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Monastic Approaches to Medicine in the Middle Ages

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The medical culture of the medieval West bore the legacy of numerous, disparate influences. We have to acknowledge first of all the overwhelming textual production of two Greek physicians: Hippocrates (late 5th-early 4th century B.C.) and Galen (died ca. A.D. 200). They operated within a moral cosmos defined by Empedocles and Pythagoras and refined by Plato and Aristotle. Philosophers such as Boethius, commentators such as Macrobius and encyclopedists such as Cassiodorus and Isidore of Seville transmitted the essentials of this cosmic framework to post-classical Europe, along with the fundamental notions of physiology, disease, and cure which continued to be operative through the Renaissance. The bulk of the Hippocratic and Galenic corpus, however, reached northern Europe through the intermediary of Islamic practitioners whose translations and commentaries were eagerly turned into Latin by Christian scholars anxious to obtain the wisdom of the Ancients. The school of translation at Toledo, which brought together the three principal cultures – Islamic, Jewish and Christian – which shared the Iberian Peninsula, was the source of much of the scientific, medical and philosophical writing which poured into the Latin West between 1000 and 1600. It is these writings, whose availability coincides with the rise of the universities in the late 12th century, which made possible the growth of scholastic medicine.

Second, we must acknowledge the occult practices of pre-Christian Europe, which survived and were absorbed into a Christian framework. These coexisted with a "natural" approach, based on diet and herbal remedies, and indeed, the two are oft-times inextricable.

Third, we have Christian culture itself. With a god and savior who was a consummate healer and whose compassion for humankind was expressed most readily in this way, it is not surprising that Christian monasteries and shrines should acquire great importance as centers of religious healing. Yet what we can call Christian medicine is in no way a monolithic discipline. At the same time that Christianity is directly responsible for the preservation and transmission of many early medical texts, as it sought indiscriminately to preserve the cultural legacy of the ancient world, medicine became, with the Christianization of the former empire, more a healing activity than a branch of learning. For though Christianity did not evince ancient medical knowledge or secular practitioners, its approach to anatomy, physiology, and pathology was tempered by a certain reticence about the natural world in general and secular learning in particular; all such pursuits tended to be subordinated to Christian exegetical purposes. In general terms, the Christian position during the first six centuries was that sickness is a consequence of the Fall. There was ongoing disagreement, however, as to whether disease was a general consequence of our sinful condition or attributable to particular sins of individuals or communities. Though Jesus twice refuted this notion, and an early Hippocratic writer refused to ascribe convulsive seizures to divine anger, Christian

commentators occasionally – though by no means always – interpreted certain instances of sudden or dramatic illness as evidence of divine retribution. Witness the description of the fate of King Herod in Acts 12:23, or Pope Gregory the Great's assessment that plague outbreaks in the sixth century were a consequence of communal sin, illustrated here in a 15th century book of hours. For devotional writers, the cure of the soul took precedence over the cure of the body, and they thus tended to advise patient acceptance of suffering as part of God's plan.

This of course does not mean that Christians of late antique and early medieval Europe did not believe in natural causes for disease nor try to heal both body and spirit. Nevertheless, the testimony of the Gospels established the patent superiority of miraculous cures over natural ones, and healing miracles played a very large part in the development of the cult of the saints in late antiquity. Though secular and religious healing continued to exist side by side, the relation between the two shifted in favor of the latter. At the same time, the physical care of the sick came very early on to be considered a fundamental characteristic of Christian charity, and clerical communities became both the guardians of sacred relics and the cultivators of medicinal herb gardens. Interestingly, we read Gregory of Tours denouncing the lack of confidence in the saints shown by a patient who sought follow-up treatment from a secular physician. But to give Gregory his due (though not to excuse his parochialism), the vehemence of his objections derives less from the simple recourse of his patient to secular healing than from the fact that the chosen physician was Jewish. And indeed, the real competitor of religious healing was not so much secular medicine as it was magic. A 4th century writer like Julius Firmicus, who was well known in the 11th and 12th centuries, lists incantations as one of four methods of healing, which also include cauterization, natural remedies, and seeking divine aid. He is careful to point out that the last of these, seeking God's assistance, is the most frequently used, and another 4th century writer, Libanius, criticized the magic arts as a survival of paganism. Bishop Synesius of Cyrene, however, whose dates are 370-430, is more circumspect when he indicates that adherence to Christianity need not be incompatible with divination, occult science, and the invocation of spirits. So medical practice in the first twelve centuries of our era is a flexible balance of classical learning, diet and herbal therapy, seeking divine aid, and recourse to magic. How these components were balanced is what I want to discuss today.

