

# Medical Astrology in Spain During the Seventeenth Century\*

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It is well known that astrological practice during the Early Modern period was closely related to medicine, and that it provided a tool for diagnosis and treatments. An interesting aspect of this relationship of medicine and astrology is the recognition of the prevailing ideas about medical astrology in the astrological works and astrological-medical treatises. This article discusses the ideas of Galenism and the astrological doctrines that established such a strong relationship between astrology and medicine. There is an overview of the Spanish authors who wrote about the subject, especially those linked with the universities. The paper then goes into detail about the examples of these ideas found in the Spanish printed texts of the seventeenth century. Finally, there is a section on some very interesting and little known treatises on medical astrology which were a reference for the practice of astrological medicine in the period.

*Es sabido que la práctica astrológica durante la Edad Moderna estaba muy relacionada con la medicina, y que proveía de una herramienta para el diagnóstico y el tratamiento. Un aspecto interesante de esta relación de la medicina y la astrología es el reconocimiento de las ideas sobre medicina astrológica prevaletientes en los trabajos astrológicos y en los tratados de astrología médica. Este artículo discute las ideas del galenismo y las doctrinas astrológicas que establecieron una relación tan fuerte entre la astrología y la medicina. Se comienza con un repaso de los autores españoles que escribieron sobre esta materia, haciendo hincapié en aquellos que estaban relacionados con las universidades. El trabajo entra posteriormente en detalle con ejemplos de las ideas mencionadas que se hallan en los impresos españoles del siglo XVII. Para concluir, el artículo se refiere a varios tratados de medicina astrológica, de gran interés pero poco conocidos, que fueron además un referente para la práctica de la medicina astrológica en la época.*

**D**URING THE EARLY MODERN PERIOD, astrological practice was closely related to medicine. The function of astrology was to provide a tool for diagnosis and treatment, based on the astrological principle that certain positions of the stars and planets caused illnesses, and that certain planetary configurations were better or more auspicious than others for medical procedures, such as bleeding, purging, or taking appropriate or proscribed medicines. However, the relationship of astrology and medicine was deeper than these simple assertions suggest: it was based in the Galenic idea of the human body and its health, an idea that was shared by both disciplines.

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The prevailing ideas about medical astrology in the astrological and medical treatises reveal interesting aspects of this relationship. This article discusses the ideas found in Spanish printed texts of the seventeenth century and considers those ideas to be part of the humanist Galenism that developed in Europe during the sixteenth century, and that also went on to be the prevailing medical system in Spain during most of the seventeenth century. The first part of this article is centred on the authors who wrote about medical astrology, especially those whose work was linked with universities. The last part of the article is an analysis of interesting but little known treatises on medical astrology that provided reference material for the practice of medicine in the Iberian world during the seventeenth century.

### ***Authors***

This initial part of this article is an overview of the authors who wrote on medical astrology in Spain in the seventeenth century. A recent catalogue has compiled 1200 scientific printed works published by Spanish authors in the seventeenth century (Navarro Brotons et al., 2007, forthcoming). Four hundred of these works were astrological, and most of them treated issues of medical astrology or included predictions of illnesses. Some of the authors were popular astrologers with unknown training, but many of the authors whose biographies are known had studied at and graduated from the best universities in the country, Salamanca, Alcalá de Henares, Valencia or Sevilla. Indeed, some were doctors and professors at these universities.

Concretely, among the authors of astrological texts whose biographies are known, nearly 50% of them were physicians (ten of twenty-two authors). This list also includes those who are known to have studied medicine, as well as two others who signed as 'doctor'. The word could refer to a doctorate in other disciplines, although it probably meant 'physician'. There is also an author whose medical activities are known, although he was not properly a physician but a popular healer, and at least three more authors whose works were on astrological medicine. If they were all physicians, the number rises from ten to sixteen, and therefore, more than 72% of the authors who wrote on astrology would then be related to medicine.

Among these authors, those who were professors at the universities must be highlighted. Antonio Núñez de Zamora and Bartolomé del Valle taught at the University of Salamanca. Núñez de Zamora was the professor of medicine. There was also a teacher of medicine at the University of Alcalá de Henares, Cristóbal Ponce de León, and the professor

Juan de Soto of the University of Granada, as well as an author called Fulgencio Vergel, who signed as “professor of mathematics at the University of Almagro”. Vergel would have been a professor at the catholic university-monastery, called Nuestra Señora del Rosario, in the Castilian town of Almagro, which was established as a university at the end of the sixteenth century.

In this paper works by the following authors will be used as examples:

Luis de Aldrete y Soto (fl. 1660-1690) was a theologian and medical practitioner who collaborated with the Inquisition. He was involved in several scientific polemics, particularly on astrology and its validity. He wrote a *Discurso del cometa deste año de 1682 en que se explica el de 1680*.

Diego Cisneros: A physician who studied at the University of Alcalá de Henares, who then went to New Spain and became a professor at the University of Mexico. He wrote the work *Sitio, naturaleza y propiedades de la Ciudad de México* in 1618.

Bernardo Ferragut (fl. 1600-1630): His biography is unknown. He wrote a work entitled *Conjectura de los efectos significados por los cometas*, in 1618.

Leonardo Ferrer (1623-1695) was an Augustinian friar who studied medicine at the University of Valencia and who went on to become a professor of mathematics at the University of Valencia for twenty-three years at the end of the seventeenth century, from 1667 to 1689. Ferrer wrote many astrological texts, lunar calendars and prognostications on comets and eclipses. The examples in this paper come from his work *Juicio de la impresion meteorological ignea que se ve en el aire en Valencia*, written in 1681 on the comet of 1680.

Joan de Figueroa (fl. 1650-1690): His biography is unknown. This author wrote a work entitled *Opúsculo de astrología en medicina, y de los terminos y partes de la astronomía necesarios para su uso*, in 1660.

Antonio de Nájera (fl. 1600-1640) was a Portuguese cosmographer who studied mathematics, astronomy and astrology in Lisbon (Portugal belonged to the Crown of Spain from 1580 to 1640). He wrote a *Discursos astrologicos sobre ou cometa de 1618*, as well as a treatise entitled *Suma astrologica y arte para enseñar a hacer pronósticos*, in 1632.

Francisco Navarro (fl. 1590-1630) was a physician who graduated as a doctor at the University of Valencia. He wrote a *Discurso sobre la maxima conjunction de 1603*.

Antonio Núñez de Zamora (fl. 1580-1610) was the professor of medicine at the University of Salamanca during the first decade of the seventeenth

century. He wrote, in Spanish, a *Juicio de la máxima conjunción*, which was included in his book on comets written in Latin: *Liber de cometis*, published in 1610.

Miguel Pedro (fl. 1600-1630) was a priest in the service of the Archbishop of Zaragoza, who worked with the Inquisition. He affirmed that he was a doctor. He wrote a *Juicio y presagio natural de los cometas de 1618*.

Cristóbal Ponce de León (fl. 1590-1620) was a physician and mathematician who studied at the University of Alcalá de Henares. He wrote *Libro de la ciencia natural del cielo* in 1598.

