CHAPTER EIGHT

THE NEW ASTRAL MEDICINE

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Introduction

The impact of astrology on medical theories and practice in the Renaissance still remains to be fully explored. Besides the general influences of celestial bodies on sublunary and terrestrial beings, physicians were traditionally taught to take astrology into account in questions such as: 1) conception or nativity; 2) crises of health or illness, known as “critical days”; and 3) medication. The link between medicine and astrology became especially firm after the work of Pietro d’Abano (1257–ca. 1315).¹

In the Renaissance, two major factors contributed to the modification of this traditional relationship between medicine and astrology. One is the severe criticism of judicial astrology, advanced by Giovanni Pico della Mirandola (1463–1494) in his posthumous work, entitled *Disputationes against Judicial Astrology* (*Disputationes adversus astrologiam divinatricon*) (Bologna, 1496). Many of his contemporaries (followed by modern historians) generally considered that Pico rejected the divinatory aspects of astrology and accepted only its physical dimensions, which can be labeled as “natural astrology.” According to this interpretation, the influences of the celestial region were exerted only by physical means: motion, light and heat.² Pico thus criticized the astrological aspects of the doctrine


of critical days. The immediate impact of his work can be observed in the field of medicine through the productions of such physicians as Giovanni Mainardi (1462–1536) and Girolamo Fracastoro (1478–1553), although the intense debates on critical days lasted through the 16th century.3

Another stimulus came from Florentine philosopher, Marsilio Ficino (1433–1499). Among his works there was a treatise on longevity, entitled *Three Books on Life* (*De vita libri tres*) (Florence, 1489), which attracted the considerable attention of physicians and natural philosophers. In its third and most important book *On Obtaining Life from the Heavens* (*De vita coelitus comparanda*), originally planned as part of his commentary on Plotinus’s *Enneads*, 4.3.11, references to Neoplatonic philosophy and related magical and liturgical discussions are concentrated upon. Ficino understood and interpreted the teachings of Plotinus along with the line developed by later Neoplatonists such as Iamblichus and Proclus. This worldview, heavily influenced by ancient Neoplatonism, was blended with ideas borrowed from late medieval alchemy, astrology and natural magic. According to Ficino, the *magus*, having correctly mastered these teachings, can manipulate material objects in order to draw down the benefit of higher cosmic and immaterial forces through which he is united with the World-Soul (*anima mundi*). Ficino also established an influential theory of the all-pervading “World-Spirit” (*spiritus mundi*), which unites the soul of the world to its body as their bond. In this perspective the universe is conceived of as a giant living being, and the correspondence and harmony between heaven and earth as its members are emphasized.4

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Pico’s criticism of judicial astrology and Ficino’s promotion of cosmic harmony led 16th century physicians to offer theoretical innovations for a new system which can be called “astral medicine.”

*Leoniceno’s Naturalistic Attitude*

Before the publication of the first Greek edition of Galen’s collected works from the Aldine press of Venice in 1525, the movement for the new translation of his writings was propelled especially by Nicolò Leoniceno (1428–1524) of Ferrara. An acquaintance of Pico and the master of Mainardi, he was influential in the reconstruction of Galen’s medical philosophy. In his booklet *On Formative Power* (*De virtute formativa*) (Venice, 1506), the first humanistic work on embryology, Leoniceno tried to explain the Galenic theory of formative power for fetal formation. He also interpreted Galen’s notion of the soul in a physicalistic or naturalistic way, where the soul was explicitly construed as the mixture of the qualities (hot, cold, wet and dry) of the four traditional elements (fire, air, water and earth).

Leoniceno regrets that philosophers and physicians blindly follow the Arabic writers who advanced the celestial origin of formative power on the basis of a passage in Aristotle’s *Generation of Animals*. The passage in question bears a particular cosmological dimension:

The faculty of all kinds of souls seems to have a connection with a body different from and more divine than the so-called elements; but as one soul differs from another in the scale of value, so differs also the nature of these bodies. In every seed there is that which renders it fertile, that is, what is called “heat.” This heat is neither fire nor any such faculty but the *pneuma* which is enclosed in the seed and a foam-like body. Nature in this *pneuma* is analogous to the element of the stars. That is why fire does not generate any animal, and we find no animal taking shape in either fluids or solids.