I draw a somewhat artificial line at the year 1200 for several reasons. The rapid development of European society between 1050 and 1225 saw the establishment of medical schools in Salerno, Montpellier, and finally Paris. As the number of healers, clerical and lay, male and female, proliferated, the medical curriculum also profited from a great influx of classical texts. The development of this curriculum marks a decided shift toward secular and specialized learning; among other things, astrology became integrated into medical practice. At the same time, beginning in the 1130s, a series of church councils forbade monks and canons regular to pursue medical studies outside of the cloister and to practice medicine "for the sake of temporal gain". These decrees were not directed against medical knowledge or practice, but rather against avarice and absenteeism. There developed nonetheless a dichotomy between learned physicians, who read Aristotle and Galen in Latin and consulted astrological charts, and simple healers, who relied on age-old natural remedies, which as we shall see did not fail to be tinged with the occult. I want to take us up to the death of Hildegard of Bingen in 1179, and

devote a good bit of my attention today to her works. She is not only the finest exemplar of the spirit of medieval monastic medicine, but also one of the last well-known writers who is largely unaffected by Galenic medicine and by astrology.

Let's take a moment to explore Galenic physiology as it was received by the West. Both physiological theory, which explained illness, and prescriptions for treatment were expressed in terms derived from the theory of *complexio*, or temperament, which refers to the role played by the balance of the elementary qualities of hot, wet, cold, and dry in the body. In complexion theory, all living things are complexionate: each plant or animal species has its own characteristic balance of qualities. Sickness occurred when the balance of qualities in an individual was upset; the healer might restore nature's balance of qualities in a patient by prescribing changes in diet, or prescribing medications. But as we'll see, complexion theory was not a mechanistic, plug-in-the-formula-get-out-the-answer approach. For in addition to a species-specific complexion, each person was endowed with his or her own innate complexion, and this could vary according to climatic conditions and to age. For example, heat and moisture in youth gave way to coldness and dryness in old age; women as a group were considered colder and moister than men, though individuals might have a hotter or colder complexion than a member of the opposite sex; peoples who lived in cold climates were considered to have a colder and moister complexion than those living under a hot sun. Each organ of the body was considered to have its own predominant complexional makeup as well. The heart was always hot, or at any rate hotter than the brain, and medical textbooks listed all bodily parts in different arrangements of heat, dryness, wetness, and cold, respectively. Complexion was supposed to be a physically perceptible quality, discernible by touch. It was never absolute, but as we can surmise, always relative, and had to be determined by comparison with the norm for the species or individual or bodily part in question.

The second pillar of physiology, the theory that specific bodily fluids, or humors, were essential to the functioning of the organism, dates back to the origins of Greek medicine. The Hippocratic treatise *On the Nature of Man* lists the four humors which became standard: blood, phlegm, bile (also termed choler, or red or yellow bile), and finally black bile (or melancholy). To these fluids were ascribed largely hypothetical origins, sites, and functions. Phlegm was a catchall term for pretty much any colorless or whitish secretion (except for semen and milk). Phlegm could have various characteristics, among them sweet, salty, watery, or mucilaginous, and the organ most frequently associated with phlegm was the brain (because of the color and consistency of the brain and of cerebrospinal fluid), but "natural" phlegm was also described as a stage in the manufacture of the blood. Yellow or red bile was identified with the fluid found in the gall bladder and said to be manufactured in the liver, along with black bile and blood. Black bile was also given its own receptacle, however, in the spleen. Baudelaire's collection of poems entitled *Spleen* attests to the longevity of this association. Blood occupied a special place among the humors, and venal blood was considered to be a combination of pure humoral blood with a lesser proportion of the other three humors. The other humors were generated as part of the process of manufacture of blood, and evidence for their presence derived from changes in color and partial separation observed in drawn blood left standing; they were considered essential to the purification and fortification of the blood.