Francisco Temudo (fl. 1650-1690) graduated in arts and worked in the city of Valladolid. He wrote several lunar calendars and prognostications, and a *Discurso de prodigios grandes*, in 1660.

Bartolomé del Valle (fl. 1600-1640) was a physician who studied arts and philosophy at the University of Alcalá de Henares. He became a doctor in medicine and the professor of astrology at this university between 1612 and 1623. He wrote a work titled *Explicación y pronóstico de los dos cometas de 1618*.

### ***Astrology and Galenism***

It must be remembered that many physicians of the Early Modern period thought that knowledge of astrology was important for the practice of their profession. During the Renaissance, humanists considered that the development of medical astrology was very scarce, and many physicians and astronomers studied medical astrology for this reason. The consequence of this was an abundance of physician-astronomer-astrologers in Europe at the end of the sixteenth century (Navarro Brotons, 1992). Spanish society was also convinced that astrological knowledge was indispensable for physicians to such an extent that the Castilian Parliament (the *Cortes*) complained before the King in Madrid in 1571 of the inadequacy of medical treatment. They blamed the physicians' ignorance of planetary motions, and pressed Philip II "to order that henceforth no physician may graduate from any university without the degree of bachelor in astrology" (Goodman, 1988, p. 8). Why was the knowledge of astrology so near to medicine? The answer to this question lies in the very basis of Galenism as well as of astrology, and the examples contained in the texts on astrological medicine show this deep relationship. This is not an attempt to explain every aspect of Galenism nor to simplify it, but, acknowledging its complexity, we will make a short refe-

rence to its basic elements, particularly to those that agree with early modern astrological doctrine.

López Piñero distinguished two aspects in early modern medical knowledge: knowledge on the human body in a healthy state, and knowledge on illness and its treatment (López Piñero, 1973). Galenic medicine understood the human body according to the Hippocratic doctrine, considering that it contained four humours, the fluids blood, phlegm, yellow bile and black bile. Health depended on the balance among these fluids. This physiological theory associated each humour with one of the four basic Empedoclean elements, blood with air, phlegm with water, yellow bile with fire and black bile with earth. According to the Aristotelian tradition, there were four fundamental qualities that characterized the four elements: air was mainly hot, and moist to a certain degree; water was mainly moist (and cold); fire was dry and hot; and earth was cold (and dry). In the doctrine of Galenism, each of the four humours possessed two of these qualities: blood was hot and moist (like air), phlegm was cold and moist (like water), yellow bile was hot and dry (like fire), and black bile was cold and dry (like earth). In order to maintain health, the body had to be balanced: not too warm nor cold, and not too moist nor dry. Each humour was also linked with a main organ, an organ with which it shared similar qualities, and from which it was supposed to flow or be related to: blood was associated with the heart, phlegm with the brain, yellow bile with the liver and black bile with the spleen.

Astrology fitted perfectly within this system. According to the tradition of Hellenistic astrology, the stars transmitted, in different combinations, the four qualities correspondent to the four elements. As everything on Earth was made of those elements, the influence of the stars was pervasive and could be found in everything. This also included the humours inside the human body which were affected by the four qualities. Therefore, the healthy balance depended not only on the body's internal production of the humours, and the ingestion of food with a certain characteristics, but also on celestial influence. Indeed, with the development of humanism, the practice of astronomy and astrology increased among humanist physicians, who saw in astrology excellent support for the interpretation of Hippocratic texts (Navarro Brotons, 2002).

The Galenic doctrine went still further, affirming that the personal complexion and temperament of each person depended on his humoral constitution. That meant that the nature and relationship of the organic systems of each individual, as well as one's particular constitution that resulted from the physiologic predominance of an organic system, depended on the humours. The temperament of a person should be understood in the sense of bodily dispositions, but also as behavioural and emotional inclinations. Galen established that a temperament dominated

by blood (and therefore by air) would be sanguine, a temperament dominated by phlegm (and water) would be phlegmatic, a temperament dominated by yellow bile (and fire) would make a choleric person, and a temperament dominated by black bile (earth) made people melancholic. This way, humours, complexion and temperament constituted an interactive system in which the states of health and sickness were based (López Terrada, 2006).

No doctrine could be nearer the assumptions of natal astrology than these aspects of Galenism. According to the astrological doctrine of genethliology, the planets that had predominance in the natal chart of a person would have an influence in his temperament. This was not a gratuitous assertion: each planet transmitted one of the four main qualities, or a mixture of some of them (usually two). The qualities, as has already been said, affected the corporal balance by acting on the humours. But it was more than that: each planet dominated the people of a certain temperament. When the natal chart of a person was dominated by Saturn, that person would be melancholic for several astrological reasons: Saturn acted on black bile; it governed the element earth; and it was cold and dry. When the lord of the natal figure was Jupiter, which was moist and warm, the person would be sanguine; Jupiter influenced blood and it governed air. Mars, a hot and dry planet of the complexion of fire, made choleric people; it acted on yellow bile. Venus, cold and moist, related to water, made phlegmatic people; Venus acted on phlegm). The Sun, the Moon and Mercury influenced mixtures of two temperaments. On this basis, astrology was a natural relative of the knowledge of the human body of Galenic medicine. The influence of the planets could be seen as part of the interactive system of health and illness composed by the individual state of humours, complexion and temperament.

Additionally, there was the knowledge of disease and its treatment: pathology and therapeutics. Galenism understood disease as a causal process resulting from an imbalance of the normal complexion of the person. Actually, health consisted of cooperation among the various parts of the body –tissues, solids and fluids– in proper proportions; the main assumption was that health was the result of the vital unity of the human organism; sickness was the disturbance of these proportions and of this harmonious working (Taylor, 1922, p. 106). The alteration of the proper balance of the four humours was the origin of pain and disease. Illness was characterized by the excess or defect of one of the humours, and the object of treatment was to restore the humoural balance. The imbalance could be rectified through diet, medicines and the practices of purging and bloodletting. All three solutions had a relationship with astrology, to which we will refer below. But it is important to establish first what was the astrological interpretation of disease.

The theories that established a relationship between the planets and the four bodily humours did the same with zodiacal signs and mundane houses. All these astrological fundamentals, every planet, sign and house, were attributed to the four qualities: cold, hot, moist and dry, as well as an influence in one or more of the four humours. Therefore, the astrological sign whose qualities coincided with those of a certain humour, as well as with the qualities of one of the main organs, was considered a signal of sicknesses related to that humour or organ.

To this theory of qualities and influence of humours was added the main theory that explained the astrological connection between disease and the celestial bodies: the well known relationship of the planets and zodiacal signs with the parts of the human body. This theory was already well developed in antiquity, and it was also very popular during the Middle Ages and the Renaissance, because it provided a 'rational' way to explain localized pain and sickness. The adjudication of the dominance of one of the zodiacal signs, or of one of the planets, over a certain part of the human body, was known as '*melothesia*'.

