

PROGNOSIS AND THERAPY IN THE HIPPOCRATIC CORPUS

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## **ABSTRACT**

Prognosis and Therapy in the Hippocratic Corpus  
(Under the supervision of Peter M. Smith)

This paper will examine the interdependence of prognosis and therapy in key texts of the Hippocratic Corpus. I argue that, contrary to prevailing scholarly opinions, prognosis possessed great medical significance, for it helped to determine the *kairos*, or the right moment to apply specific treatments before the patient's condition declines. I consider both the "Coan" and "Cnidian" writings, showing the fundamental coherence of the medical approaches represented in them. The analysis of the relationship between prognosis and therapy bears particular fruit in the nosological treatises. In these we can detect an evolution from prognoses based on pathology alone to prognoses rooted in confidence about the immediate or long-term effectiveness of the prescribed therapies.

To Alice

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## **Introduction**

This study considers the relationship of prognosis and therapy in the Hippocratic Corpus. For a long time, these aspects of Hippocratic medicine were studied in isolation from one another. Both topics were implicated in the debate about the supposed doctrinal divergence between Cos and Cnidos, and while much doubt has been cast on the alleged rivalry between the two schools, not enough has been done to challenge the persistent claims about a putative divide between the “prognostic” and “therapeutic” approaches to medicine that these schools were supposed to embody.

Hippocratic prognosis has been viewed at various times as the great achievement of scientific knowledge of disease or as a physician’s strategy for gaining a good reputation and securing the trust of his patient. The relevance of prognosis for therapy, however, has been denied or at least neglected<sup>1</sup> by the scholarship. In this paper, I will argue that prognosis had great medical significance, for it was employed with an eye to selecting the right treatment at the right time. The skilled ancient physician had to know the consequences of employing certain treatments at the appearance of particular symptoms and what the outcome would be for the patient. This is evident not just from the writings formerly assigned to the Cnidian

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<sup>1</sup> Vivian Nutton acknowledges that prognosis was essential for treatment and diagnosis but provides no references and chooses not to elaborate. 1979, 232.

school. The so-called Coan writings bear ample witness to the fact that a complete prognosis envisaged the effects of therapeutic intervention.<sup>2</sup>

In dealing with the nosological treatises, I have attempted to shed light on the different ways in which these texts factor the use of therapy into the prognosis. Some of these physicians do not take into account the effects of therapy because of the regularity of the course of a disease like pneumonia. At other times, no long-term prognosis is given because the doctor must be attentive to the meaning of symptoms at every stage and respond with the right treatment; otherwise, the result will be fatal. The author of *Internal Affections*, by contrast, offers prognoses based on an optimistic assessment of the effects of the treatment which he recommends.

I have been selective in choosing texts for analysis. I have not examined the gynecological treatises or the texts dealing with wounds or fractures. Doubtless these works are amenable to the kind of investigation that I am pursuing, but my intention was to orient this discussion around texts that have been central to the debate about the cleavage between the Coan and Cnidian approaches to the treatment of internal medicine in particular.

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<sup>2</sup> By therapeutic intervention, I mean the following: the regulation of foods, liquids, and bathing; the administration of drugs, enemas, pessaries; incision, cauterization, and miscellaneous practices including fumigation and aromatherapy.



## Chapter 1-*Prognosis and Therapy in the “Coan” Writings*

### **A Brief History of Interpretation**

This chapter will examine the relationship between prognosis and therapy in those treatises of the Hippocratic corpus formerly ascribed to the school of Cos. This task is made difficult by the fact that the surviving works on prognosis, *Prorrhetikon 1, 2, Coan Prenotions, Prognostikon*, not to mention a large share of the seven books of *Epidemics*, contain few explicit references to treatment. On the surface, these texts give the impression that diseases unfold according to discernible temporal and physiological patterns, and that the physician has a limited ability to manipulate this process.<sup>3</sup> The physician’s art consists of determining the temporal processes of illness through the observation of the full range of visible and invisible symptoms<sup>4</sup> and on the basis of these issuing a prediction of death or recovery. The body either overcomes the disease or succumbs to its power. As W.H.S. Jones says in his introduction to the first Loeb volume of the works of Hippocrates, the physician’s role was “to give nature a chance, to remove by regimen all that may hinder nature in her beneficent work”.<sup>5</sup>

Jones had concluded, and many specialists before and after him agreed, that prognosis is the central feature of the ancient physician’s art. Because the skilled physician can predict

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<sup>3</sup> Nutton 1985, 81-82.

<sup>4</sup> By invisible symptoms, I refer to phenomena which the patient alone can communicate to the doctor, such as burning sensations, ravenous hunger, etc.

<sup>5</sup> Jones, W.H.S. 1923. xvi.

a disease's course based on the aggregate of symptoms, he will know when death is inevitable and when recovery is likely. In the former case, medical intervention should consist of mild palliative measures to ease suffering before death. In the case of recovery, the physician can do nothing more than facilitate the natural processes that restore health: he will prescribe diets of gruels and liquids, administer expectorants and purgatives to expedite the elimination of peccant material. In any event, "nature" will have its way; the doctor is the servant of nature.<sup>6</sup>

In my judgment, Jones and others misunderstood the place of prognosis in Hippocratic medicine. There can be no question of its importance; the number of treatises on the subject demonstrates that. Have these treatises, however, exhausted the whole of the task of the physician as these writers conceived it? If so, one might reasonably question whether the art of medicine existed at all.<sup>7</sup> In declaring the patient's present suffering and predicting the future, they may have provided some psychological relief or some closure to the patients and their families, but their main function, the function of *healing*, was, if Jones is to be believed, an ancillary responsibility, one in which they played the assistant to the body's autonomous powers.

It cannot be disputed that the prognostic treatises of the Corpus pay surprisingly little attention to the subject of therapy's relation to prognosis. There are tantalizing notices in scattered places and unfulfilled promises of a fuller discussion, but our sources do not preserve a developed handling of the topic. On the other hand, other Hippocratic writings do not always offer comprehensive treatments of their subjects. For instance, the author of *On*

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<sup>6</sup> See *Epidemics* 6.5.1

<sup>7</sup> For evidence that the ancient Greek layman expressed skepticism about the existence of a medical art, see *On the Art*, *On Ancient Medicine*, *Regimen in Acute Diseases*.

*the Sacred Disease* provides minimal discussion of treatment, since his purpose is to elucidate the correct etiology of the disease and combat the prevailing superstitious view. This does not imply that the author could not have provided a thorough account of the proper treatment, but that he did not see it as essential to his argument. Similarly, the author of *Airs, Waters, Places* describes the effects of environment on health but gives no specific medical advice on how to treat illnesses caused by an insalubrious environment or sudden changes of climate. Instead, the author transitions to an ethnography of Asia and Europe based on the effects of geography and climate. The absence of a discussion of prognosis's relation to treatment in the prognostic treatises, therefore, need not suggest that no important connection was assumed, or that therapy was subordinate to prognosis in the physician's art. The Hippocratic authors did not always provide comprehensive treatments of their subject,<sup>8</sup> and we will see that other treatises in the Corpus, those not concerned with prognosis *per se*, will help us to understand better the processes of health and disease.

Scholars have long viewed the “prognostic” approach to therapy as the hallmark of the school of medicine centered in Cos.<sup>9</sup> One of the prognostic treatises of the corpus is titled *Coan prenotions*. The historical Hippocrates lived and practiced in Cos.<sup>10</sup> The treatise *Prognostikon* enjoyed great popularity in antiquity and was widely commented on, and well through the nineteenth and early twentieth century was believed to be the work of Hippocrates himself. The so-called genuine Hippocratic treatises, then, were said to belong to the Coan school of medicine. The Coan physicians, according to this way of thinking,

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<sup>8</sup> See Holmes 2005, 110, who notes that Hippocratic treatises were usually “organized around one particular question more than another.”

<sup>9</sup> For a good discussion of the origins of the theory of a rivalry between the Coan and Cnidian medical “schools”, see Lonie 1977.

<sup>10</sup> For the “biography” of Hippocrates, see Jouanna 1992.

practiced an expectative therapy in which the doctor interpreted the significance of “signs” or symptoms in relation to each other, climatic and seasonal changes, and the constitution of the patient. They did not advocate invasive or interventionist therapies on the grounds that nature itself was the best healer.

This laissez-faire approach to medicine was contrasted with that of the school of Cnidos, whose doctors were responsible for most of the nosological writings in the Corpus.<sup>11</sup> Cnidian physicians displayed a penchant for classifying diseases based on symptoms and the dynamic processes of each illness, or the manner in which their symptoms evolved over time. This propensity for nosological taxonomy gave the Cnidians a reputation as diagnosticians. They organized pathological phenomena under disease titles and sought thereby to create a medical encyclopedia of sorts. For each pathological condition, the author prescribed an aggressive plan of treatment. Unlike the Coan physicians who stressed the evaluation of symptoms in relation to the patient’s individual constitution, the Cnidians appeared to tailor treatment to the disease, and not to the particular needs of the patient. In this contrastive and overly neat characterization of the two schools, modern scholars devalued the contribution of the Cnidians, and praised the scientific achievement of the Coans, whose prognoses favored the observation of individual patients over a rigid classification of data. In addition to this, the perceived split between Coan and Cnidian doctrine led to a sharp division between prognostic and therapeutic treatises. The interventionist methods of the latter were judged to be incompatible with a “prognostic” approach to therapy which allowed nature to take its course and directed treatment to the needs of the individual.

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<sup>11</sup> For modern discussions of the Cnidian writings, see Edelstein 1931, Lonie 1965, Jouanna 1975, Grensemann 1974, Thivel 1981.

The consensus about the existence of two opposing schools of medicine located in Cos and Cnidos lasted well into the 1970s. I.M. Lonie wrote an important article in 1965 about the interrelations of the nosological treatises of Cnidos. Nearly a decade later, Jacques Jouanna and Hermann Grensemann each published a substantial volume examining the development of Cnidian medicine.<sup>12</sup> Skepticism, however, began to arise about the supposed doctrinal rift between the two schools after the publication of an article by Wesley D. Smith in 1973. In more recent decades, V. Langholf has made the case for a more cooperative relationship among the Coans and Cnidians<sup>13</sup> and highlighted the flimsiness of the evidence on which the supposed rivalry was based. The following is a summary of the most persuasive of his arguments.

The only reference in the corpus to a work of Cnidian origin appears in *Regimen in Acute Diseases*. The author of this treatise writes the following:

Οἱ ξυγγράφαντες τὰς Κνιδίας καλεομένας γνώμας, ὁκοῖα μὲν πάσχουσιν οἱ κάμνοντες ἐν ἐκάστοισι τῶν νοσημάτων ὀρθῶς ἔγραψαν, καὶ ὁκοίως ἔνια ἀπέβαινεν αὐτέων· καὶ ἄχρι μὲν τουτέου καὶ μὴ ἰητρὸς δύναιτο τις ἂν ὀρθῶς ξυγγράψαι, εἰ εὖ παρὰ τῶν καμνόντων ἕκαστον πύθοιτο ὁκοῖα πάσχουσιν. Ὅκοσα δὲ προκαταμαθεῖν χρὴ τὸν ἰητρὸν, μὴ λέγοντος τοῦ κάμνοντος, τουτέων τὰ πολλὰ παρεῖται, ἄλλα ἐν ἄλλοισι, καὶ ἐπίκαιρα ἔνια ἔόντα ἐς τέκμαρσιν. (*Reg. in Acute Dis.* 1)

(The authors of the work entitled *Cnidian Sentences* have correctly described the experiences of patients in individual diseases and the issues of some of them. So much even a layman could correctly describe by carefully inquiring from each patient the nature of his experiences. But much of what the physician should know besides, without the patient's telling him, they have omitted; this knowledge varies in varying circumstances, and in some cases is important for the interpretation of symptoms).

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<sup>12</sup> Lonie 1965, Jouanna 1975, Grensemann 1974.

<sup>13</sup> In this, he follows Lloyd 1976, 221 who writes: "but we do not know enough of the relations of Coan and Cnidian medicine to rule out the possibility of quite extensive mutual influences and cross-currents from a very early stage."