The humors were not only responsible for the generation of the parts of the body, but they constituted the means by which a person's complexionate balance could be maintained or altered. This involved drawing blood by one of three means: application of leeches, application of hot cups to the skin's surface, or opening a vein. The following late medieval illuminations illustrate these techniques. The balance of the humors was responsible for both physiological and psychological disposition, although critics of all three faiths – Christian, Muslim and Jewish, accused Galen of psychological materialism. They objected to the implication that material causes determined the nature of the human soul. Hildegard, as we shall see, had none of these scruples, but managed to effect a brilliant synthesis of Christian morality with humoral theory.

Before talking about Hildegard, though, I want to spend some time with medical writings of the ninth to twelfth centuries, as these will enable us to place Hildegard in proper prospective. These treatises are compiled from old excerpts of various sources, and offer a Christian perspective which is often semi-occult. Thus one 9th century manuscript containing old Latin adaptations of Galen's discussion of fevers, introduces incantations for use by the Christian physician such as "I adjure you, spots, that you go away and recede from and be destroyed from the eye of the servant of God." This same source contains more than one tract on how dreams or a patient's prognosis can be determined from the day of the moon. Prescribed prayers also complement the familiar Plinian remedies involving animal parts. Thus Pliny's prescription for curing baldness by the application of ash from incinerated bees, for healing cuts by applying powdered earthworm, or for snake bite by smearing earwax on the puncture or drinking holy water in which a black snail has been washed, are accompanied by signs of the cross, sacred names, psalms, and exorcisms. Other remedies for venomous bite include collecting blood from five incision points around the puncture and throwing it silently over wagon ruts, and churning butter on a Friday from the milk of a hind of uniform color, this accompanied by nine paternosters. Protection from sharp objects such as swords is afforded by consuming swallow nestlings boiled in wine, while protection from sharp tongues can be assured by nocturnal consumption of radish root.

The occult virtues which the ancients ascribed to animals, vegetables and minerals were accepted without question by these Christian writers, who added their own experience with native herbs as well as a considerable amount of Teutonic and Celtic folklore, more or less Christianized. Another feature of treatment in this period which has surgical application, but whose other uses are patently superstitious in origin, is cauterizing. The application of red-hot irons to the body in order to relieve internal diseases, often at points apparently unconnected with the complaint being treated, shows similarities with the phlebotomy or bloodletting points, whose location was determined astrologically. So we see that the boundaries between medicine and religion in this period are very thinly drawn.

The 11th, and even 12th, centuries show little decrease in reliance on Christian incantations and, in addition to the expected medical uses such as tooth ache, fever, cataracts, and preventing miscarriage, offer us charms for conception, for preventing conception, for making fruit trees bear, and against enemies. Thieves could be discerned by chanting the formula "Abraham bound, Isaac held, Jacob brought back to the house", and the 12th century portion of Sloane ms. 475, in the British Museum, offers the following charm against fever: "Christ was born and suffered; Christ Jesus rose from the

dead and ascended unto heaven; Christ will come at the day of judgment. Christ says, According to your faith it shall be done." This is followed by the sign of the cross and a list of sacred names which includes the four evangelists and the seven sleepers of Ephesus!

Other prescriptions make no attempt to disguise their classical source. Thus an incantation for toothache borrowed from Marcellus Empiricus (ca. 400) begins "Aridam, margidam, sturgidam" and is to be repeated seven times under a waning moon on a Tuesday or a Thursday. One of the most oft-cited experiments, repeated by William of Auvergne, Albertus Magnus, John of St. Amand and Roger Bacon, enjoys its first Christian manifestation in Sloane 475. The experiment, involving a split rod and an incantation, hearkens back to Cato's *De Agricultura*. For Cato, the split green rod served as a splint for a fractured limb and the incantation (in archaic, garbled Latin) was designed to sustain the morale of the patient during healing. By the time the ends of the rod knit back together, one could expect the bone to have healed. In the 12th century, this rather straightforward procedure has become a means for producing a tool of power. A rod of four cubits is split while repeating the paternoster and the two halves are held apart. Then the sign of the cross is made followed by the incantation "Ellum sat upon ella and held a green rod in his hand and said: "Rod of green unite again", plus further repetitions of the Lord's Prayer, until the split halves join together in the middle. The rest is then severed and the junction point used as a magic wand. As a means to heal limbs, this process becomes one of sympathetic magic, for the joining of the rod is intended to effect the joining of the fractured limb.