Zodiacal *melothesia* was mainly anatomical, giving each sign the government of a part of the body. It usually began by giving the sign of Aries dominance over the head and then continued downwards through the body. Taurus would dominate the neck and throat, Gemini the arms and shoulders, Cancer the chest and stomach, Leo the heart and upper back, Virgo the abdomen and the intestines, Libra the skin and lumbar region, Scorpio the reproductive system and sexual organs, Sagittarius hips and thighs, Capricorn knees, Aquarius the ankles, and Pisces feet and toes. This system had several variations during the early modern period, depending on the source used for the adscription. One of the most popular sources was the poem *Astronomica* by the Roman author Marcus Manilius, who established the list of correlations between the signs of the zodiac and the parts of the human body mentioned above.

Planetary *melothesia* was primarily physiological in character and centred on concrete organs, functions of the body, and an assessment of the body symmetry. Usually, the bones, bladder and spleen depended on Saturn. It must be noted that the associations were not arbitrary. For instance, the spleen depended on Saturn because this planet was cold and wet, of the nature of earth, the same qualities attributed to the spleen because it was associated with black bile and therefore to the earthy qualities. The lungs, arteries and sperm depended on Jupiter. The veins and testicles depended on Mars. The eyes, the brain and the nerves depended on the Sun. The liver depended on Venus. Reason and the tongue depended on Mercury. The Moon dominated the stomach and

the female organs. There were also several versions of planetary *melothesia*.

Within this system, the different astrological essentials could be indications (or even causes) of localized pains and diseases, or of organic malfunctions. Astrological method and calculation established the positions of several planets, or celestial configurations, and those configurations were interpreted to indicate illness. One of the main explanations for the emergence of a disease was the place a planet occupied in the heavens at a certain moment. There were many options for interpreting this rule, according to the qualities of the planet and sign and the humour that they affected, as well as according to the part of the body or organ that the planet and sign governed. This kind of explanation was also used for unusual astronomical events, such as comets, eclipses or conjunctions. The predictions varied according to the sign in which the eclipse, conjunction or comet occurred. It must be taken into account that certain planets and stars were considered to have beneficent influences, and certain others, malefic ones. These ideas were also based in the four qualities: heat and moisture were beneficent because they were fertile and active, being forces of generation; while the dry and the cold were maleficent forces because they were destructive and passive. Thus, Saturn, being the coldest planet, and Mars, the most dry, had malefic influences over human health (as well as in general, in human affairs of every kind); while Jupiter and Venus were beneficent because of heat and moist.

A more complete astrological explanation for different health outcomes was the chart or celestial map cast for the moment an event occurred. It was not only the sign in which the event occurred, but also the complete planetary picture of the moment when it happened, which meant taking into account the planet that dominated that celestial map. Concerning comets, the planet thought to have transferred its qualities to the comet was very significant. When a comet appeared in a figure under the dominion of Saturn or Mars, predictions usually included illnesses, epidemics and general harm or death.

Many prognostications of illnesses were based on these assumptions in the astrological works. Diseases were most often considered a result of Saturn's influence, and in second place, Mars, the two great malefic planets. For example, the physician Aldrete y Soto,<sup>1</sup> wrote that the comet of 1680, which originated in a chart ruled by Mars, would bring pestilence.<sup>2</sup> The professor of the University of Valencia, Leonardo Ferrer, explained

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<sup>1</sup> Aldrete y Soto did not have an official license, but he worked as a physician.

<sup>2</sup> Aldrete y Soto (1682). *Discurso del cometa deste año de 1682, cuyo anagrama es Dios Trino de Alto Luse... en que se explica... el de 1680*, Madrid, imprenta del Reyno de Lucas Antonio de Bedmar. Biblioteca Nacional de Madrid: V.E./203-31, p. 5r.



that when Saturn and Mars were near each other in the heavens, their influences were the “cause of great illnesses, suffocations, epidemics and pestilences”.<sup>3</sup>

According to the Galenic doctrine, between sickness and health laid a condition of predisposition to one or another form of disease, due to the individual's constitution or temperament (Taylor, 1922, p. 107). According to the astrological doctrine, the predisposition to certain diseases and the individual constitution or temperament could be known using the individual's natal chart. Therefore, the astrological chart was also used to predict the disease that a person could expect to have during his lifetime. The body complexion, and the person's temperament, was, according to the assumptions of astrology, due or signified by the natal chart of that person. Depending on the planets ruling his natal chart, as well as the signs ascending and descending at the moment of his birth, and on the places in the heavens (signs and houses) where the seven planets were located at that time of birth, the person would be of a certain temperament: sanguine, phlegmatic, choleric or melancholic. Moreover, he would have the predisposition to catch certain diseases according to the entire figure. This way, the predisposition or inclination of a person toward a temperament and the diseases associated to it was another aspect of Galenism where astrology fitted without problems.

Finally, the astrological theme was used for the study of a certain disease. The birth chart was used for diagnosis, but it was also customary to calculate a chart for the disease itself. That chart was erected for the location and time of the onset of the illness. The houses, the Moon and the fixed stars were specially taken into account for this kind of chart. One of the main elements was the importance of the risings and settings of the fixed stars in the prediction of sickness.

Another idea that must be mentioned is the medical doctrine according to which the course of a disease was determined by the occurrence of ‘critical days’. This theory had its origin in the Hippocratic doctrine that an illness would reach a crisis and turn either to recovery or death a certain – and calculable – number of days after onset (Siraisi, 1997, p. 140). According to this notion of critical days, a physician's main concern would be to calculate the days when the disease would take a turn for the worse or for the better (Barton, 1994, p. 187). According to medical astrological texts, the critical days were related to celestial influences, in particular, planetary movements.

The theoretical base for this confidence in astrology's important to medicine and health, derived from the Greek cosmologic tradition. The pre-

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<sup>3</sup> Ferrer (1681). *Iuyzio de la impresión meteorológica ígnea que se ve en el aire*, Valencia, Francisco Mestre (impresor del Santo Tribunal de la Inquisición). Biblioteca Nacional de Madrid: V.E./11-14. Fol. 2v.

Socratic idea that the world is essentially one and its different parts are mutually dependent would have originated the idea of the relationship among the heavenly bodies and the human body. The philosophical doctrine of the unity of the cosmos and the interdependency of its parts had become a main concept within the corpus of astrological knowledge. This is how Stoicism gave astrology a cosmologic and physic justification (Bouché-Leclerc, 1899). This cosmological justification established the interdependence, the *sympathia*, between macrocosm of the whole universe, including the sky and the stars, and the microcosm of the human body. The logical consequence of this was astrological medicine. This was also the origin of the *melothesia*, which was actually a comparison and correspondence between the universe and a human individual. Astrological medicine was, then, a natural corollary of the traditional view of the cosmos (Capp, 1979).

Going back to therapeutics, the options of changing diets and the practice of bloodletting, as well as the administration of purges or medicines, all of which shared the objective of restoring the humoural balance in the body of the patient, also had something to do with astrology. It was usually considered that different kinds of foods were classified under astrological influences, according to their qualities. Additionally, there was a complete branch of astrology dedicated to the calculation of the moment when a certain action should be taken, called 'astrology of elections'. This was one of the most important issues for the practice of phlebotomy and for purging or giving medicines. The physician needed to elect the right astrological moment for all those actions, according to the horoscope of the patient, as well as to the chart created at the beginning of the disease. There was an important consequence of the relationship between celestial bodies and bodily humours, on the one hand, and between astrological signs and illnesses, on the other: the practice of "electing" or choosing the appropriate moment to bleed a patient, or to administer medicines and purgatives. According to the celestial map of that particular moment, the result of the treatments would be either good or bad.