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under the influence of fire, whereas the heat of the sun and that of animals do generate them. Not only the heat residing in the seed but also whatever other natural residue, which there may be, has within itself a vital principle too. Considerations of this sort clearly show us that the heat contained in animals neither is fire nor draws its origin from fire.7

Relying on this enigmatic passage, Avicenna and Averroes explained what Aristotle meant regarding the nature and origin of formative power and, among their Latin followers, Pietro d’Abano developed his singular interpretation.8 By contrast, Leoniceno argues that Aristotle was making no allusion to formative power but to heat contained in the seed. Moreover, for him, Aristotle did not qualify this heat to be “celestial” but merely “analogous” to the heat of heavenly bodies. Leoniceno thus denied the link that the medieval interpreters of this passage established between heaven and earth for the birth of living beings. Needless to say, this link was the theoretical basis of medical and astrological speculations on human conception or nativity. Leoniceno’s hostile attitude toward astrology and his naturalistic interpretation were without doubt closely related to Pico’s criticism.

Fernel’s Astral Medicine

French physician Jean Fernel (1497–1558), was one of the most influential medical authors of the Renaissance.9 Although he devoted himself to mathematics and astronomy before turning to medicine, his famous medical work On the Natural Part of Medicine (De naturali parte medicinae) (Paris, 1542)—the most successful physiological textbook of the

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9 On Fernel, see Charles Sherrington, The Endeavour of Jean Fernel (Cambridge: Cambridge University Press, 1946); Hirai, Le concept de semence, pp. 83–103; idem, Medical Humanism, pp. 46–79.
Renaissance and known under its second edition’s title, *Physiologia*—barely shows a trace of the traditional astrological ideas and theories which animated his early career.

For Fernel the naturalistic interpretation that medical humanists such as Leoniceno advanced for Galen’s conception of the soul was a serious error. He could not accept the idea that the soul of a living being, identified as the mixture of elemental qualities, depends on the four elements and, therefore, is transient and destructible with the body. To his eyes this interpretation contradicted the Christian doctrine of the immortality of the soul, a doctrine that became central to philosophy especially after the Fifth Council of the Lateran (1512–1517). Wishing to reconcile the new Galen of the humanists with Christianity, Fernel called upon Ficinian Platonism. The chief fruit of his endeavor was the dialogue *On the Hidden Causes of Things* (*De abditis rerum causis*) (Paris, 1548).\(^{10}\) In this foundation of his medical philosophy, Fernel advocated the quest for the “divine” (*to theion*) in nature and in medicine, a notion evoked at the beginning of Hippocrates’s treatise *Prognostic*.\(^{11}\) By the term “divine” he signified something “super-elemental,” that is, something beyond the realm of the four elements and their forces. That is why it is qualified as “celestial.”

In the first part of the treatise, Fernel offers a particularly Platonizing image of Aristotle on the basis of Renaissance belief in the “ancient theology” (*prisca theologia*). This belief was reactivated by Ficino in order to harmonize the divergent ideas of the ancients.\(^{12}\) Crucial to Fernel’s own manipulation is the Pseudo-Aristotelian treatise *On the Universe* (*De mundo*). Adopting Ficino’s theory of the World-Spirit, Fernel manages to establish a remarkable concordance not only between Plato and Aristotle, but also between the Greeks and the Christians. In the second part

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of the treatise, Fernel tries to incorporate Galen into this ambitious theater of harmonization. Presenting a Christian Platonic interpretation of the Greek physician, he dares to build his own Galenism mainly around questions of the soul and of God.

As for fetal formation, Fernel argues that Galen identified its cause with “a very wise and powerful force” introduced from the outside. For him although Galen tended to seek the cause of natural phenomena in the powers of the elements and of their mixture, he acknowledged the existence of a formative cause “more divine” than the forces of the elements. Deducing that this cause is placed beyond the realm of the elements, Fernel argues that Galen explained the nature of this force through a series of speculations in the concluding part of his major work On the Usefulness of the Parts of the Body (De usu partium). Its discussion is of great interest for grasping not only Fernel’s interpretation but also Galen’s cosmic theology:

Who could be such a crazy enemy and opponent of the works of nature as not to see at once right at the start, from the skin itself, the skill of the Creator? Who will not go on to reflect that some mind, endowed with marvelous power, travels through the lands and permeates all parts? For there is nowhere that creatures are not seen to be generated, creatures that all have received some remarkable structure. Of all the world’s parts, the one round the earth is surely the most unimportant and squalid, yet a mind derived from those higher bodies evidently extends to there.\(^{13}\)