Incantations also abound in veterinary practice and even in treatments based on humoral theory. Such discussions praise at great lengths the virtues of bloodletting, and follow this with particularly choice discourses of the medicinal virtues of blood. Before moving on to Hildegard, I want to cite one more particularly rambling Biblical incantation. This one prescribes treating a fever in ways which begin by resembling the rite of extreme unction, but finish as a general profession of faith, with an appeal to sympathetic magic. So here goes: one is to write the prayer "O Lord, spare your servant N., so that chastised with deserved stripes he may rest in your mercy" on five communion wafers, and then place them on the wounds of a crucifix figure of Christ. The patient is to approach barefoot, eat the wafers, and say: "Almighty God, who saved all the human race, save me and free me from these fevers, and from all my languors. By God Christ was announced, and Christ was born, and Christ was wrapped in swaddling clothes, and Christ was placed in a manger, and Christ was circumcised, and Christ was tempted, and Christ was betrayed, and Christ was flogged, and Christ was spat upon, and Christ was given gall and vinegar to drink, and Christ was pierced with a lance, and Christ was crucified, and Christ died, and Christ was buried, and Christ rose again, and Christ ascended into heaven. In the name of the Father and of the Son and of the Holy Ghost, Jesus, rising from the synagogue, entered the house of Simon. Moreover, Simon's daughter was sick with a high fever. And they entreated Him on her behalf. And standing over her He commanded the fever and it departed."

The attribution of magical virtues to plants and animals which pervades these writings reflects a mindset which saw every element of the universe as interconnected. The whole of the universe existed for humanity's benefit, and the proper understanding and channeling of its powers was seen as part of God's plan for salvation. So rather than

read these prescriptions only as signs of early medieval ignorance and naiveté, it is important to understand them as expressions of a cosmology which placed humankind in a privileged position in the natural world, subordinate only to God. The finest expression of this holistic view of creation, which synthesized classical learning and empirical wisdom in a mystical love of the cosmos, is Hildegard of Bingen's. To paraphrase Abbot Ildefons Herwegen, writing in about 1930, no other medieval writer comes close to attaining her understanding of the web of nature or her empathy with the elements of creation. This remarkable visionary, theologian, composer, natural historian, and medical writer, who lived from 1098 to 1179, was accorded the title of "Teutonic prophetess" even in her lifetime.

Her medical writings include two principal treatises, *Causae et curae* and *Physica*, which were composed between 1150 and 1160. *Physica* is the first treatise I want to discuss because it constitutes the clearest bridge between the superstitious remedies of the previous century, and the more sophisticated, humoral discussions which are the subject of *Causae et curae*. *Physica* features Hildegard as an herbalist, and there, her descriptions of treatment show the greatest influence of folk remedies. These are always tempered by complexion theory. In fact, for Hildegard, the virtues of all plants derive from their complexional qualities. Thus she says about columbine, for example: "Columbine is cold. A person on whom *freislich* begins to spring up should eat raw columbine, and the *freislich* will disappear. And one on whom scrofula is developing should eat raw columbine and it will decrease. But one who ejects much phlegm should soak columbine in honey and eat it often. It will diminish the phlegm and he will rid himself of it. One with a fever (which for ancient and medieval theory was a disease in itself; as a fever in inherently hot, it will be susceptible to cold columbine, its opposite) should pound columbine, strain its juice through a cloth, and add wine. He should drink this frequently, and he will be well." As you can see by flipping through it, *Physica* is constructed of hundreds of such remedies, which are organized according to complexion and to species.

As fanciful as many of these cures seem to us today, they are consistent and logical within the framework of complexion theory, and most important, they are devoid of the incantations which pervade remedies of the previous century. We have thus turned a page in the history of medicine, towards a more rational understanding of nature. Parenthetically, it is equally important to realize, as a certain school of Hildegard fans today does not, that you can't actually practice Hildegardian medicine. Complexion theory itself is defective in addition to which the texts show a great deal of terminological imprecision (witness the term *freislich* which has to be left in its original German – notice that Hildegard herself didn't try to express it in Latin – because it is not understood today).

