barry Gower, *Scientific Method: A Historical and Philosophical Introduction* (London, United Kingdom: Taylor & Francis Group, 1996), 42, http://ebookcentral.proquest.com/lib/johncabot/detail.action?docID=169175.
[4] Federico Edoardo Perozziello, *Storia Del Pensiero Medico: Il Rinascimento, La Nascita Della Scienza Nuova e Il Secolo Dei Lumi* (Fidenza: Mattioli 1885, 2008), 76–86, http://oseegenius.unigre.it:80/pug/resource?uri=360782.

relevant as, in Hiro Hirai's words, it "[contemplated] the entire world, including not only the structure of the universe and the properties of creatures such as animals, plants and minerals, but also the human being itself and its position within the cosmic order." Natural philosophers tried to observe the world, life in general and mankind in specific to understand how it all worked. An important aspect of this philosophy was that there was no clear separation between the material world and the spiritual one. Indeed, all their observations were influenced by nature, but also by "non-natural or supernatural" elements, a good example of this being that "[among] the most frequently debated themes in Renaissance natural philosophy were the relation of souls and of life to the heavenly sphere."[5]

However, with the different definitions of science explained, the other important elements to consider when discussing the situation between the 15th and the 16th centuries are the various historical and cultural movements that all concentrated and greatly changed the medical field and the sensibilities of that historical period in general. There are the cultural movements of Humanism and Renaissance that began in Italy between the 14th and the 15th centuries, lasting through the subsequent century. Indeed, these movements were changing how people would see the purpose of their lives, as "individuals." Life was no longer perceived as a life of servitude towards God and its representatives on Earth, but it could also be lived for more secular purposes. However, this was not the only major cultural change present between these important centuries.[6]

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[5] Hiro Hirai, *Medical Humanism and Natural Philosophy: Renaissance Debates on Matter, Life and the Soul* (Leiden, United States: Brill, 2011), 2, 4, 6, http://ebookcentral.proquest.com/lib/johncabot/detail.action?docID=832321.

[6] Peter Burke, *The Italian Renaissance: culture and society in Italy*, Third edition. (Cambridge, UK: Polity Press, 2014), 203, 206, http://site.ebrary.com/id/10826729.

Indeed, the Church of Rome was also facing many changes in the 16th century. In the beginnings of this century, the Papal State was at its most rich, powerful, and beautiful time, as they had commissioned artists to make the Vatican Palaces magnificent and rich in objects of every kind, under Pope Leo X and Pope Clement VII especially. However, at the same time a movement of disappointment from within the Church was also thriving in Germany. In other words, "[the] original issue was [the] indulgences" of the Church in Rome and its representatives. Indeed, this dissatisfaction was born because Martin Luther (d. 1546) and his followers had the belief that the Church had lost its spiritual mission and concentrated too much on art, money, and corruption. This movement started thanks to Martin Luther, when he nailed 95 Theses on the door of All Saints' church in Wittenberg, Germany in 1517. He was excommunicated for his actions but at the same time this movement found many people who would support it, like King Henry VIII of England (d. 1547) and John Calvin (d. 1564). This started a major crisis in the Papal State as it was the beginning of the Protestant Reform.[7]

However, the Church refused to simply let its power split in two and with Pope Paul III Farnese many changes continued to appear in the Church. Indeed, he recognized the Saint Ignatius of Loyola's Society of Jesus, better known as the Jesuits, as members of the Catholic Church who had many duties to uphold, but most importantly the mission to stop the spread of Protestantism. He also called for the Council of Trent, a council made up by all the leading figures of the Catholic Church, including the pope, and it nearly lasted 20 years, from 1545 to 1563. With this Council, the Catholic Church decided to reject the validity of the Protestant

[7] Peter Marshall, *Reformation: A Very Short Introduction* (Oxford, United Kingdom: Oxford University Press, 2009), 23, 30, http://ebookcentral.proquest.com/lib/johncabot/detail.action?docID=472323.

Church, to reinstate the primacy of the pope, and also have "[the] aspiration for a disciplined and educated priesthood [that became] a cornerstone of Catholic reform."[8]

The consequences of the Reform and the Counter Reformation was the Pope's conviction that the Church needed to exert more control over people's thoughts and beliefs. Indeed, with Pope Paul IV there was the creation of the *Index Librorum Prohibitorum*, also known as the *Index of Prohibited Books,* in 1559, a list of books that supposedly went against the Catholic faith, in other words, heretical according to the Pope. This list of prohibited books kept growing through the years and it was fully suppressed only in 1966. Another creation of the Catholic Church was the Roman Inquisition in 1542, also known as "[the] Congregation of the Holy Office." These elements are also known as "the most notorious examples of [the Roman Catholic] 'Counter-Reformation'."[9]

This change of the power structure of one of the most influential political powers of the European monarchies has created many difficulties for people to discuss their knowledge and their desire to discover more and more ways to advance their skills and expertise in the medical field, but not only. Nevertheless, thanks to the invention of the print, there were easier ways to share one's knowledge and opinion, but at the same time there was a growing religious intolerance created by the different wars and battles each major faith was undertaking in Europe. This made the life expectancy of those who were studying medical knowledge with the intention of expanding it and to change it from the classical views, shorter than it already was. However, even when the years changed and practicing medicine became more and more like a balancing

[8] Marshall, 35–37.
[9] Cf. Marshall, 36. As for the *Index*, see: "Index Librorum Prohibitorum | Roman Catholicism," Encyclopedia Britannica, accessed December 16, 2020, https://www.britannica.com/topic/Index-Librorum-Prohibitorum.

act between wanting to save other people's lives and the healer's own, the healing practices of all levels of healers kept going forward in their advancement.[10]

Indeed, between the 15th and the 16th centuries, there was a growing awareness in Italian society that, on the basis of the philosophical developments of the Renaissance, mankind could influence and control their own life as well as the world of nature. In that period such a new awareness also influenced healing practices and those who dealt with medicines in general. Healers in the 1400s, outside an urban setting, were curing people using old traditions strongly connected to magical or folkloric elements, but towards the end of this same century and in the 1500s, those traditions were being progressively flanked by healers becoming more specialized and whose status enjoyed a major institutional recognition. Indeed, the most common kind of healers in this period were people that today would be called pharmacists. That is why by analyzing what were the healing practices in the 1400s and how society and scholars have influenced the change in healing traditions between the 15th and 16th century, it is possible to see how the techniques used to heal were progressively becoming more and more methodologically sound and developing through a quasi-scientific path that would later conflate into the patterns of the scientific revolution.

The methodology I am going to use for this project is a documentary analysis approach, which is a type of analysis based on written historical documents, when considering primary sources, and from modern times when considering secondary literature. I have chosen this type of methodology because I have the intention of exploring a well-known topic, such as medicine and the role of the pharmacist in Renaissance Italy with a different social perspective as I have

[10] Perozziello, *Storia Del Pensiero Medico*, 63–75.

the intention to study a process of evolution of what was considered a pharmacist by society's standards between the 15th and 16th century.

I realize that in the Renaissance period there was no such thing as traditional science, as most disciplines in that period were connected to philosophy and the transmission of past traditions.[11] However, there are elements of scientific method being slowly incorporated in what was the pharmacist's practice, with different historical characters and social changes. I will be using primary sources connected to the medical field of the Renaissance to prove that there was a change in healing practices that slowly became more standard, just like modern medicine. I will also use secondary sources that will mostly be biographical works about historical characters and the society they used to live in that will explain their role and what were the standard healing practices of those who were healers. Indeed, there are secondary sources that are texts from scholars who have already done extensive study on the societies of Italian Renaissance, with clear descriptions of how different healing shops existed in the different Italian cities and other references to the legal situation of medicine, especially when connected to the Church. My intention is to use these different sources to prove that the beginnings of a scientific and standardized approach to healing was coming into existence also through pharmacists.