As Langholf notes, modern scholars had tended to view this passage as the repudiation of Cnidian doctrine by a physician from the Coan school. Yet this identification is tenuous. No external evidence can be mustered for the Coan origin of this treatise.<sup>14</sup> What the author laments is that ancient physicians in general have failed to give adequate attention to regimen (*οὐδὲ περὶ διαίτης οἱ ἀρχαῖοι ξυνέγραψαν οὐδὲν ἄξιον λόγου, καίτοι μέγα τοῦτο παρῆκαν*), though it is of the greatest importance for health. He does not single out the Cnidians in his condemnation of this lapse, but *all* of the physicians that have preceded him. In addition the author of *Reg. In Acute Dis.* refers to the revisers (*ἐπιδιασκευάσαντες*) of the Cnidian sentences, whose remedies have improved on those of the original version. As Langholf states, there can be no certainty that these editors belonged to a putative Cnidian school of medicine.<sup>15</sup> Even if they did belong to such a school, we should recognize that *Reg. In Acute Dis.* does not extend its criticism of the therapeutic measures of the *Cnidian Sentences* to acute diseases but specifically exempts them from censure. This reservation is all the more striking in a treatise devoted to the treatment of acute diseases and militates against the suggestion that the author was a Coan engaged in polemic with Cnidian rivals.

Indeed, the ancient testimonia on the whole, as Lloyd and Langholf have indicated, do not support the conclusion that Cos and Cnidos espoused divergent medical doctrines and practices. The papyrus *Anonymus Londonensis*, an abbreviated version of a history of medicine written in the 3<sup>rd</sup> century BC by Aristotle's pupil Meno, does not suggest any sharp divisions in the teachings of Coan and Cnidian physicians.<sup>16</sup> Galen is aware of the *Cnidian*

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<sup>14</sup> Edelstein, for instance, regarded *Regimen in Acute Diseases* as a Cnidian treatise.

<sup>15</sup> Langholf 1990, 24.

<sup>16</sup> Lloyd 1976, 221.

*Sentences* and of an association of Cnidian physicians, but he too is silent on the doctrinal differences with the Coans that modern scholars have postulated. Perhaps a better model for considering the competition between Cos and Cnidos is suggested in a passage from Galen: “In olden times, there was a considerable contest. Cos and Cnidos competed to outdo each other in the multitude of their discoveries and inventions...they had the good competition mentioned by Hesiod, and with them strove the physicians from Italy, Philistion, Empedocles, Pausanias, and their colleagues.”<sup>17</sup> As Langholf rightly notes, Galen’s evidence for the agonistic rivalry between Cos and Cnidos does not imply a set of contradictory medical practices but simply a desire to surpass each other in the quality and quantity of medical advances.<sup>18</sup> It should also not be overlooked that writings long associated with the school of Cos reveal on closer examination a common physiology and nosological terminology with some “Cnidian” treatises.<sup>19</sup>

The overemphasis on the disparity between Coan and Cnidian medical doctrine has obscured, in my judgment, the real relation between prognosis and therapy in the Hippocratic Corpus. A growing consensus is emerging that medical ideas were shared by the two centers,<sup>20</sup> and that mutual influence rather than public antagonism characterized their relationship. But this conviction has not, as far as I can tell, led to a serious reevaluation of the medical significance of prognosis. Prognosis is sometimes still viewed in the light of the old Coan doctrine of expectative medicine and contrasted with the more active therapeutic

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<sup>17</sup> Cited in Langholf 1990, 28.

<sup>18</sup> Langholf 1990, 28. See also the statement of Lloyd, “We should not exclude the possibility of mutual sharing between Cos and Cnidos at an early stage”. 1976, 221.

<sup>19</sup> For an extensive discussion of this, see Langholf 1990, 118-135. See also Grmek 1989, 289-90.

<sup>20</sup> King 1998, 66 writes that a growing tendency in Hippocratic scholarship is to view the Corpus as “a body of shared knowledge.”

approach evident in the nosological and therapeutic treatises.<sup>21</sup> At other times, prognosis is reduced to a mere strategy for gaining a patient's trust. I will argue for a more dynamic approach to the relations of these aspects of the art of medicine in the *Corpus*, but first I must survey the prognostic literature and some earlier interpretations of the medical function of prognosis.

### The Prognostic Literature

Several of the prognostic treatises are aphoristic in form. These include *Coan Prenotions*, *Prorrhetikon 1*, and *Dentition*. The first two are evidently composite works, since there is considerable overlap between the two. There appears to have existed a body of prognostic sayings to which individual physicians were free to add from their own experience. *Coan Prenotions* duplicates a considerable portion of *Prorrhetikon 1* but reduces the specific case histories in the latter to general rules of prognosis. These gnomic texts comment on the morbidity or favorability of physiological data, behavioral changes, or other relevant phenomena. Here are several examples of the formula:

Κοιλίης περίπλυσις ἐξέρουθρος, κακὸν μὲν ἐν πᾶσιν, οὐχ ἥκιστα δὲ ἐπὶ τοῖσι προειρημένοισιν  
(*Prorrh.* 1, 2)

Οἱ ἐκ ῥίγους περιψυχόμενοι, κεφαλαλγέες, τράχηλον  
ὀδυνώδεις, ἄφωνοι, ἐφιδροῦντες, ἐπανενέγκαντες θνήσκουσιν (*Coan Prenot.* 1)

Compared to *Prog.*, these texts must have had limited practical value for prognosis. They discuss symptoms in discrete terms without analyzing the importance of their conjunction or their import for different types of human constitution. The fact that treatment receives no attention further renders these treatises moot for the purposes of this analysis.

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<sup>21</sup> For a very recent discussion of the sharp dichotomy between prognostic and therapeutic contexts, see B. Holmes 2005, 146. While I agree with her argument that the prognostic treatises tend to emphasize the body's



*Prog.*, however, provides an excellent starting point for an investigation of the medical function of prognosis and its relation to therapy. Its proem offers several reasons for its usefulness and has laid the groundwork for all subsequent scholarly discussions of Hippocratic prognosis:

Τὸν ἰητρὸν δοκεῖ μοι ἄριστον εἶναι πρόνοιαν ἐπιτηδεύειν·  
προγιγνώσκων γὰρ καὶ προλέγων παρὰ τοῖσι νοσέουσι τά τε παρόντα  
καὶ τὰ προγεγονότα καὶ τὰ μέλλοντα ἔσεσθαι, ὅκόσα τε παραλείπουσιν οἱ  
ἀσθενέοντες ἐκδιηγούμενος, πιστεύοιτ' ἂν μᾶλλον  
γιγνώσκειν τὰ τῶν νοσούντων πρήγματα, ὥστε τολμᾶν ἐπιτρέπειν  
τοὺς ἀνθρώπους σφέας ἑωυτοὺς τῷ ἰητρῷ. Τὴν δὲ θεωρα-  
πείην ἄριστα ἂν ποιέοιτο, προειδῶς τὰ ἐσόμενα ἐκ τῶν παρόν-  
των παθημάτων. Ὑγιέας μὲν γὰρ ποιέειν ἅπαντας τοὺς ἀσθενέοντας  
ἀδύνατον· τοῦτο γὰρ τοῦ προγιγνώσκειν τὰ μέλλοντα ἀποβήσεσθαι  
κρέσσον ἂν ᾔην· ἐπειδὴ δὲ οἱ ἄνθρωποι ἀποδνήσκουσιν, οἱ μὲν  
πρὶν ἢ καλέσαι τὸν ἰητρὸν, ὑπὸ τῆς ἰσχύος τῆς νούσου, οἱ δὲ  
καὶ ἐσκαλεσάμενοι παραχρῆμα ἐτελεύτησαν, οἱ μὲν ἡμέρην  
μίην ζήσαντες, οἱ δὲ ὀλίγω πλέονα χρόνον, πρὶν ἢ τὸν ἰητρὸν  
τῇ τέχνῃ πρὸς ἕκαστον νόσημα ἀνταγωνίσασθαι· γινῶναι  
οὖν χρεῖ τῶν παθόντων τῶν τοιούτων τὰς φύσις, ὅκόσον ὑπὲρ τὴν  
δύναμιν εἰσι τῶν σωμάτων, ἅμα δὲ καὶ εἴ τι θεῖον ἔνεστιν ἐν τῆσι  
νούσοισι, καὶ τουτέου τὴν πρόνοιαν ἐκμανθάνειν. Οὕτω γὰρ ἂν  
θαυμάζοιτό τε δικαίως, καὶ ἰητρὸς ἀγαθὸς ἂν εἴη· καὶ γὰρ οὐς  
οἷόν τε περιγίγνεσθαι, τούτους ἔτι μᾶλλον δύναιτ' ἂν ὀρθῶς  
διαφυλάσσειν, ἐκ πλείονος χρόνου προβουλευόμενος πρὸς ἕκαστα,  
καὶ τοὺς ἀποθανομένους τε καὶ σωθησομένους προγιγνώσκων  
καὶ προαγορεύων ἀναίτιος ἂν εἴη.

It has often been remarked that *Prog.* does not limit prognosis to a prediction of the future course of illness. The skilled physician ought to be able to furnish an account of the patient's entire case history on the basis of his interpretation of the symptoms. If he succeeds in declaring unaided the patient's sufferings, he will gain the trust of the patient and a reputation for excellence. People will marvel at his prescience, and he will avoid disrepute by declaring in advance the cases that are hopeless. Proficiency in prognosis carries another advantage: by knowing in advance the course an illness will take, the doctor can calculate the *best*

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*physis* or *dynamis* in battling disease, I believe that she has read too much into the silence of the prognostic authors on the use of therapy.

*treatment* to administer to the patient. The author goes on to say that a good prognosis helps the physician to guard against any crisis or vicissitude in the illness's progress and thus to facilitate recovery.

The author of *Prognostikon* maintains that prognosis occupies an essential place in the therapeutic process. Yet after this tantalizing statement, no further mention is made of the integral connection between prognosis and healing. The rest of the work focuses on the meaning of prognostic signs, on the import of different types of complexion, pains, urines, sweats, and stools for the length and severity of acute illness. The one reference to treatment occurs in a passage dealing with the dangers of an ulcerated throat with fever. After a discussion of the complications that may arise as a result of this condition, the author issues the following warning about treatment:

Οἱ δὲ γαργαρεῶνες ἐπικίνδυνοι καὶ ἀπο-  
τάμνεσθαι καὶ ἀποσχάζεσθαι, ἔστ' ἂν ἐρυθροί τε ἔωσι καὶ  
μεγάλοι· καὶ γὰρ φλεγμοναὶ ἐπιγίγνονται τοτέοισι καὶ αἰμόρ-  
ραγαίαι· ἀλλὰ χρῆ τὰ τοιαῦτα τοῖσιν ἄλλοισι μηχανήμασι πει-  
ρῆσθαι κατισχραίνειν ἐν τούτῳ τῷ χρόνῳ. Ὅκόταν δὲ ἀπο-  
κριθῆ πᾶν, ὃ δὴ σταφυλὴν καλέουσι, καὶ γένηται τὸ  
μὲν ἄκρον τοῦ γαργαρεῶνος μείζον τε καὶ περιφερές, τὸ δὲ  
ἀνωτέρω λεπτότερον, ἐν τούτῳ τῷ καιρῷ ἀσφαλές διαχειρίζειν.  
Ἄμεινον δὲ καὶ τὴν κοιλίην ὑποκενώσαντα τῇ χειρουργίῃ  
χρέεσθαι, ἣν ὁ τε χρόνος ξυγχωρέη, καὶ μὴ ἀποπνίγηται ὁ ἄνθρωπος. (*Prog.* 23)

Surgery on the uvula when it is red and enlarged has harmful consequences. The physician recommends a milder technique for the reduction of swelling. When the uvula becomes enlarged and livid, however, and thinner in the upper part, the right time (ἐν τούτῳ τῷ καιρῷ) to operate has arrived. This passage illuminates one aspect of how the author of *Prog.* conceives of the relation between prognosis and therapy. A correct interpretation of the symptoms helps the physician to select the appropriate therapeutic measure at the right time. The doctor who realizes the significance of a red and enlarged uvula should also foresee that

the wrong kind of intervention will exacerbate the patient's condition and hinder the path to recovery. Prognosis aids in the determination of the critical moment for surgical or other interventions and prevents the unseasonable application of harsh remedies in view of the dangers that may follow from them.

