ABSTRACT

The Hippocratics in Context: The Ethical Formation of the Hippocratic Physician

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The Hippocratic Oath is widely known today as something that medical students say at their graduation ceremony as they are about to go out into the world and begin their practice of medicine. This long-standing tradition goes back centuries, and begs the question of why this is done? Who was Hippocrates, and what did he and the physicians he taught use the Hippocratic Oath for? In order to answer this question, one must have an understanding of several things about ancient Greece: the history of education in ancient Greece, communities of physicians contemporary with Hippocrates, the Hippocratic Corpus, and Hippocrates himself. In this thesis I provide this context in order to elucidate how the Hippocratic Oath was used in the education of Hippocratic physicians in fifth century BCE Greece.

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THE HIPPOCRATICS IN CONTEXT: THE ETHICAL FORMATION OF THE $\label{eq:hippocratic} \text{HIPPOCRATIC PHYSICIAN}$

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INTRODUCTION

The age of modernity is an age of moral subjectivism; all but gone are the days of a belief in an objective moral truth, the Truth to which Socrates refers in Plato's writings. Apart from moral questions about the violent examples of rape and murder, the population increasingly has become morally illiterate and apathetic. Even in light of an increasingly morally subjective world, there is a remaining need and a desire for some kind of moral culpability in certain aspects of life. People want moral culpability, particularly in instances in which their own lives are concerned, especially when it comes to medical care: abortion, euthanasia, confidentiality, abuse of power.

There is an expectation of physicians to be morally sound individuals, ones who adhere to a strict code of conduct to which they are held accountable. It is for this reason that the Hippocratic Oath has been so popular in the medical field for so many centuries.² It provides physicians a quasi-universal moral standard under which to operate, and a way for the public to hold physicians accountable for their actions. While this may be what the Oath has become, what interests me the most is how it was originally used. In the greater context of Greek medicine in the sixth century BCE, what I intend to explore is the role that this Oath played originally in the education of Hippocratic physicians, particularly in view of the development of their ethical code.

To begin, in the first chapter I provide overview of the development of Greek educational practices leading up to the time of Hippocrates. From there, I focus more

¹ Brooks, David (2011) "Opinion | If It Feels Right."

² See Hajar (2017) "The Physician's Oath: Historical Perspectives" for specific dates.

specifically on communities of physicians who were contemporary with Hippocrates and his school on the island of Cos, namely the communities of physicians at Cyrene, Croton, Cnidus, and Rhodes. In the second chapter I focus solely on Hippocrates: his personal history, and the community of physicians to which he belonged on Cos. In the final chapter I examine the Hippocratic Oath in the context of physician education. I argue that the Oath was used in the process of training new physicians as a tool to help inculcate a system of morality that enables them to practice medicine well.

CHAPTER ONE

Ancient Greek Medical Schools: Cyrene, Croton, Cnidus, and Rhodes

Education in the Ancient World

A discussion of medical education in the ancient world requires also a brief discussion of contemporary practices regarding education in general. Due to the immense volume of primary and secondary sources, I will limit myself to what seem the most relevant and reliable sources in chronological order.

One of the earliest sources on the topic of education in Greek antiquity comes from one of the earliest sources on anything in Greek antiquity, Homer. Originally composed around the eighth century BCE, the *Iliad* shows how "a younger member [of society] learns – by prolonged association, observation, and practice – the skills that enable him to become successful and to gain honour among his peers." An example of this, as Joyal points out in his work, is Phoenix and Achilles in the *Iliad*:

σοὶ δέ μ' ἔπεμπε γέρων ἱππηλάτα Πηλεὺς ἤματι τῷ ὅτε σ' ἐκ Φθίης Ἁγαμέμνονι πέμπε νήπιον οὔ πω εἰδόθ' ὁμοιΐου πολέμοιο οὐδ' ἀγορέων, ἵνα τ' ἄνδρες ἀριπρεπέες τελέθουσι. τοὔνεκά με προέηκε διδασκέμεναι τάδε πάντα, μύθων τε ῥητῆρ' ἔμεναι πρηκτῆρά τε ἔργων.²

As yet you knew nothing of war, the great leveler, or of the assemblies where men win great distinction. It was on this account that he [Peleus, Achilles' father] sent me to teach you all these things, to become skilled at making speeches in public and performing deeds of war.³

¹ Joyal, et al. (2009) Greek and Roman Education: A sourcebook 4.

² Translations are my own unless otherwise noted.

³ Hom. *Il*. 9.438-43; trans. Joyal et al.

Peleus, in order that his son Achilles might become educated as a Greek man, sent him to learn by association public speeches and warfare. There is even brief mention in the *Iliad* of the learning of medicine. When Eurypylus is wounded by Paris, he instructs his men:

ἀλλ' ἐμὲ μὲν σὺ σάωσον ἄγων ἐπὶ νῆα μέλαιναν, μηροῦ δ' ἔκταμ' ὀϊστόν, ἀπ' αὐτοῦ δ' αἶμα κελαινὸν νίζ' ὕδατι λιαρῷ, ἐπὶ δ' ἤπια φάρμακα πάσσε ἐσθλά, τά σε προτί φασιν Ἀχιλλῆος δεδιδάχθαι, ὃν Χείρων ἐδίδαξε δικαιότατος Κενταύρων.

But save me and take me back to my black ship. There cut the arrow from my thigh, wash the dark blood away from it with warm water, and sprinkle on it the excellent, soothing herbs which they say you learned from Achilles, who was taught by Chiron, the most civilized of the centaurs.⁴

This is but one of several references to healers ($i\eta\tau\tilde{\eta}\rho\sigma\iota$) ⁵ in Homer's epics. In another passage, Homer even references Asklepios himself when discussing Chiron's role as an educator of medicine:

ελκος δ' ἰητὴρ ἐπιμάσσεται ἠδ' ἐπιθήσει φάρμαχ' ἄ κεν παύσησι μελαινάων ὀδυνάων. ἦ καὶ Ταλθύβιον θεῖον κήρυκα προσηύδα: 'Ταλθύβι' ὅττι τάχιστα Μαχάονα δεῦρο κάλεσσον φῶτ' Ἀσκληπιοῦ υἱὸν ἀμύμονος ἰητῆρος, ὄφρα ἴδη Μενέλαον ἀρήϊον Ἀτρέος υἱόν, ὅν τις ὀϊστεύσας ἔβαλεν τόξων ἐῢ εἰδὼς

Summon Machaon, the son of Asclepius, with his matchless skill as a doctor, so that he may examine warlike Menelaus. ... the man of godlike stature Machaon stood in their midst ... But when he saw the wound where the sharp arrow had struck him, he sucked out the blood, and, drawing on his expert knowledge, sprinkled over it the soothing herbs which Chiron, with kindly intent, had presented to his father at some point in the past.⁶

⁴ Hom. *Il.* 11.828-32; trans. Joyal et al.

⁵ Not specifically individuals trained solely to practice medicine but learned men of the upper class who have the familiarity with medicine that would in later centuries be expected of any educated Greek.

⁶ Hom. *Il*. 4.192-97; trans. Joyal et al.

This passage also introduces the idea of Asklepios educating his family members in the ways of medicine, showing that "Homer knew a tradition according to which Chiron was responsible for at least some of Achilles' knowledge of healing-herbs; here, he credits Chiron with Asclepius' similar knowledge." Pindar, a Boeotian poet of the sixth century BCE, confirms this in his *Pythian Ode*, citing that "[Chiron] raised Asclepius" when "Apollo took Asclepius and gave him to the Magnesian centaur to teach him how to heal diseases painful to men."

Theognis, who was an elegiac poet who lived in the sixth century BCE, was a moralistic author whose works covered a wide range of topics including friendship, fate, life, and philosophy. A passage from one of his poems speaks specifically of the benefits of learning through association:

ταῦτα μὲν οὕτως ἴσθι: κακοῖσι δὲ μὴ προσομίλει ἀνδράσιν, ἀλλ' αἰεὶ τῶν ἀγαθῶν ἔχεο: καὶ παρὰ τοῖσιν πῖνε καὶ ἔσθιε, καὶ μετὰ τοῖσιν ἵζε καὶ ἄνδανε τοῖς, ὧν μεγάλη δύναμις. ἐσθλῶν μὲν γὰρ ἄπ' ἐσθλὰ μαθήσεαι: ἢν δὲ κακοῖσιν συμμίσγης, ἀπολεῖς καὶ τὸν ἐόντα νόον.

Be the constant attendant of those who are virtuous. Be with them when you drink and take your meals. Take your seat in their company and win their approval, since they have great influence. It will be from good men that you will learn good lessons. If you keep company with evil men, you will destroy the intelligence you currently possess. 10

The passages that cite Chiron as an educator of prominent young Greek boys may indicate "a dimly remembered initiation ritual that signified passage into manhood: the youth leaves

⁷ Joyal, et al. (2009) 10.

⁸ Pindar. Pythian Ode. 3.1-7, 45-46; trans. Joyal et al.

⁹ cf. West, Martin Litchfield (2016) "Theognis (1), Elegiac Poet."

¹⁰ Joyal, et al. (2009) 6; Theognis 27; trans. Joyal et al.

his family and familiar surroundings to live with an adult male," one who presumably would be one of the virtuous men, whom Theognis references as being necessary company for the proper formation of a young man.¹¹

Outside the realm of literature and more closely tied to the life of a citizen, the Athenians of the fourth and fifth centuries BC had certain laws pertaining to a father's legal obligation "to teach his son a trade ... whereby no son was under obligation to support his father if he failed to teach him a trade." This is confirmed in Plato's *Crito* (written in the late fifth century BCE) when Socrates says that "the laws regulating a son's upbringing and education ... [the ones] entrusted with that function instructed your father to give you an education." However, Joyal makes the important note that the word here for law in Greek is νόμος, which besides 'law' can mean 'custom,' and claims that "Socrates must be invoking [the force of custom]." ¹⁴

In another part of Theognis' writing one can see the idea that "κάκος (evil), ἔσθλος (nobility), and ἄγαθος (goodness) are inherent qualities, and not something that can be learned." This gives validation and explication to the decision-making process undertaken by Hippocratic physicians when taking on apprentices. The idea that there are certain innate qualities which qualify a person for a given profession which cannot be taught lasts for centuries to come. In Cicero's *De Oratore*, a treatise on civic education written in the first century BCE, there is a discussion on the importance of an orator

¹¹ Joyal, et al. (2009) 10-11.

¹² Joval, et al. (2009) 3; Solon. Life of Solon. 22.1.

¹³ Plato. Crito. 50d-e; trans. Joyal et al.

¹⁴ Joyal, et al. (2009) 54.

¹⁵ Joyal, et al. (2009) 6. Theognis 429-38; trans. Joyal et al.; "Never will a person make the bad man good by teaching him."

naturally having the gifts that were required of good oration; they cannot be taught. Pindar chimes in on the subject as well. He takes it a step further by saying that "everything that comes by nature is best. Many men are eager to win glory with skills (ἄρεται) that are taught." Pindar warns against thinking that training can give one glory, reminding his readers that it is the gods and (or) fate that mete out glory, not an individual's training.

