


Winter 1993

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Recommended Citation

Paxton, F.S. "Signa Mortifera: Death And Prognostication In Early Medieval Monastic Medicine." *Bulletin Of The History Of Medicine* 67.4 (1993): 631-650. Web.

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Keywords

death, dying, Middle Ages, Cluny, Hippocrates

Comments

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Signa Mortifera: Death and Prognostication in Early Medieval Monastic Medicine*

FREDERICK S. PAXTON

Ulrich and Bernard of Cluny, eleventh-century authors of customaries for the great Benedictine house in Burgundy, both mentioned the presence in the monastic infirmary of servants "well-trained" (*multum exercitati*) in watching at the bedsides of dying monks for the signs of approaching death.¹ When these servants saw that death was near, they alerted the community by clapping boards together. Nothing more is said about them, or their training, yet their task was both essential and delicate. Death and dying were serious matters at Cluny, and at monastic houses in general in the Middle Ages. The dangers and possibilities involved in the passage to the other world called forth complex rituals of supplication and purification involving the whole community. At Cluny, attendance at a death was mandatory for anyone who could possibly drop what he was

* Earlier versions of this essay were read in 1992 at the Sixty-fifth Annual Meeting of the American Association for the History of Medicine, Seattle, Wash., 2 May 1991, and in 1991 at the Twenty-sixth International Congress on Medieval Studies, Kalamazoo, Mich. Funding for my research in European libraries came as a grant-in-aid for 1989–90 from the American Council of Learned Societies. I did further work as a Yale University/Mellon visiting faculty fellow in the autumn of 1990. I would like to thank especially the faculty and staff at the Section of the History of Medicine at the Yale University School of Medicine for the warmth and collegiality with which they greeted me and with which they have treated me since.

1. Bernard of Cluny, *Ordo Cluniacensis*, in *Vetus disciplina monastica*, ed. Marquand Herrgott (Paris, 1726), p. 192a; Ulrich of Cluny, *Antiquiores consuetudines Cluniacensis monasterii*, in *Patrologia cursus completus . . . series Latina*, ed. J. P. Migne, vol. 149 (Paris, 1853), col. 772a. The customaries were supplements to the Benedictine rule describing the particulars of life (the customs) at Cluny.

doing. So important was it that when the monks heard the sound of the boards clapping they shed their usual gravity and ran as quickly as possible to the infirmary, so that as many as possible might aid in the dying monk's passage.² Even in practical terms, a death disrupted the usual calm and regularity of monastic routine. (The only other time monks could run was in response to a fire.)

Although misreadings of a patient's condition were expected from time to time, the infirmary servants and their superiors must have placed a high premium on knowledge of the approach of death. No doubt such knowledge, whether based on texts or experience, was to some extent transmitted orally, but the oral tradition is closed to us. There was, however, a rich body of prognostic texts available from which to draw.³ Between the eighth and the eleventh century, monastic scribes and compilers had made a point of collecting and editing such texts, especially those that focused on the identification of *signa mortalia* (mortal signs), *signa mortifera* (literally, death-bearing signs), or *signa vitae et mortis* (signs of life and death). The texts are diverse, and include short lists based loosely on Hippocrates and ascribed to him or to Galen; versions of a more extensive and popular treatise on reading death from skin eruptions, variously ascribed to Hippocrates or to a contemporary of his, the philosopher Democritus; and tables and charts for calculating a patient's chances on the basis of the letters of his or her name or the phase of the moon on the day he or she fell ill. In what follows, I would like to draw attention to the richness of this particular textual tradition and to its importance in early medieval monastic medicine. In so doing, I will argue two points: first, that the widespread monastic interest in medical means of prognosticating the approach of death was closely connected to an increasingly central aspect of early medieval monasticism—the ritual care of the dying and the dead; and second, that a necessary condition for understanding early medieval medicine in the Latin West is a clear sense of the place of medical learning within the larger context of life in the religious communities in which medical texts were primarily collected, studied, altered, and transmitted.

2. Frederick S. Paxton, *A Medieval Latin Death Ritual: The Monastic Customaries of Bernard and Ulrich of Cluny* (Missoula, Mont: St. Dunstan's Press, 1993), p. 19.

3. Gerhard Baader and Gundolf Keil, "Mittelalterliche Diagnostik: Ein Bericht," *Medizinische Diagnostik in Geschichte und Gegenwart: Festschrift für Heinz Goerke zum 60. Geburtstag*, ed. Christa Habisch, Frank Marguth, and John Henning Wolf, *Neue Münchner Beiträge zur Geschichte der Medizin und Naturwissenschaften, Medizinhistorische Reihe 7/8* (Munich: Fritsch, 1978), pp. 121–44. As Baader and Keil (pp. 129–30) point out, there was no clear distinction between prognostics and diagnostics in the early Middle Ages, but the texts that were copied and transmitted show that the former was far more important than the latter.

The primary text on prognostication bequeathed by the medical science of antiquity to the Latin Middle Ages was the Hippocratic treatise *Prognosis*.⁴ In the fifth or the sixth century, an unknown translator in southern Italy rendered it from Greek into Latin.⁵ Essentially a guide to the course of acute diseases, *Prognosis* gives special attention to bodily signs indicating recovery or eventual death. Along with the Hippocratic *Aphorisms*, it may have been among those Latin translations of the works of Hippocrates that Cassiodorus had in mind when he recommended the study of such translations to his monk-physicians at Vivarium between the years 551 and 579.⁶ The earliest complete witness to the full Latin translation appears in a manuscript created in the late ninth century in Ravenna, and a portion of the text in an independent translation appears in a roughly contemporary manuscript from Saint Gall.⁷ The older translations almost entirely disappeared from the manuscript tradition,

4. The most readily available English edition is in *Hippocratic Writings*, ed. and trans. G. E. R. Lloyd, Penguin Classics (Harmondsworth, England: Penguin Books, 1978), pp. 170–85; the Greek original can be found in E. Littré, *Oeuvres complètes d'Hippocrate*, vol. 2 (Paris: Ballière, 1839–61; reprint, Amsterdam: M. Hakkert, 1961); see also *Hippocrates*, vol. 2, Loeb Classical Library (London: Heinemann, 1923; Cambridge, Mass.: Harvard University Press, 1981), pp. 1–55, ed. and trans. W. H. S. Jones. Galen's treatise, as Vivian Nutton observed, is not really a medical text. It is an autobiographical account of Galen's career, which illustrates his skill at prognostication but does not discuss his methods; Galen, *On Prognosis—De praecognitione*, ed. and trans. Vivian Nutton, *Corpus medicorum Graecorum*, vol. 5, pt. 8.1 (Berlin: Akademie Verlag, 1979), pp. 59–61.

5. Bengt Alexanderson, *Die hippokratischen Schrift Prognostikon: Überlieferung und Text*, *Studia Graeca et Latina Gothoburgensia*, no. 17 (Göteborg: Acta Universitatis Gothoburgensis, 1963), pp. 130–31. See also Pearl Kibre, *Hippocrates Latinus: Repertorium of Hippocratic Writings in the Latin Middle Ages* (New York: Fordham University Press, 1985), pp. 199–221.

6. R. A. B. Mynors, ed., *Cassiodori Senatoris institutiones* (Oxford: Clarendon Press, 1937), pp. 78–79; Cassiodorus Senator, *An Introduction to Divine and Human Readings*, trans. Leslie Webber Jones (New York: Columbia University Press, 1946), p. 136; Pearl Kibre, "Hippocratic Writings in the Middle Ages," *Bull. Hist. Med.*, 1945, 18: 371–412; Alexanderson, *Hippokratische Schrift* (n. 5), p. 130.