This interpretation accords well with the statements laid out in the prologue to *Prog.* The value of prognosis resides in its capacity to assist the physician in planning his treatment. More than this, the section on the lancing of the uvula shows that a skilled prognosticator will foresee the effects of treatment on the course of the illness and vary his remedies in accord with the symptoms. Despite this consistency with the prologue, some editors have bracketed or deleted the “uvula” section on the grounds that discussions of therapy have no place in a prognostic treatise.<sup>22</sup> In my judgment the deletion is arbitrary, for the section fits neatly into the context and conforms to the prologue's assertions about prognosis and therapy. The tendency within 19<sup>th</sup> century textual criticism to demand rigid uniformity of content in ancient writings may have informed these editorial decisions, but it is also likely that unwarranted assumptions about the meaning of prognosis were responsible for the editors' skepticism about the passage. It will be helpful to offer a brief survey of modern interpretations of Hippocratic prognosis in order to evaluate this supposition and to show where my own approach differs from earlier opinions.

In the 19<sup>th</sup> century, the great Hippocratic editors Ermerins and Littré heralded prognosis as the principal scientific achievement of Hippocratic medicine. They viewed the goal of prognosis as the accumulation of scientific fact and, as Edelstein put it, “the

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<sup>22</sup> Ermerins and Kuehlewein among modern editors.

objectively significant knowledge of what the outcome of sickness would be.”<sup>23</sup> This interpretation of the function of prognosis seemed to gain further strength from the case histories of the Hippocratic *Epidemics*, which recorded the symptoms of individual patients on a day-by-day basis but offered little insight into their medical significance, omitting mention of treatment except in rare cases. In effect, the case histories seemed to be guides to scientific *knowledge* of diseases, of their periodicity and strength, their effects on people of different age, sex and constitution and so forth, but they were not seen as useful for the actual *practice* of medicine.

In the 1930s, Ludwig Edelstein offered a reappraisal of Hippocratic prognosis which continues to be cited as a major contribution to scholarship. Edelstein challenged the conventional wisdom about prognosis, arguing that its primary purpose was to gain the trust of the patient and to secure the practitioner’s reputation in a society where no formal licensing existed. Its function, in other words, was psychological.<sup>24</sup> In support of this thesis, he cited the prologue to *Prog.*, which, as we have had occasion to see, lists the physician’s good reputation and the acquisition of the patient’s trust as the two principal benefits of a complete prognosis. Without question, Edelstein was right to stress the practical and psychological advantages of prognosis. But his argument does not capture the full significance of prognosis for the author of *Prog.* The author writes that “he who knows in advance the things that are going to happen will best accomplish the treatment (δὲ θεραπείαν ἄριστα ἂν ποιέοιτο, προειδὼς τὰ ἐσόμενα ἐκ τῶν παρεόντων παθημάτων).” Edelstein addresses this line but appears to misinterpret it. He believes the statement refers to the decision of *whether*

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<sup>23</sup> Edelstein 1967, 65.

<sup>24</sup> Edelstein 1967, 70.

to treat at all in cases of near-fatal illness.<sup>25</sup> While there is no doubt that the Hippocratic author maintains that prognosis helps to determine the viability of undertaking treatment in the face of mortal illness, this does not exhaust the meaning of the passage. For the prologue to *Prog.* also insists that the one who plans well in advance “will have the greater power to save those who have a chance of recovery (καὶ γὰρ οὐς οἶόν τε περιγίγνεσθαι, τούτους ἔτι μᾶλλον δύναιτ’ ἂν ὀρθῶς διαφυλάσσειν, ἐκ πλείονος χρόνου προβουλεύομενος πρὸς ἕκαστα, καὶ τοὺς ἀποθανομένους τε καὶ σωθησομένους προγιγνώσκων καὶ προαγορεύων ἀναίτιος ἂν εἴη).” This assertion affirms the medical value of prognosis against Edelstein’s reductionist view.<sup>26</sup> In his zeal to challenge the views of Daremberg and Littré, Edelstein has reduced prognosis to the art of forecasting (προλέγων) and has ignored the value of prognosis as a type of foreknowledge (προγιγνώσκειν). The author of *Prog.*, however, indicates that these are two equally determinative aspects of prognosis. Foreknowledge, of course, must precede forecasting, and it is this latter activity which, as Edelstein suggested, is an important psychological tool in forming the doctor-patient relationship. Yet foreknowing the trajectory of illness has an independent value, for it is this ability, as we have seen, which enables the physician to plan the course of treatment.<sup>27</sup>

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<sup>25</sup> Edelstein 1967, 66-67

<sup>26</sup> Langholf 1990 agrees with Edelstein’s interpretation of prognosis, indicating the longevity of Edelstein’s interpretation.

<sup>27</sup> The only modern author (whom I have found) to stress the importance of prognosis for therapy was W. Müri 1936. His conclusions were quickly dismissed by Diller 1938 in his review of Müri’s book. Diller writes that Müri was not talking about prognosis objectively speaking (*eigentliche Prognose*) but about a general intuitive recognition of imminent phenomena. This is a false distinction based on Diller’s acceptance of Edelstein’s view that prognosis proper is simply the act of forecasting designed to secure the doctor’s social and professional standing.

## **The Hippocratic *Aphorisms***

A survey of the last three books of *Aphorisms* demonstrates that the semiotic framework of Hippocratic prognosis did envisage the effects of therapeutic intervention on the patient and the disease. The collection testifies to the existence of prognostic sayings on the meaning of symptoms in relation to treatment and thus expands the heretofore limited scope of the prognostic aphorism as an index of the patient's future condition.<sup>28</sup> Book 5 opens with the terse statement that “a convulsion after hellebore is often fatal.”<sup>29</sup> Elsewhere we learn that “convulsion or hiccough supervening on excessive purging is a bad sign (5.3)” and that “whenever cases of empyema or dropsy are treated by the knife or cautery, if the pus or water flow away all at once, a fatal result is certain (6.27).” These statements suggest that the prognosis could be revised on the basis of judgments about the consequences of treatment. A successful prognosis depends on the physician's ability to understand the meaning of the signs attending his therapeutic actions.

It is also clear that drugs can produce certain effects on the body which, considered by themselves, signal danger to the patient but prove benign following the administration of the drugs. For instance, “One should also consider what is seen of the eyes in sleep; for if, when the lids are closed, a part of the white is visible, it is, should diarrhea or purging not be responsible, a bad, in fact, an absolutely fatal sign (6.52).” “Stools that are black like blood, coming spontaneously, either with or without fever, are a very bad sign, and the more numerous and the more evil the colors, the worse the sign. When caused by a purge, the sign is better, and it is not a bad one, when the colors are numerous (4.21).”

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<sup>28</sup> *Prorrhetic 1* and *Coan Prenotions* contain no references to therapy's integral relation to prognosis.

<sup>29</sup> For a good discussion of the use of black hellebore, now known to be a gastrointestinal poison, in Hippocratic medicine, see Girard 1990, 393-405.

Another function of prognosis is to aid the doctor in knowing at what time to administer the right treatment. The section on the lancing of the uvula in *Prog.* offered one example of this. While the aphorisms do not supply an abundance of examples in this regard, a sufficient number are included to highlight that this was an important part of the repertoire of the skilled prognosticator. It is essential, first of all, to be able to predict the critical days, or the day on which the disease is judged (*κρίνεται*), or determined, for death or recovery. On this day or immediately before it, the regimen must be restricted and purges or other harsh therapeutic interventions strictly avoided (1.8). In light of the importance of critical days for the health of the patient, the doctor should know in advance from the symptoms on what day the crisis will occur. Armed with this insight, he can begin to reduce regimen before the crisis and keep from being caught unawares. Several aphorisms are aimed at teaching a physician to forecast the critical days. Some are remarkably general: “Acute diseases come to a crisis in fourteen days (2.23).” Others offer greater specificity: “In cases that come to a crisis on the seventh day, the patient’s urine on the fourth day has a red cloud in it, and other symptoms accordingly (2.51).” In either case, the desire to know the critical days in advance stems from the urgent necessity to lessen the regimen at the proper moment, lest the patient’s weakened bodily condition be overcome by the strength of foods and liquids (*Ὄκωταν δὲ ἀκμάζει τὸ νόσημα, τότε λεπτοτάτη διαίτη ἀναγκαῖον χρέεσθαι*) (*Aph.* 1.8).

The previous discussion has shown the complexity of forming an accurate prognosis. The doctor has not only to discern the meaning of the whole range of symptoms in relation to the patient’s particular bodily make-up, but he must also factor in the constitutional effects of treatment on the manifestation of symptoms. He must gauge the benefit or harm caused by the therapy and determine the significance of this alteration for the prognosis. Prognosis,

then, must not be construed only as a single act of prediction uttered at the onset of the illness.<sup>30</sup> On the contrary, it is a piecemeal process subject to vigilant and continuous reinterpretation in view of the contingencies of disease and health. The Hippocratic writers maintain that one can achieve great skill in prognosis and profess the ability to offer instruction in this art. The element of the unpredictable, however, often obtrudes upon the physician's task. Ineffective or improper treatment or the disobedience of the patient may modify the course of illness, and it is the doctor's responsibility to know when these failures have taken place and what they mean for the future. We have already seen how an unseasonable lancing of the uvula affected prognosis in the case of redness and swelling. Other unprovoked physiological changes may occur to which the doctor must be attentive. The author of *Prog.* stresses the incremental process of conjecturing the course of quartan fevers: "Those that will reach a crisis after the shortest interval are easier to determine, for their differences are very great from the commencement. Those who will recover breathe easily, are free from pain, sleep during the night, and show generally the most favorable symptoms; those who will die have difficulty in breathing, are sleepless and delirious, and show generally the worst symptoms. Learning these things beforehand you must make your conjectures at the end of *each increment* as the illness advances to the crisis (20.39)." With regard to the prognostic import of ineffective treatments, *Prog.* includes a passage on pains of chest and lungs: "Such pains in these parts as do not give way before either purging of sputum, or evacuation of the bowels, or venesection, purges and regimen, must be regarded as about to turn into empyema (internal suppuration). Such empyemas as form while the sputum is still bilious are very fatal...especially should the empyema begin from sputum of

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<sup>30</sup> It would have been natural for an ancient Greek layperson to associate prognosis with divination. See Langholf 1990, 233-254.



this character when the disease has reached the seventh day, the patient may be expected to die *unless some good symptom happen to him* (15.1-14).” The effects, or in this case, lack of effect, of the method of treatment signals a degeneration into another more serious condition. One must withhold a fatal prognosis, however, in case a positive symptom should intervene to herald a favorable outcome.

Prognosis demands caution and patience. The well-known section of *Prog.* which examines the range of facial characteristics denoting illness, the so-called Hippocratic face, explains the alternative scenarios that may ensue at the onset of its appearance. “If at the beginning of the disease the face be like this, and if it be not yet possible with the other symptoms to make a complete prognosis, you must go on to inquire whether the patient is sleepless....If anything of the kind be confessed, you must consider the danger to be less. The crisis comes after a day and a night if through these causes the face has such an appearance. If no such confession be made, and should a recovery not take place within this period, know that it is a sign of death. On the other hand, if the disease be of longer standing than three days when the face has these characteristics, go on to make the same inquiries as in the previous case... (*Prog.* 2).” From this passage, it is clear that an initial prognosis within the first three days of the appearance of the facial symptoms may prove inadequate and require reappraisal if the signs persist for more than three days. This incremental approach to prognosis helps to explain how the positive or negative effects of therapy can be situated within its semiotic framework. A “long-range” prognosis, in other words, cannot be effective if it ignores the element of fortune or the sometimes indeterminate power of therapy to heal or harm.

## The Works on Regimen

The therapeutic treatises<sup>31</sup> of the Corpus have received little attention in discussions of prognosis, in no small measure because of the assumption that prognosis and therapy were unrelated medical practices. Our close reading of the prognostic writings has shown the value of prognosis in determining the *kairos*, or the essential moment, in which to apply certain treatments and to avoid others lest the patient's condition decline. The treatise *Prog.* in particular has demonstrated the incremental nature of prognosis as well as the need to reckon with the efficacy of treatment and its relation to symptoms in determining the course of illness. The treatises on regimen in the Corpus, especially *Regimen in Acute Diseases*, *Appendix to Regimen in Acute Diseases*, and *Regimen III* lend support and clarification to these arguments.