The idea of an individual outside of the family educating the children for money (instead of the children going and living with a member of society they hope to emulate) appears for the first time in Herodotus' *The Persian Wars*:¹⁷

έξελθων δὲ πέμπει ἐς τὸ στρατόπεδον τὸ Μήδων ἄνδρα πλοίῳ ἐντειλάμενος τὰ λέγειν χρεόν, τῷ οὔνομα μὲν ἦν Σίκιννος, οἰκέτης δὲ καὶ παιδαγωγὸς ἦν τῶν Θεμιστοκλέος παίδων

[Themistocles] then sent a man by ship to the Persian fleet after he had told him what to say. His name was Sicinnus; he was Themistocles' servant and his sons' παιδάγογος.¹⁸

The role of $\pi\alpha\iota\delta\acute{\alpha}\gamma\circ\gamma\circ\varsigma$ began as a privilege for wealthy families, shown in Plato's *Lysis*, which Joyal claims as "evidence for the role of pedagogues and the life of privileged boys in Athens in the late fifth century BC." When discussing the duties of Lysis' $\pi\alpha\iota\delta\acute{\alpha}\gamma\circ\gamma\circ\varsigma$ with him, Plato asks what he does, to which Lysis replies "He takes me to school." Beyond ensuring education, there is evidence of a $\pi\alpha\iota\delta\acute{\alpha}\gamma\circ\gamma\circ\varsigma$ himself teaching on an illustrated drinking cup. ²¹ There are young boys working on reading and writing, and others playing lyres and flutes. The $\pi\alpha\iota\delta\acute{\alpha}\gamma\circ\gamma\circ\varsigma$ stands off to the side with a rod, and "his

¹⁶ Joyal, et al. (2009) 7; Pindar. Olympian Ode. 9; trans. Joyal et al.

¹⁷ Joyal, et al. (2009) 37.

¹⁸ Herodotus. *The Persian Wars*. 8.75.1; trans. Joyal et al.

¹⁹ Joyal, et al. (2009) 38.

²⁰ Plato. *Lysis*. 208c1-d2, 223a1-5; trans. Joyal et al.

²¹ Joyal, et al. (2009) 46.

presence in these scenes is evidence that we are looking at public education outside the home rather than private education inside it."²² The cup also provides evidence of π αιδάγογοι providing education outside of the context of a wealthy family has hired one solely for their children.

A number of passages from Plato give an outline of the typical form of education. In *Theages*, he claims that all "good and noble (κάλοι τε καγάθοι) fathers" have their sons educated in "letters, playing the lyre, wrestling, and competition in general," indicating that society at the time had an idea of what sort of education young men ought to receive. ²³ In *Protagoras*, he also mentions more specifics about the purpose of this kind of education:

παρατιθέασιν αὐτοῖς ἐπὶ τῶν βάθρων ἀναγιγνώσκειν ποιητῶν ἀγαθῶν ποιήματα καὶ ἐκμανθάνειν ἀναγκάζουσιν, ἐν οἶς πολλαὶ μὲν νουθετήσεις ἔνεισιν πολλαὶ δὲ διέξοδοι καὶ ἔπαινοι καὶ ἐγκώμια παλαιῶν ἀνδρῶν ἀγαθῶν, ἵνα ὁ παῖς ζηλῶν μιμῆται καὶ ὀρέγηται τοιοῦτος γενέσθαι.

[The teachers] compel their pupils to learn by heart many passages which contain words of warning ["from the works of good poets"], and which describe in great detail and praise fulsomely virtuous men of the past. Their objective is that the child may emulate and imitate them and make it his goal to become like them.²⁴

Xenephon has a more practical view of the matter, claiming literacy as the ultimate goal of education: "we say that our boys go [to school] to learn letters." Aristophanes confirms this and adds that boys do not go "far beyond the rudiments of reading and writing, especially if their livelihoods to not depend on those skills."

²³ Plato. *Theages*. 122e8-11; trans. Joyal et al.

²² Ibid.

²⁴ Plato. *Protagoras*. 325d7-326e5; trans. Joyal et al.

²⁵ Xenephon. *Education of Cyrus*; trans. Joyal et al.

²⁶ Arisotphanes. *Knights*. 182-93; trans. Joyal et al.

Ancient Medical Education

Before discussing Hippocratic medicine, we must first establish the context in which the Hippocratic 'school of medicine' was operating. Brief mention must be made of other contemporary groups of physicians, namely those at Cyrene, Croton, and Cnidos. I say 'medical school' because medicine was not usually the only subject taught at places of higher learning. Our term school comes from the Greek term σχόλη, but does not share quite the same definition. Originally, σχόλη referred to leisure time.²⁷ The term usually referred to individuals who did not have to partake in manual labor and, therefore, had the time to participate in more prestigious activities such as politics and philosophy. Eventually, this term indicated "a center located in a city, in which a master, in the context of a family tradition ... provided teaching to his sons and disciples, either belonging to the family or associated with the school."²⁸ The earliest reference to such a place (as a physical location) comes from Herodotus' The Persian Wars²⁹, as many an early reference do.³⁰ When discussing a series of tragedies that had occurred on the island of Chios, Herodotus mentions that the roof of a building "collapsed on children ($\pi\alpha i\delta\epsilon \zeta$) who were learning their letters (γράμματα)."31

Cyrene

The only explicit reference to Cyrene as one of the major medical education centers of ancient Greece is from Herodotus' *The Persian Wars*. Though there is only this one

²⁷ Demont, Paul (2006) "Schole."

²⁸ Jouanna, Jacques (1998) "The Birth of Western Medical Art." 29.

²⁹ Although largely referred to as *Histories*, I will be referring to this work as it is labelled in the Loeb Classical Library edition, *The Persian Wars*. They are the same work.

³⁰ Joyal, et al. (2009) 13.

³¹ Herodotus. *The Persian Wars*. 6.27.1-2; trans. Joyal et al.

reference to Cyrene being famous for its physicians, references contemporary locations prominently known for their practice of medicine are so sparse (the only other ones being Cos, Cnidus, Croton, and Rhodes) that a single passage mentioning Cyrene makes it significant in a discussion of ancient Greek medicine.

The later development of the Cyrenaic school of philosophy points to its intellectual significance beyond the scope of medicine. The Cyrenaic school of philosophy was purportedly founded by Aristippus in the late fourth century BCE. It is an offshoot of the Sophists of Socrates' times, and can be described in modern terms as a hedonistic philosophy, focusing on the pursuit of pleasure and avoidance of pain. It is commonly thought to be one of the major influences on later Epicurean philosophy. ³² Cyrene was therefore a center of intellectual thought and formal education, but not solely of medicine.

Croton

To know of medicine was a Greek gentleman's business; it was something that any educated man was expected to have at least a working knowledge of, even if they had never studied under a physician. The school at Croton (and likely Cyrene) is an example of this. There is reference to a student of Pythagoras, Alcmaeon of Croton, in the context of Alcmaeon being a physician. In a discussion of the Pythagorean geometric theories, Aristotle names Alcmaeon as a contemporary of Pythagoras and an adherent to the Pythagorean school of thought:

καὶ γὰρ [ἐγένετο τὴν ἡλικίαν] Ἀλκμαίων [ἐπὶ γέροντι Πυθαγόρα,] ἀπεφήνατο [δὲ] παρα- πλησίως τούτοις:

³² For more on Cyrenaic, see Voula Tsouna-McKirahan's *The Epistemology of the Cyrenaic School* (1986), and C.C.W. Taylor's "Cyrenaics" (2015).

Apparently Alcmaeon of Croton speculated along the same lines, and either he derived the theory from them or they from him; for [Alcmaeon was contemporary with the old age of Pythagoras, and] his doctrines were very similar to theirs.³³

There are also writings of Alcmaeon on both medicine and philosophy in the fragments of Stobaeus' *Eclogarum physicarum et ethicarum*. Stobaeus was a Greek anthologist who worked in the 5th century CE, collecting poetry and prose from a wide variety of authors spanning many centuries. ³⁴ Much of Stobaeus' work has been lost, but the few parts that are still extant contain what Stobaeus claims are quotes from Alcmaeon's works. ³⁵ These quotes range in topic from medicine to philosophy. From this, one can infer that medicine was included within the intellectual sphere of the Pythagorean school.

One might infer from this that not only was Pythagoras a physician himself, but that in Croton there was some kind of school of medicine run or started by Pythagoras. But, upon further investigation, one would find that Pythagoras was not exactly a practicing physician, but more generally a philosopher. Iamblichus writes in his *Life of Pythagoras* that Pythagoras, before arriving in Croton with "many followers, amounting, as it is said, to the number of six hundred" who were "excited by his discourses to the study of philosophy,"³⁶ "spent two and twenty years in Egypt ... astronomizing and geometrizing" before going to Babylon:

κὰκεῖ τοῖς μάγοις ἀσμένοις ἄσμενος συνδιατρίψας καὶ ἐκπαιδευθεὶς τὰ παρ' αὐτοῖς σεμνὰ καὶ τὰν ἄλλων μαθημάτων ἐπ' ἄκρον ἐλθὼν παρ αὐτοῖς, ἄλλα τε δώδεκα προσδιατρίψας ἔτη εἰς Σάμον ὑπέστρεφε περί ἕκτον που καὶ πενθκαστὸν ἕτος ἤδη γεγονώς. 37

³³ Aristotle, *Metaphysics* 1.986a.30; trans. Waterfield.

³⁴ See Edwards and Browning (2016) for more on the life and works of Stobaeus.

³⁵ Stobaeus (1792) *Ioannis Stobaei Eclogarum physicarum et ethicarum libri duo, ad codd. mss. fidem suppleti et castigati annotatione et versione latina.* 796-797.

³⁶ Taylor, Thomas (1986) *Iamblichus' Life of Pythagoras* 13.

³⁷ Iamblichus. De Vita Pythagorica. 4.6-11

[There he] was instructed by [the Magi] in their venerable knowledge, and learnt from them the most perfect worship of the gods. Through their assistance likewise, he arrived at the summit of arithmetic, music, and other disciples; and after associating with them twelve years, he returned to Samos at the fifty-sixth year of his age.³⁸

Needless to say, Pythagoras was not solely a physician.

All of this is to say that the 'medical school' at Croton was more than just that – let us call it an institution of higher learning at which medicine was one of the many disciplines taught. That is not to say that medicine was not taught well, for Herodatus relates in his *The Persian Wars* the following concerning Croton:

ἐγένετο γὰρ ὧν τοῦτο ὅτε πρῶτοι μὲν Κροτωνιῆται ἰητροὶ ἐλέγοντο ἀνὰ τὴν Ἑλλάδα εἶναι, δεύτεροι δὲ Κυρηναῖοι.