Fernel explains that Galen meant the Creator of everything by this cosmic mind. For him this passage clearly supports the agreement among Plato, Aristotle and Galen. Fernel then tries to show that the Greek physician called this cosmic Creator “God” (Deus). To this end he calls upon another passage in the same treatise, where Galen mentioned Moses.\(^{14}\) There Galen rejected the Christian view that God instantaneously created everything by His will alone; at the same time, he accepted the notion of one single Creator of all things. For Fernel these two opinions do not differ fundamentally, and Galen’s cosmic mind must be identified as the Creator God of the Christians.\(^ {15}\)

The next problem is Galen’s conception of the soul. Distilling some key passages from the extensive On the Doctrines of Hippocrates and Plato (De

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15 Fernel, De abditis, 2.3, p. 92 = ed. Forrester, p. 432.
placitis Hippocratis et Platonis), Fernel reconstructs Galen’s view that the soul is a simple and uniform substance, superior to the “spirit” (pneuma). He concludes that since the soul is superior to the spirit which is the most excellent body, the soul must be incorporeal and free of body.\footnote{Galen, De placitis Hippocratis et Platonis, 7.3 = ed. Kühn, vol. 5, pp. 606, 608, 609.}

As for the origin of the soul, Fernel argues that Hippocrates proposed a divine opinion at the beginning of the treatise On Fleshes (De carnibus):

I should say nothing about heavenly and sublime things, unless to the extent that human beings and the other animals that live and are begotten on earth have their principle and origin there; and that the soul comes from heaven.\footnote{Cf. Hippocrates, On Fleshes, 1 = ed. Littré, vol. 8, p. 584: “About what is in the heavens I have no need to speak, except insofar as is necessary in order to explain how man and the other animals are formed and generated, what the soul is [ . . . ].” For his particular reading of Hippocrates, Fernel followed the Latin translation made by Marco Fabio Calvo (ca. 1440–1527), published in Hippocratis octoginta volumina (Rome: 1525) and in a Hippocratic collection (Paris: 1527).}

Fernel is using a Renaissance translation that differs from the modern reading at a crucial point: “the soul comes from heaven.” On this basis he argues that Hippocrates advocated the celestial origin of the soul. The soul must also be immortal since Hippocrates continued: “In my view, what we call ‘heat’ is immortal, perceives all, and sees, hears and knows all that is and all that will be.”\footnote{Hippocrates, On Fleshes, 2 = ed. Littré, vol. 8, p. 584.} In this way Fernel calls upon a lesser-known Hippocratic passage that bears a particularly cosmological dimension due to its Latin translation.

To emphasize the celestial origin of the soul, Fernel recommends another passage of Galen that seems particularly Platonizing. In reality this passage is drawn from the Pseudo-Galenic treatise On Uterine Conception, better known under the title Whether What is Carried in the Uterus is a Living Being, probably composed under a strong Platonic influence in the second century of our era:

To remove all chance of uncertainty, please listen to what [Galen] states divinely in the book On Uterine Conception: “A soul is a downflow of the soul of the universe, descending from the heavenly region, capable of knowledge; it always aspires to a path like itself and to a related substance and, abandoning earthly things, always aims at the highest points of all; having a share of the heavenly divinity, and gazing quite often over the heavenly place, it takes its stand beside the governor of all things.” This clearly shows that Galen’s opinion has not deviated at all from the view of Plato and
Aristotle; they have spoken with one voice in confirming that our soul is simple, incorporeal and immortal.\textsuperscript{19}

The point of conjunction is the Platonic doctrine of the World-Soul, which is the quintessential core of Fernel's astral medicine.\textsuperscript{20} For him something celestial stands beyond the realm of the elements and must be indestructible. The immortality of the soul is defended in agreement with Christian faith. But how can the immortal soul reside in a perishable body? For Fernel the soul does not perish, despite its attachment to the body by a certain union called “the chain of bonds” (\textit{vinculorum nexus}). It is not the soul itself but only this chain that can be damaged. Fernel identifies these bonds with spirits and their “innate heat” (\textit{calor innatus}). When an extreme defect of the body causes them to perish, the soul abandons the body and is set free.