The arguments that I wish to analyze for this project are in essence three. My first argument will focus on the popular healing practices of the 15th century and how they differed from those taught in universities. These practices were more affordable for the common people and peculiar because it was a mixture between traditional teachings that kept existing thanks to the folk healers and ancient Greek and Arab teachings that were accessible to those who would

[11] On this topic, see Perozziello, *Storia Del Pensiero Medico*.

live and work in monasteries and convents.[12] There are specific types of individuals, either saints or witches, that were also playing the role of healer.[13] At the same time, as it is well known, the witches were also considered by many and by the religious and secular authorities as those who could cast spells, inflict curses and ailments. They were all different types of healers that existed outside the city limits but still strongly influenced those living in urban contexts and vice versa.[14]

My second argument will focus on the business of medicine inside and between Italian states and other Mediterranean counterparts. I will analyze how the trade market for herbs and other medical ingredients flourished, what were the different forms of pharmacists and all the different shops dedicated to healing people interested in selling different cures to their customers and the regulations behind each trade.[15] Additionally, when considering pharmacists' business practices, there is also to study the existence and importance of the medical guilds.[16] They were institutions that protected all types of healers and were extremely important since they would often interact with the laws of the Church.[17] Another aspect was the invention of the print.[18] With this invention more medicines and medical concoctions were becoming more standardized in different locations and it created texts like the *Ricettario Medico,* the most famous being *I*

[12] Giuseppe Piccione and Giovanni Del Savio, *Meravigliosa erboristeria: metodi naturali per la difesa della salute* (Roma: EDUP, 2002), 55–78.
[13] Donald Weinstein, *Saints and Society: The Two Worlds of Western Christendom, 1000-1700*, *Fulcrum.Org* (University of Chicago Press, n.d.), 141–63.
[14] Matteo Duni, *Under the devil's spell: witches, sorcerers, and the Inquisition in Renaissance Italy*, Villa Rossa series; v. 2 (Florence, Italy: Published for Syracuse University in Italy, 2007), 66–71, http://catdir.loc.gov/catdir/toc/casalini07/0730109X.pdf.
[15] James Shaw and Evelyn Welch, *Making and Marketing Medicine in Renaissance Florence* (Leiden, Netherlands: Brill, 2011), 38–46, http://ebookcentral.proquest.com/lib/johncabot/detail.action?docID=668969.
[16] Katherine Park, "The Guild," in *Doctors and Medicine in Early Renaissance Florence* (Princeton University Press, 1985), 15–46, https://doi.org/10.2307/j.ctt7ztp1b.7.
[17] See Park.
[18] Perozziello, *Storia Del Pensiero Medico*, 70.

Ricettari Fiorentini first published in 1498 and compiled by the "Collegio de' Medici [by order of the] Consoli dell'Università degli Speziali [for the public]."[19]

The third argument has more to do with other important elements connected to all types of pharmacists and their various shops. I will focus on the different individuals who collaborated or even worked against pharmacists, from doctors to charlatans.[20] Also, I will consider how universities influenced the healing practices from official to unofficial, with a special interest to the University of Bologna (1088), the University of Florence (1321), and the University of Rome, *Studium Urbis* (1303).[21] There are also to consider the scientific-medical advances that took place during this period with famous names connected, such as Leonardo da Vinci (d.1519), Andreas Vesalius (d. 1564), Gabriele Falloppio (d. 1562) and Girolamo Cardano (d. 1576). Indeed, all these examples show society's determination in creating a procedural order regarding the different methods of medical practices and the willingness to protect it too on a small scale.

The literature about the changes occurring in medicine and on the different roles of the pharmacist during the Renaissance period is varied and all the different texts discuss a world of healing that is interconnected to its society of its time and different from the one of present days, though there are some traces still left in today's procedures. During the 15th and the 16th centuries, medicine, healers and their findings had been a by-product of the new Renaissance revolution after the medieval times, but at the same time, these medical changes also had to face with the resistance towards change of the fluctuating forces of the Church, that had always been

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[19] Alfonso. Corradi, *Le Prime Farmacopee Italiane ed in Particolare dei Ricettari Fiorentini: Memoria*, 1887th ed. (Milano: BiblioLife, LLC, n.d.), 4.
[20] Maria Conforti, Andrea Carlino, and Antonio Clericuzio, eds., *Interpretare e Curare: Medicina e Salute Nel Rinascimento*, 1a edizione, Frecce [Carocci], 2013, 189–209, http://oseegenius.unigre.it:80/pug/resource?uri=440877.
[21] On this topic, see Paul F. Grendler, *The universities of the Italian Renaissance* (Baltimore: Johns Hopkins University Press, 2002), http://hdl.handle.net/2027/heb.06177.

active in the European social sphere, especially in Italy.[22] The 15th and 16th century had times of great advancement and times of great tragedies, and with primary sources of the past and modern secondary literature it is possible to create a picture of what was the role of the pharmacist and the changes this role made to the medical field in these two particular centuries.

The primary sources that I will rely on are the *Ricettario Fiorentino,* first published in 1498 through the edition by Alfonso Corradi in 1887;[23] *De Materia Medica*, originally written by Pedanius Dioscorides the Greek (c. 90 AD);[24] *Galeni vocum Hippocratis Glossarium* first written by Galen of Pergamon (d. ca 210 AD).[25] These sources are essential to understand what the common knowledge of learned doctors between the 15th and 16th centuries was. They were considered the basic texts of all medical knowledge from the belief of the balance of the four humors to the practical ingredients of the compositions of a pill.[26]

The *Ricettario,* was a collection of ingredients and prescriptions made to cure different illnesses. In this source there are many lists of ingredients that today, at least in western medicine, are not considered to be effective, and some of them are even quite dangerous. This collection was supposed to be accessible for all those who created medicines in the past, so in a way it can be considered a first attempt at regularization on the medical prescriptions, in a time where that was not the norm. It is an important change on what became the normal medical practice of the 16th century.[27]

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[22] Adriano Prosperi, *Tribunali della coscienza: inquisitori, confessori, missionari* (G. Einaudi, 1996), xxi.
[23] Corradi, *Le Prime Farmacopee Italiane ed in Particolare dei Ricettari Fiorentini: Memoria*, 4.
[24] Pedanius Dioscorides, *De Materia Medica*, ed. Tess Anne Osbaldeston and RPA Wood (Ibidis Press cc, 2000), vii, https://archive.org/details/de-materia-medica. See English edition translated and written by Tess Anne Osbaldeston and RPA Wood in 2000.
[25] Lorenzo Perilli, *Galeni vocum Hippocratis Glossarium/ Galeno, Interpretazione delle parole difficili di Ippocrate: Testo, Traduzione e Note di Commento*, Corpus medicorum graecorum (Berlin: De Gruyter, 2017), 25, http://search.ebscohost.com/login.aspx?direct=true&db=nlebk&AN=1538433&site=ehost-live. See Italian translation written by Lorenzo Perilli and published in 2017.
[26] Shaw and Welch, *Making and Marketing Medicine in Renaissance Florence*, 32.
[27] Shaw and Welch, 43.