For at this time the best physicians in Greek countries were those of Croton, and next to them those of Cyrene.³⁹

The context in which Herodatus mentions the abilities of physicians from Croton is an anecdote about the king of Persia, Darius I. He took power in the second half of the sixth century BCE, making him a contemporary of Pythagoras, who established his school in Croton around the same time Darius took power.⁴⁰ Darius had been afflicted with an injury in his foot, and had "called in the best physicians of Egypt," none of whom could cure him.⁴¹ Darius caught wind of the medical skill of a slave named Democedes, who was then

³⁸ Taylor (1986) 9.

³⁹ Herodotus. *The Persian Wars*. 3.131.3; trans. Godley.

⁴⁰ See Briant (2015) for more on Darius I.

⁴¹ Herodotus. *The Persian Wars*. 3.129.2; trans. Godley.

brought before the king. 42 After Democedes cured Darius' affliction, he convinced Darius to free him, after which point Democedes left for Croton, and in quick succession, for Aegina:

καταστὰς δὲ ἐς ταύτην πρώτῷ ἔτεϊ ὑπερεβάλετο τοὺς ἄλλους ἰητρούς, ἀσκευής περ ἐὼν καὶ ἔχων οὐδὲν τῶν ὅσα περὶ τὴν τέχνην ἐστὶ ἐργαλήια. καί μιν δευτέρῷ ἔτεϊ ταλάντου Αἰγινῆται δημοσίη μισθοῦνται, τρίτῷ δὲ ἔτεϊ Ἀθηναῖοι ἑκατὸν μνέων, τετάρτῷ δὲ ἔτεϊ Πολυκράτης δυῶν ταλάντων. οὕτω μὲν ἀπίκετο ἐς τὴν Σάμον, καὶ ἀπὸ τούτου τοῦ ἀνδρὸς οὐκ ἥκιστα Κροτωνιῆται ἰητροὶ εὐδοκίμησαν.

Within the first year after settling there, he excelled the rest of the physicians, although he had no equipment nor any medical implements. In his second year the Aeginetans paid him a talent to be their public physician; in the third year the Athenians hired him for a hundred minae, and Polycrates in the fourth year for two talents. Thus he came to Samos, and not least because of this man the physicians of Croton were well-respected. ⁴³

Not only was Democedes a successful enough physician to be appointed as public physician at different cities multiple years in a row,⁴⁴ but the fact that his fame was wide enough for Herodotus to have known about him and to have considered him significant enough to include in his writings, even as a bit of a side story, implies that Croton was renowned as a center of medical knowledge.

Cnidus

There is one other place worth mentioning in connection with Greek medicine, Cnidus. The author of *Regimen in Acute Diseases* makes specific reference to what he calls

 $^{^{42}}$ This is especially significant because of how famous Egyptians physicians were in the Odyssey: in book IV 227-32 "Hellen has drugs from Egypt where πλεῖστα φέρει ζείδωρος ἄρουρα | φάρμακα" (How, W.W. and Wells, J. (1991) A commentary on Herodotus with introduction and appendixes. ii. 85 n.).

⁴³ Herodotus. *The Persian Wars*. 3.131.1-2; trans. Godley.

⁴⁴ And, as How and Wells note "the story is interesting as one of the earliest accounts of state endowments for medical science (Cf. Mahaffy, S.L. pp.290 seq.)" (How, W.W. and Wells, J. (1991) iii. 131 n.)

the 'Cnidean Sentences' (τὰς Κνιδίας καλεομένας γνώμας). ⁴⁵ The reference to these "sentences" (γνώμας) in the Hippocratic Corpus is the oldest one. The "sentences" themselves have been lost and are only sparsely mentioned in later literature. It is generally accepted that regardless of their exact nature and authorship that the Cnidian Sentences were likely a collection of teachings, related to Cnidus in comparable way to the relation of the Hippocratic Corpus to Cos. ⁴⁶

Regimen as a whole could be described as a critique of these sentences ("sayings" γνώμαι), indicating that there was a community of physicians at Cnidus that was producing literature significant enough to warrant a response by the author(s) of the Hippocratic Corpus. It sounds obvious now, but the idea of two separate medical schools has not been so clear for long. Wesley Smith makes a point of tracing the scholarship on the Cnidian versus the Coan (Hippocratic) school of medicine,⁴⁷ in order to correct misconceptions about the two schools. He notes that "in the nineteenth century people seemed to know much more about early Greek medicine than they do in the twentieth."

The existence of a close connection between the two schools is undeniable. The exact nature of the connection between the Cnidian and the Coan schools of medicine must be determined in order to justify the preference that this paper, and academia, places on the Coan school. What follows is a summary of Smith's work to clarify the connection between the two schools.

⁴⁵ Hippocrates. Regimen in Acute Diseases. 1.1

⁴⁶ Langholf, Volker (1990) *Medical Theories in Hippocrates: Early Texts and the "Epidemics."* 13-17.

⁴⁷ Smith, Wesley D. (2005) "Galen on Coans versus Cnidians." I have included relevant footnotes from Smith's piece containing further citation of works that he references.

⁴⁸ Smith. (1973) 570

It began, Smith describes, with Littré's attribution to the Coan school of the works of the Corpus which still held medical relevance in the nineteenth century, and he ascribed the "cruder and more primitive works" to a separate Cnidian school. 49 Ludwig Edelstein began to question how much was really known about Hippocrates' work and school in 1931. 50 He claimed that the idea of Hippocrates was fabricated in order to explain the authorship of the Corpus. Edelstein still attributed some works in the Corpus to Coans and others to Cnidians; *Regimen in Acute Diseases* he attributed to the Coans because of the passage mentioned above.

Karl Deichgräber "showed that the various books of the Hippocratic *Epidemics* have affinities with one another and with other works in the Corpus." He made some connections between *Epidemics* 5 and 7 with Cos. Deichgräber ascribed to Littré's assumption that the Corpus consists of Coan and Cnidian works, and he identified the works he believed to be Coan. Deichgräber ascribed to Littré's example, looking for "personalities of authors in the Cnidian works which had been identified by Littré."

When it came to the writings attributed in antiquity to Polybos (Hippocrates' student and son-in-law), Hermann Grensemann argued that some of them were Cnidian

⁴⁹ Littré (vol. 1, pp. 3-26, 440-464, and vol. 7., pp. 304-309) characterizes the schools. Emil Littré (1839).

⁵⁰ Ludwig Edelstein, "Peri Aeron und die Sammlung der hippokratischen Schriften," *Problemata*, Berlin, 1931, Heft 4, pp. 116-181; also *idem* "Hippokrates" in Pauly Wissowa *Real-Encyclopädie d. clss. Alteriumswiss.*, Suppl. VI, cols. 1290-1345.

⁵¹ Smith (1973) 571.

⁵² For his assumption that he has described a school by finding affinities of works, see especially Karl Deichgräber, *Die Epidemein und das Corpus Hippocraticum. Voruntersuchungen zu einer Geschichte der Koischen Aerzteshcule* (Abhand. Preuss. Akad. Wissench. Phil.-Hist. Klasse, Nr. 3. Berlin: Walter de Gruyter, 1933; reprinted 1971)

⁵³ Smith. (1973) 571; Johannes Ilberg, "Die Aerzteschule von Knidos," *Berichte Sächs. Akad. Wissench. Leipzig.* Phil.-Hist. Klasse, 1925, 76. Bd., 3. Heft. "Ilberg considered all the extant Cnidian works to be from a younger generation, but the "Kernel" was old Cnidian (p. 25).

and asserted that *Nature of Man* was Coan.⁵⁴ In regards to some of Grensemann's other arguments, Smith has simply this to say: "His arguments are patently circular and useless unless the rigid schools existed with peculiar and exclusive doctrines."⁵⁵

I. M. Lonie "assumes that all of the therapeutic works [in the Corpus] he calls Cnidian are somehow descended from one big work *Cnidian Opinions*, which he therefore can reconstruct in outline." In a word, Smith regards this hypothesis as "extreme," but does not disagree with it outright. In 1910, Max Wellmann suggested "without argument, that where Cnidian works coincided, the source would be Euryphon." Euryphon was a physician of Cnidos and is often credited with composing the Cnidian Sentences. Soranus of Ephesus, a physician and Hippocratic commentator contemporary with Galen, identifies Euryphon as a contemporary of Hippocrates in his *Vita Hippocratis*.

Smith points out that all of this scholarship occurred in the wake of Hermann Diels' Doxographi Graeci (1979), "of the line of transmission of doxographical information about philosophers. Diels was able to present a reconstruction of Theophrastus' lost work Φύσικον δόξαι and to prove that it was the ultimate source of many later reports." Smith points out that this style of sythentic historiography was characteristic in the "intense period"

⁵⁴ Hermann Grensemann, *Der Arzt Polybos als Verjasser hippokratischer Schriften* (Abhand. Akad. Wiss. Lit. Mains. Geistes- und Sozialwiss. Klasse, Nr. 2. Weisbaden: Franz Steiner, 1968), p. 59.

⁵⁵ Smith (1973) 572.

⁵⁶ I. M. Lonie, "The Cnidian Treatises of the Corpus Hippocraticum," *Classical Quarterly*, n.s., 1965, *15*: 1-30; see p. 14 and passim.

⁵⁷ Smith. (1973) 572.

⁵⁸ Max Wellman, "Euryphon" in Pauly-Wissowa *Real-Encyclopädie d. class. Altertumswiss.*, vol. 6, col. 1344.

⁵⁹ Smith, William (2005). A Dictionary of Greek and Roman biography and mythology.

⁶⁰ Smith (1973) 573.

of Quellenforschung in Classical scholarship that began in the late nineteenth century."⁶¹ Quellenforschung, German for "source research," was the idea that there needed to be a shift in academia to the original source of texts which had been transmitted to modernity through the Middle Ages.⁶²

Diels' success at synthesizing a lost work from available sources, Smith says, explains why these scholars took such liberties with their assumptions. But the assumptions they made became fact, and Smith has taken it upon himself to go back and question the foundations of decades of Classical scholarship. He wishes to qualify the actual doctrinal differences between Cos and Cnidus, should there be any.

Smith uses Galen to refute all of the claims referenced above. Galen lived in the second century CE, and was renowned as both a physician and commentator on the Hippocratic Corpus.⁶³ There are many of his works still extant today, though an equal number, if not greater, have been lost to time. The main assumption assayed here is that there was a Cnidian school ideologically separate from a Coan school of medicine.⁶⁴ Smith reverences a passage from the first section of Galen's *Modus Modendi* which puts this most plainly:

καὶ πρόσθεν μὲν ἔρις ἦν οὐ σμικρά, νικῆσαι τῷ πλήθει τῶν εὑρημάτων ἀλλήλους ὀριγνωμένων τῶν ἐν Κῷ καὶ Κνίδῳ· διττὸν γὰρ ἔτι τοῦτο τὸ γένος ἦν [X.~6K] τῶν ἐπὶ | τῆς Ἀσίας Ἀσκληπιαδῶν, ἐπιλιπόντος τοῦ κατὰ Ῥόδον· 65

And in the past there was not a little competition to surpass each other in the number of discoveries between those on Cos and on Cnidus, for they were still the twofold tribe of the Asclepiads in Asia, after the one at Rhodes had failed.