The treatise *Regimen on Acute Diseases* purports to offer a rational<sup>32</sup> account of the use of regimen in serious illness. The author laments the ignorance of his peers on the subject of regimen and notes that doctors tend to employ their own methods without understanding their sometimes harmful effects on the patient. In fact, the ancients have largely neglected the serious study of regimen in their writings, settling uncritically for the same conventional methods which have brought medicine into disrepute. This neglect is especially regrettable, in the author's judgment, for regimen is of the greatest importance for healing every manner of disease.<sup>33</sup> If the author of *Reg. In Acute Dis.* expresses a very

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<sup>31</sup> I limit the therapeutic treatises to the works on regimen in order to distinguish them from the nosological writings of chapter 2.

<sup>32</sup> By rational, I mean the author connects the administration of foods and liquids to the underlying causes of disease and its relative strength at various stages instead of relying on tradition, intuition, or a superficial interpretation of symptoms. In other words, he is able to provide an account for his actions.

<sup>33</sup> Granted the tone of this work is polemical, but the author may be reflecting a historical truth nevertheless. Both major writings on regimen (*Regimen III* is the other) in the corpus comment on the lack of attention given

optimistic view, unusual for the Corpus, of the capacity of the right regimen to cure the sick, he also warns of the perils of urging inappropriate nourishment at certain stages of illness. In order to avoid this pitfall, the physician must pay attention to the whole of the medical art. In some cases, this means that the doctor must know from the signs when the critical days and paroxysms will occur and adjust his regimen accordingly. In other cases, the physician should realize when the symptoms suggest that the time for therapeutic intervention has arrived, a time which if neglected will cause the worsening of the disease or the patient's death. For therapeutic purposes, the doctor must practice the art of prognosis.

A number of passages in *Reg. In Acute Dis.* indicate the value of prognosis for the therapeutic enterprise. The author notes that “abundant moisture indicates an early crisis, while a later appearance of scanty moisture indicates a late crisis (12.10-12).” He recommends that in cases where the mouth is moist, and the sputa as they should be, one should increase as a general rule the quantity of the gruel.<sup>34</sup> Moisture portends an imminent crisis. The administration of purges to eliminate the sputum will require the compensatory nourishment of the increased quantity of gruel. In cases of pleurisy especially, the author remarks, the pains will cease immediately after the purge if unstrained gruel has been given to the patient from the beginning of the illness. Under this regimen, “the crises are simpler, more decisive, and less liable to relapses.” The presence of moisture and sputa informs the doctor's decision to increase the regimen and administer the purge, thus effecting a quick resolution to the problem. The author goes on to state that, “many other points have been

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to this topic by other doctors. This may also account for the absence of serious discussions of therapy in the prognostic writings, though the traditional therapeutic methods (purging, regimen, venesection, etc) are presupposed and employed there.

<sup>34</sup> This recommendation appears to contradict *Aph.* 1.8, but we do not have any information about the original context of the saying.

passed over which *must be used in prognosis* (προσημαίνεσθαι); these will be discussed later (13.1-2).”

This passage confirms the value of prognosis for the therapeutic art in general and for the regulation of quantities of gruel in particular. The promise of a fuller discussion of the points relevant to prognosis will, unfortunately, remain unfulfilled, but several passages shed further light on the author’s view of the importance of prognosis for treatment, without any explicit mention of the term. One should know, for instance, that in cases of intestinal pain resulting from constipation the administration of gruel will increase the pain and cause rapid respiration. Rapid breathing dries the lungs and engenders further complications. Even more dangerous is the giving of gruel if “pain in the side continues and does not yield to the fomentations, while the sputum is not brought up, but becomes viscid without coction (16.10-12).” The author warns that the administration of gruel, if the pain is not first removed by loosening the bowels or by venesection, will lead to a swift death. The doctor must judge from the symptoms what treatments are required, and which to avoid, and what consequences result from an ill-timed therapy. This method of prediction differs in no significant way from the prognostic approach of *Prog.*, which also advised that the physician know the consequences of applying unseasonable remedies and provided specific recommendations on the right moment to treat. A passage similar to *Prog.* 23, which pinpointed the *kairos* for cutting a swollen uvula, appears in *Reg. In Acute Dis*:

Καιρὸν δὲ τῆς δόσιος τοῦ ῥοφήματος τόνδε  
μάλιστα φυλάσσεσθαι, κατ’ ἀρχὰς καὶ διὰ παντὸς τοῦ νοσήματος·  
ὅταν μὲν οἱ πόδες ψυχροὶ ἔωσιν, ἐπισχεῖν χρὴ  
τοῦ ῥοφήματος τὴν δόσιν, μάλιστα δὲ καὶ τοῦ ποτοῦ ἀπέχεσθαι;  
ὁκόταν δὲ ἡ θέρμη καταβῆ ἔς τοὺς πόδας, τότε διδόναι, καὶ  
νομίζειν μέγα δύνασθαι τὸν καιρὸν τοῦτον ἐν πάσῃσι τῆσι  
νούσοισιν· οὐχ ἥμιστα δὲ ἐν τῆσιν ὀξείῃσι, μάλιστα δὲ ἐν

τῆσι μᾶλλον πυρετώδεσι καὶ ἐπικινδυνότησιν. Χρέεσθαι δὲ πρῶτον μάλιστα μὲν  
χυλῶ, ἔπειτα δὲ πτισάνη, κατὰ τὰ τεκμήρια τὰ προγεγραμμένα ἀκριβέως θεωρέων.  
(*Reg. in Acute Dis.* 20)

The right moment in fevers to supply gruel and drinks takes place when the heat descends to the feet. This is the critical time in all acute diseases. The administration of gruels before this time carries great danger. For the author of *Reg. In Acute Dis.*, a correct interpretation of the signs leads to certain knowledge of the time to intervene and the time to refrain from intervention.

The preceding passage receives far greater elaboration in the *Appendix to Reg. In Acute Dis.*, in which the physiological assumptions underlying the meaning of foot temperature are set out in detail. The author repeats the injunction against applying gruels until the feet warm up but then offers a medical explanation for his treatment on the basis of the etiology of the symptom: “for usually coldness of the feet indicates that the fever is about to grow virulent, and if you make an administration at that moment, you will be committing all the greatest mistakes, since you will increase the disease by no small measure. When the fever diminishes, the opposite happens, and the feet become hotter than the rest of the body (13).” In this case, the *kairos* indicates the critical moment at which the doctor must *refrain* from treatment. If he moves to treat when the feet are cold, he will give nourishment to the disease. The author proceeds to recommend the administration of gruel when the feet have warmed and the crisis has passed. This is the *kairos* for the resumption of regimen. Premature treatment proves fatal. The author of the *Appendix* has shown that the *kairos* can refer to a critical moment when treatment should be administered or avoided and when the failure to do one of the other will have harmful consequences for the patient. He has also grounded his recommendations for therapy in a credible narrative of the physiological processes governing the symptom.

A methodologically related approach to prognosis and therapy, albeit a more dogmatic one with respect to methods of treatment, may be found in *Regimen 3*. The author of the four treatises on regimen maintains that diseases arise from an imbalance of nourishment to exercise or vice versa. An excess of nourishment gives rise to dangerous surfeit, which produces many illnesses. Too much exertion causes wasting diseases if not counterbalanced with adequate foods. The author then proceeds to offer a course of regimen that will suffice to preserve health in the majority of men, who have insufficient leisure to devote their entire energies to health. These prescriptions have no bearing on prognosis. The particular concern of this treatise, however, is to propose, as the author claims, a new method of therapy involving the interrelations of prognosis, diagnosis<sup>35</sup> and therapeutic intervention. The term that the author uses for prognosis is *prodiagnosis*, a term which does not appear elsewhere in the Hippocratic literature. The usual Greek words for prognosis are *προνοίη*, *προγίνωσκειν*, *προσημαίνεσθαι*. As a result, scholars have attempted to distinguish pro (i.e. prediagnosis) diagnosis from the type of prognosis advocated in *Prog*. From an etymological point of view, however, it is difficult to see any important distinction in the meanings of these terms, which indicate either foreknowledge of some kind or the declaration of things before they take place. In practice, the author of *Regimen* appears to mean the same thing by prediagnosis as other authors mean by prognosis—with the important exception that the former advocates the use of prediagnosis for the *prevention* of disease before it occurs. In practice, this means that the author will interpret symptoms with a view to the future and alter the patient's regimen to avert the onset of illness. The practice of prediagnosis is critical for the knowledge of when and how to treat. In this respect at least, *Regimen 3*, despite its

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<sup>35</sup> By diagnosis, the author means an analysis of the underlying cause of the ailment, which he always interprets as an improper balance between nourishment and exercise.

claims to originality, differs in no significant way from the practice of other Hippocratic physicians.

The following passage illustrates the method of treatment used by the author of

*Regimen 3:*

Ὅτι δ' ἂν τύχη ποιήσας κατὰ τοῦτον τὸν καιρὸν, τοῦτο αἰτιῆται οὐκ αἴτιον ἑόν· τουτέω γὰρ κρατεῦντα τὰ σιτία τοὺς πόρους, κατὰ σμικρὸν ξυλληγομένη ἢ πλησμονή ἐς νοῦσον προήγαγεν. Ἄλλ' οὐ χρεὶ προῖεσθαι μέχρι τουτέου, ἀλλ' ὁκόταν γινῶ τὰ πρῶτα τῶν τεκμηρίων, εἶδέναι ὅτι κρατέει τὰ σιτία τοὺς πόρους κατὰ σμικρὸν ξυλληγόμενα, ἢ πλησμονή ἐστὶ. Μύξαι γὰρ καὶ σίελα πλησμονῆς ἐστὶ κρίσις· ἀτρεμίζοντος μὲν δὴ τοῦ σώματος, φράσσουσι τοὺς πόρους τοῦ ἀτρεμίζοντος μὲν δὴ τοῦ σώματος, φράσσουσι τοὺς πόρους τοῦ πνεύματος, πολλῆς ἐνεούσης τῆς πλησμονῆς· θερμαινόμενον δὲ ὑπὸ τοῦ πόνου, ἀποκρίνεται λεπτυνόμενον. Χρὴ δὲ τὸν τοιοῦτον ἐκθεραπευθῆναι ὧδε· διαπονήσαντα ἐν τοῖσι γυμνασίοισι τοῖσιν εἰδισμένοισιν ἀκόπως, θερμῶ λουσάμενον, σιτίσαι παντοδαποῖσι καὶ ποιῆσαι ἐμέσαι· ἐκ δὲ τοῦ ἐμέτου κλύσαι τὸ στόμα καὶ τὴν φάρυγγα οἴνω ἀύστηρῶ, ὅπως ἂν συστυφῆ τὰ στόματα τῶν φλεβῶν καὶ μηδὲν ἐπικατασπασθῆ, ὁκοῖα γίνεται ἀπὸ ἐμέτων· εἶτα ἐξαναστὰς περιπατησάτω ἐν ἀλέῃ ὀλίγα· ἐς δὲ τὴν ὑστεραίην τοῖσι μὲν περιπάτοισιν αὐτοῖσι χρέεσθαι, τοῖσι δὲ γυμνασίοισιν ἐλάσσοσι καὶ κουφοτέροισιν ἢ πρόσθεν· καὶ ἀνάριστος διαγέτω, ἢν θέρως ἢ· ἢν δὲ μὴ θέρως ἢ, μικρὸν ἐπιφαγέτω· καὶ τοῦ δείπνου ἀφελεῖν τὸ ἥμισυ οὗ εἴωδε δειπνεῖν· τῆ δὲ τρίτῃ τοὺς μὲν πόρους ἀποδότω τοὺς εἰδισμένους πάντας καὶ τοὺς περιπάτους, τοῖσι δὲ σιτίοισι προσαγέτω ἡσυχῆ, ὅπως τῆ πέμπτῃ ἀπὸ τοῦ ἐμέτου κομιεῖται τὸ σιτίον τὸ εἰδισμένον. Ἦν μὲν οὖν ἀπὸ τουτέου ἰκανῶς ἔχη, θεραπευέσθω τὰ ἐπίλοιπα τοῖσι μὲν σιτίοισιν ἐλάσσοσι, τοῖσι δὲ πόνοισι πλείοσιν· ἢν δὲ μὴ καθεστῆκη τὰ τεκμήρια τῆς πλησμονῆς, διαλιπὼν δύο ἡμέρας ἀφ' ἧς ἐκομίσαστο τὰ σιτία, ἐμεσάτω πάλιν καὶ προσαγέτω κατὰ τὰ αὐτά· ἢν δὲ μὴ, καὶ ἐκ τρίτου, μέχρις ἂν ἀπαλλαγῆ τῆς πλησμονῆς (Reg. 3.70)

After a discussion of signs that arise from an imbalance of food over exercise, the author insists that the doctor not allow the complaint to degenerate into illness but that he urge a regimen aimed at the evacuation of the surfeit: baths, emetics, walks, and after a set period of time, the complaint will disappear.