More than that, medicines were prepared according to astrological rules, for the reason that plants and minerals were also related to the stars, and those relationships had to be taken into account in order for their therapeutic applications to be effective. The pre-Christian Hermetic origin of the belief that the medicinal virtues of some plants were due to their relationship with the seven planets or with the twelve signs of the Zodiac or the thirty-six astrological decans was related to a different concept of health. In the Hermetic tradition, health was related to the vices of the human soul (Festugière, 1944). While this theory of relationship between the plants and the stars did not emerge out of Hippocratic theories and Galenic therapeutics, the basic notion of the association of plants to

planets and astral influences to the effectiveness of plant remedies adapted well to the theory of the four qualities. This tradition also included the notion that minerals similarly represented the influence of celestial elements on earthly materials. Therefore, plants and minerals were used in medicines depending on the planet or sign whose qualities were appropriate, according to the medical doctrine, to fight a certain disease. There was a popular tradition of creating astrological amulets of certain stones or minerals: this superstitious practice of creating zodiacal amulets for disease was changed and systematized by medical astrology, by Hermetism and particularly by Neo-Platonism, giving a plausible base for the medicinal use of minerals (Fresquet Febrer, 2002). In the case of Spain, the work *Lapidario* by the king Alfonso X had a great influence on this issue. It included the qualities of the stones and the influences exerted over them by the Zodiacal signs, the planets, the constellations and the positions of the stars (Fresquet Febrer, 2002).

There were still two other aspects of early modern medicine with which astrology correlated. The first of these ideas was related to Hippocratic 'environmentalism'. According to Kessel, in Galenic medicine there were a number of different theories regarding what was supposed to be in balance in order to maintain health, but, within all of those categories, air had an integral place, either as an element itself, as a part of a humour, or as a component of the external natural environment (Kessel, 2006, p. 28). Galen's development of the Hippocratic idea of the relationship of the four qualities with the four seasons led to an inclusion of the environment within the system of elements whose balance was important for health. Spring was associated with blood, winter with phlegm, summer with yellow bile and autumn with black bile. The conception of air and health was associated with a holistic conception of health and disease, linked to balance and harmony with nature and the universe (Kessel, 2006, p. 48). One of the consequences of this Hippocratic 'environmentalism' adopted by Galenic humanist physicians was that, depending upon the 'airs' in the environment of a particular place of the world, the state of health of its inhabitants would be different from others. From medical theory, conclusions were drawn by comparing various environmental factors, such as atmospheric conditions (essentially the temperature, the waters and the geographical situation) with the different individuals and people characteristic of those environments (Grove, 1995, p. 48). These were not so much theories of climatic influence as they were theories about the airs, waters and places as they were used in the Hippocratic corpus (Grove, 1995, p. 48). The idea that the body's physical balance was affected by the airs and waters of the place where they lived, and therefore by climate and geographical location, was analogous to the balance that was linked to the season, and thus

necessitated that physicians be concerned with all these issues, particularly after the century of discoveries.

Once again, there were two aspects of astrology, two of the most ancient aspects, which had a deep relationship with this medical theory: astro-meteorology and astrological chorography. Astro-meteorology investigated the links between the stars and the seasons, and in particular the agricultural year (Barton, 1994, p. 180). It must be remembered that the association of the seasons to the signs that were visible in the sky during a certain period of the year, was a very usual one. Whether the stars were considered causes of meteorological events, or simply signs of the change of the seasons (Barton, 1994, p. 180), they had a correlation with the weather. The links of the four humours with the seasons also helped to establish an easy relationship between both. Astrological chorography was the placing of lands and regions of earth under the dominion of heavenly bodies. In his foundational book of Hellenistic astrology, Ptolemy associated geographical regions, as well as their weather and ethnology, to the signs of the zodiac.<sup>4</sup> As in the case of other astrological theories, there were several versions of chorography or zodiacal geography. The most used chorographies during the Renaissance and the seventeenth century were those described by Ptolemy, Marcus Manilius and Dorotheus of Sidon.<sup>5</sup> Spanish astrologers were also devoted to the chorography attributed to Albumassar.<sup>6</sup> The idea that a certain place (country, region, city) was ruled by a certain sign of the Zodiac and by a certain planet related to that sign was a traditional aspect of astrology. This idea included not only the rulership of signs over places, but also the idea that the weather in those places, with a particular insistence over the winds and 'airs', also had a link to the astrological dominance. There was a causal relationship between the signs and the weather, the seasons and the human temperament. This way, astro-meteorology and astrological chorography agreed with the ideas on temperament and the influence of 'airs' developed by Galenic environmentalism.

The last idea that must be mentioned is related to an important issue for medicine during the sixteenth and beginnings of the seventeenth century: the emergence of the so called 'new diseases'. *Morbo gallico*, syphilis and several other diseases that had been unknown by the ancient physicians were a great concern for early modern European physicians, who

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<sup>4</sup> Ptolemée, (1993), *Manuel d'astrologie. La Tétrabible*. Paris, Les Belles Lettres. Trad. E. Teissier. About Ptolemy's chorography, see Bouché Leclerc, A., *L'astrologie grecque*, Paris, 1899 (re-edited Paris 1979), pp. 328-347.

<sup>5</sup> Manilius, M., *Astrología*, trad. Calero, F., Gredos, Madrid, 1996, v. 745-815 (p. 215-219). About Manilius' chorography, see Bouché Leclerc, A., *L'astrologie grecque*, Paris, 1899 (re-edited Paris 1979), p. 329-331; for Dorotheus of Sidon see Bouché Leclerc, A., *L'astrologie grecque*, Paris, 1899 (re-edited Paris 1979), pp. 331-333.

<sup>6</sup> On Albumassar's chorography, see Yamamoto, K.; Burnett, C., (2000), *Albumassar on Historical Astrology. The Book of Religions and Dynasties*. Leiden: Brill, pp. 511-521.

described and analyzed them. Astrology offered an explanation for the origin of those new diseases, an explanation that came from the Arab astrological knowledge, and was a part of an extremely popular theory that explained great changes on earth: the theory of the great conjunctions. In all probability, this theory was first enunciated by Al-Kindi, and then, popularized by Masha'allah and Abu'Mashar. The theory of great conjunctions divided history into periods related to the conjunctions of Saturn and Jupiter which occurred in the same place of the sky (in Aries) every nine hundred and sixty years. There were shorter periods, or cycles, of two hundred and forty years, when the two planets were conjunct in a new astrological triplicity,<sup>7</sup> and also of twenty years, when the conjunctions happens in a new Zodiacal sign. According to this theory, a new cycle was synonymous with a new phase of history, and that implied the disappearance of some diseases, as well as the emergence of new ones. If the Renaissance and the seventeenth century had seen the arrival of new diseases that Galen or Hippocrates did not know, it was due to the beginning of a new era. There had been a conjunction of Jupiter and Saturn in Pisces in 1524; and there was another conjunction in 1603 of the two planets in Sagittarius. Both conjunctions meant great changes, and particularly that of 1603, because it had occurred in a new triplicity: from Pisces, a watery sign, to Sagittarius, a fiery sign. The four qualities were always involved, and this explanation of the causes that had brought the new diseases was quite popular among the Spanish authors of works on astrological medicine.