The *De Materia Medica* is important especially when studying medicine in the Renaissance period. Indeed, during this cultural change there was a renewed interest for the classics of Ancient Rome and Ancient Greece and every life aspect connected to them, from philosophy to medicine. *De Materia Medica* was used as a guiding textbook for those who were studying medicine in universities and it was first copied by different monasteries who had the duty to copy exactly different ancient texts to preserve them.[28] This was true in medieval times and continued to be so later thanks to the invention of the printing techniques.[29] It was a connection with the past and its medical practices that were the foundation for the medical knowledge of both the 15th and 16th centuries.[30]

The *Glossarium* is also relevant for this research and the period in question. It held the basic knowledge of what the ancient Romans, like Galen, understood of the human body, strongly influenced by other great doctors of the past, the most famous name being Hippocrates (d. circa 370 BC). Galen was extremely important for all physicians who studied medicine at universities, as indeed, his understanding of the human body was still considered to be exact until Andreas Vasalius and his treatises on the anatomy of the human body. Texts he was able to write thanks to his real-life observations on human corpses.[31] Galen's teachings were also important for monasteries and pharmacists as they based their understanding of medical herbs and other ingredients to make medicines based on Galen's knowledge of what would work on people.[32]

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[28] Piccione and Del Savio, *Meravigliosa erboristeria: metodi naturali per la difesa della salute*, 58–59.
[29] Perozziello, *Storia Del Pensiero Medico*, 70.
[30] Piccione and Del Savio, *Meravigliosa erboristeria: metodi naturali per la difesa della salute*, 58–59.
[31] Meyer Friedman and Gerald W. Friedland, *Medicine's 10 Greatest Discoveries* (New Haven, Conn: Yale University Press, 1998), 2, http://search.ebscohost.com/login.aspx?direct=true&db=nlebk&AN=52853&site=ehost-live.
[32] Piccione and Del Savio, *Meravigliosa erboristeria: metodi naturali per la difesa della salute*, 58–59.

Scholarship on medical topics of the Renaissance period is certainly vast. Among the titles I intend to start with, there are Matteo Duni's *Under the devil's spell; The Medical Renaissance of the Sixteenth Century,* written by French, Lonie and Wear; *Interpretare e curare: medicina e salute nel Rinascimento,* edited by Maria Conforti, Andrea Carlino and Antonio Clericuzio; *Making and Marketing Medicine in Renaissance Florence,* written by James Shaw and Evelyn Welch; *Il professore di segreti: mistero, medicina e alchimia nell'Italia del Rinascimento* written by William Eamon; *Storia del pensiero medico: il Rinascimento, la nascita della scienza nuova e il Secolo dei lumi*, written by Federico E. Perozziello.

For the first secondary text, Duni explains the details of what was considered folk healing by both the standards of the common people and the Church. It derives its knowledge and conclusions from different trial transcripts of people who were accused of witchcraft in the years right before and after the year 1500. It is interesting because it defines both the practical aspects of healing but also the more ritualistic aspects that were once connected to pagan beliefs and later with Christian rituals, such as making "the sign of the cross" to heal someone.[33]

This is a useful text since it depicts who were the common healers during the 1400s and how by the end of the century, they were accused of witchcraft simply because these types of healers were not considered devout to God enough, though there were contaminations between the high medicine and low-class medicine. It does not describe the more institutionalized role of the pharmacist, but at the same time it does give a description of what was commonly considered medicine by the Church and the people of the 15th and early 16th century.[34]

The source, *the Medical Renaissance,* describes a new debate made between scholars about the Renaissance medicine in Europe and how the different healers were recognized in

[33] Duni, *Under the devil's spell: witches, sorcerers, and the Inquisition in Renaissance Italy*, 66–68.
[34] Duni, 66–71.

society and the dangers they had to face with the Inquisition as a lot of these people had no medical background in universities and no traditional training, meaning they were truly dangerous people for those who could not afford a real doctor. This source describes the different people who were considered healers back then and they were "wise-women, charmers, wizards or magicians, astrologers, priests and ministers and their wives, herbalists, empirics and barbers to pharmacists, surgeons and physicians." This source is useful to understand the variety of people who could heal and how exactly they were allowed to do so from the Church's perspective, or if they did not have the official permission, how they got around it.[35]

Therefore, this source is interesting because it helps establish which were the real doctors and those who were still in the healing field but weather they were legally recognized as such. This is more connected to medical institutions and how the healers could be legally protected with guilds, universities, and if truly in trouble, from the Inquisition of the Church. That is why understanding what the difference between doctors, pharmacists and charlatans was could help also show what were the common practices of medicine that worked, which ones were effective and why, and how this knowledge could be spread to other doctors or deemed worthy of further investigation.[36]

The third source, *Interpretare e Curare,* is a collection of essays regarding the medical world of the 1500s and the people who changed it. There is an essay on Vesalius and his discoveries, and also on pharmacies, barbers, and charlatans.[37] All these essays are essential to further the understanding of all these elements of the healing practices of the 16th century. Each essay is written by different historians who are experts in their field. All these historians are

[35] A. Wear, R. K. French, and I. M. Lonie, *The Medical Renaissance of the Sixteenth Century* (Cambridge University Press, 1985), xiv.
[36] Wear, French, and Lonie, xiv.
[37] Conforti, Carlino, and Clericuzio, *Interpretare e Curare*, 189–209.

considering different life aspects of Renaissance society from top to bottom, which can give a broad overview of what were the expected healing practices of each member of the medical field and how they were interconnected.

The text *Making and Marketing Medicine* explains in detail the business connected to pharmacies during Renaissance Florence and how important these shops were for both the common people and for doctors to prescribe different "personalized" medical prescriptions to sell to their patients. Doctors would give the prescriptions they created for their patients to the people working in the apothecaries, and the pharmacists would later create and give the cures to the patients. This source gives many particular details on what a pharmacy would buy and sell, it also demonstrates how the pharmacy would use personalized methods to create medicines and the economic values attached to them.[38]

This source is important as it demonstrates the everyday dynamics of the trade system revolving around the medicine world in Renaissance Florence. Therefore, it defines what society expected from shops such as the pharmacies, their practices and how the trade of spices and components of different medicines moved around in different places of Europe, Italy especially as it had many nautical ports in the Mediterranean Sea very close to the east. It will help with the thesis as this source can illustrate what were the different regulations created between traders, pharmacists, and doctors.[39]

The book *Il Professore di Segreti* is also noteworthy because it describes the life and adventures of an empirical doctor, meaning a doctor who followed Galen's ancient teachings, Leonardo Fioravanti (d. 1583), who still tried to advance medicine's abilities. To explain his life better, the author gives some very useful information about the background of the different

[38] Shaw and Welch, *Making and Marketing Medicine in Renaissance Florence*, 191–210, 257.
[39] Shaw and Welch, 40–46.

healing shops that existed in Bologna, Italy, in the 1500s. All these shops for healing had different insignias that would show which type of healer was present in the shop. For example, there was a shop with the sign of the symbol for the salasso, a specific cure where people were expected to lose blood and feel better for it, in other words, the famous bloodletting. This same shop would also be the shop for barbers who could only heal external wounds, like broken legs or rashes. Another interesting example would be a shop with the insignia that pictured three crosses and that would signify the presence of female doctors who were the only ones that could touch a female body, alive or dead. These are all useful information to learn how Renaissance society had divided up the jobs each healer had to have and how much the Church was accepting of their official practices.[40]

The idea of different shops of medical healers is truly interesting. All these shops could legally exist and that meant they had the protection of different governments, universities, and the Church. Each 'specialization' meant that there existed different rules to obey regarding cures and medications, that could be interpreted into an understanding of what medicines worked on men, which ones worked on women and the distinction between superficial wounds and internal illnesses could show another aspect of the beginnings of the scientific method.[41]

The last source of this partial literary review, *Storia del Pensiero Medico,* is the one that is most generic but at the same time important because it describes what was happening in the world of medicine between the 15th and 16th centuries. There are two interesting chapters in this book that describe how the Renaissance period in Italy changed before, with the religious Reform born with Martin Luther in 1517 and the Counter reform in 1542. Indeed, the Council of

[40] William Eamon, *Il Professore Di Segreti: Mistero, Medicina e Alchimia Nell'Italia Del Rinascimento*, [2a edizione], Quality Paperbacks [Carocci], 2019, 38–40, http://oseegenius.unigre.it:80/pug/resource?uri=437853.
[41] Eamon, 38–40.