Once the celestial origin and immortality of the soul is confirmed, Fernel's next step is to demonstrate the divinity of spirits in living beings on the basis of his interpretation of Galen. To this end Fernel divides spirits into three categories: 1) the spirit of God; 2) the spirit of nature; and 3) the spirits in natural beings. The spirit of God is distributed through everything and embraces all. Fernel then addresses the spirit of nature:

The spirit of nature is the one that all philosophers and poets unite to celebrate, the one that Plato called “World-Soul” (\textit{animus mundi}) and Galen called “mind derived from those higher bodies”; the one that Aristotle in his discourse on the world defined more explicitly thus: “Spirit is the name of a substance in both plants and animals, an animate and fertile substance penetrating everything.” Dispersed far and wide, it embraces everything, it cheers everything, carrying along with it the vital soul of the world, and nature itself; it renders vital everything into which it has extended.\textsuperscript{21}

Fernel tries to show that Galen is well accompanied by Plato and Aristotle on the notion of the spirit of nature. This harmonization is built on the amalgam of the Platonic doctrine of the World-Soul and the Stoic theory


of the divine *pneuma* pervading everything, a theory whose echo is found in the Pseudo-Aristotelian *De mundo*.\textsuperscript{22}

After this concordance of the ancients as to the superior kinds of spirit, Fernel turns to the inferior one. For him the spirits of each particular, mortal and concrete being are subject to the soul; they tie the soul to the body, while keeping the intermediate status between the two. Significantly, inferior spirits are governed by and united to the superior spirit of nature. Clearly inspired by that enigmatic passage in Aristotle’s *Generation of Animals*, Fernel then argues that both spirits and their heat are divine. For him the nature of this heat has a more excellent and divine character than spirits themselves. But why is the nature of this heat celestial? Can anything celestial exist in the body? Precisely here, notes Fernel, many people erroneously claim that anything celestial is external to the human body. Indeed living beings at death must lose the cause of their functions of life. For Fernel it is the innate heat of spirits that is extinguished. This heat must thus bear a super-elemental nature as the author of life’s functions or of life itself. Fernel goes even further to compare it with the light and heat of the sun or with any force derived from heaven into a natural body.

After all these discussions Fernel explains what he understands by the term “divine.” Following Aristotle’s words, he defines it as “anything that corresponds to the element of the stars.” This special element must be the fifth element, the incorruptible and eternal *aether* of Aristotle. For Fernel this *aether* provides the soul’s faculties and spirits in natural living beings, and determines their form. The indispensable instruments of his physiological system, built on a singular interpretation of Galen, are supported again by this Platonizing reading of Aristotle. In this particular reading, Fernel repeatedly appeals to the cosmological passage of his *Generation of Animals*. This passage becomes a symbol of Renaissance astral medicine.

*Mizauld’s Harmony between Heaven and Earth*

A disciple of Fernel, Antoine Mizauld (ca. 1512–1578) went beyond his master by reinforcing the idea of harmony between heaven and earth in medicine. Among his writings let us focus here upon the *Medical and Astronomical Union from the Conversation of Asclepius and Urania* (Aesculapii

\textsuperscript{22} Ps.-Aristotle, *De mundo*, 4, 394b9–11.
et Uraniae medicum et astronomicum ex colloquio conjugium) (Lyon, 1550).23 In this dialogue between Asclepius the medical god and Urania the celestial goddess, Mizauld developed the theoretical foundations of his astral medicine and mentions various authorities: Galen and Hippocrates for medicine, Ptolemy and Julius Firmicus for astronomy and astrology, Plato and Proclus for Platonism. However, the most important authority is Hermes Trismegistus. According to Mizauld, this mythical figure lived a short time after Moses, and even Galen learned much from his writings. Needless to say, this was a view based on the prisca theologia belief of the Renaissance. Fernel was doubtless his major inspiration for the choice of this direction.

In the beginning of the treatise, Asclepius’s uncle, Mercury, calls celestial gods to an assembly. In this assembly, Jupiter proposes to send Asclepius to the earth in order to investigate the sicknesses that are tormenting human beings. Urania and Asclepius agree to make the journey together and, on their way, elaborate eleven dialogues on the harmony between the heavens and humankind. First Urania quotes Galen’s praise of the Creator expressed in On the Usefulness of the Parts of the Body:

Then do not wonder so greatly at the beautiful arrangement of the sun, moon and the whole chorus of stars, and do not be so struck with amazement at the size of them, their beauty, ceaseless motion and ordered revolutions that things here on earth will seem trivial and disorganized in comparison; for here too you will find displayed the same wisdom, power and foresight […]. You should rather estimate the art of the Creator of all things […]. For [the sun and the moon] are divine and celestial and we are mere figures of clay, but in both cases the art of the Creator is equally great.24

To Mizauld Galen’s words signify that the body of the human being bears a certain resemblance to celestial bodies and its contemplation leads to the discovery of its accord with heaven. That is why, he says, all the ancients celebrated the human being as a microcosm. Then he proceeds to explain celestial matters (via Urania) and their counterparts in the human body (via Asclepius).