7. Milan, *Biblioteca Ambrosiana* (hereafter cited as Milan), MS. G 108 inf., is the basis for Alexanderson's edition. The separate translation (of the first five chapters) is in Saint Gall Stiftsbibliothek (hereafter cited as Saint Gall), MS. 44; see Henry E. Sigerist, "Fragment einer unbekanntenen lateinischen Übersetzung des hippokratischen Prognostikon," *Sudhoffs Archiv für Geschichte der Medizin*, 1930, 23: 87–90. Full descriptions of these and most other manuscripts discussed here can be found in Ernest Wickersheimer, *Les manuscrits latins de médecine du haut Moyen Age dans les bibliothèques de France*, Documents, études et répertoires publiés par l'Institut de Recherche et d'Histoire des Textes, no. 11 (Paris: Editions du Centre National de la Recherche Scientifique, 1966); and Augusto Beccaria, *I codici di medicina del periodo presalernitano* (Secoli IX, X e XI), *Storia e letteratura*, no. 53 (Rome: Edizioni di Storia e Letteratura, 1956).

however, when either Constantine the African (d. c. 1087) or Gerard of Cremona (d. 1187) made a new translation from the Arabic which included a Galenic commentary.⁸ Then, when the medical school at Salerno produced the influential collection of short treatises for teaching purposes commonly known as the *articella*, this new translation of *Prognosis* took its place at the center of the high and late medieval medical curriculum.⁹

The authentic text of Hippocrates' *Prognosis* was, however, not the most popular prognostic text bearing the name of that Greek physician to circulate in the early medieval West.¹⁰ That distinction must go to two texts preserved in a mid-ninth-century manuscript from the abbey of Echternach which may originally have come from the area around Paris.¹¹ The first is introduced by the rubric "Here begin the signs of approaching death according to the opinion of Hippocrates."¹² It echoes—in exceptionally bad Latin—parts of the beginning of the second chapter of the authentic Hippocratic text. In a few often garbled lines, it directs attention to sunken cheeks, changes in the earlobes, hardness and dryness of the face, and tense and painful skin (in the absence of sleeplessness, hunger, diarrhea, vomiting, or bleeding from the nose) as signs that

8. Kibre, *Hippocrates Latinus* (n. 5), pp. 201–13. The one exception appears in Munich, Bayerische Staatsbibliothek MS. lat. 11343, a thirteenth-century witness to the older translation. The text (Paris, Bibliothèque Nationale [hereafter cited as Paris, BN], MS. lat. 7099, late eleventh or early twelfth century, fols. 15r–17v) cited by Kibre (p. 202) as a separate translation beginning "Incipit liber prognosticorum eiusdem species et vultus alicuius infirmi" has little or no relation to the Hippocratic text and deserves to be studied in its own right.

9. Nancy G. Siraisi, *Medieval and Early Renaissance Medicine: An Introduction to Knowledge and Practice* (Chicago: University of Chicago Press, 1990), pp. 58, 71.

10. Augusto Beccaria, "Sulle tracce di un antico canone latino di Ippocrate e di Galeno. I," *Italia medioevale e umanistica*, 1959, 2: 11–12; and Innocenzo Mazzini, "Le traduzioni latine di Ippocrate eseguite nei secoli V et VI: Limiti e caratteristiche della sopravvivenza del corpus ippocratico fra tardo antico ed alto medioevo," in *Formes de pensée dans la Collection hippocratique: Actes du IV^e Colloque international hippocratique (Lausanne, 21–26 Septembre 1981)*, ed. François Lasserre and Philippe Mudry, Université de Lausanne, Publications de la Faculté des lettres, no. 26 (Geneva: Droz, 1983), pp. 485–86, both remark that whereas the influence of the *Aphorisms* was widespread and direct, that of *Prognosis* was limited and indirect.

11. Paris, BN, MS. lat. 11219. See Augusto Beccaria, "Sulle tracce di un antico canone latino di Ippocrate e di Galeno. II," *Italia medioevale e umanistica*, 1961, 4: 6, for the Parisian provenance.

12. Paris, BN, MS. 11219, fol. 38v: "Incipiunt signa mortifera iuxta yppocratis sententiam." See the edition presented in the Appendix to this essay. The other text is the pseudo-Hippocratic *Capsula eburnea*, to which I will turn below.

death is near. Similar versions of the same text appear in manuscripts from Monte Cassino (shortly after 900), Chartres (900–1000), and the lower Rhône valley (early eleventh century).¹³ The basis of all of them is that portion of chapter 2 of *Prognosis* which describes the *facies hippocratica*: the list of facial signs that reads: “the nose sharp, the eyes sunken, the temples fallen in, the ears cold and drawn in and their lobes distorted, the skin of the face hard, stretched and dry, and the colour of the face pale and dusky.”¹⁴ As it stands in the Echternach book, however, the text records only the Hippocratic attention to the quality of the skin and the earlobes, together with—at least implicitly—Hippocrates’ caution a few lines farther on that such things as sleeplessness, hunger, or sudden purgings of the body could create the false impression of the approach of death.¹⁵ A more recent version, in a manuscript from Monte Cassino written in the early tenth century, is both closer to Hippocrates and in better Latin. It reads in full:

From these you will know that those who are sick and have not been disturbed by lack of sleep, hunger, or diarrhea, vomiting, or hemorrhaging, and whose eyes, temples, or cheeks are sunken, or the nose sharp, or whose earlobes are

13. Monte Cassino, Archivio della Badia (hereafter cited as Monte Cassino) MS. 97, p. 67 (H. Kühlewein, “Beiträge zur geschichte und beurtheilung der hippokratischen schriften. I. Zu Hippocrates’ Prognosticon,” *Philologus*, [1884], 42: 120–21, claimed to have found the text on “one of the first pages” of this manuscript, but as Beccaria, “Sulle tracce. I” [n. 10], p. 11, noted, it actually occurs on p. 67); Chartres, Bibliothèque Municipale (hereafter cited as Chartres) MS. 62, fol. 38r; Montpellier, Bibliothèque de la Faculté de Médecine (hereafter cited as Montpellier); MS. 185, fol. 154v.

14. Hippocrates, *Prognosis*, chap. 2; Lloyd’s translation (*Hippocratic Writings* [n. 4], p. 171). Alexanderson’s old Latin version has “nares acutae, oculi concaui, tempora dimersa, aures frigidae et contractae et pinnacula contracta, cutis quae in fronte est dura et tensa et sicca, color totius uultus uiridus et niger constitutus aut liuidus et plumbo similis.” Alexanderson, *Hippokratische Schrift* (n. 5), p. 136.