Trent changed the freedom that most of society had achieved through the Humanist movement and it restricted a lot of practices, like the printing of specific books with the invention of the *Index,* by Pope Paolo IV in 1559. Science could not advance anymore outside the different universities and this slowed down the advancement of the discipline during the 16th century, though it did not stop it. The medical field took some tentative steps towards new discoveries that were moving further away from ancient teachings; however, the Church was a constant threat that made these discoveries more like acts of rebellion than science. However, there are important historical examples of people who were still able to make medical discoveries in this period, trying to break away from the chains of ancient philosophers' certainties.[42]

A common point to all the above-mentioned scholars is that they describe a reality where all kinds of doctors existed during the Renaissance period, from universities or from the streets to the politics and legalities connected to the healing practices. They help create a picture of what the general public accepted as doctors and their expected duties towards the people. All the types of pharmacists had to survive these great changes, both the good and the bad, but they were able to create their own little healing niche that allowed them to thrive in such uncertain times and continue healing the people who needed help.

[42] Perozziello, *Storia Del Pensiero Medico*, 63–75.

2. Healing in the 1400s

The world and development of medicine have accompanied the different stages of history and the evolution of human societies. A historical stage leading to interesting change can be closely explored in Italy in the passage from the medieval to the early modern period, when the Italian Humanism and Renaissance flourished, in the fifteenth century and the following one too. In that century there were several changes regarding the power of the Christian Church, the growing ideal of a glorified classical past and the foundation of more and more schools and intellectual circles that could monopolize and restrict knowledge. Indeed, the most noteworthy elements that characterize what medicine was in the rural areas and who the healers were in this time period were the folk healers, who would heal according to traditional popular beliefs and what they personally observed,[43] the convents and monasteries that would grow their own medicinal plants,[44] and towards the end of the 15th century, other various figures seen as healers, such as saints and witches, who were connected to the world of the supernatural, which was always linked to healing practices.[45]

The first part to investigate with more detail is the concept of folk healers and their idea of curing people with popular medicine. Folk healers were not recognized as proper doctors by the authority of the different Italian States or by the Church.[46] Indeed, they were the "lowest on the [hierarchical] scale [as they] were the unlicensed practitioners, […] whose prescriptions were

[43] Piccione and Del Savio, *Meravigliosa erboristeria: metodi naturali per la difesa della salute*, 55–57, 67.
[44] Peter Dendle and Alain Touwaide, eds., *Health and healing from the medieval garden*, Paperback edition (Woodbridge, UK: Boydell, 2015), 162–79.
[45] Weinstein, *Saints and Society*, 141–42.
[46] Piccione and Del Savio, *Meravigliosa erboristeria: metodi naturali per la difesa della salute*, 55–57.

simpler and cheaper than those of the more prestigious physicians."[47] They were the kinds of healers that could be more commonly found in more rural areas, such as "donne, […] guaritori, […] conciaossa" (women, healers, bonesetters).[48] The folk healers were extremely important because they were cheaper than official doctors, as their training came from family and oral traditions used to heal the common people for everyday illnesses. Indeed, their knowledge was more practical than those who attended university, so even if they were at the lowest hierarchical station in the medical field, they were necessary to cure those people who could not afford to go to a proper physician outside their own hometowns. However, there is to consider a strong connection between the knowledge of folk healers with their popular medicine and that of the clergy who lived in the same areas.[49]

Indeed, as Matteo Duni highlights, "their methods typically included traditional remedies based on the curative properties of plants, animal parts and other substances, used in conjunction with formulas and rituals that […] were a mixture of the religious and the magical." These were the rituals that all healers would follow, from the university doctor to the folk healer, but all on different kinds of level of dedication. Finding a balance between the bodily cure and the healing rituals was up to each individual healer, in accordance with their training. However, these types of healing were not recognized by the "official medicine," the one that was taught in universities according to knowledge that started with the teachings of the ancient Greeks, which spread among different universities also thanks to medical texts such as Pedanius Dioscorides*' De Materia Medica*.[50]

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[47] William, Minkowski, "Women Healers of the Middle Ages: Selected Aspects of Their History," *American Journal of Public Health* 82, no. 2 (February 1992): 293, https://doi.org/10.2105/AJPH.82.2.288.
[48] Piccione and Del Savio, *Meravigliosa erboristeria: metodi naturali per la difesa della salute*, 77.
[49] Duni, *Under the devil's spell: witches, sorcerers, and the Inquisition in Renaissance Italy*, 66–71.
[50] Duni, 66–67.

All folk healers were important, and their healing methods were spread out between the populace, but there was also another type of healer, who lived in convents or monasteries that were built in many places all around Italy. By the 1400s these places had become more and more secluded and the people living in them would grow gardens with medical plants. Additionally, with their knowledge of reading and writing, the nuns and the monks living in such places were able to learn more about the medical capabilities of what they were growing in their own gardens. As for their healing practices monks and nuns relied on both written traditions and those of the folk healers. This is one more type of possible combination between the practices of common healer and those of the clergy.[51]

The plants that the nuns and the monks would grow always had a connection to ancient traditions and specific worldviews related to the functioning of the cosmos. Indeed, most Medieval texts about herbs were all about the plants' healing properties and how each one had a connection to the heavens and how different celestial bodies influenced the growth of each medical herb. In other words, it was a deep held belief that "the entire world of nature was governed and directed by the movement of the heavens and the celestial bodies."[52] Herbs and other types of plants were the essential element of all healing practices, and thanks to how convents and monasteries were run, with the monks' dedication to copying older texts to preserve them, and their abilities to grow their own gardens and heal the people who would go there asking for treatments, the clergy's healing practices kept on growing and defining themselves.[53]

[51] Piccione and Del Savio, *Meravigliosa erboristeria: metodi naturali per la difesa della salute*, 58–59.
[52] Dendle and Touwaide, *Health and healing from the medieval garden*, 33, 47–59.
[53] Piccione and Del Savio, *Meravigliosa erboristeria: metodi naturali per la difesa della salute*, 58.

Because of their isolation or semi-isolation, the idea that folk medicine and the medicine prescribed by those of the clergy that lived in convents and monasteries could have mixed in some places and times is not farfetched. Indeed, there are many examples of when all healing practices are present, from the herbal knowledge, the availability of said herbs, to the prayer that must be connected to the healing ritual. The prayer was extremely important because it also protected the healers so that they could continue their craft, and not be accused of heresy by the Church and its representatives. Indeed, the Church was present at all levels in the life of individuals in the 1400s, and Christian prayers allowed different healers to still claim their belief in God and the teachings of not just pagan traditions, but also those of the Church.[54]

That the Church was present in diverse daily aspects for the people living in the Middle Ages and the Renaissance is particularly true when discussing the different figures of healers, often ranging from holy individuals to witches, all who would claim to heal people. Though often the Church claimed that witches were able to do so only through magical or superstitious means.[55] Holy men or women existed as figures belonging to the Church' belief system and for that reason, the Church would often support them as healers, while witches became a real threat only in the later medieval society of the 15th century.[56] Relevant was certainly the role of female figures, in both groups, often drawing from a common background of healing practices and traditions, making potions and other remedies, so well-known to those who study witchcraft-related accusations.[57]

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[54] Duni, *Under the devil's spell: witches, sorcerers, and the Inquisition in Renaissance Italy*, 66–71.
[55] Dinora Corsi, *Diaboliche, Maledette e Disperate: Le Donne Nei Processi per Stregoneria (Secoli XIV-XVI)*, Biblioteca Di Storia 20 (Firenze: Firenze University Press, 2013), 75–84.
[56] Piccione and Del Savio, *Meravigliosa erboristeria: metodi naturali per la difesa della salute*, 80.
[57] Corsi, *Diaboliche, Maledette e Disperate*, 37.