Upon Urania’s request to explain the generation of human beings, Asclepius gives a “common” view of physicians and philosophers. According to this, there is first a “certain craftsman-like spirit” (opifex quidam spiritus) of divine and celestial origin in fetal formation. This spirit is fully ethereal and much resembles a celestial body. It nourishes and gives form to the fetus by procreating the parts of its body in adequate proportions. This spirit imprints on the fetus a “living image” (viva imago) of heaven in the form of celestial sparks. That is why the human being can be regarded as a portrait of the celestial theater. This ethereal spirit holds the key to grasping the origin of affinity between heaven and human beings. Urania counters Asclepius that she recognizes in human generation the providence of God since everything, transmitted from heaven through this formative spirit, is under God’s control. She argues that Galen shared the same opinion.25 The Christianized image of Galen hints at the influence of Fernel.

The second dialogue addresses the harmony of the sun and the heavens with the rational soul and the body of the human being. Urania begins the discussion by specifying the role of the Creator. For her, God is the Creator of all heavenly bodies. Moses and the Platonists are called upon to confirm this. Asclepius replies that God is also the author of the rational soul and the human body. To Urania, what governs the sun and the other celestial bodies is incorporeal since it is the divine, immortal and indivisible mind. Likewise, to Asclepius what governs the rational soul and the human body is also incorporeal since it is the divine spirit of the celestial Father. Mizauld appeals to the authority of Hermes for this development. Then he argues through Urania that the sun is the ray of the divine mind and occupies the preeminent place in heaven above all creatures by fostering them through its vivifying spiracle. Asclepius answers:

> Almost similarly, the mind, that is, the immortal rational soul in the human body, is a very excellent representation of the sun, which the Platonists somewhere called “World-Soul” although it is invisible.26

Thus the Platonic doctrine of the World-Soul plays as important a role in Mizauld’s system as in Fernel’s, and the sun is regarded as its visual representation.

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26 Ibid., 2, p. 39.
The third dialogue compares the sun’s rays and spirits with physiological spirits in the human body. Urania first characterizes the sun’s rays, sometimes called “the spirit and soul of the world,” as substances of a bright, subtle and tenuous nature, fully celestial and ethereal, resulting from the sun’s body. Asclepius opposes physiological spirits as their counterparts in the human body. These spirits are diffused everywhere in the body as certain solar rays. Their substance is wholly ethereal, subtle and bright.27

Let us move on to the sixth dialogue, which compares the sun’s natural heat with the native heat of the human body. Asclepius argues that from this native heat flows not only spirit but also a hidden ethereal light that illuminates and cherishes all the parts of the body. This heat is said to be of a celestial and ethereal nature adequate to preserve the human body. Then Mizauld introduces a vehicle of this heat:

The Platonists, who followed Hippocrates, and Galen with them called it “fire” or “heat” and “divine spiracle.” The Peripatetics called it sometimes “heat” and “natural heat” or “the bond between the soul and the body,” and also “spirit” by imitating my Hippocrates.28

It is striking that the Platonists are conceived by Mizauld as Hippocrates’s disciples. He goes even further to argue that Galen called native heat and its spirit something divine, the author of all natural operations, the soul or its first instrument and a certain offshoot of celestial fire. Following this, Mizauld makes allusion to the cosmological passage of Aristotle’s Generation of Animals: “[innate heat is] something corresponding to the element of the stars. The sun presides over it.”29

The sun’s preeminence is confirmed in the seventh dialogue on the comparison of the sun to the heart. After the discussions on its rays and spirits, the sun itself now occupies the central place. Under the authority of Dionysius the Areopagite, Urania presents the sun as the transparent image of God. Asclepius counters:

The heart is the noblest part of everything in the body and is secretly associated by marriage with the sun, the prince [of the heavens], also called “the heart of heaven” by the ancients.30

27 Ibid., 3, pp. 41–46.
28 Ibid., 6, pp. 58–59.
29 Ibid., 6, pp. 60–61.
30 Ibid., 7, p. 67.
What is remarkable in Mizauld is this “heliocentrism” before the diffusion of the Copernican system. Evidently, he does not refer to the Polish astronomer or anything related to his ideas of the new world system. Rather, Mizauld’s “heliocentrism,” together with “cardiocentrism,” must be understood in the context of Renaissance Platonism where the pre-eminence of the sun was firmly established.31

Cardano’s Theory of Cosmic Heat

Another crucial element for the further evolution of Renaissance astral medicine was presented by Girolamo Cardano (1501–1576) of Milan.32 He is known for his reform of astrology through his commentary on Ptolemy’s Tetrabiblos and related works on horoscopes. In his eyes, medical prognostication has a common basis with divination and, therefore, is intimately related to astrology and prophecy. He also believed that Hippocrates was a precursor to these aspects of medicine.