15. Hippocrates, *Prognosis*, chap. 2: “If he admits to any of these things, the case must be judged less severe than if it were otherwise, for where the facial appearance is due to any of these causes a crisis will be reached in a day and a night.” *Hippocratic Writings* (n. 4), p. 171, Lloyd’s translation. The ninth-century source may have been Celsus, who in his *Medicinae libri* 2.6, paraphrases Hippocrates: “nares acutae, conlapsa tempora, oculi concaui, frigidae languidaeque aures et imis partibus leuiter auersae, cutis circa frontem dura et intenta: color aut niger aut perpallidus, multoque magis, si ita haec sunt, ut neque uigilia praecesserit neque uentris resolutio neque inedia.” A. *Cornelii Celsi quae supersunt*, ed. Friedrich Marx, *Corpus medicorum latinorum*, vol. 1 (Leipzig: Teubner, 1915), p. 55. Vatican City, Biblioteca Apostolica Vaticana (hereafter cited as Vatican), MS. lat. 5951, which is from the monastery of Nonantola, in central Italy, and was written in the first half of the ninth century, has a copy of this work by Celsus on fols. 1r–155v.

distorted, or whose skin on the forehead is hard or the skin generally dry, tense, and livid: you will know they are about to die.¹⁶

Still, the absence of some of the facial signs listed by Hippocrates, and the presence of features (e.g., the reference to hollow cheeks and livid earlobes) not listed in *Prognosis*, shows that the text in this form had a long and independent life and remained apparently unaffected by the presence of more accurate translations of some or all of *Prognosis* in southern Germany and northern Italy by the end of the ninth century.¹⁷

The textual history of the signa mortifera according to Hippocrates can be partially reconstructed from the context in which the text appears in its four manuscript witnesses. In the Echternach book,¹⁸ it appears between a short treatise on surgery by Heliodorus (fl. A.D. 150–200) and a little group of medical *questiones*, but it flows directly into a seemingly unrelated sixteen-line description of topics covered “in this book” (“in hoc libro”). Ernest Wickersheimer reasoned that this latter passage was a separate fragment from the end of a book on pathology.¹⁹ What he did not realize, however, was that the description and the signa mortifera had been copied into the Echternach book as a unit. That this is the case is clear from the fact that in the three other manuscripts in which the signa appear, they come at the end of the first book of the early medieval version of Galen’s treatise *Ad Glauconem de methodo medendi*.²⁰ In each case, the signa mortifera are followed by one of two forms of a description of the contents of the book just finished.²¹ At some point before the middle of the ninth century (possibly even in the process of creating the Echternach book), a scribe copied the pseudo-Hippocratic signa mortifera from the Galenic text (along with the final words of book 1) and trans-

16. Montpellier, MS. 185, fol. 154v. See the edition in the Appendix, below, and cf. Henry E. Sigerist, “Early Mediaeval Medical Texts in Manuscripts of Montpellier,” *Bull. Hist. Med.*, 1941, 10: 36–37. I would like to thank the conservator of manuscripts at the library of the Faculté de Médecine at Montpellier for his kind assistance. All translations are mine unless otherwise indicated.

17. I.e., in Saint Gall, MS. 44; and Milan, MS. G 108 inf. Beccaria (“Sulle tracce. I” [n. 10], p. 11) believed it to have originated in a sixth-century translation, but gave no reasons.

18. Paris, BN, MS. lat. 11219.

19. Wickersheimer, *Manuscripts* (n. 7), p. 117.

20. Monte Cassino, MS. 97 (chap. 59), p. 67 (see above, n. 13; and *Bibliotheca Casinensis*, [Montecassino, 1875], 2: 368); Chartres, MS. 62, fol. 38r (chap. 59); Montpellier, MS. 185, fol. 154v (chap. 60). On Galen’s original, see George Sarton, *Galen of Pergamon* (Lawrence: University of Kansas Press, 1954), pp. 63–64.

21. The Monte Cassino and Chartres manuscripts contain a short notice: “Unde finem faciam dicendi in hoc libro superius de aliis dicturis causis in alium incipiam.” The Montpellier manuscript has the longer form noted by Wickersheimer in the Echternach book.

mitted them independently. It was through that independent transmission that they came to be copied into the Echternach book.

The connection between Hippocrates and Galen established by the inclusion of the signa mortifera under the former's name in a work ascribed to the latter may explain the origin of a similar but unrelated text attributed to Galen in a number of manuscripts. The earliest example is in a manuscript dated to shortly after the year 800 and now in London, which seems to have originated in southern Germany.²² Other copies appear in at least three other ninth-century books and one from the eleventh century.²³ The most interesting examples of the text appear in two manuscripts from Echternach. The first is the same book that carries the related text under the name of Hippocrates which we have already considered. It records a carefully corrected version of the signs of death:

Galen observed: These are the signs of approaching death in the human body. In the human body the forehead breaks out, the eyebrows are skewed. The left eye is smaller than the right. The bridge of the nose is white. The mind fails. The pulse runs ahead. The feet are cold. The bowels empty themselves. Young men lie awake and the old sleep. These are the signs of approaching death.²⁴

The other Echternach book, from later in the century, is—in its present form—composed of a number of pieces of other works. In one of them (a piece of a Latin poem from sub-Roman Britain on the daily tasks of monks), the signs of death according to Galen, followed by a few lines on reading the signs of death in urine, appear after a prognostic diagram ascribed to Pythagorus which considers the letters of the sick person's name and the phases of the moon.²⁵

This text may have its origin in the works of Galen, but it is more likely that it is an anonymous attempt to root a version of the signs of death in the Galenic tradition.²⁶ It has only two links to Hippocrates' *Prognosis*—

22. London, British Library (hereafter cited as London, BL), MS. Arundel 166, fol. 71v; Beccaria, *I codici* (n. 7), p. 265.

23. Paris, BN, MSS lat. 528, from Saint-Denis and then Saint-Martial, fol. 80r; 11219, fol. 170r; 11411, fol. 99v; and Rouen, Bibliothèque Municipale (hereafter cited as Rouen), MS. 1407 (formerly O.55), from Saint-Ouen, fol. 184v.

24. Paris, BN, MS. lat. 11219, fol. 170r. See the edition in the Appendix, below.

25. Paris, BN, MS. lat. 11411, fol. 99r–v; Wickersheimer, *Manuscripts* (n. 7), pp. 123–24. All three texts are edited in Francis John Henry Jenkinson, *The Hisperica Famina* (Cambridge: Cambridge University Press, 1908), pp. 31–32. See also the edition of the pseudo-Galenic signa in the Appendix, below.

26. It was more successful than the pseudo-Hippocratic facies and became the basis for numerous Latin and vernacular versions in the later Middle Ages. See Rosemary Woolf, *The English Religious Lyric in the Middle Ages* (Oxford: Clarendon Press, 1968), pp. 78–82; and

the reference to one eye being smaller than the other (although Hippocrates did not distinguish between left and right eyes) and, even more tenuous, the reference to odd sleeping patterns (here encapsulated in the image of the old, who usually suffer from insomnia, sleeping; and the young lying awake). In two of its five manuscript witnesses, it appears as an addition, once by itself in the margin without any reference to Galen, and once along with other prognostic texts.²⁷ In two others, it appears after the next text we will consider, the *Capsula eburnea* (attributed to Democritus or Hippocrates); and within a large compendium titled *Teropeticus* or *Tereoperica* (Therapeutics).²⁸ A clue to its history may lie in the placement of the text in the last witness, an eleventh-century medical manuscript bound into a book now at Rouen.²⁹ It appears there, near the end of a collection of hundreds of recipes and short bits of medical advice, along with another prognostic text beginning, "Utile est eciam hoc nosse et pronustica."³⁰ This latter text appears as the chapter preceding the pseudo-Hippocratic signa mortifera in the pseudo-Galenic *Ad Glauconem de methodo medendi* in the manuscripts from Chartres and Montpellier. We saw how a scribe had most probably excised the pseudo-Hippocratic signs from the end of a copy of *Ad Glauconem de methodo medendi* en route to their inclusion in the first Echternach manuscript. A similar act of transmission would explain this case. Either some copies of *Ad Glauconem de Methodo medendi* circulated with signs according to Galen, which a scribe then copied, along with the preceding chapter, for separate transmission; or someone added the pseudo-Galenic signs after

Rossell Hope Robbins, "Signs of Death in Middle English," *Mediaev. Stud.*, 1970, 32: 282–98. Cf., for example, these lines from the high medieval poem on the rules for health from Salerno known as the *Flos medicinae scholae Salernis*, printed by Hope Robbins (p. 283):

Hiis signis moriens certis dinoscitur eger:
Fronte rubet primo, pedibus frigescit ab imo,
Decidit et mentum nasus summotenus albet,
Petrescit venter leuus minuatur ocellus.
Excubeas patitur Iuuenis si nocte dieque
Sique senex dormit designat morte resolui.