Considering all this concurrences, it is not hard to understand the relationship of astrology with medicine during the period of Galenism. Spanish physicians kept practicing medicine in the traditional Galenic-Hippocratic way during the first part of the seventeenth century, and the central part of the century was characterized by the fragmentary and isolated introduction of some modern elements, accepted only as slight rectifications of the traditional doctrines or simply rejected (López Piñero, 1973, p. 377). Therefore, the texts on astrology related to medicine written in this century must be understood in this context.

### **Examples from the texts**

The authors of astrological works that explained ideas related to medicine based upon the concepts discussed above, usually insisted on the importance of astrology in the practice of medicine. In what follows, the examples of all those ideas will be provided. Most of the astrological

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<sup>7</sup> Triplicities were astrological groups of three Zodiacal signs. Each group was considered as linked to one element, and therefore, to one of the main qualities. The signs of the first triplicity, Aries, Leo and Sagittarius, were of a fiery nature. Taurus, Virgo and Capricorn were of the nature of earth. Gemini, Libra and Aquarius were airy signs; and Cancer, Scorpio and Pisces were of watery nature.

texts analyzed in this section have never been studied from this point of view.

### ***The astrological influences on the four bodily humours***

There are many examples of authors who mentioned the relationships of the heavenly bodies with the four humours. Bartolomé del Valle, professor at the University of Salamanca, wrote that “Mars in the sixth [house] means hot illnesses of blood and choler”.<sup>8</sup> With respect to the sign in which the great conjunction of Saturn and Jupiter occurred in 1663 —namely Sagittarius, a fire sign— Francisco Temudo wrote that it “signals corruption of the blood because of the abundance of choler and melancholy, with the result that, from those mixed up humours, several illnesses will be caused and duplicated, [but the physicians] will not truly understand which humour originated the illness”.<sup>9</sup> The Jesuit Hugh Sempilius, professor at the Colegio Imperial of Madrid, included a book on astrology in his work *De Mathematicis disciplinis Libri duodecim* (Ambers, 1635). In this book, he criticized several aspects of astrology; however, he could admit astrological medicine if it was based in the theory of humours, because it was clear for him that the skies influenced in the four qualities.<sup>10</sup> The astrologer Juan Casiano predicted in 1682 “great melancholic diseases” caused by the comet of that year.<sup>11</sup> In an early work, the professor of the University of Valencia Juan Bautista Corachán classified the sicknesses that were announced by the position of Mars and the Moon during a conjunction in the same year 1682 as “diseases caused by the abundance of heat and blood”.<sup>12</sup> Another astrologer, Pedro Mexía, explained that, considering that the comet of 1618 was influenced by Mars, it threatened people with several “chole-

<sup>8</sup> “Marte en la sexta [casa] significa enfermedades calientes de sangre y cólera”. Valle (1619). *Explicación y pronóstico de los dos cometas de 1618*, Granada, Francisco Heylán y P. De la Cuesta. Biblioteca Nacional de Madrid: VE/54-50.

<sup>9</sup> “[La conjunción] muestra corrupción de sangre por la mucha abundancia de cólera y melancolía, resultando que de los tales humores confundidos y mezclados se ocasionaran enfermedades duplicadas, sin conocimiento cierto de cuál de los humores proceda la causa de la enfermedad”. Temudo (1660). *Discurso de prodigios grandes y vaticinios naturales, y felices sucesos y victorias grandes ... según lo indica la Magna Conjunción de Júpiter y Saturno en el año de 1663*, Madrid, Julián de Paredes. Biblioteca Nacional de Madrid: Mss. 4859, en el tomo *Sucesos de 1559 a 1660*.

<sup>10</sup> “quia constat innumeris et manifestis experiētiis, caelum influere primas qualitates, nempe calorem, frigiditatem, humiditatem, siccitatem; et consequenter secundas à primis ortas, et in quibus temperamentum humanum consistit”. Sempilius, (1635). *De mathematicis disciplinis, Libri XII*, Antverpiae, ex off. Plantiniana Balthasare Moreti. Biblioteca Nacional de Madrid: 3/21647. Book XI- 16, p. 231.

<sup>11</sup> “grandes enfermedades melancólicas”. Casiano (1618). *Breve discurso acerca del cometa de 1618*, Lisboa, Pedro Craesbeeck. Biblioteca Nacional de Madrid: Ms. 2349. Fol. 264r.

<sup>12</sup> “enfermedades ocasionadas de abundancia de calor y sangre”. Corachán, J.B. (1682). *Discurso sobre el cometa de 1682*, Valencia. Biblioteca Nacional de Madrid: V.E./15-3. Fol. 3v.

ric and acute diseases".<sup>13</sup> The professor of Salamanca Antonio Núñez de Zamora wrote on the eclipse of the Moon in the year 1604 that the diseases "will be very complicated by melancholy [...] and [for this reason] they will be longer than they should be according to their nature".<sup>14</sup> On the solar eclipse of 1600 he wrote that the passion and vomits it would cause "gravely threatens with melancholic fevers, such as quartans. But because of the participation of Mars [in the figure of the eclipse], the fevers will be complicated from the beginning with choler and melancholy, with bad discernment and falsity; or they will be at the beginning acute fevers, such as hot fevers, or malign tertians so that the patients will fell burnt with them; or with blood corruption, such as rot *sinochos*, which at the end become, once burnt the choler, in quartans and melancholic fevers".<sup>15</sup>

### *Melothesia*

There are many textual examples of the relationships of astrological elements and parts of the body. For instance, with respect to the comet of 1618, Bartolomé del Valle explained that "because it is in the sign of Virgo, which signifies the lower part of the belly, it announces that mortals will be afflicted with illnesses in the abdomen".<sup>16</sup> The second comet of the same year 1618 signified, according to this author, problems in the reproductive and urinary systems, "because Scorpio signifies the organs of generation, and the diseases of groins and bladder".<sup>17</sup> Since the conjunction was in Sagittarius, Temudo wrote that "as Sagittarius

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<sup>13</sup> "enfermedades coléricas y agudas". (1618). *Discurso sobre los dos cometas que se vieron por el mes de noviembre de... 1618*, Lisboa, Pedro Craesbeeck. Biblioteca Nacional de Madrid: Ms. 2349, Fol. 294v.

<sup>14</sup> [Las enfermedades] "tendrán mucha complicación de melancolía [...] y [por esta razón] serán más largas de lo que según su naturaleza devieran ser". Núñez de Zamora, A. (1610). *Liber de cometis... y juicio de la máxima conjunción de 1603*, Salmanticae, Antoniae Ramirez viduae. Biblioteca Nacional de Madrid: 3/44151, Li. 4. Fol. 180r.