⁶¹ Smith (1973) 573.

⁶² Gehrke, Hans-Joachim (2018) "Historiographical Methods"

⁶³ cf. Nutton, Vivian (2006) "Galen of Pergamum."

⁶⁴ Smith (1973) 575.

⁶⁵ Galen. Modus Modendi. 1.6K

The most accurate translation of this passage depends on the division of the Roman world at the time Galen was writing *Modus Modendi*. Hankinson dates the piece "between 172 and 175" AD. ⁶⁶ According to the *Barington Atlas of the Greek and Roman World*, it seems that for Galen Cos and Cnidus both fell in the Asian province. ⁶⁷ There are two tribes of Asclepiads in Asia at the time. Cos and Cnidus are both in Asia, shown by figure 1, and are together the "twofold tribe ... of the Asclepiads in Asia" (διττὸν ... τὸ γένος ... ἐπὶ | τῆς Ἀσίας Ἀσκληπιαδῶν), and thus, proving Smith's point, could not have been fundamentally different schools of thought. ⁶⁸

From this passage, evidently Galen (and presumably his contemporaries) judged the presence of two distinct communities of physicians at Cos and at Cnidus, and it appears that they were both communities of Asclepiads. Their proximity geographically strengthens this claim. Smith concludes that Cos and Cnidus were both Asclepiadeic schools of medicine, and so the claim that the two schools at Cos and Cnidus were doctrinally separate is false.

⁶⁶ Hankinson, R. J. (1991) On the Therapeutic Method. xxxiv.

⁶⁷ See figure 1: Cos and Cnidus are circled, located on the southern coast of the Asian province.

⁶⁸ The translation here is my own.



Figure 1: The Roman Empire in the second century CE

A good example of this competitive relationship between Cos and Cnidus can be found in a different passage of Galen's, in his commentary on Hippocrates' *De Articulis*:

Κατεγνώκασιν Ίπποκράτους ἐπεμβαλεῖν τὸ κατ' ἰσχίον ἄρθρον, ὡς ἂν ἐκπίπτον αὐτίκα πρῶτος μὲν Κτησίας ὁ Κνίδιος συγγενὴς αὐτοῦ· καὶ γὰρ αὐτὸς ἦν Ἀσκληπιάδης τὸ γένος, (10) ἐφεξῆς δὲ Κτησίου καὶ ἄλλοι τινές. 69

On the one hand Ctesias of Cnidus first, being kin of that man [Hippocrates], for he was himself also the stock of Asklepios, on the other hand after Ctesias even some others had commented that Hippocrates had so set the joint at the hip that it would fall out immediately.

As Jouanna so eloquently summarizes, here is "an example of a specific criticism made by an Asclepiad of Cnidus, Ctesias, concerning the way in which an Asclepiad of Kos,

⁶⁹ Kühn (1829) Claudii Galeni opera omnia. p. 731.

Hippocrates, reduced a dislocation of the hip."⁷⁰ There are many other passages, most from Galen, which flesh out the relationship between the Coan and Cnidian communities.⁷¹

The very fact that so much discussion has been devoted to the supposed connection between Cos and Cnidus makes Cnidus worthy of mention. While they were physically separate communities of physicians, the ties between them are too strong to ignore. They were both communities of Asclepiads, they both were prominent centers of medical practice and thought, and they clearly were contact with each other and had an ongoing intellectual discourse about the practice and theory of the medical field.

Rhodes

One interesting take away from the discussion of Cos and Cnidus is the reference to a third community of Asclepiads at Rhodes:

διττὸν γὰρ ἔτι τοῦτο τὸ γένος ἦν [X.~6K] τῶν ἐπὶ | τῆς Ἀσίας Ἀσκληπιαδῶν, ἐπιλιπόντος τοῦ κατὰ Ῥόδον. ⁷²

For they were still the twofold tribe of the Asclepiads in Asia, after the one at Rhodes had failed.

There is additional evidence in a Galenic text preserved in Arabic for the existence of a community of Asclepiads at rhodes:

The places in which the craft of medicine was studied were, according to the information mentioned by Galen in his *Commentary on the Boof of the Oaths by Hippocrates*, there in number: One was in the city of Rhodes, the second in the city of Cnidus, and the third in the city of Cos.

. . .

⁷⁰ Jouanna (1998) 30.

⁷¹ See also Galen's commentary on Hippocrates' *De Victu Acutorum*, found in Khün's *Claudii Galeni Opera Omnia*. p. 419.

⁷² Galen (2001) Modus Modendi. 1.6K

(Medical) instruction in the city of Rhodes had disappeared, because the masters had no heirs.⁷³

These are the few (if not only) references to a medical school at Rhodes. While this is interesting to note, because it had "failed" by the time of Hippocrates, it does not hold a great deal of significance in this discussion.

⁷³ Rosenthal, Franz (1956) "An Ancient Commentary on the Hippocratic Oath." 80.

CHAPTER TWO

The Hippocratic Medical School at Cos

As Elizabeth Craik puts so succinctly in the introduction to her work *The Hippocratic Corpus*, "the evidence for the life of Hippocrates is sketchy and for the most part dates from long after his lifetime." The main problem is the "scant contemporary or near-contemporary references." One of the few can be found in Plato's *Protagoras*, which refers to him as "Hippocrates the Coan, one of the Asklepiads." What is assumed to be true is that Hippocrates was born in 460 BC on the island of Cos. He was grandson of Hippocrates, son of Herakleides, father to Thessalos and Drakon, and father-in-law to Polybos.

His relation to the god Asklepios did not become mythically familial until the first century BC, thanks to a collection of letters falsely claiming to be written by Hippocrates, called the *Pseudepigraphia*. They claim Hippocrates was a direct descendent of Asklepios paternally.⁴ Mythologically, Asklepios was one of Apollo's sons. By the time of Hippocrates, the cult of Asklepios was one of the most popular of the healing deities, surpassing "all others in duration and geographic range of his appeal." By referring to Hippocrates as one of the Asklepiads, Plato was indicating that Hippocrates was a member

¹ Craik, Elizabeth (2008) The Hippocratic Corpus. xx.

² Wickkiser, Bronwen Lara (2008) Asklepios, Medicine, and the Politics of Healing in Fifth-Century Greece: Between Craft and Cult. 21.

³ Wickkiser (2008) 21; Plato. *Protagoras*. 311b-c; trans. Wickkiser.

⁴ Wickkiser (2008) 55.

⁵ Wickkiser (2008) 2.

of his cult. I do not believe Plato was going so far as to claim that Hippocrates was a priest in the cult of Asklepios, but rather that Hippocrates, and presumably his family, had a special devotion to the god of healing. Many questions arise when discussing the exact nature of the relationship between Hippocrates and Asklepios, but the following are the two which seem most important. They are both questions of cause and effect, or more colloquially, 'chicken or the egg?': Did Hippocrates' devotion to Asklepios precede or follow his career as a physician? And was it Hippocrates who made Asklepios famous, or vice-versa?

According to Bronwen Wickkiser, the answers to these questions are not clear. By the fifth century BC, the myth of Asklepios had already become deeply intertwined with the medical profession. Physicians claimed Asklepios as their patron god; beyond that, there were those who claimed ancestral connection to the god of healing. Plato's *Symposium* offers evidence of this in the character of Eryximachos, a physician, who claims that "our ancestor Asklepios established our art $(\tau \dot{\epsilon} \chi \nu \eta)$." Wickkiser provides an interesting connection between physicians' claims of kinship with Asklepios and the Hippocratic *Oath*. The *Oath* is made in the name of Asklepios, and part of it concerns proper behavior towards fellow physicians; Wickkiser explains:

That is, to behave as a member of a family or brotherhood claiming common descent from Asklepios. An essential aspect of this familial metaphor was the claim that Asklepios was the ancestor of all doctors. The term Ἀσκλεπιάδαε, or descendents of Asklepios, appears already in the fifth century BC, although scholars since antiquity have debated whether specific instances of the term refer to true blood-descendants of Asklepios or to all doctors. By tracing their lineage back to Asklepios, doctors forged a powerful link between themselves and their divine counterpart. By doing so, they undoubtedly gained, and presumably intended

⁶ Wickkiser (2008) 54.

⁷ Plato. Symposium. 186e; trans. Wickkiser.

to gain, authority and prestige among the population at large through this divine genealogy.⁸

Hippocrates' mythical blood-relation to Asklepios claimed in the *Pseudepigraphia* likely started out as a typical devotion to the most popular healing deity of the time, which was then exaggerated due to his skill as a physician. Instead of a question of who furthered the other's reputation, it seems to have been mutual. Hippocrates' fame grew with Asklepios' popularity, and vice-versa. After a few centuries, it was almost inevitable that a direct family tie would be made to explain their prominence.

There is also the issue of the authorship of the so-called Hippocratic Corpus, a question referred to as the Hippocratic Question. As Craik points out, there was evidence roughly contemporary with Hippocrates that labelled his son-in-law, Polybos, as a potential author of some of the treatises of the Hippocratic Corpus:

[Polybos] has a strong presence in the biographical tradition, both as Hippocrates' supposed successor in leading medical education at Cos, and, on the valuable early testimony of Aristotle, as supposed author of some 'Hippocratic' works.⁹

Other non-contemporary sources speak of the Hippocratic works as being faithful to the Hippocratic teachings while not necessarily written by Hippocrates himself. A passage from Galen's commentary on Hippocrates' *On the Nature of Man* is one such example:

νέων διδασκαλίαν, ὅς οὐδὲν ὅλως φαίνεται μετακινήσας τῶν Ἱπποκράτους δογμάτων ἐν οὐδενὶ τῶν ἑαυτοῦ Βιβλίων, ισπερ οὐδὲ Θεσσαλός ὁ υίός αὐτοῦ, θαυμάσιος μὲν ἀνὴρ καὶ οὖτος γενόμενος, ἀλλ' οὐ καταμείνας ἐν τῇ πατρίδι καθάπερ ὁ καταμείνας·

Most of those who know the system of Hippocrates reckon this book with the legitimate works, considering it to be a writing by the great Hippocrates, although some think it is by Polybos, a pupil of Hippocrates, and also someone taking up the

⁸ Wickkiser (2008) 54.