27. Paris, BN, MSS lat. 528 and 11411.

28. London, BL, MS. Arundel 166; Paris, BN, MS. lat. 11219. On the *Tereoperica*, for which these two manuscripts are the only early medieval witnesses, see Baader and Keil, "Mittelalterliche Diagnostik" (n. 3), pp. 125, 128–30, which argues that a group of prognostic/diagnostic texts including the signs of death according to Galen, the *Capsula eburnea*, and a dietetic calendar circulated as a unit, and came thus to be included in the *Tereoperica*.

29. Rouen, MS. 1407, fol. 119–222; it is the sixth of eight separate manuscripts bound into one volume.

30. Wickersheimer, *Manuscripts* (n. 7), pp. 168–69, text ed. by Wickersheimer, p. 169.

Early Medieval Monastic Medicine 639

"Utile est" because the pseudo-Hippocratic signa often followed it in *Ad Glauconem de methodo medendi*. From one of these two routes, they came to be added to the Rouen manuscript. No doubt because of their aphoristic quality, they must also have circulated independently of even the text beginning "Utile est," and by this route they entered into the two manuscripts in which they stand alone.³¹

En route to at least two manuscripts, as noted above, the pseudo-Galenic signs of death came to be transmitted along with another popular prognostic guide, the *Capsula eburnea*.³² This text, another product of the work of fifth-century or sixth-century Italian translators, is a pseudonymous work on prognosticating the approach of death on the basis of skin eruptions; it is variously ascribed to Hippocrates or Democritus, and was originally composed in Greek in the fourth or fifth century A.D.³³ The treatise often appears with a preface that tells the story of its discovery in an ivory casket (hence the title *Capsula eburnea*) in the tomb of either of the two ancient Greeks by one of the Roman emperors, who then entrusted it to his private physician. More popular than the authentic *Prognosis*, the *Capsula eburnea* was translated by Gerard of Cremona from an Arabic version in the twelfth century and remained current in both versions throughout the Middle Ages.³⁴ In its early medieval form, it usually runs to about twenty short chapters.³⁵ Each chapter presents a

31. See n. 27, above.

32. Karl Sudhoff, "Die pseudohippokratische Krankheitsprognostik nach dem Auftreten von Hautausschlägen *Secreta Hippocratis* oder *Capsula eburnea* benannt," *Archiv für Geschichte der Medizin*, 1916, 9: 79–116; Walter Puhmann, "Die lateinische medizinische Literatur des frühen Mittelalters: Ein bibliographischer Versuch," *Kyklos*, 1930, 3: 406–7. See also Gerhard Baader, "Early Medieval Latin Adaptations of Byzantine Medicine in Western Europe," in *Symposium on Byzantine Medicine*, ed. John Scarborough, Dumbarton Oaks Papers, no. 38 (Washington, D.C.: Dumbarton Oaks Research Library and Collection, 1985), pp. 256–57; and Kibre, *Hippocrates Latinus* (n. 5), pp. 110–23.

33. It was translated not only into Latin but also into Syriac, Hebrew, Arabic, and Persian. Puhmann, "Lateinische medizinische Literatur" (n. 32), p. 407. The Greek original is, however, extant in only one manuscript; Baader and Keil, "Mittelalterliche Diagnostik" (n. 3), p. 125. The legendary relationship between Democritus and Hippocrates has recently been discussed in detail by Owsei Temkin, *Hippocrates in a World of Pagans and Christians* (Baltimore: Johns Hopkins University Press, 1991), pp. 61–71.

34. Kibre, *Hippocrates Latinus* (n. 5), pp. 110–23; but Kibre incorrectly lists Montpellier, MS. 185; and Chartres, MS. 62, as witnesses on page 113 and does not include Paris, BN, MSS lat. 11219 and 10251; or Vatican, MS. Pal. lat. 1088.

35. I. Heeg, *Pseudodemokritische Studien*, Abhandlungen der königlich preussischen Akademie der Wissenschaften, Philosophisch-historische Classe, no. 4 (Berlin: Akademie Verlag, 1913), showed that this text became attached (as chapter 1), and gave the name *Prognostica Democreti* to, quite another text, an anonymous handbook of medicine in about ninety-five chapters, based mainly on the *Synopsis* of Oribasius (before A.D. 403) but also on Galen.

particular medical condition (e.g., pain in the face or stomach, consumption, acute fever, hemorrhoids, vomiting) and then says that if certain pimples, rashes, or other signs on the skin accompany the condition, the patient will die. The prognosis of death is very definite: ipsa die (that same day); or, in most cases, sometime within twenty-three days.³⁶

The earliest witness to the Latin text of the *Capsula eburnea* is a manuscript originating in southern Francia, from a center with Visigothic connections, which is now in Glasgow and which may date from the eighth century.³⁷ This manuscript identifies the text as having been found in Hippocrates' tomb.³⁸ Other early medieval copies of the *Capsula* survive from southern Germany, the Ile de France, Burgundy, and northern and southern Italy.³⁹

As we have seen, the *Capsula*, along with the signs of death ascribed to Galen, got into two early ninth-century manuscripts as part of a text called *Tereoperica*. The routes of transmission in other cases are complex and varied. The most common route seems to have been via a collection of letters and didactic works often containing a treatise titled *Sapientia artis medicinae* and a traveling companion, a short prognostic text beginning "Indicia ualitudinum Yppogratis."⁴⁰ In two manuscripts, the text

36. Sudhoff, "Pseudohippokratische Krankheitsprognostik" (n. 32), pp. 90–102.

37. Glasgow, University Library (hereafter cited as Glasgow), MS. Hunterian T.4.13, fol. 172v–173r (not in Beccaria's catalog). See Henry E. Sigerist, "Die Prognostica Democriti im Cod. Hunterian. T.4,13, S. IX/X," *Archiv für Geschichte der Medizin*, 1921, 13: 157–59; and Beccaria, "Sulle tracce. II" (n. 11), p. 26, for the earlier dating. Kibre, *Hippocrates Latinus* (n. 5), p. 112, supplies the rubric of the preface, "Liber praesentiae Hipp. qui in sepulcro suo inventus fuit," which Sigerist did not print, but dates the text too late.

38. Sudhoff, "Pseudohippokratische Krankheitsprognostik" (n. 32), pp. 84–85, printed a number of examples of the preface with the story of the ivory casket.