<sup>15</sup> "Y esta pasión y vómitos amenaza mucho calenturas melancólicas, como quartanas. Pero por la participación de Marte, desde el principio serán calenturas complicadas de cólera y melancolía, de mal juyzio, y fallaces, o serán al principio calenturas agudas, como calenturas ardiendes, o tercianas malignas que se abrasen los enfermos con ellas, o de corrupción de sangre, como son sinochos pútridos, cuyas terminaciones paren requemada y tostada la cólera en quartanas y enfermedades melancólicas,

<sup>16</sup> "Y porque la mayor parte de este cometa se hallava en el signo de Virgo, que significa la parte inferior del vientre: los mortales anuncia serán afligidos con las siguientes enfermedades [...]: fluxos de vientre...". Valle (1619). *Explicación y pronóstico de los dos cometas de 1618*, Granada, Franciso Heylán y P. De la Cuesta. Biblioteca Nacional de Madrid: VE/54-50, fol. 5v.

<sup>17</sup> "Y porque Escorpión significa los miembros dedicados a la generación, las enfermedades de las ingles y bexiga". Valle (1619). *Explicación y pronóstico de los dos cometas de 1618*, Granada, Franciso Heylán y P. De la Cuesta. Biblioteca Nacional de Madrid: VE/54-50, fol. 9r.

rules the legs and thighs, [the conjunction] threatens illnesses in those parts".<sup>18</sup>

The text by professor Núñez de Zamora on the solar eclipse of the year 1600 explained that being "Cancer the sign where the eclipse happened, which governs the chest, ribs, stomach, heart, spleen and lungs, [the eclipse] means long diseases, troublesome coughs which will move to chest, heart passions and vomits, consumptive fevers of tuberculosis, spasms and diarrhoeas."<sup>19</sup>

### ***Elections: the right moment to bleed or purge***

The idea that astrological configurations should be taken into account of bloodletting and for the administration of purges and medicines was quite a popular one. Professor del Valle wrote: "I advise physicians and surgeons in treating maladies at this time to avoid opening or cutting pustules or other kind of tumours, if they can wait, as long as the Moon is in Virgo, Libra, Sagittarius, Gemini and Scorpio, because [opening when the Moon is in this signs] could inflict a great deal of misery on the patient. Ptolemy warned about this in *Centiloquium 20*: Do not touch with iron the member when the Moon is in the sign that dominates that member, because the Moon moistens the places where she is, because she rules the humours, and therefore, moved to flow, humours fill that part, and the result is that the sores rot, and there are spasms, with which the cure becomes dangerous, uncomfortable and ends badly".<sup>20</sup> Sempilius talked

<sup>18</sup> "como el signo de Sagitario domina sobre las piernas y muslos, en tales partes amenaza enfermedades". Temudo (1660). *Discurso de prodigios grandes y vaticinios naturales, y felices sucesos y victorias grandes ... según lo indica la Magna Conjunción de Júpiter y Saturno en el año de 1663*, Madrid, Julián de Paredes. Biblioteca Nacional de Madrid: Mss. 4859, en el tomo *Sucesos de 1559 a 1660*.

<sup>19</sup> "por estar Saturno en signo de humana figura, que Libra por tal se reputa, y Cancro ser el signo donde el eclipse se hizo, el qual tiene dominio sobre pecho, costillas, stómago, corazón, baço y pulmones, significa enfermedades largas, tosses molestas, corrimientos al pecho, passiones cardíacas y vómitos, ptísicas, spasmos, fluxos de vientre".

<sup>20</sup> "Una cosa advierto a los médicos y cirujanos en la cura de estas enfermedades en este tiempo, que se aparten y guarden de abrir o sajar acerca de las dichas partes encordios, u otro género de tumores, o sangrar, si lo pudieren dilatar, estando la Luna en el signo de Virgo, Libra, Sagitario, Géminis y Escorpión, porque será posible traer al enfermo a una grande miseria. Así lo amonesta Ptolomeo, *Centiloquio 20*: No toques con hierro al miembro, quando la Luna ocupare el signo que tuviere dominio sobre el tal miembro, porque la Luna los lugares que habita más los humedece, por ser señora de los humores, y así movidos con mayor afluxo llena aquella parte de los humores, de donde se siguen podrearse las llagas, y aver espasmos, por lo qual viene a hazerse la cura peligrosa, e incómoda, y tener malos fines". Valle (1619). *Explicación y pronóstico de los dos cometas de 1618*, Granada, Francisco Heylán y P. De la Cuesta. Biblioteca Nacional de Madrid: VE/54-50. Actually the twentieth aphorism in the *Centiloquium* (a work traditionally attributed to Ptolemy whose author is unknown) said: "Pierce not with iron that part of the body which may be governed by the sign actually occupied by the Moon". English translation (based in Proclus' paraphrase of the works) in Ptolemy, *Tetrabiblos*, trans. by J.M. Ashmand (2005), Abingdon: Astrology Classics Publishing, p. 154



about astrological elections in the third chapter of his book on astrology. He distinguished between licit and non-licit elections. He affirmed that he did not reject all of them, "but only those not based in nature, or those depending on chance or will, or those the search for whose causes in the stars is impious".<sup>21</sup> Among the licit elections, he admitted phlebotomy, although only in the aspect that concerned the duration of the extraction, and not the election of the day and hour for the bloodletting.<sup>22</sup> Second, he wrote, "it is licit to choose the moment for baths and for scraping, for washing or for establishing the use of medicines".<sup>23</sup> He also admitted as licit the election of the moment appropriate to take medicines.<sup>24</sup>

### *Critical days*

The theory of critical days in the diseases was one of the issues that excited controversy during the Renaissance and seventeenth century practice of medicine. The physicians discussed the causes of the crisis as well as the days or months or seasons that should be considered as critical for every kind of disease. Astrology provided an answer to these questions, and therefore, some physicians relied on astrological elements for the knowledge of critical days.

As an example, the physician Diego Cisneros said that astrology was important for the practice of medicine because "without astrology it is impossible to know either the critical days or their cause".<sup>25</sup> The critical days, according to astrology, depended mainly on the moon's motion. Another physician, Figueroa, said that "having known the illness and studied the critical days, and seen the disposition of the Moon, it is possible to predict the course of the illness and its end".<sup>26</sup>

<sup>21</sup> "Neque enim cum quibusdam Astrologis omnes electiones reiicio, sed eas quae vel in naturam fundamentum non habent, vel eas quae mere fortuitae et voluntariae sunt, vel eas, quarum causas inquirere in astris impium est". Sempilius, (1635). *De mathematicis disciplinis, Libri XII*, Antverpiae, ex off. Plantiniana Balthasare Moreti. Biblioteca Nacional de Madrid: 3/21647. Book XI, chapter III-1, p. 240.