Some saints were believed to have the power to heal. That is why they were seen as individuals who thanks to their holy faith were able to get into contact with God and through him, heal all those who were hurt or sick. Indeed, "[religious] literature is populated by wounded saints whose suffering […] is a signifier of their holiness and a testament to their devotion."[58] Saints were recognized as such by the Church as Holy beings if they respected the models of virtue and behavior created by the Church. Indeed, "[as] elaborated by Thomas Aquinas and other thirteenth century theologians, the [heroic] virtues [of the saints] were seven: the three theological virtues of faith, hope, and charity and the four cardinal values of prudence, temperance, justice, and fortitude." What the saints were able to do thanks to their faith and virtues were considered lifesaving events, or miracles. That is why most of the people recognized as saints by the Church and the people of their communities, could complete miracles that "addressed obvious human needs – many were the saints […] whose hands healed the sick or lame, even revived the dead." Moreover, "[an] agent of Satan might confound the laws of nature and by wizardry lure others into the diabolic path, but someone who practiced the Christian virtues to a heroic degree could not possibly be in the devil's employ – at least so the theologians reasoned."[59]

Therefore, those who were known as "agents of Satan,"[60] or better yet witches, were believed to be individuals, mostly although not exclusively female, who could help people heal them or at times curse them, thanks to the power given to them by the devil. Most of these individuals were originally known as folk healers who had learned how to heal others thanks to the old tradition that those considered to be witches had inherited, but the fact that they would

[58] Larissa Tracy and Kelly DeVries, *Wounds and Wound Repair in Medieval Culture* (Leiden, Netherlands: Brill, 2015), 19, http://ebookcentral.proquest.com/lib/johncabot/detail.action?docID=4007495.
[59] Weinstein, *Saints and Society*, 141–42.
[60] Weinstein, 141.

keep healing others without a major recognized sacrifice to God's faith put these types of healers in danger according to the Church' values. This type of danger especially grew toward the end of the 1400s and kept getting worse in the 1500s. Indeed, many so called witches existed before this period, but towards the end of this century, the Christian Church started to criminalize them and accuse them of heresy and later of proper witchcraft, both crimes considered to be extremely evil in the eyes of the Church.[61]

However, for the regular people, witches were extremely important as they "were more accessible in terms of culture and honorarium." The witches were healers who did not just use magical powers to heal people, but they would also use "traditional remedies" plus what was considered a magical element, that by the end of the 1400s, was also considered to be Satanical by the Church. The problem with witches was that, though they were often considered as healers, others were accused of causing sickness in other people, especially those who were their enemies or those they were paid to curse by their paying customers. Therefore, they were not just healers, but also the cause of illnesses. That was what made the witches untrustworthy in the eye of the public.[62]

Thus, in the rural areas of the 1400s there were many types of healers, from the folk doctors trained by those of the older generations to the witches that were slowly growing into a social problem. All kinds of healers existed, and many were still finding their official place in society as that was slowly changing from Medieval to Renaissance models. There were many healers who existed in this century that slowly had to change their role because of the ever-growing power of the Church and what they believed was proper healing. However, all these figures were central to the rural societies of the 1400s. Their knowledge might not have been

[61] Piccione and Del Savio, *Meravigliosa erboristeria: metodi naturali per la difesa della salute*, 80.
[62] Duni, *Under the devil's spell: witches, sorcerers, and the Inquisition in Renaissance Italy*, 66–71.

scholarly, but it was based on experience and tradition, something that would still influence healing practices to come in pre-modern times.

3. The Rules of Business

The Italian 15th and 16th century was full of changes, both political and social. New governments and states were taking shape, and new power structures reinforced. These changes also influenced the world of apothecaries, also called Speziali, and healing shops inside the city limits. The Speziali's healing business of the cities is different from those healers of the more rural areas as there were more rules to follow and a stronger community living and controlling the different businesses of the city.[63] That is why in some of the greatest cities in Italy between the 15th and 16th century, Florence, Bologna and Rome, there were great examples of the inner workings of the medicine world inside an urban environment. There are the pharmacies and guilds in Florence and a strict system regarding the making of the medicines and the trade in the Mediterranean Sea.[64] There was Bologna with all the different healing shops dedicated to all kinds of people and each specialized in a different illness.[65] Additionally, there was Rome with the ever-present influence of the Church and the strenuous research for independence of the Speziali in relation to this great religious institution.[66]

With the city of Florence, there were so many aspects of this city that were stunning when considering the time period of the 15th and 16th century, from the height of the Renaissance period to the fall after the strengthening of the Church.[67] When it came to the apothecary world

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[63] Park, "The Guild," 1.
[64] Shaw and Welch, *Making and Marketing Medicine in Renaissance Florence*, 40–46, 191–213.
[65] Eamon, *Il Professore Di Segreti*, 38–39.
[66] Ivana Ait, "Fra Mercato e Pratica Sanitaria: Gli Speziali a Roma Nel XV Secolo," *Studi Storici* 49, no. 2 (2008): 455–71.
[67] Marshall, *Reformation*, 36.

of Florence there were many aspects to consider. The most important one was the relationship between the pharmacists and doctors, and the business connected to the shop of the Speziali. Indeed, "[the] apothecary worked closely with the physician to create the right pills, syrups and other products that would prove therapeutic for a specific individual at a particular point in their life." The pharmacists' knowledge was highly requested by those who wished to buy specific kinds of medical remedies when it came to the creation of healing medical pastes, syrups and pills. Indeed, there was still the notion that most home remedies, could work, but the more difficult to make requested the skills of a specialist, the pharmacist.[68]

As for the making of the medicines and all the connected inventions, those who worked in the apothecaries would follow, not only the doctor's instructions, but also "recipe book[s] […], where specific drug recipes provided tried and tested solutions for specific ailments." Indeed, in the "[fifteenth century] pharmacology was rooted in the classical text *De materia medica*, written around 65AD by the Greek physician, Pedanius Dioscorides." There were different attempts to standardize medicines, such as the "*The Ricettario fiorentino* (1499), [that] intended to establish definitive recipes for the use of the city's apothecaries." There were also other "recipe [books, like the one] kept by the hospital of Santa Maria Nuova in Florence […] which combines elements from both the learned and popular tradition as well as the practice of contemporary doctors." However, "[there was] a strong adherence to the Galenic theory that drugs should always be 'tempered' to the particular condition of the individual patient, taking into account characteristics such as constitution, age and sex, as well as external variables such as the season."[69]

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[68] Shaw and Welch, 233.
[69] Shaw and Welch, 233–36, 256.

The Florentine pharmacists' most important medicines were "[the] purges […]. Following these, [there were] clysters, sweet electuaries, bitter electuaries and pills." Additionally, there were also medicinal syrups that were used as supplements to a purge. These medicines were for internal ailments of the bodies. For external types of sicknesses, the most used cures were "epithems, fomentations, baths, ointments, plasters and cerates." All these medicines were created with local product or imported. Indeed, with Italy being in the middle of the Mediterranean Sea there were many great port cities. The most relevant for Florence's importation businesses was Venice, as through "their trade routes – mainly through Alexandria, and, to a much lesser extent, Beirut," many ingredients used for the creation of various medicines were able to reach Florence.[70]

Another element to consider when writing about Florence is the guild system. As a matter of fact, since pharmacies, or Speziali, were dealing with health and cures that would always deal with human bodies, it meant that "[the] preparation of […] drugs was therefore the preserve of professional apothecaries, subject to city and guild regulation."[71] The guild that was founded in Florence for the "community of medical practitioners and the practice of medicine [was] the Guild of Doctors, Apothecaries, and Grocers; this body established licensing requirements and standards which the profession was expected to observe." Indeed, "[the] Guild of Doctors, Apothecaries, and Grocers was one of the twenty-one corporations of masters established in 1293 by the Ordinances of Justice."[72]

The guilds existed to protect the economic and political interest to all those who lived thanks to a particular trade. The medical guild, "[by] the mid-fourteenth century, […] was

[70] Shaw and Welch, 195, 236.
[71] Shaw and Welch, 233.
[72] Park, "The Guild," 1–2.

probably the largest of the greater guilds, boasting a membership of roughly six hundred." Those who were members of this guild were originally just "spice and drug merchants," then others joined the guild, such as doctors, grocers, "chandlers, painters, stationers, leatherworkers, and metalworkers," later in time there were also traders, such as "barbers and gravediggers." To be a member of such a guild was a difficult and restricted achievement as "[the] requirement of either a doctorate or a practical examination set medicine apart from the other occupations governed by the Guild of Doctors, Apothecaries, and Grocers."[73]