It is in *Causae et curae* that humoral theory comes into play, and here Hildegard's discourse fluctuates between the naturalistic and the theosophical. She applies the humors to a shrewd and insightful discussion of human nature, and treats human sexuality in a frank, descriptive, and entirely non-judgmental tone. In her discussion of the origins of disease, however, she gives in to a dualistic argument which is decidely Augustinian, and one feels the tug of these two contradictory approaches throughout *Causae et curae*.

In her discussion of disease, Hildegard shows herself to stand outside of the main current of Galenic medicine. Whether this is only due to her time period, or also due to her own education, is very difficult to judge. Though Hildegard shows familiarity with complexion theory, and gives the temperaments their proper names, her discussion of the humors in fact owes very little to Galen. Rather than describing these as composed of blood, phlegm, bile, and black bile, Hildegard informs us that the humors are made up of four types of phlegm – dry, moist, foamy, and lukewarm – which derive from fire, air, blood (water) and flesh (earth), respectively. So her humors are directly connected to the four elements of ancient philosophy. The humors are arranged, moreover, in a hierarchy such that the two dominant ones are termed phlegm, while the two subordinate ones are termed slime. While Hildegard appears to favor a balance consisting of dry and moist phlegms over foamy and lukewarm slimes, this is only one of several possible healthy arrangements. This, as you will recall, is entirely in keeping with complexion theory. So for each ailment, mental as well as physical, that she discusses, she establishes which humors act as phlegm and which as slime, and explains the particular imbalance responsible for the pathological state. All pathological states, to abstract beyond the humors involved, result from a dominance of slime over phlegm.

In her discussion of the four temperaments, Hildegard treats men and women separately, and describes the strengths and weaknesses, physical characteristics, emotional and sexual behavior in relationships, suitable occupations, and prognosis for health and longevity which are characteristic of each temperament. In her equation of the humors with physical traits and reproductive behavior, as well as in the complexity of her psychological portraiture, moreover, Hildegard is unique. Your handout offers a summary of these descriptions, which reveals the breadth and depth of her restless intellect.

Following Hildegard in her shift to the metaphysical, we find, listening to her other voice, that the humors have become exempla of the human condition. Blood is the only positive humor, and indeed was the only humor present in the body before the Fall. She moralizes humoral theory, which as you recall treated the other humors as components of the blood, by making them contaminants which entered our bodies as a result of Original Sin (and in this she departs quite radically from Galen). At the same time, she adopts a dualistic tone polarizing matter and spirit which is absent from her earlier discussion. We find her sharing with St. Augustine his early position that children, and libido, were not part of God's plan. Rather both of these, as well as toil, illness, pain and death, became our lot after the expulsion from Eden. To experience this in Hildegard's own words: "The blood changed into the poison of semen by which human children are generated. Because of that man's flesh is full of ulcers and sores. These ulcers and sores produce disturbances and vapors in people. Out of them comes the phlegm which brings various diseases to the human body". (Remember that she doesn't maintain this dualistic tone, but fluctuates back and forth)

While the herbal remedies presented in *Physica* are applied to the body, and seem sufficient to heal it, more is required in order to heal the spirit. Melancholy is singled out by Hildegard as the fruit of "the first attack by the devil on the nature of man". When we read her discussion of melancholy in *Causae et curae* in conjunction with a letter written to the prelates of Mainz in the last years of her life, we can hear Hildegard speaking as a music therapist. Though neither of her medical treatises overtly discusses

music as an instrument of healing, she alludes to its therapeutic value when she attributes melancholy to humanity's separation from the angelic choirs, with which Adam's voice had been in harmony prior to his expulsion from Eden. In the letter I just mentioned, Hildegard describes music as a gift of the Spirit designed to soften the memory of exile and recover that primeval unity with the angelic voices which Adam and Eve had enjoyed. Psalms, hymns and musical instruments came into being, so she asserts, through imitation of the inspired prophets, which enabled humans to "sing in joyfulness of heart….And in this way, they imitated Adam, too, for he was educated by God's finger, the Holy Spirit, and before the Fall, his voice carried in itself, in full, harmonious sound, the loveliness of every musical art." In daily experience, then, though she appears to lack the meta-language necessary for incorporating music into medical practice, Hildegard must have applied both music and diet therapy in a regimen which sought spiritual wholeness, and ultimately salvation, as it greatest goal.