⁹ Craik (2008) p. xx; Aristotle. *Historia Animalium*. 512b12.

education of later generations, who seems to have altered none of the Hippocratic dogma at all in his own books, just as Thessalos, his son, did not.¹⁰

The multiple genres of texts included in the Corpus is further evidence of variable authorship:

Formal treatises, aphoristic compilations, summaries, drafts, notes and rough amalgamations of material. Additionally, there is a substantial amount of biographical material generally viewed as apocryphal: two speeches, a decree and a collection of letters purporting to be to or by Hippocrates.¹¹

This question is not one that arose in the past couple of centuries; the Hippocratic Question has puzzled academics since at least the second century CE, when Galen, in his many commentaries on the Corpus, attempted "to differentiate between true and false Hippocratic writings: he passed many judgements in the course of his commentaries on Hippocratic texts and, in addition, wrote a book (now lost) on the subject." The Question is not one to which I dare to claim that I have a definite answer.

It would not be disputed by many that, at the very least, it appears the Hippocratic Corpus is comprised of works which were written by individuals in the Hippocratic school of thought. Craik suggests that:

There are no claims to authorship by name [in the Corpus], possibly because writing happened in a community rather than an individual milieu; there are few references to contemporaries by name and no named dedicatees.¹³

The anonymity of the Corpus is a bit odd in the context of contemporary Greek literature. As such, it behooves me to give an example of contemporary writing which highlights this peculiarity.

¹⁰ Galen (1998) On Hippocrates' On the Nature of Man. 11-12; trans Beach and Lewis.

¹¹ Craik (2008) p. xxi.

¹² Craik (2008) p. xxi.

¹³ Craik (2008) p. xxiii.

While in an entirely separate genre, Thucydides' History of the Peloponnesian War is one such example. The work, contemporary with the life of Hippocrates in the fifth century BC, begins with Thucydides stating his own name, along with his reason for writing the text: "Thucydides, an Athenian, wrote the history of the war waged by the Peloponnesians and the Athenians against one another" (Θουκυδίδης Ἀθηναῖος ξυνέγραψε τὸν πόλεμον τῶν Πελοποννησίων καὶ Ἀθηναίων ὡς ἐπολέμησαν πρὸς ἀλλήλους). 14 A more in-depth discussion on historiography and the quest for honor that drove historians of the time is not about to unfold, but the stark difference between the author stating his name and purpose and the anonymous treatises of the Corpus rings clear enough. The opening lines of Herodotus' The Persian Wars starts in much the same manner: "What Herodotus the Halicamassian has learnt by inquiry is here set forth" (Ἡροδότου Ἁλικαρνησσέος ἰστορίης ἀπόδεξις ἥδε). 15

It would not be unreasonable then to follow Craik and assume that the texts of the Corpus were developed in a community. That having been said, the community would have been that of the Hippocratic school on Cos. Therefore calling the works "Hippocratic" is reasonable, insofar as it is understood that Hippocratic does not mean written by Hippocrates, but by a community of physicians who adhered to the teachings of Hippocrates. This would not have been a novel concept to the Greeks of that time. There was a guild of poets called the Homeridae (Ὁμηρίδαι) who were dedicated to "[preserving] Homer's poetry (Pind. Nem. 2. 1; Pl. Phdr. 252b) and telling stories about his life (Pl. Resp. 599e; Isoc. 10. 65)." ¹⁶

¹⁴ Thucydides. *The Peloponnesian Wars*. 1.1.1; trans. Smith, C. F.

¹⁵ Herodotus. *The Persian Wars*. 1.1; trans. Godley

¹⁶ West, Martin Litchfield (2015) "Homeridae"

The education of non-family members

The evidence that follows concerning Hippocrates' education of non-family members comes from fragments of Galen's works that survived in Arabic texts and which were translated into French by B. R. Sanguinetti not more than a century ago. ¹⁷ Franz Rosenthal then translated those fragments into English and organized them in a logical manner.

Rosenthal makes the following comment regarding the authorship of these fragments: "There is nothing in our fragments that points directly to Galen, but they also contain nothing that could not have been said by him." He also notes that the style of the *Commentary* matches what one would expect of classical literature in the second century AD, if not earlier. Even in light of this, "the *Commentary* remains the most serious and well-informed work on the mythological history of medicine down to the time of Hippocrates that has come to us from Antiquity," albeit by a somewhat circuitous route. ¹⁹ Two of the fragments which he translates pertain specifically to Hippocrates' decision to expand the education of new physicians beyond the limits of family. I have included the two fragments in their entirety:

Galen says: The family of Asclepius had in the past been bound by oaths and covenants preventing them from teaching medicine to outsiders. They had restricted (the instruction in it) to their children in the medical schools on the islands of Rhodes and Cnidus and in the city of Cos, and had passed it on orally to their heirs. Eventually, however, Hippocrates feared that the craft might be lost, and he therefore fixed it permanently in writing.²⁰

¹⁷ Rosenthal (1956) 52.

¹⁸ Rosenthal (1956) 86.

¹⁹ Rosenthal (1956) 87.

²⁰ Rosenthal (1956) 80; Al-Bîrûnî, Risâlah fi fihrist kutub Muhammad b. Zakarîyâ' ar-Râzî 26—2-6 Kraus (Paris 1936). The fragment very probably is derived from the Commentary. Cf. fr. B 1 b (above, fn. 21) and fr. B 3 g.

Hippocrates looked into the craft of medicine, and noticing that it had already disappeared from most of the places in which Asclepius had established medical instruction, he became afraid that it might be completely wiped out.

The places in which the craft of medicine was studied were, according to the information mentioned by Galen in his *Commentary on the Boof of the Oaths by Hippocrates*, there in number: One was in the city of Rhodes, the second in the city of Cnidus, and the third in the city of Cos.

(Medical) instruction in the city of Rhodes had disappeared, because the masters had no heirs. (Medical instruction) in the city of Cnidus was (nearing) extinction, because those who were heirs to it were just a few persons. In the city of Cos, where Hippocrates resided, (medical instruction) still persisted, (but only) a few remnants remained of it, because those who were heirs to it were few. Now, Hippocrates looked into the craft of medicine and found that it had almost disappeared, because there were few children in the family of Asclepius to inherit it. Therefore, he was of the opinion that he (should) spread it everywhere on earth, hand it over to the rest of mankind, and teach it to those who were deserving of it, so that it might not disappear. He said that 'benefits should not be liberally extended to all who deserve them, whether they be one's relatives or not.'²¹ He took in strangers and taught them the craft of medicine. He established the written *Covenant* for them and made them swear the oaths contained in it. (They also had to swear) that they would not oppose his injunctions nor teach anyone the science of medicine unless he declared before that he would abide by this *Covenant*.²²

From these passages, one learns that Hippocrates was the first of the Asclepiads to commit his teachings to writing and to teach non-family members the art of medicine. These two facts could very well help explain why Hippocrates remained so widely known for so many centuries after his death, even to modernity.

Beyond the changes that Hippocrates was making to physician education by his incorporation of non-family members into his school, education in general was changing as well. Already in Chapter One, we saw the shift from the legal obligation for paternal

²¹ "In the *Testament* (waṣâyâ) of Hippocrates (cf. Ritter-Walzer, *op. cit.* [above, fn. 33], 806), Hippocrates exhorts physicians 'not to withold medical instruction from those who want to study the craft of medicine and are deserving of it' (quoted from Alî b. al-'Abbâs al-Majûsî, *al-Kâmil 1*, 8; Bûlâq 1284, cf. the Latin translation)."

²² Rosenthal (1956) 80-81; Ibn Abî Usaybi'ah 1, 2419-31 Müller. Possibly, only the middle paragraph is derived from the Commentary. Cf. above, fn. 21, and the preceding fragment. Cf. also Ibn Ridwân, an-Nâfi' fî ta'lîm şinâ'at aṭ-ṭibb, referred to by J. Schacht and M. Meyerhof, The medicophilosophical controversy between Ibn Butlan of Baghdad and Ibn Ridwan of Cairo 21 f. (Cario 1937. Publ. of the Faculty of Arts of the Egyptian University 13).

education in Solon to the hiring of a "teacher" (παιδάγογος) to teach one's children.²³ The latter is a good example of the growing practice of exchanging money for education. Plato makes reference to Hippocrates of Cos accepting money from individuals who expected in return to study with him and become physicians. Plato compares them to those who would approach sculptors and pay them for training to be a sculptor, or any other trained profession.²⁴ He even goes on to imply that the education one would receive from Hippocrates of Cos is the kind of education one would seek in order to become "an expert practitioner," not "the kind of education that befits a freeborn layman." In other words, this kind of education gives one enough literacy in a field to hold a conversation on the subject.²⁵

The Function of the Corpus in Hippocratic Education

There is evidence in the corpus itself suggesting it was meant to be used by physicians in the teaching process. Lesley Dean-Jones makes a compelling argument for this in her article "Physician' A Metapaedogogical Text." She makes the argument that the Hippocratic treatise *Physician* was written for physician-teachers rather than people learning to become physicians. ²⁶ The work itself is a brief treatise on the kinds of things expected of a physician (presumably Hippocratic), ranging from what behavior is expected of a beginning physician to the proper use of various surgical instruments. She cites specifically the first part of the treatise concerning the examination of potential students

²³ Chapter One, pp. 5.

²⁴ Plato. *Protagoras*. 311b.

²⁵ Plato. *Protagoras*. 312a7-b6; trans. Lamb, Walker; cf. Chapter One, pp. 4-6.

²⁶ Dean-Jones, Lesley (2010) "Physician: A Metapaedogogical Text." 58-59.

required of a teacher, an evaluation of both their appearance and character.²⁷ She references several aspects of the treatise which indicate "that the author always conceived of the student in the third person as an object of discourse, never in the second person as a reader of the text."²⁸ Furthermore, referencing the importance of reputation for a physician in the ancient world, Dean-Jones notes that "no responsible physician would rely on a reading of this chapter to inculcate the medical ethos in those entering the profession."²⁹ It would not be incumbent on a student to read this treatise and, from it, to absorb all the necessary information on how to act and practice Hippocratic medicine.

The matter of rhetoric is another interesting topic in the education of a physician. Pankaj Agarwalla claims that "rhetoric in ancient medicine was primarily used in defense of one's medical theories, reputation, and art." Agarwalla references as prime evidence of this the *Cnidian Sentences*, referenced above. He claims that "the antagonism in these treatises points directly to the existence of live debates and strongly suggests that rhetorical skills would be necessary to defend the ancient physician's theories." This certainly was necessary at times, as medicine was far from infallible. A physician at this time needed to be trained in "convincing the public that their art was based on sound knowledge." A physician would only be as good as his arguments were defending his action, and so a rigorous education in rhetoric was undoubtedly a main component of medical education.

²⁷ Hippocrates. *Physician*. IX.204-208; trans. William Jones.

²⁸ Dean-Jones (2010) 68.

²⁹ Dean-Jones (2010) 60.

³⁰ Argarwalla, Pankaj K. (2010) "Training Showmanship: Rhetoric in Greek medical education of the fifth and fourth centuries BC." 74.

³¹ Argarwalla (2010) 77.

³² Argarwalla (2010) 78.