For however great Florence was, there are other important Italian cities to consider. Indeed, there is Bologna, also known as the "capitale della medicina" (capital of medicine) with its different healing shops during the 16th century. In this century the power that controlled and safeguarded the pharmacies were two, one for each half of the century. The first half was the medical guild, like the one in Florence. Indeed, those who were members of this guild were doctors, pharmacists, barbers, midwives, "droghieri, candelai, birrai e mercanti di vernici" (grocers, chandlers, brewers and paint merchants). In the latter half of the century the power who controlled doctors and pharmacies was the Health Council, also known as the "Protomedicato."[74] This council had the power to tax and inspect all healing shops, and it was connected to the governing power of the state.[75]

There were many types of healing shops, and all of them had an "insegna che era loro concesso di esporre" (sign that they were allowed to display) by whichever controlling authority was present. The most interesting shops to note are two: the one belonging to barbers and the one of the midwives. Indeed, the barber shop had a sign that depicted an arm and a very sharp needle

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[73] Park, 2-7.
[74] Eamon, *Il Professore Di Segreti*, 35–39.
[75] Shaw and Welch, *Making and Marketing Medicine in Renaissance Florence*, 40–46.

to showcase that their expertise was the salasso, in English known as bloodletting. They were in charge of curing all external maladies a man could suffer of, from broken bones to rashes. At least officially, as in reality, their services were much cheaper than the ones offered by proper doctors, so barbers would also heal many other low-levelled sicknesses of the common people.[76]

The other interesting healing shop belonged to the midwives. Their insignia showed three crosses and their duty was to help heal all women. Indeed, they would help women with the birthing of babies as that was their main duty; however, their job was not limited to expectant mothers and babies. They were also in charge of healing any illnesses a woman presented, both internal and external, as the midwives were the only ones who could actually view a female body, medically speaking. Indeed, the general medical practices with the female body were considered to be "secret and the exclusive domain of women." Moreover, since they were the only ones who could touch female bodies, they were also in charge of washing and dressing them once they were ready to be buried.[77]

Moving on from Bologna, another important Italian city to consider is Rome where the power of the Church was located. When discussing Roman apothecaries of the 1400s, there is to consider the careful ever-changing power dynamic between pharmacists, doctors and the different popes who ruled over Rome and the Papal State. Starting in the 15th century and moving on to the 16th century, there has always been a relationship between doctors and pharmacists as each profession was dependent on the other. However, in Rome there was an added strain to this relationship. Indeed, as Ivana Ait has shown, the Speziali were trying to achieve more economic independence from the Roman medical guild yet the Popes desired more control over their business and the following taxation. The pharmacists' businesses would import

[76] Eamon, *Il Professore Di Segreti*, 38–39.
[77] Eamon, 39.

many different medical ingredients, such as “zenzero di varie qualità […], cannella, noce moscata, pepe, zucchero, ambra, incenso, ammoniaca, arsenico, borace, canfora, verderame, gomma arabica, […] sangue di drago, rabarbaro, […] insieme ad un'ampia varietà di metalli in forma greggia o semilavorata: rame, ferro, ottone, piombo, oro in foglia” (ginger of various qualities […], cinnamon, nutmeg, pepper, sugar, amber, incense, ammonia, arsenic, borax, camphor, verdigris, Arabic gum, […], dragon's blood, rhubarb, […] together with a wide variety of metals in raw or semi-finished form: copper, iron, brass, lead, gold leaf), making it necessary for the papal forces to create higher taxes for the pharmacists. Something that the pharmacists were trying to get around through their healing practices.[78]

Indeed, they were at the very heart of “i segreti dell'arte farmaceutica e magica, dell'artigianato e della pratica commerciale, riconosciuta utile dall'intera collettività” (the secrets of pharmaceutical and magical art, craftsmanship and commercial practice, recognized as useful by the entire community). However, what is more interesting are the shops and the businesses themselves. The apothecary shops were considered as “veri e propri luoghi di riunione e di incontro per la gente del rione, dove spesso si concludevano trattative d'affari, si risolve vano liti, si stipulavano atti di ogni genere, erano dislocate in modo piuttosto omogeneo all'interno del tessuto urbano” (true meeting places for the people of the district, where often business negotiations were concluded, disputes were resolved, acts of all kinds were stipulated, they were located in a rather homogeneous way within the urban fabric). This is true for all Speziali, yet the ones in Rome especially had to deal with the strongest political power that could either leave them be or stop them, the Church.[79]

[78] Ait, “Fra Mercato e Pratica Sanitaria: Gli Speziali a Roma Nel XV Secolo,” 1–3.
[79] Ait, 4–7.

Indeed, starting from the 16th century, pharmacies were obligated to keep accounting books always ready to be checked by those who had the duty of inspecting the different shops. A duty always given out by those of the Church with the invention of the governmental figure of the protomedico, a figure invented by the pope to center more governmental power to the Church and its collaborators. This also meant that the Speziali had officially less independence and was more under the control of the doctors, something that was not strictly true before. Moreover, all pharmacists had to strictly follow a type of *Ricettario,* the most common Roman ones were the "*Antidotarium* of Mesue il Giovane and the *Antidotarium Nicolai*, of master Nicola Salernitano," that could also be found in the Speziale of the San Salvatore Hospital. These were necessary duties that all pharmacists had to follow to be able to keep their practice going forward legally.[80]

Therefore, all pharmacists in the cities of Florence and Bologna as well as in Rome between the 15th and 16th centuries had to face strict control from the governments they served under and the Church. However, they were important members of all communities as they were the ones who lived and worked in the center of the cities, allowing for people to be cured or to meet future business partners and more. Each shop had its own specialization in how to cure different patients, making it a necessity to grow the number of shops in the city. The job of a pharmacist was an interesting combination of healing practices. A true mixture of the Ancients' teachings, thanks to doctors' influence, and the pharmacists' own everyday work experiences. In other words, the pharmacist was a combination of healer and businessman, in the strictest of ways.

[80] Ait, 9-15.

4. Studying and Practicing Medicine

Having seen the healing world of the poor and richer commoners outside and inside an urban setting there is now to consider another aspect of the medical world. Those who were recognized as doctors by universities, those who advanced the medical knowledge and those who were the less trained healers who would sell "false medicine"[81] for some coin. The world of the 15th and 16th centuries had many aspects of life and society that were interconnected with the world of healing and the one of the Speziale is remarkable because it exists between the poor and the rich. However, the people belonging to the medical field were not just folk healers, members of the clergy, or pharmacists. Indeed, there were more people connected to the world of healing, and also strongly tied to pharmacists' business. At the highest hierarchical standing there were the university acclaimed doctors and those who made the greatest medical or anatomical discoveries of their own time, interesting examples being Leonardo Da Vinci (d. 1519), Andreas Vesalius (d. 1564), Gabriele Falloppio (d.1562) and Girolamo Cardano (d. 1576). On the other side, at the lowest levels, there were the grave robbers and the charlatans, those who today's society would call frauds, though back then it was not so clear cut.