Hildegard's conception of health and her approach to the world are decidedly Benedictine. The Benedictine values of stability, measure and moderation are at the foundation of her views on nutrition. And we find in her approach to diagnosis and treatment an abiding concern for the whole person, for body and spirit, and a deep awareness of our place in this world and the next. In her musings on how and why our lives are shaped by physical facts and bodily needs, she reflects on light and air, eating and drinking, work and relaxation, waking and sleeping, and our emotional ups and downs. All of these must be part of hygiene, which itself is much more than diet and cleanliness. In the Benedictine Rule, hygiene is a much broader concept: it implies a balanced regimen of work, prayer and study which addresses body, mind and spirit, and in which music forges the link between this world and eternity, orienting the soul toward its true home.

Nature and God are linked through the creative power of the Word, for which Hildegard coined the term *viriditas* or "greening power". Viriditas is the life force which brings all of us into wholeness and into balance with Nature, and is the key to finding our way to God. In this way, Hildegard stands at the pinnacle of medieval Christian medicine. Having evolved beyond excessive reliance on the occult and perched on the cusp of a revival of scholastic medicine, she exemplifies the naturalistic bent of the best of monastic thought. Fusing what ancient medical knowledge was available with a principled interest in nature, she incorporates both into a cosmic order infused with divine love and a teleological purpose. While we no longer live in Hildegard's terracentric universe and her anatomy and physiology are no longer applicable, we stand to learn much from her understanding of the interconnectedness of all living things and of matter and spirit. Medieval Benedictine thought at its finest embraced and synthesized the whole of learning, both secular and sacred. Though Hildegard's model of the physical universe has fallen into disuse, her values endure, and can help us understand her approach to healing as part of an ongoing, living Benedictine tradition.

Medieval Monastic Medicine
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Summary of Hildegard's treatment of humors and temperaments (Schipperges, 1995

Sanguine men had their libido well under control while carrying out their sexual tasks, so that their "stem blossoms and performs properly" (*ita quod etiam stirps eorum in florem honorifice frondet*). In a proper embrace, they were called the golden edifice (*aureum aedificium in recta amplexione*). When they had no women with whom to interact, these men were as dull as a day without sunshine. (CC 72/73)

Sanguine women had a tendency to become fat. They had soft, sumptuous flesh and delicate blood vessels that carried a rich supply of healthy blood. They had a bright, white facial color. "They love caresses, are kind, are exact in artistic work and are content with their lives. At the time of menstruation, they suffer only a small loss of blood; their womb is well developed for childbearing. If they live without mates and so bear no children, they easily become sick. However when they have husbands, they are healthy." (CC 87)

Choleric men were hot-tempered. They felt robust and energetic when they interacted with women. If they lived without a woman, they dried up and dragged themselves around like dying persons (CC 71). **Choleric women**, on the other hand, were clever and charitable. They attracted men, but did not bind themselves to them. However if they were tied to a man, they were faithful and remained healthy. If they did not have a husband, they suffered in body (CC 88).

Phlegmatic men had broad, feeble blood vessels; their flesh was soft like a woman's flesh. They tried to pass themselves off as spirited, but they lacked any real drive. They did not have the power to plow the earth, because they could not interact with women. And because they had this physical deficiency, they were also slow of thought (CC 75/76). **Phlegmatic women** had serious faces, swarthy skin, and a vacillating nature. Men attracted them, though, and they were fruitful in producing posterity. They were difficult for others to bear and excessive in their passion (CC 88).

Melancholic men were bitter and greedy. They were devious, subject to mental illness and largely unsuccessful with women. They were often dissolute in their passion and as unregulated in their interaction with women as a donkey. They often hated women and would have liked to kill the woman with whom they were having sexual relations (CC74). **Melancholic women**, in their turn, were heedless in their thoughts, often of foul disposition, and unstable. Since they could not receive or warm the male seed, they remained unfruitful. They were usually more healthy, more powerful, and happier without a mate than with one. If they ever felt a desire of the flesh, it quickly passed (CC 89).

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