<sup>22</sup> "Inter licitas autem electiones sequentes admitto. Primo, phlebotomia seu sanguinis emissio extra tempus necessitatis, quod diem et horam eligere non admittit". Sempilius, (1635). *De mathematicis disciplinis, Libri XII*, Antverpiae, ex off. Plantiniana Balthasare Moreti. Biblioteca Nacional de Madrid: 3/21647. Book XI, chapter III-3. 1635. MBN: 3/21647, p. 241.

<sup>23</sup> "Secundo, licitum est eligere tempus balneorum et scarificationum, sive munditiei causam sive medicamenti loco adhibeantur". Sempilius, (1635). *De mathematicis disciplinis, Libri XII*, Antverpiae, ex off. Plantiniana Balthasare Moreti. Biblioteca Nacional de Madrid: 3/21647. Book XI, chapter III-3. 1635. MBN: 3/21647, p. 241.

<sup>24</sup> "Tertio, expedit eligere tempus in medicamentorum sumptione". Sempilius, (1635). *De mathematicis disciplinis, Libri XII*, Antverpiae, ex off. Plantiniana Balthasare Moreti. Biblioteca Nacional de Madrid: 3/21647. Book XI, chapter III-4.

<sup>25</sup> Cisneros, D. (1618). *Sitio, naturaleza y propiedades de la ciudad de México*, México, en casa del Bachiller Ioan Blanco de Alcazar. Biblioteca Nacional de Madrid: R-14254.

<sup>26</sup> Figueroa, J. (1660). *Opusculo de astrología en medicina*, Lima. Biblioteca Nacional de Madrid: R-5320.

### ***Comets, the air and the alteration of humours***

One of the most popular ideas among Spanish authors was the traditional Aristotelian view that comets caused illness because they were composed of malignant vapours crossing the atmosphere, and, therefore, that breathing the air corrupted by comets caused health problems. This view considered that astronomical events like comets were natural causes of health problems because they heated or dried the body, thus causing an alteration of the body balance. Examples of this can be found in a manuscript by the cosmographer Antonio de Nájera, who explained that comets were a hot and dry exhalation rising from the Earth. He wrote: "I will show in this work how, naturally and philosophically speaking, comets are proved to be the cause of great heats and droughts, and accidentally, of plagues".<sup>27</sup> He explained that "viscous exhalations [that rise to form comets] infect the air, and because sustenance is corrupted, they cause contagious ailments and pestilence".<sup>28</sup> Another author, Miguel Pedro, defining comets also as exhalations, affirmed that "as they are of bad quality, they infect the air and alter men's humours, from which derive illness and anger".<sup>29</sup>

Another very interesting proposal in the Spanish works relates to the idea that comets extract humours from the Earth, namely, that comets also extract certain vapours or humours from human beings, which harm them because they would then lose something indispensable for life: the '*humidum radicale*' or root moisture.<sup>30</sup> Ferragut explained that comets [astrologically] indicate pestilence for two reasons. First was the traditional idea that cometary exhalations "infect the air [...] and, by continuous breathing, bodies receive it, and are therefore corrupted and generate very contagious pestilences".<sup>31</sup> The second reason, interesting from a medical point of view, was that "those hot and dry exhalations extract the '*humidum radicale*' from human and animal bodies, through the heated and infected air. This root moisture supports the natural humours, and, as its nourishment, supports the flame of life; when it ends, life ends".<sup>32</sup> He thus found it reasonable that astrologers predicted death after the appearance of comets. Ferragut added a medical remedy: "I confirm this [problem] with physicians' advice, who recommend during

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<sup>27</sup> Nájera, A. (1632). *Suma astrológica y arte para enseñar a hacer los pronósticos*, Lisboa, Antonio Álvarez. Biblioteca Nacional de Madrid: R-14234. Fol. 271v.

<sup>28</sup> Nájera, A. (1632). *Suma astrológica y arte para enseñar a hacer los pronósticos*, Lisboa, Antonio Álvarez. Biblioteca Nacional de Madrid: R-14234. Fol. 271v.

<sup>29</sup> Pedro, M. (1618). *Iuyzio y presagio natural de los cometas de 1618*, Huesca, Pedro Bluson. Biblioteca Nacional de Madrid: V.E./ 62-96. Fol. 4v.

<sup>30</sup> "Húmedo radical"

<sup>31</sup> Ferragut, B. (1618). *Coniectura de los efectos significados por los cometas*, Huesca, Pedro Bluson. Biblioteca Nacional de Madrid: VE/75-48. Fol. 4r.

<sup>32</sup> Ferragut, B. (1618). *Coniectura de los efectos significados por los cometas*, Huesca, Pedro Bluson. Biblioteca Nacional de Madrid: VE/75-48. Fol. 4r.

the times [when a comet is seen] for people to eat cold and moist food, so that the root moisture can be augmented and preserved".<sup>33</sup>

Both ideas show how medical astrology was considered integrally related to natural astrology. The authors explained the relationship of celestial bodies to the usual astrological predictions of sickness, plague and death by means of natural causes, thus integrating astrology with natural philosophy, and always taking into account the problems that, according to Galenic medicine, excessive heat or dryness provoked in human health.

### ***Conjunctions and the new diseases***

Astrological sources contained an interesting theory of the origin of disease related to great conjunctions. In particular, the physicians who were also university professors agreed that great conjunctions caused new illnesses, an idea to be found in the treatises by Arab astrologers. The main source followed by Spanish authors is the work *On Great Conjunctions* by the Arabic astrologer Albumassar.<sup>34</sup> Thus, we read in the work of Francisco Navarro (who had studied medicine at the University of Valencia) that maximum conjunctions alter the world "and new sicknesses are born, and little by little old illnesses which were common during the previous conjunction disappear and are forgotten".<sup>35</sup>

### ***Chorography and environmentalism***

The division of the Earth into several parts that were under the influence of a certain astrological element was one of the oldest traditions in Western astrology. It was a tradition that Ptolemy sanctioned with his authority in his *Tetrabiblos*, which was a reference work for astrologers, with the division of the Earth in climates. The idea was that the disposition of men, their complexion as well as the diseases they were inclined to suffer depended on their location on Earth, exactly as it was considered in medicine following the ideas of Hippocratic environmentalism. The natural explanation was that health, both in medicine and in astro-

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<sup>33</sup> Ferragut, B. (1618). *Coniectura de los efectos significados por los cometas*, Huesca, Pedro Bluson. Biblioteca Nacional de Madrid: VE/75-48. Fol. 4r.

<sup>34</sup> Albumasar, *De magnis conjunctionibus*. English translation by Yamamoto, K.; Burnett, C., (2000), *Abumassar on Historical Astrology. The Book of Religions and Dynasties*. Leiden: Brill.