There have already been many mentions of doctors in the chapters before as they were a complimentary existence to pharmacists' duties. They were more commonly the healers of nobles and rich, as most common people could not afford their services.[82] However, they are still

[81] University of Sheffield, "A Brief History of Quackery - Quackery and the Supernatural in Varitey Performance - Student Research Projects - Projects - National Fairground and Circus Archive - The University of Sheffield," March 12, 2020, https://www.sheffield.ac.uk/nfca/projects/studentresearch/supernatural.
[82] Duni, *Under the devil's spell: witches, sorcerers, and the Inquisition in Renaissance Italy*, 66.

connected to the world of the lower classes thanks to the existence of the Speziali. To become a doctor between the 15th and 16th centuries, one needed to attend a university, a common reality as in Italy there were both the first and the most important universities in Europe, and to be able to attend university one had to come from a rich family who could afford to send young students to university.[83] That is why a doctor's wage was very expensive and only high members of society could afford their time. For this reason, pharmacists, and the other healers, though not considered as knowledgeable as doctors, were still important to heal the rest of society.[84]

Even if in the medical world, doctors were at the top, they still had rules and laws that they had to follow strictly to be able to keep their medical practice going on. Their healing methods were mostly focused of keeping whatever illness they encountered at bay, not truly to cure people.[85] Indeed, doctors "had three kinds of remedies at their disposal: diet, medication, and surgery," with a stronger focus on dieting, although there were doctors who would only focus on what they could see, for example, the "[way of healing of the] Florentine doctors […] was entirely naturalistic. Patients went to them for physical explanations and physical remedies," and that meant that they were looking for different remedies from "traditions of domestic and Church healing."[86]

The places where officially recognized doctors would study their discipline were universities. The most important ones to consider when thinking of the medical department are also the ones who were granted the title of *Studium Generale* meaning that they could give degrees out to their students. The most relevant ones were in Florence, known as the Università

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[83] Filippo Maria Renazzi, *Storia dell'Università degli studi di Roma: detta comunemente la sapienza, che contiene anche un saggio storico della letteratura romana, dal principio del secolo XIII sino al declinare del secolo XVIII.* (Nella stamperia Pagliarini, 1803), 223.
[84] Duni, *Under the devil's spell: witches, sorcerers, and the Inquisition in Renaissance Italy*, 66.
[85] Eamon, *Il Professore Di Segreti*, 38.
[86] Katharine Park, "The Doctors," in *Doctors and Medicine in Early Renaissance Florence* (Princeton University Press, 1985), 5, http://www.jstor.org.jcu.idm.oclc.org/stable/j.ctt7ztp1b.8.

degli Studi di Firenze, founded in 1321, in Bologna, the most ancient of them all, founded in 1088 and in Rome, also called *Studium Urbis*, founded in 1303 by Pope Boniface VIII. The University of Florence it started as a *Studium Generale* in 1321. At first it was unable to attract enough students to establish itself as a university. However, in 1348, the university of Florence was born again, this time to stay for a longer time period, though it still had many difficulties in keeping its title as it was shut down a few more times. The most common disciplines taught in this university were civil and canon law, literature, and medicine. The most problematic element of this university was the inconsistent numbers of professor that would teach in Florence, as they would move around between other Italian universities.[87]

In the 16th century the University of Bologna, the earliest to be established in Europe, had many professors and courses prepared for many subjects, the most important being law and humanities, of which medicine was a part of. At the beginning of the century, in the 1520s "[the] medicine faculty had approximately 18 professors of medical theory, 5 of medical practice, 5 professors of surgery, 5 natural philosophers, 2 metaphysicians, 5 logicians, 4 astronomers, 7 professors of rhetoric and poetry or humanities, a professor of Greek, and one to teach Hebrew or Hebrew and 'Chaldean' (i.e., Aramic)." All these professors would teach the necessary subjects for a learned doctor to graduate from university with a title that would be recognized by both nobles and the high clergy of the Church. [88]

Later on, still in Bologna, "the last third of the sixteenth century [the] faculty of arts and medicine of 45 to 50 persons had 9 professors of medical theory, 7 for practical medicine, 4 for surgery, and 1 for medical botany. There were about 8 natural philosophers […] who taught 'fossils, plants and animals.' Two astronomers, 1 mathematician, 3 humanists, 1 professor of

[87] Grendler, *The universities of the Italian Renaissance*, 3, 77–82.
[88] Grendler, 3, 15.

Greek, 2 metaphysician, and 1 or 2 logicians made up the rest." Indeed, there was a greater focus on the herbal studies, also known as botany, and a deeper practical study of the human bodies, anatomy, thanks to the discoveries published by Andreas Vesalius, a doctor that will be explored in a later time.[89]

For the third university to consider, the one in Rome, there is a strange situation when it comes to the study of medicine at university. Indeed, even if it was the city where the Christian Church established its power, the University of Rome did have a very important medical faculty. The situation was so particular that the Roman *Studium Urbis*, was considered "[the] principal academic institution […] for medicine." The *Studium Urbis* was known for having a "strong tradition of anatomical teaching" in the 1500s, and here as well there was a focus on "teaching botanical *materia medica* [moreover, in the last part of the century] a botanical garden was established at the Vatican." The vicinity of the Church did not seem to have had a detrimental effect on the new medical courses of the university.[90]

All these universities were extremely important for the formation of new doctors. However, for the creation of new medical accomplishments, there were individuals that between the 15th and 16th centuries were able to make incredible discoveries about the human body, and most importantly, publish them. The most well-known of them all was Leonardo Da Vinci. He was a genius of his time, who lived in Florence for a time, and later worked in Rome and Milan. He ultimately ended his life working under the King of France, Francis I, and he died in Amboise, France. He was an artist first, but he was also an engineer, inventor, and a keen observer of the human body, both inside and outside. Because of his interest in humankind, both

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[89] Grendler, 18.
[90] Nancy G. Siraisi, *History, Medicine, and the Traditions of Renaissance Learning* (Ann Arbor, United States: University of Michigan Press, 2007), 172, http://ebookcentral.proquest.com/lib/johncabot/detail.action?docID=3414719.

as an artist and as a scientist, he drew many sketches where he would meticulously consider every single aspect of the human body, from muscles to joints and tendons, something that would help him tremendously in his studies of anatomy. Da Vinci's most important published medical discovery was the one of the human heart and the blood circulation, even if he could not study how the two were connected and how it all worked inside the human body.[91]

Andreas Vesalius was another important scientist who dedicated his life to study human anatomy in the 1500s. He was not the first to dissect a human body; however, he was the first who studied the human body without carefully following Galen's teachings. Following the teachings of Pedanius Dioscorides (d. 90 CE) *Materia Medica*, most universities did not see a need to change their understanding of the human body, also there was the problem of the Church as one of the "reason[s] for the failure of the science of anatomy to develop was the almost universal prohibition of dissection of human bodies, [as only in] the Renaissance […] a few Italian city-states, [like Bologna,] began to permit the dissection of a few executed felons each year." Andreas Vesalius got his degree from the University of Padua and "in 1538 he published *Tabulae anatomicae sex*, in which he first dared to point out several [small] errors that Galen had made." After his publication he taught anatomy in the university of Padua and Bologna, and then left teaching to become a doctor in the court of King Charles V and his services were requested in other European courts as well. His most famous text was "*De humani corporis fabrica, libri septem*, usually referred to as the *Fabrica*."[92]

Gabriele Falloppio followed Vesalius' steps and studied anatomy while teaching anatomy and surgery in several universities, in places like Ferrara, Pisa and Padua. Falloppio was

[91] Eugène Müntz, *Leonardo Da Vinci* (New York, United States: Parkstone International, 2011), 93, 129–148, http://ebookcentral.proquest.com/lib/johncabot/detail.action?docID=791252.
[92] Friedman and Friedland, *Medicine's 10 Greatest Discoveries*, 2–10.