39. The copies from southern Germany are London, BL, MS. Arundel 166 (not cited by Sudhoff or Kibre); St. Gall, MSS 44 and 751, dating to 850–900; and Vatican, MS. Pal. lat. 1088, late ninth century (not cited by Sudhoff or Kibre). Those from the Ile de France, Burgundy (St-Benigne de Dijon), and northern Italy (Verona) are, respectively, Paris, BN, MS. lat. 11219 (not cited by Sudhoff or Kibre); Paris, BN, MS. lat. 10251, ninth century (not cited by Sudhoff or Kibre); and Karlsruhe, Badische Landesbibliothek (hereafter cited as Karlsruhe), MS. Reichenau 120, c. 850. Those from southern Italy are Glasgow, MS. Hunterian V.3.2, c. 800; Monte Cassino, MSS 69 and 97, later ninth and early tenth centuries; and Vatican, MS. Barb. lat. 160, eleventh century.

40. Glasgow, MS. Hunterian V.3.2; London, BL, MS. add. 8928; Vatican, MS. Barb. lat. 160; Monte Cassino, MSS 69 and 97. Baader and Keil, "Mittelalterliche Diagnostik" (n. 3), p. 125, cites Veit Scherer, "Die *Epistula de ratione ventris vel viscerum*: Ein Beitrag zur Geschichte des Galenismus im frühen Mittelalter" (Ph.D. diss., Berlin, 1976), for the finding that the *Capsula eburnea*, along with the text beginning "Indicia ualitudinum," belong to a distinct *Überlieferungscorpus* (body of transmission) of medical letters designated Corpus II.

appears as part of an antidotarium.⁴¹ In three, it is associated with treatises on pulse and urine.⁴² In three others, it is associated with other means of prognosticating death: in two cases, lunar charts, and in one case, a list of "Egyptian days" on which it is bad luck to treat patients.⁴³

The interests in and attitudes toward medicine of medieval monks are rarely directly available to us, and thus indirect methods of investigating monastic involvement in medicine as a science and an art are a necessary supplement to research.⁴⁴ One such method involves noting exactly how, when, and where particular texts were copied—or shortened, expanded, or otherwise changed—and passed on during the period. Careful attention to such details is one of the surest means of revealing the interests and preoccupations of those who copied texts and compiled manuscripts. There is no disagreement on the state of material culture in the West between the end of the sixth and the end of the eleventh century, but the image of scribes slavishly copying manuscripts with little regard to their content is largely a misleading caricature. The limited resources for book production demanded choice and a certain selectivity when working. Parchment was precious, and writing was a laborious process. There may have been few original writers during the period, but every scriptorium engaged in selection and editing of texts, far more so than

41. Paris, BN, MS. lat. 10251; Glasgow, MS. Hunterian T.4.13.

42. Paris, BN, MS. lat. 10251; Monte Cassino, MS. 69; Vatican, MS. Pal. lat. 1088.

43. In Saint Gall, MSS 44 and 751, the text is associated with lunar charts; in Karlsruhe, MS. Reichenau 120, it is associated with Egyptian days. On lunar charts, see Ernest Wickersheimer, "Figures médico-astrologiques des IX^e, X^e et XI^e siècles," *Janus*, 1914, 19: 157–77; Christoph Weisser, "Das Krankheitslunar aus medizinhistorischer Sicht," *Sudhoffs Archiv*, 1981, 65: 390–400; and idem, *Studien zum mittelalterlichen Krankheitslunar: Ein Beitrag zur Geschichte laienastrologischer Fachprosa*, Würzburger medizinhistorische Forschungen, no. 21 (Pattensen/Hannover: Horst Wellm Verlag, 1981). On Egyptian days, see Lynn Thorndike, *A History of Magic and Experimental Science*, 8 vols. (New York: Macmillan, 1923–1958), 1: 685–88.

44. See, however, Karl Sudhoff, "Eine Verteidigung der Heilkunde aus den Zeiten der 'Mönchsmedizin,'" *Archiv für Geschichte der Medizin*, 1913, 7: 223–37, for one of those rare direct glimpses into monastic attitudes. I should point out that my focus here on monasticism does not entail agreement with that historiographic tradition that sees the early Middle Ages as dominated by "monastic medicine." Cf. Heinrich Schipperges, *Die Benediktiner in der Medizin des frühen Mittelalters*, Erfurter theologische Schriften, no. 7 (Leipzig: St. Benno Verlag, 1964); Gerhard Baader, "Die Anfänge der medizinischen Ausbildung im Abendland bis 1100," in *La scuola nell'occidente latino dell'alto medioevo*, Settimane di studio del Centro Italiano di Studi sull'alto Medioevo, no. 19, 2 vols. (Spoleto: Presso la sede del Centro, 1972), 2: 682; and Katharine Park, "Medicine and Society in Medieval Europe, 500–1500," in *Medicine in Society: Historical Essays*, ed. Andrew Wear (Cambridge: Cambridge University Press, 1992), pp. 59–90.

scholars have usually acknowledged.⁴⁵ That is why careful attention to the form and precise content of texts as they appear in different manuscripts at different times is a particularly effective method for research.

With this in mind, let us review the results of the investigation. The diversity of the texts on the signs of approaching death which appear in the manuscripts, and the freedom with which scribes altered, excised, arranged, and rearranged individual examples (or groups of them), points to the active and continuous appeal of such texts between the late eighth century and the twelfth century, especially in monastic scriptoria.⁴⁶ For example, the older of the two manuscripts from Echternach contains copies of all three of the texts discussed in detail here.⁴⁷ Perhaps because of that, the compiler, or compilers, apparently refused to accept the ascription of the *Capsula eburnea* to Democritus. Instead of the rubric "Incipit pronustica democreti" that appears in other manuscripts, the Echternach book has "Incipiunt pronustica de mortibus," after which another hand has added, "ex yi" (i.e., *ex yppocrati*), perhaps because of the presence of Hippocrates' name above the signa mortifera.⁴⁸ Similarly, the scribe of Saint Gall MS. 44, which presents a unique translation of the first five chapters of the authentic *Prognosis* and the text of the *Capsula*, one after the other, appears to have tried to solve the problem of authorship of the *Capsula* by presenting the text as a letter written by Hippocrates to Democritus.⁴⁹

45. For recent assessments of the editorial activities of early medieval monks, see Linda E. Voigts, "Anglo-Saxon Plant Remedies and the Anglo-Saxons," *Isis*, 1979, 70: 250–68; Frederick S. Paxton, "Bonus liber: A Late Carolingian Clerical Manual from Lorsch (Bibliotheca Vaticana MS Pal. lat. 485)," in *The Two Laws: Studies in Medieval Legal History Dedicated to Stephan Kuttner*, ed. Laurent Mayali and Stephanie A. J. Tibbetts, *Studies in Medieval and Early Modern Canon Law*, vol. 1 (Washington, D.C.: Catholic University of America Press, 1990), pp. 1–30; and Susan A. Keefe, *Water and the Word: Baptism and the Education of the Clergy in the Carolingian Empire* (Notre Dame, Ind.: Notre Dame University Press, forthcoming).

46. Of the sixteen manuscripts referred to here, nine are unquestionably of monastic provenance, and five others may be.

47. Saint Gall, MS. 44, has two texts and a lunar chart; Monte Cassino, MS. 69, and Paris, BN, MS. lat. 10251, have the *Capsula* and a treatise on the signs of death in urine (see below, n. 50); Monte Cassino, MS. 97, has the pseudo-Hippocratic signa and the *Capsula*; London, BL, MS. Arundel 166, has both the pseudo-Galenic signa and the *Capsula*; Paris, BN, MS. lat. 11411, has both the pseudo-Galenic signs and a lunar chart.