A following chapter (72) describes another set of symptoms which may arise from surfeit: bodily pains affecting the entire body or the one part afflicted by the excess. These pains resemble those caused by fatigue and lead the patient to adopt a therapy of rest and

overfeeding, thus giving rise to fever. The patient, who still misunderstands that excess of food in relation to exercise gave rise to the ailment, continues to feed and bathe until the fever turns into pneumonia. The patient or the doctor must practice forethought in order to prevent the start of illness. The administration of vapor baths, emetics after meals, and a proper course of exercise will avert fever. However, if through lack of forethought, a fever should follow upon the surfeit, the doctor should prescribe an extreme reduction in regimen, that is, a diet of water for three days. If the fever persists after the three days, the doctor should give barley, and the fever will end after the fourth or seventh day. The Hippocratic physician has formed a prognosis based on symptoms of bodily pains resembling fatigue followed by fever. He predicts that the fever will abate after three days or on the fourth or seventh day if the patient follows the right regimen. The prognosis, then, envisages the therapeutic interventions within its chronological framework. The illness will unfold according to a predictable pattern provided that the regimen is properly adjusted at the appropriate stages. For the author of *Regimen 3*, the prognosis indicates the type of treatment to be used, the stages at which the treatment should be adjusted, and the critical days on which the illness will terminate if the right treatment is taken throughout. He is separated from the other authors of the Corpus that we have discussed in regard to his dogmatic view of the origins of illness and his corresponding approach to therapy. His method of prognosis and therapy accords with theirs, however, to the extent that he links the prognostic symptoms to the time and method of treatment.

### **The *Epidemics***

A major contributing factor to the view that the Coan school of medicine eschewed aggressive approaches to therapeutic intervention was the striking absence of references to



therapy in the case histories of the *Epidemics*. The perception that the ancient physicians responsible for these texts advocated an expectative approach to treatment was further strengthened by *Epidemics* 6.5.1: “The body’s nature is the physician in disease. Nature (ἡ φύσις) finds the way for herself, not from thought (ἐκ διανοίης).” It is certainly true that ancient physicians believed in the body’s capacity to rehabilitate itself. Observation and experience taught them that lesson. They saw patients evacuate harmful material of their own accord, whether through nosebleeds, stools, vomits, or sweats, and noticed how these emissions appeared to generate a spontaneous recovery. A thorough examination of the Hippocratic *Epidemics*, however, shows that the attending physicians, despite their confidence in the body’s restorative powers, engaged in a variety of invasive therapeutic procedures, including incision, cautery, and the administration of strong drugs such as hellebore and *linozostis*. In practice, the relative strength and constitutional disposition of the patient would have determined whether these treatments were necessary or advisable.<sup>36</sup> Since in many cases, the patient was not strong enough to fight the disease on his or her own, the doctor would attempt through his therapeutic program to assist or even compel nature to accomplish its healing task. As W. Smith writes, “the wisdom of nature is what the active, interventionist physician strives to imitate.”<sup>37</sup>

The omission of all mention of therapy in the majority of case histories cannot be ignored, however, particularly in light of the fact that most modern scholars consider them to have been tools to assist in prognosis.<sup>38</sup> If this was indeed their principal function, then the

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<sup>36</sup> See *Ep.* 2.3.2

<sup>37</sup> Smith, W. 1994, 225.

<sup>38</sup> Deichgräber, Diller, Langholf, et al.

thrust of our argument, that prognosis was essential for determining what therapies to employ in the right circumstances, has met a serious objection. On the other hand, there is good reason to maintain that, while the primary purpose of recording case histories may have been to develop a series of reliable prognostic signs, in practice this effort was largely unsuccessful. The overwhelming impression given by the case histories is that the doctors were uncertain how to interpret the disease phenomena they encountered. An obvious indication of this is that the physician almost always refrains from drawing conclusions about the disease from his observation of the symptoms. When conclusions are drawn, they are often couched in highly tentative language (*ἴσως, οἴμαι, οὐκ οἶδα*) or as questions.<sup>39</sup> Frequently the doctor admits he does not understand the meaning of a particular symptom. In addition to this, the great majority of references to treatment point to their general ineffectiveness: “Scomphus, in Oeniadae, possessed by pleurisy, died on the seventh day, delirious. He drank a drug that purges downwards that day, having been mentally alright the previous day. Not much was purged, but in the purgation he became delirious (*Ep.* 5.3).”<sup>40</sup>

Even when certain treatments are successfully employed, death often follows several days later.<sup>41</sup> Given this uncertainty about the benefits of treatment, it is understandable that specific therapies were often omitted in these accounts. No direct correlation between the therapy and the outcome could be established in most cases, because the diseases themselves were not yet adequately understood. No firm prognostic data could be drawn from them.

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<sup>39</sup> See especially *Ep.* 4.3, 4.25, 4.26, 4.55.

<sup>40</sup> There are many other examples of this. See *Ep.* 4.30, 5.2, 5.7, 7.50. Most instructive in this regard is the famous cough of Perinthus in *Ep.* 6.7.1, in which the physician admits that he tried every form of treatment to no avail: “nothing I tried worth notice helped these, not when they were pressed to evacuate the bowels, not roiling the stomach, not phlebotomy. I even cut the vein under the tongue, and tried emetics on some.”

<sup>41</sup> *Ep.* 5.4, 5.5, 5.9

The author of *Epidemics 5* offers the only compelling evidence for the relation of prognosis and therapy in this set of texts. This treatise discusses treatment far more often than do the other six, and the physician expresses greater confidence in his ability to relate the symptom to the appropriate therapy. His approach to this problem is completely consistent with the other treatises in the corpus. When evaluating a fatal case, the author writes: “it would appear that, if there had been a single incision adequate for drainage and the pus had been drawn toward the incision and, if another incision had been needed, one adequate for drainage had been cut: if this had been done to him *at the right time* (ἐν τῷ ὠρεῖ), then he would have become healthy (5.7).” The author made a judgment about the right therapy to use on the basis of his interpretation of the symptoms. He also recognizes that there must have been an opportune moment to treat, but since he did not attend the patient himself, he refrains from formulating an opinion as to when it might have been.

Other cases might have turned out differently if the drugs had been administered according to the proper measure. Scamandrus of Larissa purgative drugs while suffering from a mortification of the hip. He died with spasms on the eighth day. The doctor writes: “it seemed that he would have survived longer if not for the strength of the medicine (5.15).” This retrospective prognosis<sup>42</sup> takes into account the effects of therapy on the length of the disease. Antimachus of Larissa, a woman fifty days pregnant, suffered a variety of symptoms including loss of appetite, heartburn and fever. Purgative drugs made her nauseous and ulcerated her lower intestine. After steadily declining, she died at midnight. The author writes: “it looked as though she would have survived if she could have drunk water and vomited immediately, before it went below (5.18).” Again the prognostic signs

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<sup>42</sup> This sounds like an oxymoron but ancient prognosis refers to the interpretation of symptoms in general, whether past, present, or future.

point to a certain treatment which, if not administered on time, will lead to the death of the patient.<sup>43</sup>

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<sup>43</sup> Even Ludwig Edelstein, who denied that prognosis had any medical significance, concedes that the *Epidemics* are the only place where prognosis and therapy are connected (1967, 79): “The books on *Epidemics* are the only writings to use prognosis in curing the sick. Elsewhere the setting up of prognoses in treating a patient always hinges on psychological considerations.”

## **Chapter 2-Prognosis and Therapy in the “Cnidian” Treatises**

### **A Distinctive Cnidian Approach to Medicine?**

This chapter will focus on the ways in which prognosis, diagnosis, and therapeutic intervention interact in the “disease” treatises of the Hippocratic corpus. As noted in chapter one, since the rise of modern critical scholarship, this sub-genre was held to represent the Cnidian approach to medical doctrine and practice. The number of treatises assigned to this collection varied according to individual scholars’ conceptions of the nature of Cnidian doctrine. Ilberg had associated as many as twelve writings with this group;<sup>44</sup> Edelstein had limited the tally to three.<sup>45</sup> Lonie sought a middle ground while favoring Ilberg’s liberal estimate.<sup>46</sup> Though the notion of rival medical schools has met with a great deal of skepticism over the last two decades, there can be no question that the writings long associated with Cnidos offer a distinct, and roughly uniform, approach to the classification of disease and therapy. *Diseases 2*, *Diseases 3*, *On Affections*, and *On Internal Affections* may be included without controversy in this collection.

Three traditional claims about these “disease” treatises deserve a fresh evaluation: first, that the authors emphasized diagnosis over prognosis, that is to say, they were more concerned to identify individual diseases than to analyze the predictive value of disease

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<sup>44</sup> Ilberg 1894, 33.

<sup>45</sup> Edelstein 1931, 159.

<sup>46</sup> Lonie 1965, 1.

phenomena on the basis of symptoms;<sup>47</sup> second, that they directed their treatment to the disease rather than the particular constitution of the patient;<sup>48</sup> and third, that they favored an interventionist approach to therapy that could be contrasted with the laissez-faire prognostic method of healing.

The first claim constitutes, in my judgment, a serious misunderstanding of the literature. M. Grmek has articulated the problem thus: “In truth, modern diagnosis implies prognosis, and Hippocratic prognosis is partly diagnosis in disguise...prognosis gave the physician a simple and effective way to distinguish and articulate typological regularities in the jumble of a still very crude nosological taxonomy.”<sup>49</sup> Grmek notes the unsystematic character of early efforts to classify diseases, arguing that prognosis represented an effort to organize morbid phenomena into a coherent system. Since the names attributed to various diseases were liable to multiple interpretations, it was helpful for physicians to examine, without recourse to disease titles, how the symptoms develop over time and interact in individual cases. As a physician himself and historian of science, Grmek criticized the tendency of philologists to make academic distinctions which the literary record, not to mention actual medical experience, does not support. Diagnosis must include prognosis, since disease is a process, not a static entity. In addition to this, ancient prognosis involved the interpretation of signs with regard not just to the future, but to the past and present as well, thus overlapping to some extent with the function of modern diagnosis. Though Grmek does not address the implications of his view for the “disease” treatises of the Corpus, his

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<sup>47</sup> Littré developed the modern opposition between diagnosis and prognosis. See also Jones 1923, ix. Thivel 1981, 39-67 discusses the developments since Littré.

<sup>48</sup> Sudhoff 1927, 97; Lonie 1965, 3.

<sup>49</sup> Grmek 1989, 293.

effort to collapse the distinction between diagnosis and prognosis provides the key to understanding how diseases are classified in these writings.

We have already defined prognosis as the art of determining the short-term and long-range consequences of illness on the basis of the total manifestation of symptoms over time. The presentation of the various disease phenomena in the nosological writings provides this same prognostic scheme with the important exception that the *nosoi* are enumerated, roughly speaking, according to an *a capite ad calcem* organizational principle. *Diseases 2*, for instance, starts with diseases of the head and then moves down the body until it reaches the feet. These *nosoi*, however, are often nothing more than a series of prognostic signs, which, when appearing together, indicate that the illness will follow a particular course until it terminates within a specified interval. An analysis of the physiological causes is an incidental, not an essential, aspect of the presentation of illness.<sup>50</sup> For some diseases, the physiological cause is mentioned; in many other cases, it is omitted. When the author of *Diseases 2* mentions a disease of the head, he means that the head is the locus for the symptoms (12). When an internal organ is affected such as the spleen, *Dis. 2* calls this a splenic disease because the patient feels pain there. It is the symptom that determines the disease title in these cases, not the supposed “real” cause. Very frequently, no effort is made even to locate the affected body part. The simple formula “another disease” (21) begins the entry and a series of prognostic signs follow along with the projected timeline for death or recovery. This demonstrates that diagnosis, if by this term we mean a judgment about the explicit cause of disease, was not, at least in the early stages of disease classification,<sup>51</sup>

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<sup>50</sup> *Dis. 3*, for example, eliminates any discussion of etiology altogether.