In his successful work On Subtlety (De subtilitate) (Nuremberg, 1550), Cardano calls upon the authority of Hippocrates to explain his pan-vitalistic view of the universe. There he establishes a synthesis of two eminent ideas. One is the opinion attributed to Hippocrates, the other stems from that cosmological passage of Aristotle’s Generation of Animals:

[...] it is evident that Hippocrates correctly said: the soul is nothing but that celestial heat. This also corresponds well to the opinion of Aristotle since he wants the spirit’s heat to have a certain analogy with the element of the stars. Indeed whether the heat is the soul or its first instrument, wherever there is this [kind of] heat, it is evident that the soul itself should also be

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present; therefore [there should be] life too. For life is nothing but the work of the soul.\textsuperscript{33}

Cardano’s source for this Hippocratic idea is \textit{On Fleshes}, which suggested the cosmological dimension of the soul’s origin. As we have seen, Fernel used the same passage to defend the immortality of the soul and its celestial origin. In other writings Cardano goes even further by arguing that this cosmic heat is animate and endowed with intelligence. Thanks to this all-pervading heat, analogous to the World-Soul or its physical manifestation, the omnipresence of the soul is guaranteed in the universe.\textsuperscript{34}

An even more important passage, which could be widely diffused in the medical milieu, is surely found in his commentary (Basel, 1564) on the central textbook of the traditional medical curriculum, Hippocrates’s \textit{Aphorisms}. In the preface to its seventh and last book, Cardano sums up the global view of the Hippocratic corpus. According to him, the natural philosophy of Hippocrates teaches the origin and immortality of all things, the three elements as well as cosmic heat:

In his natural philosophy, [Hippocrates] proposed five goals, the first [of which] was to discuss the origins of all things, and he showed it in the first book of \textit{On Regime (De diaeta)}. That is what we also declared [elsewhere]: Nothing is corrupted or destroyed but all persists; three [remain] because they are elements, that is, earth, water and air, yet being divided and separated [from each other]; but one [entity] is totally immortal that he calls “fire,” “heat” or “heaven,” about which he clearly teaches in the book \textit{On Fleshes (De carnibus)} […] It is evident enough from this that we agreed with him on the elements’ number and substance (although we did not then know these things) as well as on the quality of heaven.\textsuperscript{35}

Hippocrates is presented by Cardano as an ancient sage who knew and taught the very secret of the original constitution of the world and of the soul, especially through his treatises such as \textit{On Regimen} and \textit{On Fleshes}. Through this particular philosophical reading of Hippocrates, Cardano


\textsuperscript{35} Girolamo Cardano, \textit{In septem Aphorismorum Hippocratis particas commentaria} (Basel, 1564), col. 737 = Girolamo Cardano, \textit{Opera omnia} (Lyon: 1663), vol. 8, p. 523.
developed his theory of cosmic heat as an equivalent of the World-Soul or its physical manifestation. This was to become a central tenet of astral medicine in the second half of the 16th century.

Gemma and the Apogee of Astral Medicine

Cornelius Gemma (1535–1578), royal professor of medicine at the University of Louvain, was a friend of Mizauld and a son of the famous cosmographer-mathematician Gemma Frisius (1508–1555). Cornelius grew up in a particular environment where mathematical and astronomical sciences were part of the family business. Unlike his father, he was heavily influenced by Ficinian Platonism. He also called upon the authority of Hippocrates on many occasions in his major work *On the Divine Signs of Nature (De naturae divinis characterismis)* (Antwerp, 1575). He believed that the Greek physician was a leading figure among the ancient sages. In support of this conviction, Gemma developed a particular interpretation of Hippocrates on the basis of the *prisca theologia* belief in vogue among his contemporaries. His approach was also influenced by the views of two leading physicians of the time, Fernel and Cardano.