Vesalius' student when it came to anatomy, so he also did not completely agree with Galen's teachings and looked at Vesalius as an example to follow, that is why he was "known for his anatomical work and his connections to Vesalius."[93] Therefore, following Vesalius' teachings in anatomical studies, his research "led […] him discovering the 'Fallopian tubes' which still bear his name. Fallopio described these links between the uterus and the ovaries as flaring out at the end like a 'brass trumpet' – a tuba." He was another man who doubted the correctness of Galen's teachings, and this made him another important name in the history of medicine in the 1500s.[94]

Girolamo Cardano, another great scientist who greatly influenced the course of medicine in the 16th century, was a famous doctor as well as a mathematician: his expertise with numbers made of him a great gambler, the kind that always won. He taught at the university of Pavia and Bologna and was a doctor for many influential people. Probably because of his colleagues' jealousy, Cardano was accused of magic and witchcraft in 1571, but his fame was so grand that he did not suffer truly dangerous consequences. His greatest medical achievement was the understanding of asthma caused by allergies, an illness that the bishop of Edinburgh was suffering from, and Cardano was correctly able to diagnose.[95]

These are some of the universities and names that have shaped the medical world from a high standing spot in the medical hierarchy. However, on the other side there are other figures of which we do not have the names that were still very important as they either helped out universities in making their discoveries, like grave robbers, or got into contact with the common people of the city who could not afford neither a doctor nor a pharmacist, but still needed

[93] R. Allen Shotwell, "The Great Pox and the Surgeon's Role in the Sixteenth Century," *Journal of the History of Medicine and Allied Sciences 72,* no. 1 (2017): 28.
[94] John Gribbin, *Science, a History, 1543-2001* (London; New York: Allen Lane, 2002), 26, http://archive.org/details/sciencehistory150000grib.
[95] Perozziello, *Storia Del Pensiero Medico*, 66–67.

medicines, like the charlatans. Grave robbers were people who would go into cemeteries and look for freshly buried bodies to steal and sell to those who studied anatomy courses. This especially became more and more common thanks to Vesalius influence. Indeed, Vesalius "and his students forged keys, rifled tombs and gibbets, and stole in and out of ossuaries in a series of [night-time] escapades that he recounts with evident relish and amusement." The crime of stealing corpses from their graves became such a problem in the latter half of the 16th century that "[there was] persistent public concern regarding anatomical practice in Italy, and even then this concern coexisted with well documented popular enthusiasm for the spectacle of dissections."[96]

On the other hand, charlatans, were not considered criminals by the medical authorities of the different Italian states, though the Church did keep a close eye on them. Indeed, the negative connotations of their name, charlatans, come in later in time. In the sixteenth century they were proper professionals who sold cures, accurately inspected by the authorities previously mentioned, like the protomedico, in city squares through entertainment and games. Their name came from the words "cianciare" meaning to chatter, a technique used by the charlatans to impress their clients, just like good salespeople of today, to buy the medicines they would create. These cures were not like the ones prepared by the pharmacists, but they were still acceptable according to the guilds and other medical and governmental powers. One thing to note about charlatans was that they were also nomadic in their selling adventures; indeed, they were a particular branch of peddlers, specialized in medical cures.[97]

[96] Katharine Park, "The Criminal and the Saintly Body: Autopsy and Dissection in Renaissance Italy," *Renaissance Quarterly* 47, no. 1 (1994): 18, https://doi.org/10.2307/2863109.
[97] Conforti, Carlino, and Clericuzio, *Interpretare e Curare*, 189–96.

Therefore, there are people from the high medical hierarchical world that both taught and influenced future studies in universities and people from the lower levels, both criminal and not, who were still able to influence the medical world from the perspective of the common people. Pharmacists would place themselves right in the middle of this hierarchical ladder. The world of medicine was broad, and it infiltrated many aspects of Renaissance life from an academic's perspective or from a criminal one. Indeed, many people were involved in the healing world and all from truly different backgrounds, but together they were still able to change what the history of medicine was changing into in the 16th century.

5. Conclusions

This work started as an investigation into the healing world of the 15th and 16th centuries, with a stronger focus on the character of the pharmacist as he was the figure in the middle between nobles and common people, and in contact with them all through different ways. Indeed, the pharmacist was the man who was able to both heal people, make a profit for himself and establish relationships between all members of the society he served.[98] This has made him an interesting character as he was able to move around the different social classes with their permission. It also allowed him to formulize better caring systems that all pharmacists could share between those in the healing business.[99]

The one limit this work has is the difficulty in accessing primary sources about what pharmacists had written about their duties. Indeed, there are many sources describing the relationship between doctors and pharmacists from the doctors' viewpoint and many other financial sources that help scholars understand who the pharmacists' clients were, but there is very little written from the personal perspective of pharmacists. However, that problem mostly stems from the fact that if pharmacists ever wrote about their livelihood, most of those sources were lost throughout time.[100]

However, there is still a lot of information about pharmacists and though they might have been the most resourceful healing members of society, they were not the only one present. Between the two centuries, the 15th and the 16th, there were many different living conditions,

[98] Ait, "Fra Mercato e Pratica Sanitaria: Gli Speziali a Roma Nel XV Secolo," 7.
[99] Shaw and Welch, *Making and Marketing Medicine in Renaissance Florence*, 235.
[100] Conforti, Carlino, and Clericuzio, *Interpretare e Curare*, 129–42.

both inside and outside the city limits, and each state inside the Italian peninsula. All these conditions led to different realities that had incorporated diverse healers with specific healing traditions and training, from those who were recognized by the secular authorities, having received a formal training from a university to those who worked outside the system without a license, who were often ignored as the forces of the state could not reach rural areas.[101]

Through the chapters of this work many types of healers have been explored. There were the folk healers, the clergy living in monasteries, witches, saints, pharmacists, doctors, professors, grave robbers, and finally the charlatans. All these figures focused their life work into healing people, or helping people who could heal, with both good and bad outcomes. Nevertheless, the one that was able to heal more people and create a bigger market industry for medical ingredients was still just the pharmacist. Indeed, that is why the role of the pharmacist bloomed inside the city, though it was heavily influenced by his working relationships with doctors and the different governments present in Italy.[102] Though, there is to take note of the market competition with charlatans who were state recognized, but nomadic in their selling procedures, so not as socially relevant in their business practices.[103]

Pharmacists were people within the social system who both had to obey the rules and change them as more medical discoveries were being made and most of their clients could not afford the more expensive types of medicines.[104] That is why, pharmacists had to continuously innovate themselves, also by making more and more standardized cures with texts like the *Ricettario Fiorentino* and other printed texts created to make sure that specific medical recipes

[101] Piccione and Del Savio, *Meravigliosa erboristeria: metodi naturali per la difesa della salute*, 77.
[102] Park, "The Guild," 2.
[103] Conforti, Carlino, and Clericuzio, *Interpretare e Curare*, 189–209.
[104] Duni, *Under the devil's spell: witches, sorcerers, and the Inquisition in Renaissance Italy*, 66.

became more common between all healing shops and more affordable for all kinds of people.[105] Compared to the healers of the lower classes, who most likely did not have an academic training and could not spread their knowledge through texts but only orally,[106] and doctors with university backing who were more focused on making new discoveries regarding the human body,[107] pharmacists were able to create a growing method in their healing practices.

The method was not yet scientific in its function, but it was slowly moving towards creating a basic line for the future scientific transformation and revolutions of the coming centuries. All these changes were slowly developing in a world where the Church was facing social, political, and military destabilization, with the Counter-Reformation pressing strongly on the common social regulations of the general population and the dangerous consequences of going against this political major power. However, some sort of method was being used by all those in the healing world, and the one written down by pharmacists was part of the foundations of the future scientific revolution that started towards the end of the 16th century and developed from the 17th century on.[108]

The pharmacist was a role that completed many duties, from the cultural one of creating method, to his social function of supporting its collaborators, the doctors, or its clients, the patients. He was an essential member of society who through many influences was able to heal people and keep its working traditions for so many years that they are still part of everybody's daily life. Indeed, in Italy, people still completely trust those who work under the green cross, the pharmacists, sometimes more than their doctors. Therefore, the pharmacists of the 15th and 16th

[105] Shaw and Welch, *Making and Marketing Medicine in Renaissance Florence*, 235.
[106] Duni, *Under the devil's spell: witches, sorcerers, and the Inquisition in Renaissance Italy*, 67.
[107] Friedman and Friedland, *Medicine's 10 Greatest Discoveries*, 10.
[108] Perozziello, *Storia Del Pensiero Medico*, 70–75.

centuries thrived inside the city limits of different Italian states and helped so many people that their job was able to continue to exist even today.

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