48. Paris, BN, MS. lat. 11219, fol. 169r. This suggests that at Saint Gall in the ninth century there was familiarity with the legendary letters by Hippocrates concerning his voyage to Abdera and his meeting with Democritus; see Temkin, *Hippocrates* (n. 33), pp. 61–71.

49. Saint Gall, MS. 44, pp. 220–26: "Incipit pronostica Democrito"; cf. Sudhoff, "Pseudohippokratische Krankheitsprognostik" (n. 32), pp. 80–81; and Beccaria, *I codici* (n. 7), p. 365.

Early Medieval Monastic Medicine 643

The text of the *Capsula* also came into a late ninth-century German manuscript as part of a body of transmission that carried it as well to Monte Cassino and to the monastery of Saint-Benigne de Dijon, in Burgundy; but its placement in that manuscript is unique.⁵⁰ It stands there as chapter 53 of book 1 of the Galenic *Ad Glauconem de methodo medendi*—that is, at essentially the same place where, in other witnesses to that text, we found the pseudo-Hippocratic signs of death. As Gerhard Baader has shown, the history of *Ad Glauconem de methodo medendi* is a good example of the way in which early medieval writers adapted Latin medical texts based on Greek originals for their own use.⁵¹ The early medieval version retains only the first chapter of book 1 of the original. The rest is pseudonymous and varies from manuscript to manuscript. Galen's text became, in effect, a point of attraction for various materials that gained authority by being transmitted under his name and as part of a recognized medical treatise.⁵² The *Ad Glauconem de methodo medendi* would have been particularly susceptible to such treatment because it is the one work to which Cassiodorus explicitly referred by title when recommending a program of medical readings for monastic physicians, and copies of Cassiodorus's book were a staple of early medieval monastic libraries.⁵³ In the case of this particular manuscript, someone must either have added the *Capsula* at that place in the text where he expected to find a prognostic guide to the signs of approaching death, or have decided to replace the short list normally found there with the more complete information transmitted via the *Capsula*.⁵⁴

This kind of editorial initiative says a great deal about the ways in which early medieval monks could be systematic and critical in their

50. Vatican, MS. Pal. lat. 1088. The body of transmission (Überlieferungscorpus) includes treatises on prognosis by pulse and urine. In the manuscripts from Monte Cassino and Saint-Benigne, both from the middle of the ninth century, there is an unusual guide to reading the signs of death in urine: "Signa urine, que cognoscitur cum nocte in calicem misceris. Urina pura et super nebula—egritudine significat." Monte Cassino, MS. 69, pp. 550a–551a; Paris, BN, MS. lat. 10251, fol. 87v–88v.

51. Baader, "Early Medieval Latin Adaptations" (n. 32), p. 253.

52. For a similar example of the use of an authoritative text (i.e., the Gregorian sacramentary) as a point of attraction for other materials, see Frederick S. Paxton, *Christianizing Death: The Creation of a Ritual Process in Early Medieval Europe* (Ithaca: Cornell University Press, 1990), pp. 187, 207.

53. A point made by Beccaria, "Sulle tracce. I" (n. 10), p. 1. On the influence of Cassiodorus in early medieval culture, and for a list of manuscripts, see Cassiodorus, *Introduction* (n. 6), pp. 47–63.

54. Cf. Baader and Keil, "Mittelalterliche Diagnostik" (n. 3), p. 138, n. 54, where they note the peculiarity of the presence of the *Capsula* in the pseudo-Galenic text, but do not say how the *Capsula* came to be there.

search for and presentation of material. When they received new materials they often compared them with texts already at hand (or remembered from other times and places), and when faced with conflicting traditions, or inadequate information, they made alterations to suit their own purposes.

What were those purposes? Why did early medieval monks go to so much trouble over texts that purported to aid them in recognizing the signs of recovery or approaching death? Hippocrates wrote that through successful prognosis "one may become a good physician and justly win high fame. In the case of patients who were going to survive, [the physician] would be able to safeguard them the better from complications by having a longer time to take precautions. By realizing and announcing beforehand which patients were going to die, he would absolve himself from any blame."⁵⁵ Galen felt very strongly that his expertise in prognostication was a major factor in his fame and importance as a physician.⁵⁶ Some monastic physicians certainly cared about their reputations, and general success in prognostication would be a valuable asset to any healer, but no monastic infirmarian had anything to fear from families or authorities who might blame him for the death of a patient in his care. The evidence that monastic physicians and scribes gave particular attention to the collection and transmission of texts on the signs of approaching death suggests that the reasons for their interest in this sort of prognosis, particularly in the ninth century, when most of the manuscripts we have been considering were written, went beyond the merely medical.

There is a clue to their motivations in a manuscript from the abbey of Saint-Benigne de Dijon written about the year 800.⁵⁷ This book is quite extraordinary among the monastic medical manuscripts of the period, for it draws our attention to the close ties between the library, the chapel, and the infirmary in an early medieval religious community. It opens with a life of Cosmas and Damian, the Byzantine physician-saints.⁵⁸ As

55. Hippocrates, *Prognosis*, chap. 1, in *Hippocratic Writings* (n. 4), p. 170, Lloyd's translation. See also Temkin, *Hippocrates* (n. 33), p. 11.

56. Galen, *On Prognosis* (n. 4).

57. Paris, BN, MS. lat. 11218; Wickersheimer, *Manuscripts* (n. 7), pp. 100–112; Beccaria, *I codici* (n. 7), pp. 161–66. The manuscript was at Saint-Benigne in the seventeenth century before traveling to Paris; it was copied from an older Burgundian exemplar.

58. Isidore of Seville ranked Cosmas and Damian with Galen and Hippocrates as the most famous physicians of antiquity and had portraits of all four on the cabinet that housed his medical books. Schipperges, *Benediktiner* (n. 44), p. 30. The anonymous eighth-century monastic defender of medicine of Bamberg, Staatliche Bibliothek, MS. med. 1 (formerly L.III.8) ended his treatise with a poem on the four; it is edited by Sudhoff, "Verteidigung" (n. 44), p. 236–37. The Bamberg manuscript has now been fully edited and translated into

Ernest Wickersheimer concluded, the presence of this text in a medical compendium indicates its use as a means of comforting the sick, to whom it was probably read.⁵⁹ It was also a reminder to the monk-physicians of Saint-Benigne, either working in the infirmary or studying medicine in the library or in their cells, of the advice Cassiodorus had given his monastic physicians more than two centuries before:

Learn, therefore, the properties of herbs and perform the compounding of drugs punctiliously; but do not place your hope in herbs and do not trust health to human counsels. For although the art of medicine be found to be established by the Lord, he who without doubt grants life to men makes them sound.⁶⁰

Cassiodorus's advice represents the Latin Christian form of the accommodation between the conflicting claims of religious and secular medicine which had been an issue ever since the meeting of Greek Hellenism and Judaism in the third and second centuries B.C.⁶¹ Medicine is an art established by God. It should be studied and practiced, but successful healing is God's work, not the physician's.