The Hippocratic treatise *On Regimen* plays a central role in Gemma’s philosophical, or more precisely Neoplatonic, reading of the Greek physician as in the case of Cardano. Gemma calls this treatise “the divine book” in his early work *On Cyclognomic Art (De arte cyclognomica)* (Antwerp, 1569) and closely relates it to *On Fleshes*. Like Cardano, he explains that Hippocrates advanced in *On Fleshes* the idea of cosmic heat, which is animate and endowed with intelligence. As for the structure of the world, Gemma’s discussion revolves around the Ficinian notion of the universally pervading World-Spirit. Then, alluding to the cosmological passage of Aristotle’s *Generation of Animals*, he says:

> Above quality, I place the spirit which, in my opinion as well as according to the view of Hippocrates in the books *On Regimen* and *On Fleshes*, does not really differ from innate heat, just as that universal spirit of the world

does not differ from the element of the stars. Many people often speak of it, but very few [of them] really understand it. Here the former kind of spirit is the first instrument of a future form or soul. It connects the form to bodies as the spirit is tied to these bodies by a carrier quality that intervenes. It is the same spirit as that which perfects, connects, sees and understands everything according to Hippocrates.³⁷

This argument is based on the combination between Aristotle’s idea on the heat of the spirit contained in the seed and that of Hippocrates on animate cosmic heat. This is exactly the same combination established by Cardano in his De subtilitate.

Let us return to Gemma’s major work On the Divine Signs of Nature. Following in the footsteps of Fernel, he first appeals to the notion of the “divine” among the ancients to explain his astral medicine. To his eyes this medical principle is important not only for the remedy of mind and body but also for the restoration of health in human beings and in human society itself. Then Gemma acknowledges seven degrees of divinity in the universe, the first of which resides in matter and the second in the forms of mixed bodies. The third degree, more important than the previous two, is situated in the spirit:

Indeed the spirit is the knot and tie of opposites and, by the kinship of its nature, looks at both sides to the same degree. So it is not surprising if it connects the soul with the body in a human being, celestial force with sublunary things in the exterior sphere, corporeal faculties with incorporeal faculties in both realms […] . Since [the spirit] belongs to all, draws all through all, composing very different things into one species by the perpetual change of contrary movements (that is, attraction, repulsion or self-rotation), Hippocrates, more than divine, attributes this triple motion to the [spirit] by really subtle signs in the first book of On Regimen […] .³⁸

For Gemma just as for the other followers of Ficino, spirit is a universal knot of all natural beings as well as an indispensable pillar in the structure of the universe and of human beings. Here again, what is most striking in Gemma’s discourse is the appeal to Hippocrates’s On Regimen, which occupies for him a fundamental place to explain the nature of the spirit.

Next Gemma places Hippocrates beside Hermes and the Platonists who, to his eyes, form one and the same school in the quest for divinity in nature and in the universe. He does not conceive the Greek physician as an ordinary member of those “ancient theologians” (prisci theologi)

³⁷ Cornelius Gemma, De arte cyclognomica (Antwerp: 1569), 2.3, p. 42.
but rather as a main figure among them. By placing Hippocrates beside Philo and Moses, Gemma goes even further to prepare the ultimate harmony between the Greeks and the Christians. For him what Hippocrates called “fire” and “water” in *On Regimen* corresponds to what Moses called “heaven” and “earth” in *Genesis*. Thus an extraordinary ascension of the status of *On Regimen* can be observed in Gemma. Indeed for him this Hippocratic treatise occupies a central and privileged place: equivalent to holy literature such as Hermes’s *Pimander* and Plato’s *Timaeus* and close to Moses’s *Genesis*. With Gemma, Renaissance astral medicine may have reached its apogee.

*The Paracelsian Quest for the Universal Medicine*

Once the philosophical foundation of astral medicine was established, the next step was the search for its application in other medical fields such as pathology, therapy, medication and pharmacology. However, traditional pharmacology and therapeutic theories based on the Arabo-Latin stream of Galenic medicine did not adapt. Something suitable for this new setting was required. This was carried out by the Paracelsian “chymical” (alchemical/chemical) philosophers of the turn of the 16th and 17th centuries.

Although Paracelsus (ca. 1493–1541) himself shared a similar worldview with Ficino, Fernel and Cardano, his denial of the Pagan classical authorities forced him to develop a radical medical philosophy and to seek a field of activity outside the traditional academic system. In the manifesto of

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his new medicine, *Paragranum* (written ca. 1529/30), “astronomy” was one of its four pillars. By the term “astronomy,” he sought to establish a new overall harmony between heaven and earth. He also borrowed many ideas and terms from late medieval Lullian alchemy. Among these there was the notion of “quintessence” (*quinta essentia*), according to which something celestial was enclosed in terrestrial things. From this notion Paracelsus developed the idea of *arcanum*, the invisible quintessential core of natural things that, once liberated from their visible material cover or vestments, exerts marvelous medicinal power. This idea was to culminate in the theory of the universal medicine toward the end of the Renaissance.