<sup>51</sup> I accept the conclusions of Jouanna 1975 that etiology played an inconsistent role in the early layers of the disease treatises.

essential to the project of defining morbid phenomena, but it was rather the coincidence of the symptoms and their bearing on the length and severity of disease that warranted division into separate categories.<sup>52</sup>

In what respect, then, do the “disease” treatises differ from the approach of *Prog*? It must be remembered that *Prog.* was concerned with the manifestation of *acute diseases* in particular. This set of illnesses included pneumonia, pleuritis, *kausos*, phrenitis, etc. The antiquity of these disease titles is guaranteed by the reference in *Reg. in Acute Dis.*, which says that the ἀρχαῖοι labeled these acute (1). The distinction between individual acute illnesses appears to have grown so nebulous, however, that *Prog.* and *Reg. In Acute Dis.* grouped all of them together under one heading, focusing on the symptoms themselves without bothering with the variation in names.<sup>53</sup> The author of *Reg. in Acute Dis.* goes so far as to criticize the *Cnidian Sentences* for multiplying the names of diseases on the basis of very slight variations in symptoms. In truth, however, the alleged divide between the prognostic writings and the disease treatises on this point of classification carries little significance. The editors of the disease treatises took into account the wide variety of possible manifestations of symptoms, including their meaning for the progress of the disease over time, and labeled them as distinct diseases or as varieties of the same disease.<sup>54</sup> The authors of *Prog.* and *Reg. In Acute Dis.* followed this practice in every respect but the

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<sup>52</sup> B. Holmes 2005, 111 n. 24 writes that “it is often difficult, particularly in a situation such as this one where no name for this disease is provided, to distinguish between a symptom and the pathological condition itself.” She also notes that the ancient physicians lack an explicit system of causality.

<sup>53</sup> See *Prog.* 25: Ποθέειν δὲ χρῆν οὐδενὸς νοσημάτων οὖνομα, ὅτι μὴ τυγχάνη ἐνθάδε γεγραμμένον· πάντα γὰρ ὀνόμα ἐν τοῖσι χρόνοισι τοῖσι προειρημένοισι κρίνεται, γνώση τοῖσιν αὐτέοισι σημείοισιν.

<sup>54</sup> B. Holmes 2005, 120 n. 58 has aptly articulated this point: “A *nosos* can have an *eidos*, a “form”, but this seems to refer to the collection of qualities that render it discrete vis-à-vis other diseases. If this has a phenomenal dimension, it no doubt lies in the symptomatic expression of the *nosos*...”



terminology, which they deemed unimportant. Both groups present the prognostic symptoms, the critical days and the likelihood of death or recovery.

The distinction between diagnosis and prognosis also misses the point insofar as *Prog.* and the nosological treatises attribute the origin of all acute diseases to a broadly similar humoral pathology. The treatise *On Affections* states that all diseases arise from bile and phlegm (*Aff.* 1); *Diseases* 2.1-11 credits the onset of various illnesses to fluxes of bile and phlegm. *Prog.* notes that the most favorable kinds of vomit are compounded of bile and phlegm in equal measure (13). The most dangerous stools are those with a bilious appearance (11). The worst kinds of sputa contain an abundance of phlegm, etc (14). The assumption underlying these observations is that an imbalance of one particular humor generates disease, while a mixture indicates health. Fluxes of phlegm or bile may also obstruct the lungs or vessels and hinder their proper functioning or alter the temperature of the body. In either case, *Prog.* and the “disease” treatises assume that disordered humors are responsible for disease, which also explains why purges and other evacuants are recommended in both sets of writings.

Even if one were to limit Hippocratic prognosis in the strict sense to the act of announcing death or recovery in advance to the patient, as Edelstein and Diller had done, one would be hard pressed to say that the nosological treatises do not countenance this practice. In cases of pneumonia, the author of *Dis. 3* states that “if the sputum is not cleaned out effectively, if respiration is rapid, and if expectoration is failing, announce that there is no hope of survival unless the patient can help with the cleaning (*Dis. 3.* 15.142).” In a disease of the lung, “if hair falls out of the head, which is already on the point of becoming bald from the disease, and if, when the patient spits onto coals, his sputum has a heavy odor, tell him

that he his about to die before long, and that what kills him will be diarrhea (*Dis.* 2.48).”

These two separate treatises bear witness to the fact that Diller’s *eigentliche Prognose* was also recommended by the supposed Cnidian physicians.

More significant for the purposes of this project, both the “Cnidian” treatises and *Prog.* are aware that the same disease can have different outcomes depending on the constitution of the patient and the course of treatment undertaken throughout the process. The standard line about Cnidian medicine, that its practitioners tailored treatment to symptoms in the abstract without considering different kinds of patients or their prior medical history, is not borne out by the evidence. Very often the Hippocratic author suggests the administration of *pharmaka* such as hellebore, but sometimes only for a certain kind of patient. For instance, in quartan fevers, the author of *Diseases 2* prescribes medications when the fever seizes a person who *is already unclean from a previous disease*. By contrast, when a healthy person comes down with fever, the doctor should apply vapor baths and garlic heads soaked in honey (*Dis.* 2.43). The immediate medical history of the patient is relevant to the decision of whether to evacuate the lower cavity at the beginning of the disease.

It is also true that the Hippocratic physicians in this part of the *Corpus* pay attention to the peculiar bodily make-up of each patient. The final section of *Diseases 3* lists the properties of the various cooling agents that were to be employed in cases of ardent fever. In introducing the list, the author writes: “Give different ones to different patients, for the sweet ones do not benefit everyone, nor do the astringent ones, nor are all patients able to drink the same things (*Dis.* 3. 17).” The author of *Internal Affections*, when advising a course of treatment for a particular kind of dropsy, warns that a very emaciated patient must be

moistened with vapor baths prior to taking the medication: otherwise he will not respond well to it (*Int. Aff.* 26). The author of *Diseases 3* displays sensitivity to the effects of pleurisy on someone of a bilious nature. “If the person is bilious by nature, and has been taken by the disease when in an unclean state, before he expectorates bilious sputum clean out bile thoroughly with a medication; but to a patient already expectorating bilious material, do not give a medication, because if you do, he will be unable to discharge his sputum upwards, and will choke to death on the seventh or ninth day (16).” A bilious person afflicted with pleurisy requires a special kind of therapeutic intervention. The doctor must be attentive to the symptoms, however, before administering the bile-inducing *pharmakon*. He has to know the consequences of applying medications at the wrong time. If the patient discharges sputum on his own, then the expectorant will arrest the bilious flow and cause the patient to choke to death by the seventh or ninth day. The prognosis envisages the therapeutic intervention. The right time to treat is before the expectoration of sputum. Once the bilious cough has begun, treatment must be avoided. The author of *Diseases 3*, like the other Hippocratic authors we have considered, employs prognosis for the sake of determining the *kairos* for treatment and adjusts the prognosis and the therapy to the nature of each patient.

Another typical claim about the “disease” treatises, that they espouse a more aggressive therapeutic methodology than do the Coan writings, does not consider the full range of the evidence. We have already seen that the prognostic writings and the treatises on regimen presuppose aggressive therapeutic methods in their own right. But it is also true that the nosological writings advocate an expectative approach to medicine in certain situations. *Dis. 2*. 1-11 omits mention of treatment altogether in its presentation of disease. Other treatises present some diseases as incurable, offering treatment as an option to be exercised

only at the physician's discretion. In some cases, the author recommends that the attending physician wait a certain period before treating, to see whether the disease will issue in death or recovery in the critical early stages. When describing a particular kind of jaundice, the author of *Int. Aff.* writes: "the disease is less often mortal than the preceding one but, unless the patient recovers in seven days, it goes on for a longer time...when the case is such, if you attend the disease from the beginning, after seven days have the patient drink hellebore... (36)." The physician refrains from treating at the beginning of disease, for the first days will decide whether the patient lives or dies. There is nothing the physician can do to ensure a favorable outcome.

The traditional view of the "disease" treatises of the Corpus, then, has to some extent misrepresented the medical practices reflected in them and set up a false contrast with the prognostic approach to healing. In effect, the nosological literature does not constitute a major departure from the approach to prognosis and healing in *Prog.* and the works on regimen. We concluded in chapter one that the medical significance of prognosis consisted in determining the *kairos* for treatment, which meant either the right moment to treat or the time to avoid a certain treatment. An ill-judged decision about the moment to apply a particular remedy could cause irreparable harm to the patient. An important element of prognosis, therefore, was the recognition of the effects of treatment on the symptoms. The texts consulted in the first chapter provided sufficient evidence to support this argument, but the "Cnidian" writings, with their ample and detailed discussions of treatment, offer wider scope for our analysis of the relationship between prognosis and therapy in the Hippocratic Corpus.

### **Prognosis and Therapy in Four Nosological Treatises**

The nosological writings observe a similar structural pattern with some key variations. They consist of descriptions of various morbid phenomena under disease titles which range from vague (*ἐτέρη νοῦσος*) to very specific (*φρενίτις*). After the disease title come the list of symptoms and the prognosis. The author then proceeds to a discussion of the recommended therapy, which sometimes takes into account the constitution of the patient and the contingencies of a disease's course but at other times is given without these qualifications. Some of the writings have received far more elaboration than others; *On Internal Affections* shows the greatest interest in etiology and diagnosis. The physiological and/or external causes of each disease are examined sometimes at great length in this treatise. *Diseases 3*, by contrast, pays little attention to pathogenesis. *Diseases 2.1-11* presents the etiology but leaves out treatment. *On Affections*, alone in this group, contains a literary prologue. Notwithstanding this variety, the basic scheme of symptoms followed by prognosis and treatment may be found in the great majority of these texts.

Since Jacques Jouanna's exhaustive study of the literary strata of the Cnidian treatises, it has been generally conceded that *Diseases 2.12-75* includes the oldest material of this collection.<sup>55</sup> Chapters 1-11 describe the same diseases as 12-23 but have been expanded to include the etiology. These chapters appear to have been subjoined to the work at some other time, since they contain no reference to treatment and present material that is repeated in subsequent chapters. *Diseases 2.12-75* provides the basic scheme of symptoms, prognosis and therapy on which *Internal Affections* and *Diseases 3* would later elaborate and thus serves as a good starting point for our investigation.

At the most general level, *Diseases 2* shows that the appearance of a particular set of symptoms demands a specific therapeutic response. A close observation of the signs tells

the doctor which therapy to undertake from the beginning and how to modify the treatment over time. This much is obvious enough. Have the prognoses, however, taken into account the effects of treatment or have the authors set this matter aside, presenting the course of illness without considering the benefits of therapy? At first glance, the latter seems to be more correct, since the sections on prognosis and therapy have been strictly separated from one another. But it would be hard to imagine the usefulness of this approach unless one advocated the view that only the body's *physis* in combat with disease could determine the resolution. The elaborate therapeutic recommendations of this collection indicate that these physicians believed in an active approach to healing and therefore were not prepared to leave the body to its own devices. Careful attention, then, must be paid to the recommendations about therapy to see how they relate to the prognosis.