Medical manuscripts from monastic scriptoria do not usually exhibit such clear signs of the ties between religion and healing in the early Middle Ages, but those that contain signa mortifera often do. Sabina Adacher has recently underscored the overridingly religious character of the tenth-century manuscript from Monte Cassino which contains copies of both the pseudo-Hippocratic signs and the *Capsula eburnea*.⁶² The pseudo-Galenic signs were central enough to monastic life and thinking for someone to add them to the margin of a page of unrelated material in another manuscript; they accompany a general treatise on monastic life in still another.⁶³ The connection between the spiritual and the medical is particularly apparent in an anonymous treatise on the signs of death in the manuscript from Saint-Benigne which begins with the life of

German by Ulrich Stoll, as *Das "Lorscher Arzneibuch": Ein medizinisches Kompendium des 8. Jahrhunderts (Codex Bambergensis Medicinalis 1): Text, Übersetzung und Fachglossar*, Sudhoffs Archiv, Zeitschrift für Wissenschaftsgeschichte, Beiheft 28 (Stuttgart: Steiner, 1992).

59. Wickersheimer, *Manuscripts* (n. 7), p. 100.

60. Cassiodorus, *Introduction* (n. 6), p. 135, Jones's translation.

61. Temkin, *Hippocrates* (n. 33), pp. 86–93, 161–62, 171–77, 253.

62. Sabina Adacher, "La trasmissione della cultura medica a Montecassino tra la fine del IX sec. e l'inizio del X sec.," in *Montecassino dalla prima alla seconda distruzione: Momenti e aspetti di storia cassinese (secc. VI–IX)*, ed. Faustino Avagliano, Atti del II Convegno di studi sul medioevo meridionale—Miscellanea Cassinese, no. 55 (Montecassino: Pubblicazioni Cassinesi, 1987), p. 391.

63. Paris, BN, MSS. lat. 528, fol. 80r; 11411, fol. 99v.

Cosmas and Damian. It resembles the other texts we have been considering insofar as it discusses physical signs and pathological conditions. But it differs from them in its characterization of death in terms of the dissolution of the connections between the body and the soul ("dissolutum iuncturas corporis seu hanimis") and the giving up of the spirit ("relinquit spiritum"), forms of expression drawn not from the language of medicine but from prayer and ritual. Its final sentence expresses an extraordinary blending of Hippocratic and spiritual medicine: "That which is called life relinquishes the spirit, and, the bile of the blood of the whole body and the phlegm of all the flesh having been changed, they die."⁶⁴ Between this text and another, beginning "Signa si eger moriturus est aut uitalis," there is a chart for forecasting recovery or death by matching the day of the onset of illness with the days of a lunar month.⁶⁵ The three texts make an interesting group. The first has its roots in the tradition of Hippocrates' *Prognosis*, to which it adds a number of not unreasonable additions.⁶⁶ The lunar chart is, like all of its kind, rooted in Hellenistic popular astrology.⁶⁷ The third text contains bizarre bits of folk prognostics involving dogs. It suggests, for example, that some lard be spread over the foot of a sick person and then placed near an unknown dog. Recovery is signaled by the dog's eating the lard; death by its refusal to do so.⁶⁸ Yet even here, there are echoes of the Hippocratic tradition, for the text also mentions classic Hippocratic signs: sunken eyes, sharpness of the nose, and (less often cited) uncontrolled tugging at clothing.⁶⁹

During the last half of the eighth century and the whole of the ninth, there was intense activity in the Latin church around the ritual care of the dying and the dead.⁷⁰ During that period, clerics, monks, and nuns created an elaborate ritual structure to direct and accompany the pas-

64. Paris, BN, MS. lat. 11218, fol. 100v; see the edition in the Appendix, below. For the liturgical language of prayers for the dying and the dead, see Albert Blaise, *Le vocabulaire latin des principaux thèmes liturgiques* (Turnhout: Brepols, 1966), pp. 535–37, 544–48.

65. Paris, BN, MS. lat. 11218, *De dispoicione de Lunas*, fol. 101r; text edited by Wickersheimer, *Manuscrits* (n. 7), p. 110.

66. See the edition in the Appendix, below.

67. Weisser, *Studien* (n. 43), p. 422.

68. Paris, BN, MS. lat. 11218, fol. 101v: "Item de lardo aut de ungia, egroto a calcaneo usque ad pollice per ingue et in uico ignoto cani. illut iacta si comederit uiuit. si collegerit et proicerit non aeuidit."

69. Ibid. "Item si abuerit oculus in cauis subductus aut nasum extra consuetudinem acutum aut . . . manum tra[h]aere uel uestimentum suum quasi pullegare." Cf. Hippocrates, *Prognosis*, chaps. 2, 4, and note the Hippocratic flavor of the expression "extra consuetudinem" here.

70. Paxton, *Christianizing Death* (n. 52), chaps. 3–5.

sage of a Christian soul from this world to the next. For most of the ninth century, the new rituals were in a constant state of development and were confined to monasteries and other cloistered communities, but just as they took final shape, between the 860s and the 880s, monasteries began to open their infirmaries to nobles who took the habit of monks so that they might die with the full benefit of the new rites; and the liturgical directions for the rites came to be included in influential sacramentaries, in ritual booklets, and even in handbooks for parish priests.⁷¹ One such handbook, created at the German abbey of Lorsch in the last quarter of the ninth century, provided priests with a comprehensive guide to the performance of their pastoral duties, as well as the basic tools they would need to carry them out. These included formulas for granting penance both in Latin and in Old High German; a calendar and computus for calculating feasts; expositions on the meaning of the mass and baptism; copies of the new rites for the sick, the dying, and the dead; and essential texts on the responsibilities of priests.⁷² Along with the computational material, the creators of the manual included a table presenting the Egyptian days on which no one should be bled or should make or take any medicines; a lunar table giving the prognosis for patients who had fallen sick on any particular day of the cycle of the moon; a list of treatments to be prescribed during each month; and a prognostic chart based on the numerical evaluation of the letters in a patient's name. These aids to medical prognosis come right at the beginning of a book that is concerned with such priestly duties as hearing confession and granting penance; saying mass; baptizing; and seeing to the needs of the sick and the dying. Priests might indeed be expected to perform medical services for their flock, and would find these items useful if they did, but I think the primary reason for the inclusion of prognostic texts in such a general manual on the priestly life lies elsewhere. It lies in the desire to forecast the approach of death so that the dying person would not miss out on the aid that the new rituals would bring during the dissolution of his or her soul and its passage to the other world. By the late ninth century, the fruits of the labor of monk-physicians and scribes had thus begun to move into the wider world of the parish and the common folk.⁷³

Monastic interest in medical texts on the signs of approaching death from the eighth to the twelfth centuries arose thus as much, if not more, from liturgical concerns as from medical ones. Many of the centers that

71. Ibid., pp. 185–200.

72. Paxton, "Bonus liber" (n. 45).

73. The statistics in Weisser, *Studien* (n. 43), pp. 423–24, show that the period from the ninth through the eleventh century was the heyday of specialized lunar charts for the sick.

produced extant copies of *signa mortifera* also played a central role in the development of rituals for the dead and the dying. This is true above all for Saint Gall, whose scribes are responsible for transmitting to the Carolingian church Irish rituals of anointing the sick and the dying.⁷⁴ It is also true of Saint-Denis and the region around Paris, and of Verona, in northern Italy.⁷⁵ In these and other scriptoria, work on medical, religious, and liturgical manuscripts went on simultaneously. The chapel and the infirmary, medical needs and religious concerns, coexisted within a single community dedicated not only to the religious life but increasingly to dying in a particular manner. Among people who took ever more seriously their community's duty to attend to the needs of the dying, the accumulation, transmission, and study of texts on the signs of life or the approach of death would have fulfilled an important role. If someone's death could be forecast, there would be less chance of missing the opportunity to bring the whole force of ritual skill and liturgical power into play to direct and accompany the process of death and dying. It is easy to see that the texts themselves often carried little accurate scientific information. But that is not the point. The very accumulation of multiple texts on the signs of approaching death during the period, and at specific places such as Echternach, illustrates that the users of these texts set out not so much to find the one correct method of prognostication as to accumulate as many texts as possible, and to link those they found with the great but shadowy figures of Greek antiquity, whose knowledge in these matters was quite precisely legendary.⁷⁶ As to the training received by the infirmary servants who watched over the dying at Cluny in the eleventh century, I would suggest that it entailed the study of precisely those guides to prognosticating the approach of death which their monastic predecessors had gathered over the previous three hundred years.