As we have already seen in Chapter One, Aristophanes notes that "boys often do not progress far beyond the rudiments of reading and writing, especially if their livelihoods did not depend on those skills." It is then likely that an intensive education in rhetoric was not exactly part of the core curriculum for the general population of Greece. The only instances in which one would pursue such a subject would be if your livelihood depended on it. Physicians needed rhetoric to practice medicine effectively, and so when they decided to pursue an education in medicine, they had to learn rhetoric as a part of that education. This explains why there are so many rhetorical works in the corpus, as examples to teach aspiring physicians how to use rhetoric effectively.

Thankfully, as has been mentioned previously, a physician would not be defending himself to a medically illiterate audience. There was precedent for laymen of ancient Greece to be versed in all fields, including medicine. One treatise aimed at providing medical education to the non-professional can be found in the *Corpus*, namely *Affections*, which is "unique among the Hippocratic writings" because of its intended audience. As Cañizare points out: ³⁴

Affections is a medical work for non-physicians. Its text reflects a situation in which medical knowledge is definitely not confined to specialists, but is part of the public domain. Intelligent laymen are expected to be able to understand medical themes, to judge the competence of physicians and to get a background that is solid enough to express their opinions of the decisions and the practice of specialists.

. . .

Educated laymen are supposed to have an intellectual interest in medicine; they have access to medical handbooks and collections of recipes. The author of Affections conceives medicine as an essential part of layman education.³⁵

³³ Aristophanes. *Knights*. 182-93; trans. Joyal et al.

³⁴ Cañizare, Pilar Pérez (2010) "The Importance of Having Medical Knowledge as a Layman: Hippocratic Treatise Affections in the context of the Hippocratic Corpus." 88.

³⁵ Cañizare (2010) 97-98.

The purpose of such an education is to provide the non-professionals "guidelines to assess the competence of doctors."³⁶

More important here, though, is the physician as a teacher ("doctor") of future physicians, not an educator of non-professionals. Roberto Lo Presti takes a closer look at the particular pedagogical methodology of certain Hippocratic treatises in order to establish how the Hippocratics went about educating their students. The most important aspect of this education, according to Presti, was errors. In order to explain why errors were the most important aspect of medical education, he first distinguishes errors from mistakes. An error is something made on the scale of an entire scientific community. A mistake, however, is a more individual affair, which he defines as an "occasional failure to conform with a rule of procedure," brought about by a lapse either in "observation or, more frequently, practice." The key difference between an error and a mistake is that a mistake is an "accidental and subjective sidetracking" from what is accepted as true "scientific knowledge," while an error is a "breakdown of that knowledge on a wide scale." Discourse on errors were the most important aspect of medical education because discussions of the faulty theories made physician-teachers better able to defend Hippocratic scientific theories.

The treatises which comprise the *Corpus* discuss both errors and mistakes, each for differing epistemological reasons. The treatises which Presti labels "discourse[s] on error" include *Ancient Medicine*, *Nature of Man*, and *Sacred Disease*:

Each of these writings invariably reveal the erroneous nature of such theoretic discourses. Exposure of this sort precedes a resetting of the cognitive value of these discourses; an incorrect theory is, indeed, an 'empty shell', both on a logical level, since it is shown to be inconsistent (cf. *Nature of Man* 1; *Sacred Disease* 1.13), and

³⁶ Cañizare (2010) 94.

on the level of standard procedure, since it generates vacuous and aleatory therapeutics (Sacred Disease 1.4-6; Ancient Medicine 15).³⁷

These treatises are summarily polemics against what the Hippocratics believe (and to them, what they have proven) to be faulty beliefs about the correct practice of medicine. In other treatises such as *Fractures* or *Articulations*, the main focus is on "erroneous forms of practice, manifestations of ignorance true and proper, all the more dangerous since they are widespread amongst practitioners." Early on in the work, the author of *Fractures* explains the discussion of "erroneous forms of practice" as an "integral part of his teaching: 'one must mention those errors of practitioners on which I want to give positive instruction (τάς μεν αποδιδίασκαι) and those errors on which I want to give negative instruction (τας δε διδάσκαι).""

What Presti notes as interesting about the particular discussion of errors in *Fractures* and *Articulations* is the inclusion by the author of "errors committed in the first person." For the author it is "not merely a question of denouncing the errors of others, but of learning through reconstructing the genesis of one's own failures." In doing so he can instruct his audience how to avoid what he did wrong and to follow what he did right. The next and final question, then, would be how the *Oath* factored into this method of education, and what significance it holds in the ethical formation of Hippocratic physicians.

³⁷ Presti (2010) 140.

³⁸ Presti (2010) 142; *Fractures* 25.

³⁹ Presti (2010) 142; Fractures 1.

⁴⁰ Presti (2010) 143.

⁴¹ Ibid.

CHAPTER THREE

The Ethics of the Hippocratic Oath

Greek Ethics

Before discussing the ethics of the Hippocratic Oath, we must first define what "ethics" means to us and what it meant to the Greeks. Proceeding chronologically, let us first consider the etymology of our word "ethics." Its most direct precursor would be the Greek $\tilde{\eta}\theta\sigma_{\zeta}$, which has two primary meanings. The first, and not particularly relevant for our discussion, is an "abode," an "accustomed place". There are passages in the *Iliad* and the *Odyssey* as well as passages in Herodotus where it is used in this manner to identify animal dens. The second meaning is more relevant: "customs," or more particularly "character" or "disposition." While Aristotle is one of the few to use $\tilde{\eta}\theta\sigma_{\zeta}$ to mean "moral character," the idea of character as a result of habit appears in Plato's *Laws*:

κυριώτατον γὰρ οὖν ἐμφύεται πᾶσι τότε τὸ πᾶν ἦθος διὰ ἔθος.

For because of the force of habit, it is in infancy that the whole character is most effectually determined.³

In this passage $\tilde{\eta}\theta o \zeta$ appears next to its cognate $\xi\theta o \zeta$ ("habit"), a relationship noted by Aristotle to argue for a direct link between "moral character" ($\tilde{\eta}\theta o \zeta$) and "habit" ($\xi\theta o \zeta$).

The discussion of $\tilde{\eta}\theta o \varsigma$ also requires consideration of its relationship to Greek culture in general: "Greek ethics in all periods essentially revolves around two terms,

¹ On $\tilde{\eta}\theta$ ος, see *LSJ* s.v. 2a.

² Aristotle. *Nichomachean Ethics*. 1139a; trans. Rackham

³ Plato. *Laws*. 7.792e; trans. Bury.

⁴ Aristotle. *Nichomachean Ethics*. 1103a; trans. Rackham

εὐδαιμονία and ἀρετή, or, as they are traditionally rendered, 'happiness' and 'virtue'."⁵ For the Greeks, εὐδαιμονία was the "possession of what is thought to be desirable," differing slightly from the common translation of "happiness."⁶ The relation between these two terms comprises the majority of early Greek writings on morality and goodness. The question Socrates spends the most time answering is how a man should live "in order to achieve εὐδαιμονία." His answer to this, in sum, is through ἀρετή: "If ἀρετή were equivalent to 'virtue', this could be taken as the simple assertion that the good life is, necessarily, a good *moral* life," one in which an individual has achieved εὐδαιμονία.⁸ Rowe breaks down the relationship into three parts:

Human beings ... are like other things in the world in that they have a 'function' or activity which is particular to them.

The good life, εὐδαιμονία, will consist in the successful performance of that function.

Nothing can perform its peculiar function successfully unless it possesses the relevant ἀρετή, i.e. unless it is *good of its kind*.⁹

The question then turns to defining human ἀρετή: what is the function of humanity that must be fulfilled well in order to achieve εὐδαμονία?¹⁰ Rowe points out that for Plato, this is "governing and the like (i.e. the governing by the soul of its union with the body)," and "justice."¹¹ For Aristotle, this looks like "an active life of that which possesses reason, and

⁵ Rowe, Christopher (1991) "Ethics in Ancient Greece." 122.

⁶ Ibid.

⁷ Rowe (1991) 123.

⁸ Ibid.

⁹ Ibid.

¹⁰ Rowe (1991) 124.

¹¹ Rowe (1991) 125.

the best of the ἀρέται." Of the two, Aristotle's theory of ethics is the more practical, and applicable to the practice of medicine:

Knowing how to act, the possession of practical wisdom, means having an 'eye' for solutions; and that can only be developed through a combination of training in the right habits and direct acquaintance with practical solution. 12

As attractive as Plato's postulation that knowledge of true ἀρετή is accessible "only to these few [philosophers], insofar as it involves the exercise of reason and deliberate choice," physicians of all time periods have dealt not in abstractions but with particulars. Even the more abstract rhetorical works in the Corpus deal with problems that physicians actually face. Some works in the Corpus argue forcefully that medicine is not just an intellectual pursuit. As Jouanna explains:

Whereas the physicians who supported philosophical medicine believed that, to practice medicine properly, it was necessary to begin with a prior understanding of human nature, the author of [the Hippocratic treatise] De prisca medica declared that it was a knowledge of medicine, as properly defined, that best served as the source of an understanding of human nature ... Physicians were no longer obliged to attempt to recreate man, beginning from a few first elements, the way a painter who depicts man begins with a few primary colors. The physician's task, then, was to observe the various reactions of the human body to the different actions of a regimen (food, drink, exercise). Through the causal study of these actions and the corresponding reactions, a physician could determine the different categories of human nature. In this way, the physician had replaced the general concept of human nature, which comes from a body of knowledge shaped by philosophical thought (φύσις, in the singular), with the different categories of human nature obtained through reasoned observation (φύσεις, in the plural). From this point on, medicine acquired a new standing: it was no longer driven by philosophical anthropology, but rather became itself a science of man. 13

The work *De prisca medica* serves as one of a few examples in the Hippocratic Corpus that strongly defends an *a posteriori* view of the nature of man: the idea that one can observe man and, from there, develop theories of man's nature, instead of trying to develop theories

¹² Rowe (1991) 128.

¹³ Jouanna (1998) 52.

of the nature of man without using observations (a priori). It is this reaction against abstract intellectualism that makes other treatises in the Corpus, such as the Oath, so intriguing.

The practicality of Aristotle's views on ethics is most evident when he discusses virtue. He delineates two kinds of virtue, intellectual and moral:

Διττῆς δὴ τῆς ἀρετῆς οὔσης, τῆς μὲν διανοητικῆς τῆς δὲ ἠθικῆς, ἡ μὲν διανοητικὴ τὸ πλεῖον ἐκ διδασκαλίας ἔχει καὶ τὴν γένεσιν καὶ τὴν αὕξησιν, διόπερ ἐμπειρίας δεῖται καὶ χρόνου· ἡ δ' ἠθικὴ ἐξ ἔθους περιγίνεται, ὅθεν καὶ τοὕνομα ἔσχηκε μικρὸν παρεγκλῖνον ἀπὸ τοῦ ἔθους.