Let us look at the case of Joseph Du Chesne (1546–1609) *alias* Quercetanus, who was one of Paracelsus’s most prominent followers during this period. In his treatise *For the Truth of Hermetic Medicine* (*Ad veritatem Hermeticae medicinae*) (Paris, 1604), Du Chesne devoted himself to the quest for the universal medicine. There he divides natural bodies into two kinds: simple and composite. The simple bodies are subdivided into two groups: formal and material. The formal simple bodies are all active, invisible and spiritual entities. Du Chesne acknowledges three categories among them: 1) elements; 2) three Paracelsian principles of Salt, Sulfur and Mercury; and 3) astral “seeds” (*semina*). There is a clear hierarchy among these categories. The first rank is attributed to astral seeds, which activate the three principles. Because of these principles, the elements too are seen as formal and active entities although they are by nature nearly inert with only passive qualities. Significantly, these formal bodies can still be considered “material” upon receiving their own material cover or vestment. With this cover they become perceptible, even visible. Every natural being thus has a double nature: one visible and material, the other invisible and spiritual.

Although Du Chesne denies the possibility of capturing astral seeds separately through the chymical dissolution of natural bodies, he thinks it possible to obtain the hidden body of the three principles, which can be regarded as their receptacle or vehicle. This is the real identity of quintessence for him:

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The artist not only can separate these elemental bodies but also can reduce them into nothing so that, once the passive and material elements are separated, those three hypostatical, formal and active principles remain. Contracted into one [entity], these [principles] form a mixed body which philosophers call “quintessence” […] This [essence] is free of corruption and rich in perfection and life-giving spirits.44

For Du Chesne this celestial essence constitutes the body of heaven, which is endowed with powers to generate, foster and perfect sublunary things. By its supreme subtlety and purity, this heavenly essence permeates all natural beings and bestows on them their own specific virtues. In such a manner heaven fashions all sublunar beings.

Upon materializing the heavenly essence that holds the secret of life, the quest for the universal medicine seems like a real possibility to Du Chesne. He argues that the true medical philosopher must eliminate the material cover by distillation to obtain this essence crucial to the preservation of health and life. He goes even further to call it “the celestial stone of philosophers” (lapis caelestis philosophorum), an idea against which his anonymous detractor reacted violently.45 Du Chesne responds:

As it is very simple, pure and incorruptible, [the universal medicine] is called “quintessence” […] and “the celestial stone of philosophers.” Since that anonymous author did not have any knowledge of this [entity], he misunderstood that, speaking of the stone of philosophers, that is, this universal medicine, I was thinking of the transmutation of metals as if such a transmutation were the supreme medicine of the human body. He was also ignorant of the fact that in the microcosmic human being lie hidden the mines of imperfect metals from which many diseases are propagated; necessarily a good, pious and wise doctor should reduce them into gold and silver, that is, the perfect purification through the virtue of that very remarkable and precious medicine if we want to reach sanity and good health […]46

After establishing the existence of the universal medicine, Du Chesne tries to explain its origin through the interpretation of the Creation story of Genesis in chymical terms especially used for distillation. His modus operandi is to demonstrate, on the basis of prisca theologia belief, the

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45 This detractor was Jean Riolan the elder (1537–1605), dean of the faculty of medicine at Paris, who anonymously published his censure as Apologia pro Hippocratis et Galeni medicina adversus Quercetani librum (Paris, 1603). On their polemic, see Kahn, Alchimie et Paracelsisme, pp. 363–386; Hiro Hirai, “Alchemy and Medicine in Joseph Du Chesne’s De priscorum materia (1603),” read at the international conference Alchemy and Medicine from Antiquity to the Enlightenment (Cambridge, 22–24 September 2011).
46 Du Chesne, Ad veritatem, 1.14, p. 178.
concordance of ancients such as Plato and Aristotle with the “Hermetists,” that is, the chymical philosophers under the authority of the Bible. For Du Chesne the knowledge of the Hermetists is in total agreement with the true philosophy of Moses who, hearing the words of God, recorded them in the book of Genesis.47

Following in the footsteps of Du Chesne, 17th century Paracelsian chymists such as Oswald Croll (ca. 1560–1608) and Robert Fludd (1574–1637) produced the most celebrated works of the Paracelsian movement, where the chymical interpretation of Genesis and the quest for the universal medicine were crucial.48 Needless to say, this was a natural development of Renaissance astral medicine.


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