74. Paxton, *Christianizing Death* (n. 52), pp. 109–12.

75. *Ibid.*, pp. 172–84, 157–58.

76. Owsei Temkin, "History of Hippocratism in Late Antiquity: The Third Century and the Latin West," in *The Double Face of Janus and Other Essays in the History of Medicine* (Baltimore: Johns Hopkins University Press, 1977), pp. 167–77, showed that by the end of the third century A.D., Hippocrates and other physicians of antiquity had already become nearly mythical figures in whom great authority was invested but of whom little was actually known. Also see Temkin, *Hippocrates* (n. 33), pp. 51–75.

Appendix: Editions

Pseudo-Hippocratic Signa Mortifera

A. Paris, BN, MS. lat. 11219, fol. 38v

B. Monte Cassino, MS. 97, p. 67; ed. Kühlewein, "Beiträge" (n. 13), p. 120

C. Chartres, MS. 62, fol. 38r; partially ed. Wickersheimer, *Manuscripts* (n. 7), p. 18

D. Montpellier, MS. 185, fol. 154v; ed. Sigerist "Early Mediaeval Medical Texts" (n. 16), pp. 36–37

A. is the basis for my edition; the variants listed are from previous editions corrected with my readings for B and D

Incipiunt signa mortifera iuxta yppocratis sententiam. Unde scias quibusque aegritudinem sine quaetum uigiliae longioris turbauerint neque famis, neque repentina effusi uentris aut nausiam aut narium hat buccarum conductio aut nausia huris ultimi defensionis, conuersi fuerint aut pellicoli frontis dure, aut aridas cotis contentionem et doloris si fuerint scias eos morituros.

1. Incipiunt] Incipit BD Ei (de?) *add.* A yppocratis] yppogratis B hypocrate D sententiam] sententia B sentenciam D
- 1–2. quibusque aegritudinem] quia his qui aegrotant B si quis aegrotat C quod his qui egrotat D
2. sine quaetum] si neque eos B sineque eum C sine que eos D uigiliae] uigilie BD longioris] longiores BCD turbauerint] turbauerunt C famis] fames B fammes D
3. repentina] repentinus D effusi] effusio BD nausiam] nausiorum B narium] sanguinis BD hat *sic, recte* aut] et eis fuerit (fuerint D) concauitas (cauitas D) oculorum aut tymporum (thymporum D) aut narium acumen uel *add.* BD
4. nausia] si BD huris] aurium BD ultimi] ultimae B ultime D defensionis] depensiones B depensione D conuersi] conuerse B *om.* D et liuore si *add.* D fuerint] fuerit D
- 4–5. aut pelliculi—fuerint] *om.* D aut pelliculae in frontem ducere aut ariditas cutis cum tensione et liuore fuerint B

Pseudo-Galenic Signa Mortifera

A. Paris, BN, MS. lat. 11219, fol. 170r

E. London, BL, MS. Arundel 166, fol. 71v; ed. Heeg, *Pseudodemokritische Studien* (n. 35), p. 18 n. 1

F. Paris, BN, MS. lat. 11411, fol. 99v; ed. Jenkinson, *Hisperica Famina* (n. 25), p. 32

G. Paris, BN, MS. lat. 528, fol. 80r; ed. Wickersheimer, *Manuscripts* (n. 7), p. 51

H. Rouen, 1407, fol. 184v; ed. Wickersheimer, *Manuscripts* (n. 7), p. 169

A. is the basis for my edition; the variants are from previous editions.

Percepit galienus. In corpore humano quae signa sunt mortifera. In corpore humano frons rumpit supercilia declinantur. Oculis sinister minuitur. Nasus summus albigat mentus cadit. pulsus ante currit. pedes frigescunt. uenter diffugit. Iuuenem uigilantem. et senem in somnum. haec sunt signa mortifera.

650 FREDERICK S. PAXTON

1. Percipuit gallienus E Dicit galienus F *om.* G Hic docet pronustica juxta Galieni sententia. Praecipuit Gallienus H In corpore humano] Quomodos signant mortifera corpus humanum G quae] quod EFH sunt] fiunt H In corpore] *om.* G corpore] *corr. ex* corpus A corpus EH
2. humano] *corr. ex* humanum A, humanum H *om.* G frons] *corr. ex* fons A rumpit] rubit EFH rubet G declinantur] declinatur E reclinantur G sinister] senex E sinixte F minuitur] *corr. ex* minuatur A terminuatur E minuit G minuat H uel *add.* H nasus] nasum G
3. summus] sumus F in summo G albigat] *corr. ex* a(m)bigat A mentus] mens G mentis H cadit] *corr. ex* cadet A cadet E pulsus] pullus F ante currit] currit, ante E frigescent] frigidescent E infirigidiscunt F frigidiscunt G frigescent H diffugit] decurrit E defugit FG defit H
4. uigilantem] uigilante H in somnum] in sompnum F dormientem G haec] ec G sunt] *om.* H mortifera] morbifera E mortiferum G haec-mortifera] *om.* F Urina mane alba prandium rufor prandis rursus in candida optima est. Urina nigra mala pessema est. Urina pura et nebulosa proximum mortem significat. Urina rubea si aluerit fecem non periclitauit *add.* F

Anonymous Signa Mortifera in Paris, BN, MS. lat. 11218
(c. 800 Burgundy), fol. 100v

I present the text here just as it appears in the manuscript. The orthography and grammar are confused, and some of the readings are doubtful.

De signa mortalia dicit: unguis nigre digitorum et pedum frigide et digiti nigri et duri et inmittentis uel cadentis in se proxima morte manifestant; et cacumina digitorum liuidas erunt et labia liuida et sub aluda et torta et frigidae mortale et tenebrarum subuersiones apariscentis perituri erunt. Et a somno cauma multa habenti disperacio erit. Et dissolutum iuncturas corporis seu hanimis isdem fecto et sine senso et non audiens. neque adtonitur mortalis. Et uomerit per naris quod biberit manabit mortalis futura. Aut mortalis haec extollencias fiunt, et uentris alleuacionis et uissicae non sunt uidens autem mortalem. Si pro frigidum caledum erit circa umbilico usque susum precordus et sub usti umectacio, non uualde aparuerit. Pulmonem autem et cor humectato submisso praebundanter interius in is mors. Ex his locis si exilauerint habundanter uentusitatem caledam. Et quibus secundum consuitudinem omnem immutatum iterum uade carne calorem, sicut autem de capite suspira mentum. Quod uita uocatur relinquit spiritum, corporis tocius sanguinis et colera, et fleuma et carnis omnis inmutati periunt. Explicit.

3. sub aluda] The meaning escapes me. I would expect the reference here to be to earlobes.
5. fecto] facto?
8. uissicae; i.e., uessicae—of the bladder
9. sub usti] sub isti? umectacio] humectato uualde] ualde