Here is a sample of the structure of *Diseases 2*:

Πλευριτίς· πλευριτίς ὅταν λάβῃ, πυρετός καὶ ῥίγος ἔχει, καὶ ὀδύνη διὰ τῆς ῥάχιος ἐς τὸ στῆθος, καὶ ὀρθοπνοίη, καὶ βήξ, καὶ τὸ σίαλον λεπτὸν καὶ ὑπόχολον, καὶ ἀποβήσεται οὐ ῥηιδίως, καὶ διὰ τῶν βουβώνων ὀδύνη, καὶ οὐρέει αἱματώδεις. Ὅταν οὕτως ἔχῃ, ἢν μὲν τὸ πῦρ ἀνῆ ἑβδομαῖον ἔοντα, ὑγιῆς γίνεται· ἢν δὲ μὴ ἀνῆ, ἀφικνέεται ἢ νοῦσος ἐς τὰς ἑνδεκα ἡμέρας ἢ τὰς τεσσαρεσκαίδεκα· οἱ μὲν οὖν πολλοὶ ἐν ταύτησιν ἀπόλλυνται· ἢν δὲ ὑπερβάλλῃ τὴν τεσσαρεσκαίδεκάτην, ἐκφυγγάνει. Ὅταν οὕτως ἢ ὀδύνη ἔχῃ, χλιάσματα προστιθέναι· πινέτω δὲ μέλι, ἀναζέσας, ἐπιχέας ὄξος ἴσον τῷ μέτρῳ τοῦ μέλιτος, ἔπειτα ὅποσον ἂν γένηται μέτρον τοῦ ἐφδοῦ μέλιτος καὶ τοῦ ὄξους, ἐπιχέας ὕδατος ἐνὸς δέοντος εἴκοσι, τοῦτο διδόναι πίνειν κατ' ὀλίγον πυκνὰ, καὶ μεταμίσγειν ὕδωρ, ὄξος ὀλίγον παραχέων· ῥοφεέτω δὲ καὶ κέγχρου χυλὸν, μέλι ὀλίγον παραστάζων, ψυχρὸν, ὅσον τεταρτημόριον κοτύλης ἐφ' ἑκατέρῳ σιτίῳ, καὶ πινέτω οἶνον λευκὸν, οἰνώδεα, ὕδαρέα, ὀλίγον· ὁ δὲ οἶνος ἔστω ὡς μαλθακώτατος ὀσμὴν μὴ ἔχων. Ὅταν δὲ ὁ πυρετός ἀφῆ, ἡμέρας μὲν δύο τὸν κέγχρον ῥοφεέτω δις τῆς ἡμέρης, καὶ τεῦτλα ἠδύτατα ἐσθιέτω· ἔπειτα μετὰ ταῦτα σκύλακα ἢ ὀρνίδιον κάδεφρον ποιήσας, τοῦ ζυμοῦ ῥοφεέτω, καὶ τῶν κρεῶν φαγέτω ὀλίγα· τὸν δὲ λοιπὸν χρόνον μάλιστα ὅσον ὑπὸ τῆς νοῦσου ἔχοιτο, ἀριστιζέσθω μὲν τὸν κέγχρον, ἐς ἐσπέρην δὲ σιτίοισιν ὡς ἐλαχίστοισι χρήσθω καὶ μαλθακωτάτοισιν. (*Dis.* 2.44)

<sup>55</sup> Jouanna 1975.

In this kind of pleurisy, the patient recovers if the fever goes away on the seventh day. Otherwise, the disease lasts for eleven or fourteen days, during which time many patients die. If the patient lasts beyond the fourteen days, he will survive. The therapeutic recommendations which follow the prognosis consist of fomentations, honeyed drinks, and wine. After the fever remits on the seventh day, the regimen should be adjusted for two days and then again after these until the termination of the disease. Pleurisy, then, unfolds according to a regular and predictable pattern. The best the doctor can do is to facilitate the remission of fever on the seventh day. In fact, the therapy is directed only to those patients whose fever has cleared on the seventh day; in other words, those with the best hope of recovery. The physician is advised to adjust the regimen after the disappearance of the fever. It is here alone that prognosis helps the doctor to know when to alter the treatment. On the whole, this passage suggests that pleurisy cannot always be cured by therapy. The physician can make an attempt, but the outcome will depend on the body's response to the regimen.

There are a number of other ailments in this treatise, however, for which a precise and detailed course of treatment is required to bring about a favorable resolution for the patient. In the case of a damaged lung, the author specifies that *unless the patient is treated* he will die immediately: he expectorates blood and pus, and then violent fevers come on and kill him. If the doctor administers the right treatment, the patient will likely recover, but the doctor must observe the signs and know when to intervene with medications and when to refrain:

If you think it is the right time to give hellebore, if the person is able, let him take it straight off, but if he is not, mix half a draught of hellebore with lentils, and stop the administration with the fifth or sixth draught. If violent fevers are present, do not give a medication to set the lower cavity in motion, but if they are not clean downwards with ass's milk; if the patient is too weak to drink this, employ an enema. Give a gentle medication for the head; if copious salty sputum runs into the mouth, apply a

medication to the nostrils, but one that will not draw bile; if no flux goes into the mouth, do not make any application to the head (50).

This cautious approach to prognosis and therapy resembles that of *Prog.* and *Reg. In Acute Dis.*, where the symptoms are persistently evaluated for their relevance to the time and manner of treatment.

These case studies have illustrated the two models of prognosis and therapy employed in *Diseases 2*. In cases of pneumonia or pleurisy, the disease follows a predictable course regardless of the treatment. There will be minor adjustments to regimen after the critical days have been reached, but the physician's task primarily consists of reducing regimen to avoid giving strength to the illness. Chance governs the outcome. A host of other illnesses, however, require vigilant attention throughout their course. Individual symptoms demand a particular therapeutic response. The patient's recovery depends on the doctor's ability to interpret the range of possible signs and then to apply the appropriate treatment at the right moment.<sup>56</sup> It is true, however, that the author of *Dis. 2* sometimes looks beyond the symptom to the cause of the disease in order to determine the treatment. When the lung falls against the side (59), for instance, attention must be paid to the reason for the lapse. If a wound or a previous incision gave rise to the problem, the physician is to attach a pipe to a bladder, fill it with air, and place it in the opening. In any other case, the patient should be prescribed gruels while his chest is wrapped in a bandage. The symptoms alone do not provide sufficient information to select the treatment. One might say, then, that a determination of the etiology of the disease must precede judgments about therapy. Based on the entirety of the evidence from *Diseases 2*, however, etiology and therapy appear to be

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<sup>56</sup> Another characteristic example of the use of *kairos* in *Diseases 2* (61) occurs in the context of a dropsy of the lung. The author notes that some people think the disease arises in the lower cavity because they see the belly large and the feet swollen. This happens, however, only when the *kairos* for the incision has been missed.



linked only when an external wound has contributed to the disease. The “disease” treatises are primarily concerned with internal diseases; external wounds are dealt with in other treatises<sup>57</sup> of the corpus and require specific kinds of treatment. As the author of *Aff.* writes: “about medications that are drunk or applied to wounds, it is worth learning from everyone; for people do not discover these by reasoning, but by chance, and experts not more than laymen (45).” It is this overlap between external wound and internal disease in the case of the lapsed lung that results in a separate therapeutic recommendation when the former is in question.

The approaches to prognosis and therapy represented in *Diseases 3* resemble those of *Diseases 2*, except that in the former the discussions of pleurisy and pneumonia display a greater sophistication in their recommendations for treatment. For pneumonia, the symptoms provide a clear indication of the course of the disease: if the tongue is dark at the beginning of the disease, recovery will be more rapid; if this occurs later, recovery will be slow. The author writes: “the tongue gives an indication of recovery in this disease just as in pleurisy (15).” One should also attend to the sputa in the first two weeks, for its color and texture will change as the disease advances. If the patient no longer coughs up moist sputum on the fifteenth and sixteenth days, he has recovered. Otherwise, the eighteenth and twenty-first days will be critical for recovery. If the disease lasts beyond this time, a sweetish sputum indicates that the disease will likely last for a year; a foul taste in the mouth points to a fatal issue. The first twenty-two days will determine whether the patient will recover or suffer lasting effects and possibly perish.

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<sup>57</sup> e.g. *On Ulcers, On Wounds of the Head.*

What role, then, does the therapy play in making the prognosis? The conclusion appears to be that while treatment is helpful in facilitating recovery, the prognosis does not envisage the effects of therapy in this case. Pneumonia follows a fixed course. If recovery occurs through treatment, it will happen only on certain critical days, the fifteenth, the sixteenth, the eighteenth, or the twenty-first. A correct interpretation of the symptoms, however, will suggest to the physician what plan of treatment to undertake if recovery is to be possible. In the case of pneumonia, the treatment needs to be specific to the day: “On the first days, gruels should be sweetish, for with these you will best wash away and remove what has been deposited and congealed in the chest. On the fourth, fifth, and six days, change from sweet to rich ones, for this helps the patient to cough up sputum gently...give expectorant medications on the sixth and eight days, and even later in the course of the disease (15).” The regularity of the course of pneumonia demands precision in the administration of treatment, and if recovery occurs, it will occur at the interval specific to the periodicity of the disease.

The lengthy discussion of pleurisy which follows the section on pneumonia represents a different approach to prognosis and therapy. The many possible variations in symptoms requires that the physician pay vigilant attention to the progress of the illness and measure his therapeutic responses accordingly. This disease does not follow one fixed course. The doctor must interpret the signs to determine what is happening inside the body at every moment. As in *Prog.* and some sections of *Diseases 2*, the prognosis must be continually revised with every new development. Differences in symptoms will mean different critical days and different approaches to treatment.

The author distinguishes between several types of pleurisy: the bilious and sanguineous variety, pleurisy with hiccups, and pleurisy of the back. These varieties have their own critical days and prognostic signs in addition to the general symptoms of pleurisy. There are, however, other ancillary symptoms that are relevant to prognosis: “When, in one of these pleurisies, in addition the back becomes red, the shoulders are warm, the patient feels a heaviness on sitting up, and his belly is set in violent motion by yellow-green foul-smelling stools, he dies on the twenty-first day as a result of the evacuation. If he survives after that, he recovers (16).” The author then writes: “patients whose expectorations are manifold from the start, and whose pains are very sharp, die on the third day; if they survive for that many, they recover.” Any number of things can happen to affect the outcome of the disease.

While the author of *Diseases 3* reserved judgment about the capacity of therapy to cure pneumonia, he expresses a great deal more optimism about it in pleuritic cases if the right treatments are administered throughout (*Dis. 3, 16*). After describing his recommendations for therapy, the author writes: “These diseases, if treated in such a way, are cured, unless some of the material that should be coughed up is left behind in the lung and becomes pus (16).” Barring the latter contingency, the prospects for recovery are very good. But this is true only if the treatment is selected at every stage with an eye to the symptom and the patient. Whereas in pneumonia the treatment was carefully regimented without regard for variations in symptoms or individual patients, the indeterminacy of pleurisy means that the doctor has, to some extent, to treat extemporaneously while watching for a multitude of possible contingencies. For example, patients that are spitting up bilious material must not receive a medication, for they will choke and die on the seventh or ninth day. If, besides pain

in the side, the patient aches in the hypochondrium area, the doctor should administer an enema. If stertorous breathing is heard in the chest without adequate expectoration, a medication of cuckoo-pint root and olive oil should be administered. The therapeutic interventions are directed to the elimination of the harmful material, whether bile, phlegm, or blood. If the doctor knows what the symptoms portend and what the effects of medications are, he will know when to treat in a certain way and when to refrain from treatment.

The treatise *On Affections* observes the same model of prognosis and therapy embodied in *Diseases 2* and *Diseases 3* but puts far greater emphasis on the physiological cause of the disease in prescribing treatment. For the author of *Aff.*, all diseases arise from bile and phlegm: “the bile and phlegm produce diseases when, inside the body, one of them becomes too moist, too dry, too hot, or too cold; they become this way from foods and drinks, from exertions and wounds, from smell, sight, sound, venery, and from heat and cold (1).” Further on the author adds: “for phlegm and bile, when gathered, are powerful and have dominance in whichever part of the body they occupy, and they produce suffering and violent pain; but dispersed, they are weaker in any part of the body in which they appear (16).” It was remarked above that a humoral pathology based on bile and phlegm informed the prognostic treatises, the treatises on regimen, as well as the nosological writings. In that respect, this is nothing new. The humors come into greater prominence in *Aff.*, however, because the treatment is often tailored to the particular fluid responsible for the disease. In *Diseases 2*, medications are employed to clean out the upper and lower cavities, but only rarely was a specific humor mentioned. In *Aff.* it is critical to target phlegm or bile when administering medications: “In cleaning, employ medications that clean out bile; when they are phlegmatic, give medications that clean out phlegm (36).” One can detect which peccant

humor is responsible by observing the color of the patient's skin or of his excretions: "in white phlegm, the whole body swells up with a white swelling, and on one and the same day, the patient seems better, at other times worse...give this patient a medication that will clean water and phlegm downwards...if the patient is treated at the onset of the disease, he recovers; if he is not, the disease changes to dropsy and has killed the person (19)." The color of the body indicates that the disease owes its origin to phlegm. The attending doctor must succeed in cleaning out the phlegm with the right kind of medication, for not all *pharmaka* elicit this particular fluid. This treatment leads to recovery; a failure to treat properly prolongs the disease and causes dropsy.