Virtue being, as we have seen, of two kinds, intellectual and moral, intellectual virtue is for the most part both produced and increased by instruction, and therefore requires experience and time; whereas moral or ethical virtue is the product of habit $(\xi\theta\circ\varsigma)$, and has indeed derived its name, with a slight variation of form, from that word.¹⁴

Even though he distinguishes between the two, both sides of virtue ($\mathring{\alpha}\rho\epsilon\tau\mathring{\eta}$) are grounded in the real world: "instruction ... experience and time" for intellectual, "habit" for moral. Both forms of virtue deal in action, unlike to Plato's virtue, which consists of a vertical intellectual pursuit of the Good.

Modern Ethical Theories

Modern theories of ethics have become more complicated than a discussion of habit and character, but still encompass many of the ideas contained within the linguistic origins of the word. In ethics, John Skorupski draws a connection between character, feeling, and action:

Through its concern with action and reasons for action ethics also becomes concerned with character as it bears on reasons for action. ... And through that concern with character, it becomes concerned with questions about what there is reason to feel, and how reasons to feel connect with reasons to act. ¹⁵

¹⁴ Aristotle. Nichomachean Ethics. 1103a; trans. Rackham.

¹⁵ Skorupski, John (2003) "Ethics." 203-204.

Mary Midgley mentions one popular idea of "ethics simply as a device of egoistic prudence." She explains that this idea's crux is the assumption that the need for ethics only arose once social interaction began, and that it arose only out of necessity due to conflict. While a compelling argument on its face, one to which both Hobbes and Rousseau both ascribed, Midgley offers two reasons "this cannot mean that morality ... arises only from this calculating self-interest." Her reason is twofold. Firstly, "people simply are not so prudent or consistent as this account would imply." Secondly, she references humanity's innate goodness:

An equally well-known [to humans' lack of prudence and consistency is the] range of human good qualities. ... Egoist theorizers such as Hobbes sometimes explain this by claiming that these alleged motives are unreal, only empty names. But it is hard to see how names could ever have been invented, and have become current, for non-existent motives. And it is still more puzzling how anyone could ever have successfully pretended to be moved by them. ¹⁹

John Haldane breaks down modern ethics into three essential parts: morality, moral theory, and meta-ethics.²⁰ The first of these Haldane describes as "a body of moral claims usually expressing a certain kind of concern or commitment," insofar as those moral claims are claims "about what is of moral value ... and about what ought to be done or avoided in general and on particular occasions."²¹ In the *Oath*, one can see several claims of this kind:

διαιτήμασί τε χρήσομαι ἐπ' ἀφελείη καμνόντων κατὰ δύναμιν καὶ κρίσιν ἐμήν, ἐπὶ δηλήσει δὲ καὶ ἀδικίη εἴρξειν. οὐ δώσω δὲ οὐδὲ φάρμακον οὐδενὶ αἰτηθεὶς θανάσιμον, οὐδὲ

¹⁶ Midgley, Mary (1991) "The Origin of Ethics." 3.

¹⁷ Midgley (1991) 4; Hobbes, Thomas (1651), *Leviathan*. Part One, Ch. 13, p. 64; Rousseau, Jean-Jacques (1762). *The Social Contract*. p. 18, 194; (1954) *Discourse on Inequality*. Part One.

¹⁸ Ibid.

¹⁹ Midgley (1991) 5.

²⁰ Haldane, John (2003) "Applied Ethics." 490-491.

²¹ Ibid.

ύφηγήσομαι συμβουλίην τοιήνδε· όμοίως δὲ οὐδὲ γυναικὶ πεσσὸν φθόριον δώσω.

I will use treatment to help the sick according to my ability and judgment, but never with a view to injury and wrong-doing. Neither will I administer a poison to anybody when asked to do so, nor will I suggest such a course. Similarly I will not give to a woman a pessary to cause abortion.²²

ἐς οἰκίας δὲ ὁκόσας ἂν ἐσίω, ἐσελεύσομαι ἐπ' ἀφελείη καμνόντων, ἐκτὸς ἐὼν πάσης ἀδικίης ἑκουσίης καὶ φθορίης, τῆς τε ἄλλης καὶ ἀφροδισίων ἔργων ἐπί τε γυναικείων σωμάτων καὶ ἀνδρώων, ἐλευθέρων τε καὶ δούλων. ὰ δ' ἂν ἐν θεραπείη ἢ ἴδω ἢ ἀκούσω, ἢ καὶ ἄνευ θεραπείης κατὰ βίον ἀνθρώπων, ἃ μὴ χρή ποτε ἐκλαλεῖσθαι ἔξω, σιγήσομαι, ἄρρητα ἡγεύμενος εἶναι τὰ τοιαῦτα.

Into whatsoever houses I enter, I will enter to help the sick, and I will abstain from all intentional wrong-doing and harm, especially from abusing the bodies of man or woman, bond or free. And whatsoever I shall see or hear in the course of my profession, as well as outside my profession in my intercourse with men, if it be what should not be published abroad, I will never divulge, holding such things to be holy secrets.²³

The second component of ethics Haldane describes as "the articulation of such principles [namely the moral claims of morality] within a systematic structure."²⁴ It is here that Haldane notes two important things about such systematic structures. Firstly, that moral claims can exist without such a structure, and secondly that moral claims can be "compatible with different moral theories."²⁵ To explain this, he uses the example of lying.

²² Hippocrates. *Oath.* 14-19; trans. Jones.

²³ Hippocrates. *Oath.* 23-31; trans. Jones.

²⁴ Haldane (2003) 490-491.

²⁵ Ibid.

The moral claim that lying is wrong can be justified by multiple moral theories (systematic structures): "the immorality of lying might, for example, be taken to derive from its tendency to cause unhappiness (consequentialism), its intrinsic wrongness (deontology), or its being at variance with a divine commandment (divine law)." For the Hippocratics, this paradigm was a combination of two of these structures, divine law and consequentialism:

Όμνυμι Ἀπόλλωνα ἰητρὸν καὶ Ἀσκληπιὸν καὶ Ύγείαν καὶ Πανάκειαν καὶ θεοὺς πάντας τε καὶ πάσας, ἵστορας ποιεύμενος, ἐπιτελέα ποιήσειν κατὰ δύναμιν καὶ κρίσιν ἐμὴν ὅρκον τόνδε καὶ συγγραφὴν τήνδε

I swear by Apollo Physician, by Asclepius, by Health, by Panacea and by all the gods and goddesses, making them my witnesses, that I will carry out, according to my ability and judgment, this oath and this indenture.²⁷

ὄρκον μὲν οὖν μοι τόνδε ἐπιτελέα ποιέοντι, καὶ μὴ συγχέοντι, εἴη ἐπαύρασθαι καὶ βίου καὶ τέχνης δοξαζομένῳ παρὰ πᾶσιν ἀνθρώποις ἐς τὸν αἰεὶ χρόνον παραβαίνοντι δὲ καὶ ἐπιορκέοντι, τἀναντία τούτων.

Now if I carry out this oath, and break it not, may I gain for ever reputation among all men for my life and for my art; but if I transgress it and forswear myself, may the opposite befall me.²⁸

²⁷ Hippocrates. *Oath.* 1-5; trans. Jones.

²⁶ Ibid.

²⁸ Hippocrates. *Oath.* 31-34; trans. Jones.

The Hippocratics believed that the reward of fulfilling the Oath was "reputation among all men" (δοξαζομένω παρὰ πᾶσιν ἀνθρώποις) something ingrained in Greek culture for which to be striving, a stepping stone towards εὐδαιμονία.

The actual word here for reputation is δοξαζομένφ, from the verb δοξάζω, which in turn comes from the noun δόξα. The noun δόξα has quite a few meanings, but there is one of particular importance for this discussion. Jones' translation of δοξαζομένφ as "reputation" is accurate; however, more specifically it is almost always meant as "good reputation," if not simply "glory." It would be the positive judgement of your "moral character" ($\tilde{\eta}\theta$ ος) insofar as you "carry out this oath and break it not."

A question then arises about the "opposite" (τὰναντία) of this. The opposite of reputation would be something along the lines of bad reputation, but in the context of the Oath I believe it is also something more personal than that. It is significant that the passage includes the phrase "among all men" (παρὰ πᾶσιν ἀνθρώποις). The opposite refers both to the "reputation" and "among all men." Instead of a good reputation among all men, you would have a personal shame about your own actions, unbeknownst to anyone. However, the idea that shame requires an audience must be reconciled. Cairns explains that "shame (αἰδός) still depends on the idea of an external audience to bring it about, and the notion of the external audience is the main catalyst of the emotion." Shame, Cairns says, is an emotion that is a reaction to some "criteria" which define what is and is not shameful. The threat here is that even when there is nobody watching, when one is alone with a

²⁹ On δόξα, see *LSJ* s.v. 3a.

³⁰ Cairns, Douglas L. (1993) *Aidōs: The Psychology and Ethics of Honour and Shame in Ancient Greek Literature*. 16.

³¹ Cairns (1993) 5.

patient, one's own moral code, the maxims in the Oath, are bearing witness as audience to the physician's actions, and he is aware that they are watching. That moral code serves as the audience that Cairns says is necessary for the proper feeling of shame, the knowledge of those "criteria" that tell a physician whether what they are doing is right or not. This threat of shame (and prior promise of good reputation) is backed up by the litany of gods in whose names the Oath is sworn, hence the moral theory of divine law.

The third and final level, meta-ethics, "addresses such metaphysical and epistemological questions as whether values are objective, and what that might mean and whether thoughts about them can constitute genuine knowledge." This level of discussing ethics has less to do with what is right or wrong, and more to do with why we think we know what is right and wrong: "the logical status of moral claims and moral theories." This is the level of discussion necessary to answer the ultimate question for this paper: what gave the Oath validity, what was its role in physician education in the ancient world, and what are the implications of such a role.

The Oath in Hippocratic Medical Education

The question of the hour is this: in light of all that has been said about Hippocratic medical education and Greek culture, how did the Oath factor into the ethical formation of Hippocratic physicians?

The passage from Rosenthal's translation of the Galenic fragments provides the most compelling piece of evidence for how the Oath was used in the education of physicians:

³² Haldane (2003) 490-491.

³³ Ibid.

He established the written Covenant for them and made them swear the oaths contained in it. (They also had to swear) that they would not oppose his injunctions nor teach anyone the science of medicine unless he declared before that he would abide by this Covenant.³⁴

The Covenant referenced here is none other than the Oath. It was through the creation of the Oath that Hippocrates was able to expand the number of students who would learn and pass on the medical knowledge that had been accumulated over generations. Another section of Rosenthal's translation mentions one the shortcomings of the Asclepiads, that due to the restrictions of educating only family members was severely shrinking their numbers:

(Medical) instruction in the city of Rhodes had disappeared, because the masters had no heirs. (Medical instruction) in the city of Cnidus was (nearing) extinction, because those who were heirs to it were just a few persons. In the city of Cos, where Hippocrates resided, (medical instruction) still persisted, (but only) a few remnants remained of it, because those who were heirs to it were few. Now, Hippocrates looked into the craft of medicine and found that it had almost disappeared, because there were few children in the family of Asclepius to inherit it. Therefore, he was of the opinion that he (should) spread it everywhere on earth, hand it over to the rest of mankind, and teach it to those who were deserving of it, so that it might not disappear.³⁵

The failing population of the Asclepiads perfectly explains the passages of the Oath which bind student and teacher as kin.