<sup>35</sup> Navarro, F. (1604). *Discurso sobre la conjunción máxima que fue en 1603*, Valencia, Juan Cristótopmo Garriz. Biblioteca Nacional de Madrid: R-11642, p. 7.

logy, was influenced by the winds' and waters' qualities of the places where people lived. Therefore, health was influenced by meteorology, as well as by the environment. As winds and weather were influenced by the stars that ruled a specific location – an idea that was acknowledged as natural astrology and therefore 'scientific' – health was, therefore, naturally influenced by the stars that ruled the region on Earth where a person lived. A consequence of this theory was that the theory that illnesses caused by astronomical events would only affect the inhabitants of certain regions, namely, the parts of the Earth ruled by the zodiacal sign where the event happened. The main example of these ideas is the work by the physician Diego Cisneros. He studied at the University of Alcalá, and later went to work in New Spain, where he became professor at the University of Mexico. He shared, along with other authors, the idea that the air and its natural conditions influenced health, and he wrote a treatise for studying the natural condition of the air in Mexico City, in order to give physicians a useful tool for their practice in that new place. This treatise, *Place, nature and properties of Mexico City*, published in 1618, was obviously entitled after the Hippocratic treatise *De aere, aquis et locis*, that Cisneros actually quotes several times. Cisneros defended in his work the reasons why astrology was so important not only for the practice of medicine in the New World, but also for the actual understanding of health, as well as the understanding of physical body of the inhabitants of that locale. Therefore, physicians should study the stars, the Ptolemaic astrological climates, and the signs and planets that ruled Mexico, in order to properly practice medicine there. Cisneros explained his ideas particularly in the last chapter, entitled: *That physicians need to know the science of Astrology to practice Medicine perfectly*.<sup>36</sup> He gave examples of planetary influences and aspects on diseases, the theory of critical days, and the importance of astrological considerations for dispensing medicines. On the importance of the knowledge of the influences of the skies on air, he concluded that physicians ought to know them, because, "once the air has been altered, it has to alter us, therefore we must know the knowledge of the cause that altered the air, which is the superior cause".<sup>37</sup> This treatise is one of the most interesting examples of the relationship between astrology and medicine to be found in the Spanish works of the seventeenth century, and it deserves a longer and deeper study than can be undertaken within the confines of this paper.

<sup>36</sup> "De la necesidad que tienen los Médicos de la ciencia de la Astrología para exercitar perfectamente la Medizina, y que Galeno y Hippócrates fueron excellentes Astrólogos, y otros muchos". Cisneros, D. (1618). *Sitio, naturaleza y propiedades de la ciudad de México*, México, en casa del Bachiller Ioan Blanco de Alcazar. Biblioteca Nacional de Madrid: R-14254.

<sup>37</sup> "alterado el ayre nos à de alterar a nosotros, luego necessario es el conocimiento de la causa que alteró el ayre, que es la supperior". Cisneros, D. (1618). *Sitio, naturaleza y propiedades de la ciudad de México*, México, en casa del Bachiller Ioan Blanco de Alcazar. Biblioteca Nacional de Madrid: R-14254.

There is also another important treatise on astrology that contains a long explanation of the relationship between astrology and meteorological conditions – namely, changes in the weather – and the influence of those changes on health. It is the work entitled *On the natural science of heaven*, published in 1598 by Cristóbal Ponce de León, a physician and mathematician who studied at the University of Alcalá de Henares. Ponce de León included a large number of medical-astrological issues in this work: he explained *melothesia*, planetary influences on bodily humours, and he highlighted the idea that the influence of the stars in the winds was also related to the humours, since winds influenced illnesses according to their qualities. Ponce's explanations are interesting because he was trying to give a natural explanation for astrological influences on health. For example, he wrote: "if Saturn is not felt, the air gets fuller and fuller, swelling the body vessels with thick humours, and these filled vessels cannot let the other humours that control the body go through them; therefore, in certain [phases of the] moon there are more headaches and leg aches than in others".<sup>38</sup>

### *A treatise on medical astrology*

There can be no doubt that the links between astrological doctrines and medical practice and theory inspired many authors in seventeenth century Spain. The conclusion of this article must bring forward a treatise that is the main example of all the ideas mentioned, and that illustrates perfectly the close relationship between medicine and astrology during this period. This example is the work by Joan de Figueroa. Figueroa published in Lima, Peru, in 1660, a long work in six books, entitled *Treatise on Astrology in Medicine, and on the terms and parts of astronomy necessary for its use*.<sup>39</sup> He intended to gather all knowledge on medical astrology, explaining what parts of astrology were necessary for medical practice. The first book was a treatise on astrology in itself. The second book explained the relationship between the humours and the heavens, in which the author detailed what sicknesses come from planetary positions in the different parts of the heavens. He discussed the body parts ruled by each planet and sign, and the proper time for giving medicines. Figueroa also explained what planets rule each illness, writing, for example, that: "To cure these fevers one must note the planet that rules and has a power over them [...] and that, at the beginning of the treat-

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<sup>38</sup> Ponce de León, (1598). *Libro de la ciencia natural del cielo*, Alcalá de Henares, Iuan Graçían. Biblioteca Nacional de Madrid: R-11595.

<sup>39</sup> *Opúsculo de astrología en medicina y de los términos y partes de la astronomía necesarias para el uso della*. Figueroa, J. (1660). *Opusculo de astrología en medicina*, Lima. Biblioteca Nacional de Madrid: R-5320.

ment, that planet must not be powerful, but as weak as possible, and the planet with the opposite quality and nature must get stronger".<sup>40</sup> The following chapters included the election of suitable moments for bleeding and phlebotomy, and for giving medicines and purgatives.

### **Conclusions**

To conclude, medical astrology was a doctrine widespread in Spain during the seventeenth century. Many authors and most works on astrology demonstrate this by including ideas related to the practice of astrological medicine. Medical astrology was accepted by scholars at the universities as natural astrology, and it thus had no problems during the Inquisition.

There were several ideas that established an easy relationship of astrology with medicine, most of them based in the assumptions of natural causes and natural influences. The macrocosm-microcosm relationships were contained in nearly every astrological work. This included predictions of diseases according to the qualities of the planets or signs, as well as according to the parts of the human body that the astrological elements governed. The astrologers considered also the importance of the risings and settings of the fixed stars in the prediction of sickness; the critical days of illnesses according to planetary influences; and the timing of when to give medicines depending on the planetary aspects in the celestial figure. These authors also usually referred to Ptolemy, Manilius, Galen and Hippocrates to support their assertions, using them as authorities whose opinions could not be doubted in the traditional scholastic manner.

The treatises demonstrate how the two disciplines were interrelated in a corpus that set forth natural interpretations of the relationship between medicine and astrology, as well as the influence of Humanism through the tradition of the macrocosm-microcosm doctrines that provided the basis of this medical astrology. This article has tried to illustrate the range of ideas contained in this body of work, using examples from Spanish texts of the seventeenth century, virtually unknown sources that can enrich our knowledge of medical practice in Spain during the seventeenth century. Additionally, apart from these astrological sources, there are sources on medicine written in the same period. The conclusions contained in this article can also serve as the point of departure for future research on history of medicine in this period. Medical texts have never

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<sup>40</sup> Figueroa, J. (1660). *Opusculo de astrología en medicina*, Lima. Biblioteca Nacional de Madrid: R-5320, p. 116v.

been studied with the objective of discovering astrological ideas. Such a study might be helpful in understanding the actual attitude of physicians who were non-astrologers towards the doctrines of astrological medicine.

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