This rigidity about humors and their corresponding medications, which we will see developed even further in *Int. Aff.*, stands alongside an approach to prognosis and therapy that is fundamentally consistent with the other treatises we have considered. This comes into focus in a passage dealing with the properties of food and drinks: "If the foods and drinks that are most nourishing to the body and most sufficient for nourishment and health are employed at an inopportune moment or in an excessive amount, diseases result and, from the diseases, death (*Aff.* 48)." The author follows this comment with a discussion of the capacities of various foods to generate particular physiological responses. If the physician can interpret from the symptoms what is happening inside the body, he will know what foods to use and when to use them to achieve the desired effect on the patient, whether it be to strengthen or slim down the body, to purge phlegm or bile, etc. As the author writes, "if you make your administrations to patients in accord with their disease and their body, the body will consume the foods in due course and be neither in want nor overfull; if, however, you miss the right measure in the one direction or another, in both cases harm will be done (47)."

To know, then, the time to employ the right foods and in what measure to employ them requires an understanding of the disease and the constitution of the patient, all of which are within the province of Hippocratic prognosis.

*On Internal Affections* contains the most detailed and sophisticated presentation in the Hippocratic Corpus of the causes of disease and the therapies that must be used to counter them. Like *Aff.*, this treatise expounds on the physiological causes of illness but expands the humoral pathology of bile and phlegm to include the harmful effects of blood. With relation to prognosis and therapy, a number of scenarios are envisaged, but the author tends to keep the effects of treatment in the foreground when making the prognosis. He employs the formula: if the disease is treated in such a way, you will very quickly make the patient well (*τάχιστα ὑγιᾶ ποιήσεις*). He says this whether the disease has crises on particular days or these are left unspecified. The emphasis of the prognosis lies in the capacity of treatment to bring about a swift recovery. Sometimes no other prognosis is given, at other times an alternative prognosis takes into account the possibility of a failure to treat or of some negligence in its application.

The discussion of dropsy in *Int. Aff.* (23) illustrates how the author conceives of prognosis as a task that is bound up with the therapeutic process. After the etiology and the symptoms, the physician recommends incision at the point where the swelling emerges, a medication, and a resumption of the regimen that had been prescribed in the previous case. If the patient is treated in such a way, you will quickly make the patient well, he writes. The prognosis presupposes that the therapy has been properly administered. The disease will come to a swift end if the physician acts promptly. There is no mention of critical days or of a regular period during which the disease is decided (*κρίνεται*) for death or recovery. In a

certain case of typhus, however, the author writes that the disease regularly leads to death on the seventh or fourteenth day, but if the patient survives the twenty-fourth, he has moved beyond the point of danger. Despite providing this chronology in the section devoted to the symptoms, the author proceeds to write in his recommendations for therapy that if the right medications, gruels, or drinks are given, “you will quickly make the patient well. Still, the disease is severe, and few escape it.”

These two statements appear to contradict one another. The fact that they are formulae which are repeated frequently throughout this text suggests that their meaning might require a bit of unpacking. In most cases, the patients afflicted with this kind of typhus will perish. It cannot be true then that the recommended medications will *always* bring about a swift recovery for the patient, though this is what the formula implies. It must mean that those patients *who will respond well to the medication* will enjoy a quick recovery.<sup>58</sup> For the author elsewhere recognizes that some patients respond well to treatments and others do not. Whereas there may be certain cases where treatment always works, such as in the case of dropsy mentioned above, at other times and for certain diseases the results are unpredictable. There is a disease of the spleen, for instance, which requires cauterization. The author writes: “If you think it advisable, cauterize when the spleen is thickest and largest. If you succeed in cauterizing at the opportune moment, you will bring about recovery; but, if the patient does not recover with this treatment, he wastes away; and in time dies, for the disease is severe (32).” This example indicates that the bare statement “you will bring about recovery” does not apply to every patient, but only to those who are capable of being cured. To return to the typhus, then, the doctor states that many will die from the disease before the twenty-fourth

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<sup>58</sup> For a thorough discussion of how some of the sweeping statements in the Corpus require qualification, see von Staden, 1990.

day, but usually on the seventh or fourteenth. Survival beyond the twenty-fourth day bodes well for recovery. If the right treatments are administered, however, and the patient responds well to them, then recovery will follow much more quickly than the usual twenty-four day interval allotted to the disease.

This treatise also includes diseases against which the physician must pursue a long-term plan of treatment in order to achieve a favorable result. The prognoses given in these cases again presuppose that the prescribed plan of treatment has been followed. The following is an account of a specific type of dropsy (26):

The next dropsy arises in the following way: if, in summer, a person on a long journey happens upon some stagnant rain water, and drinks a large amount of it at one draught, if his tissues drink up the water and hold it within themselves, and if no evacuation at all occurs. The patient, then, suffers the following: the water in the tissues produces burning heat in the cavity and in the body, so that the fat present in the cavity melts. As long as the person keeps walking, he does not seem to suffer any harm, but when he stops and the sun goes down, he immediately has an attack...When the case is such, give the patient spurge-flax, hippopheos juice or Cnidian berry; you must give these medications as follows: the spurge-flax every sixth day, the hippopheos juice every eighth day, and the Cnidian berry every tenth day; you must give them until the patient is cleaned out and loosened. On the days between, feed him well on the same things given to previous patients. In particular, give him the same water to drink from which he took the disease...This patient, if treated in such a way, will be relieved of the disease within three or six months; but if there is any negligence, and he is not treated at once, he soon dies.

This disease, then, does not have the expected critical days within which death or recovery is determined. The length of the disease depends on the regularity and the accuracy of the therapeutic intervention. Death will occur whenever errors are made in the treatment. *Int. Aff.* stands as the only treatise in this collection which provides timeframes for the termination of a disease on the sole basis of a successful plan of treatment. In ileuses, or inflammations of the bowel, the method is the same (44). The disease lasts for one year if it is treated properly; no mention is made of when or under what circumstances the patient



might die. The prognosis is based on an optimistic appraisal of the benefits of the recommended therapy.

*Internal Affections* is also noteworthy for drawing the most explicit connection between diagnosis of cause and therapeutic response. The author lists four possible causes of sciatica, or severe burning pain in the joints: the heat of the sun which dries the moisture in the joints, bile, phlegm or blood. Separate courses of treatment target each etiology. This approach has its limitations because the author fails to differentiate the signs indicating the likelihood of one cause over another: “the pains from all these diseases are similar; sometimes mild chills and fevers are present (51).” Here no useful correlation is posited between symptom and cause. The doctor reasons from his humoral theory to a judgment about the cause of the sciatica. He moves beyond prognosis, which always relied on the observation of symptoms, however grounded they may have been in assumptions about the physiology of the body, to a more dogmatic posture. The seeds of this kind of dogmatism in ancient medicine would grow to a much larger stature in the centuries succeeding the Hippocratics.

### **Conclusion**

This study has demonstrated the fundamental coherence of the approaches to medicine represented by the two sections of the Hippocratic Corpus formerly assigned to Cos and Cnidos respectively. It has shown that, contrary to prevailing scholarly opinion, prognosis and therapy were interdependent aspects of the art of healing. The analysis of this relationship proved most productive in the “Cnidian” treatises, which contain thorough accounts of prognosis and treatment for a variety of pathological conditions. Though our approach was largely synchronic, it is tempting to see a development in the Hippocratic

physicians' method of forming prognoses. In *Diseases 2* and *3*, some diseases are presented as following a determined course which the administration of treatment is incapable of altering. Other diseases must be carefully watched at all times, because any variation in symptoms demands a specific therapeutic response.

Some of the prognoses in *Internal Affections*, however, represent a departure from these two methods. They presuppose either the immediate or long-term effectiveness of the recommended therapeutic program. This treatise also contains highly detailed, specific prescriptions for treatment, including the precise days on which to alternate the use of certain kinds of purgative drugs. The work appears, therefore, to reflect an advanced stage of collective medical experience, one in which generations of trial and error had yielded firm prognostic data based on what must have been widespread success in the application of therapies. The next step will be to investigate the nature of the proposed therapies, why they were successful or unsuccessful, and the significance of their careful regulation according to precise temporal schemes. Such a project, however, must await another day.

## Bibliography

All of the chapter references to the Hippocratic writings as well as the translations have been taken from the Loeb editions of Jones, Potter and Smith.

- Deichgräber, K. 1933. *Die Epidemien und Das Corpus Hippocraticum*. Berlin.
- Diller, H. 1938. "Walter Müri : *Arzt und Patient bei Hippokrates*". *Gnomon* 14 : 123-139.
- Edelstein, L. 1931. *Peri Aeron und Die Sammlung der Hippokratischen Schriften*. Berlin.
- . 1967. *Ancient Medicine* (selected papers). Berlin.
- Girard, C. 1990. "L'hellébore, panacée ou placebo?" in *La Maladie et Les Malades Dans La Collection Hippocratique*. ed. Potter, P., Maloney, G., Desautels, J. Quebec: 393-405.
- Grensemann, H. 1975. *Knidische Medizin. Vol I*. Berlin.
- Grmek, M. 1989. *Diseases in the Ancient World*. Baltimore.
- Holmes, B. 2005. *Interpreting the Symptom: From Mastery to Misfortune in Archaic and Classical Greek Thought* (unpublished diss.). Princeton.
- Ilberg, J. 1894. "Die medizine Schrift über die Siebenzahl und die Schule von Knidos," in *Festschrift für Lipsius*: 33-47.
- Jones, W.H.S. 1921-1953. *Hippocrates vol. 1, 2, 4*. Harvard.
- Jouanna, J. 1974. *Hippocrate. Pour une Archaeologie de L'école de Cnide*. Paris.
- . 1992. *Hippocrate*. Fayard.
- King, H. 1998. *Hippocrates' Woman : Reading the Female Body in Ancient Greece*. London and New York.
- Langholf, V. 1990. *Medical Theories in Hippocrates. Early Texts and the Epidemics*. Berlin.
- Lloyd, G.E.R. 1976. "Jouanna, J. *Hippocrate: Pour une Archaeologie de L'école de Cnide*; Grensemann, H. *Knidische Medizin I*." (Rev.). *Journal of Hellenic Studies*: 219-221.
- . 1979. *Magic, Reason, and Experience*. Cambridge.
- Lonie, I.M. 1965. "The Cnidian Treatises of the *Corpus Hippocraticum*". *CQ* 59: 1-30.
- . 1977. "A Structural Pattern in Greek Dietetics and the Early History of Greek

- Medicine". *MedHist* 21: 235-260.
- Müri, W. 1936. *Arzt und Patient bei Hippokrates*. Bern.
- Nutton, V. 1979. *Galen: On Prognosis. Text, Translation, Commentary*. Berlin.
- . 1985. "Murders and Miracles: Lay Attitudes Towards Medicine in Classical Antiquity," in *Patients and Practitioners: Lay Perceptions of Medicine in Pre-Industrial Society*. Ed. Porter, R. Cambridge: 23-53.
- Potter, P. 1988. *Hippocrates, vol. 5, 6*. Harvard.
- Smith, W. 1973. "Galen on Coans vs. Cnidians". *BHM* 48: 569-585.
- . 1994. *Hippocrates vol. 7*. Harvard.
- von Staden, H. 1990. "Incurability and Hopelessness," in *La Maladie et Les Malades Dans La Collection Hippocratique* ed. Potter, Maloney, Desautels. Cambridge: 75-112.
- Stannard, J. 1961. "Hippocratic Pharmacology". *Bulletin for the History of Medicine* 35: 497-518.
- Sudhoff, K. 1927. *Kos und Knidos*. Munich.
- Thivel, A. 1981. *Cnide et Cos ? Essai sur les doctrines medicales dans la Collection Hippocratique*. Paris.