The Oath has quasi-adoptive power. The first ten lines, after invoking the gods, establish familial bonds between the speaker and all Hippocratics:

ήγήσεσθαι μὲν τὸν διδάξαντά με τὴν τέχνην ταύτην ἴσα γενέτησιν ἐμοῖς, καὶ βίου κοινώσεσθαι, καὶ χρεῶν χρηϊζοντι μετάδοσιν ποιήσεσθαι, καὶ γένος τὸ ἐξ αὐτοῦ

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³⁴ Rosenthal (1956) 80-81.

³⁵ Rosenthal (1956) 80-81; Ibn Abî Usaybi'ah 1, 2419-31 Müller. Possibly, only the middle paragraph is derived from the Commentary. Cf. above, fn. 21, and the preceding fragment. Cf. also Ibn Ridwân, an-Nâfi' fî ta'lîm şinâ'at aṭ-ṭibb, referred to by J. Schacht and M. Meyerhof, The medicophilosophical controversy between Ibn Butlan of Baghdad and Ibn Ridwan of Cairo 21 f. (Cario 1937. Publ. of the Faculty of Arts of the Egyptian University 13).

άδελφοῖς ἴσον ἐπικρινεῖν ἄρρεσι, καὶ διδάξειν τὴν τέχνην ταύτην, ἢν χρηΐζωσι μανθάνειν, ἄνευ μισθοῦ καὶ συγγραφῆς, παραγγελίης τε καὶ ἀκροήσιος καὶ τῆς λοίπης ἀπάσης μαθήσιος μετάδοσιν ποιήσεσθαι υἱοῖς τε ἐμοῖς καὶ τοῖς τοῦ ἐμὲ διδάξαντος, καὶ μαθητῆσι συγγεγραμμένοις τε καὶ ὡρκισμένοις νόμῳ ἰητρικῷ, ἄλλῳ δὲ οὐδενί.

To hold my teacher in this art equal to my own parents; to make him partner in my livelihood; when he is in need of money to share mine with him; to consider his family as my own brothers, and to teach them this art, if they want to learn it, without fee or indenture; to impart precept, oral instruction, and all other instruction to my own sons, the sons of my teacher, and to indentured pupils who have taken the physician's oath, but to nobody else.³⁶

Rosenthal's translation of the fragments from the Galenic texts above describes how Hippocrates incorporated non-family members into the cult of Asklepios in order to educate them in medicine. This is validated by the Oath: student and teacher become kin by their oath, and in turn their progeny become kin. The student has a duty to pass on knowledge to the teacher's heirs, and likewise to his own children. Beyond his own children and his teacher's children, anyone who takes the Oath is obliged to pass along knowledge to others who swear the Oath. The bond between those who swore the Oath was a familial one:

The aspiring practitioner, having taken the oath 'according to medical law' and signed up, is to join the doctor's own family and to treat its members, and be treated by them, as a son or brother. He will be taught from books and orally and in' every other way' – that is, with practical training and advice – and in turn he is to be willing to impart his knowledge to the members of his new family and to those who wish to enroll and take the oath. This document extends the obligations of the medical apprentice, in contrast to other apprenticeship contracts known for other

³⁶ Hippocrates. *Oath.* 5-13; trans. Jones.

crafts, far beyond the bounds of his education. It imposes obligations on him that are lifelong and that extend sideways to take in the family members of his teacher.³⁷

This is perfectly in line with what Galen says prompted Hippocrates to start expanding the population of those eligible for education in the art of medicine. Education was traditionally a family affair, as shown from numerous passages of Homer, Solon, and Herodotus. The Oath allows for the continued tradition of "familial" education while allowing for more physicians to be educated.

The most logical use of the Oath in the context of physician education would be as a first step, an indoctrination into what is expected of Hippocratic physicians. From there, the actual training began.

Aristotelean ethics state that "virtue" (ἀρετή) is something accomplished through habit, repeated action. By introducing moral maxims to students explicitly via the Oath, one would not inculcate virtue. It is only the first step towards that end. The only way to achieve "virtue" (ἀρετή) (actions most fitting for a physician, true good character) is by three means according to Aristotle:

τὰ δὲ κατὰ τὰς ἀρετὰς γινόμενα οὐκ ἐὰν αὐτά πως ἔχῃ, δικαίως ἢ σωφρόνως πράττεται, ἀλλὰ καὶ ἐὰν ὁ πράττων πῶς ἔχων πράττη, πρῶτον μὲν ἐὰν εἰδώς, ἔπειτ' ἐὰν προαιρούμενος, καὶ προαιρούμενος δι' αὐτά, τὸ δὲ τρίτον ἐὰν καὶ βεβαίως καὶ ἀμετακινήτως ἔχων πράττη.

Acts done in conformity with the virtues are not done justly or temperately if they themselves are of a certain sort, but only if the agent also is in a certain state of mind when he does them: first he must act with knowledge; secondly he must deliberately choose the act, and choose it for its own sake; and thirdly the act must spring from a fixed and permanent disposition of character.³⁸

³⁷ Nutton, Vivian (2012) Ancient Medicine. 69

³⁸ Aristotle. *Nichomachean Ethics*. 1105a.4; tarns. Rackham.

After introducing the maxims explicitly, it would be beneficial for students to witness these virtues expected of physicians with their own eyes by staying close to physicians who are virtuous in order to develop that "permanent disposition of character." This idea of learning virtue by association from those who are virtuous has already been mentioned in the writing of Theognis.³⁹ The idea of developing and maintaining a virtuous life through association with virtuous men also appears elsewhere in Aristotle's *Nichomachean Ethics*, when he discusses rightly-ordered "frienship":

οὐ γὰρ ῥάδιον καθ' αὑτὸν ἐνεργεῖν συνεχῶς, μεθ' ἑτέρων δὲ καὶ πρὸς ἄλλους ῥᾶον. ἔσται οὖν ἡ ἐνέργεια συνεχεστέρα, ἡδεῖα οὖσα καθ' αὑτήν, ὃ δεῖ περὶ τὸν μακάριον εἶναι.

Now a solitary man has a hard life, for it is not easy to keep up continuous activity by oneself; it is easier to do so with the aid of and in relation to other people. The good man's activity therefore, which is pleasant in itself, will be more continuous if practised with friends.⁴⁰

For students of Hippocrates, this "relation to other people" would be the Hippocratic community, tied together by the familial bonds of the Oath.

Beyond how these ethical maxims are inculcated in students, another question arises: what is the ethical framework of all of these maxims? The simplest answer to this question can be found in a short passage from Soranus' *Gynaecology*. Soranus was a physician from the second century CE, who was a known commentator on the Hippocratic Corpus.⁴¹ In this particular work, he makes mention of Hippocrates specifically when discussion abortion:

οί μὲν γὰρ ἐκβάλλουσιν τὰ φθόρια τὴν Ἱπποκράτους προσκαλούμενοι μαρτυρίαν λέγοντος· οὐ δώσω δὲ οὐδενὶ φθόριον, καὶ ὅτι τῆς ἰατρικῆς ἐστιν ἴδιον τὸ τηρεῖν καὶ σώζειν τὰ γεννώμενα ὑπὸ τῆς φύσεως.

³⁹ Chapter One, pp. 3; Theognis 27.

⁴⁰ Aristotle. *Nichomachean Ethics*. 1170a.5-6; trans. Rackham.

⁴¹ King, Helen (2015) "Soranus, of Ephesus, Physician".

For one party banishes abortives, citing the testimony of Hippocrates who says I will give to no one an abortive; moreover, because it is the specific task of medicine to guard and preserve what has been engendered by nature.⁴²

The maxims found in the Oath adhere to this "specific task of medicine." This is particularly obvious in the maxims concerned with matters of death:

οὐ δώσω δὲ οὐδὲ φάρμακον οὐδενὶ αἰτηθεὶς θανάσιμον, οὐδὲ ὑφηγήσομαι συμβουλίην τοιήνδε· ὁμοίως δὲ οὐδὲ γυναικὶ πεσσὸν φθόριον δώσω.

Neither will I administer a poison to anybody when asked to do so, nor will I suggest such a course. Similarly I will not give to a woman a pessary to cause abortion.⁴³

To induce death would be a violation of the natural course of a patient's life, and inducing an abortion with drugs is likewise an interruption of something "engendered by nature." The truth of Soranus' claim about the "specific task of medicine" is evident (if less obviously) in the other passages of the Oath pertaining to the treatment of patients:

διαιτήμασί τε χρήσομαι ἐπ' ἀφελείη καμνόντων κατὰ δύναμιν καὶ κρίσιν ἐμήν, ἐπὶ δηλήσει δὲ καὶ ἀδικίη εἴρξειν.

I will use treatment to help the sick according to my ability and judgment, but never with a view to injury and wrong-doing.⁴⁵

ές οἰκίας δὲ ὁκόσας ἂν ἐσίω, ἐσελεύσομαι ἐπ' ἀφελείη καμνόντων, ἐκτὸς ἐὼν πάσης ἀδικίης ἑκουσίης καὶ φθορίης, τῆς τε ἄλλης καὶ ἀφροδισίων ἔργων ἐπί τε γυναικείων σωμάτων καὶ ἀνδρώων, ἐλευθέρων τε καὶ δούλων.

⁴² Soranus. *Gynaecology*. 1.60; trans. Temkin.

⁴³ Hippocrates. *The Oath.* 16-19; trans. Jones and Potter.

⁴⁴ Soranus. *Gynaecology*. 1.60; trans. Temkin.

⁴⁵ Hippocrates. *The Oath.* 14-16; trans. Jones and Potter.

Into whatsoever houses I enter, I will enter to help the sick, and I will abstain from all intentional wrong-doing and harm, especially from abusing the bodies of man or woman, bond or free.⁴⁶

In the first passage, "injury and wrong-doing" (δηλήσει δὲ καὶ ἀδικίη) can be considered violations of "nature" (φύσεως). This exact sentiment is repeated later in the Oath, reiterating that the speaker will do no "wrong-doing and harm" (ἀδικίης ...καὶ φθορίης) when entering a home to treat a patient.

Beyond setting out explicitly the moral code of Hippocratic physicians, the Oath does not do anything significant in the way of forming an ethical theory. What it does do is provide the basis for a student to start developing the proper habits of a physician, habits which will help him practice medicine well, and achieve the "virtues" (ἀρέται) of a Hippocratic physician.

⁴⁶ Hippocrates. *The Oath.* 23-26; trans. Jones and Potter.

CONCLUSION

In the modern medical school, the Hippocratic Oath is usually recited at the graduation ceremony (if at all), as the medical students become physicians who are ready to go out into the world an practice medicine. While this is a nice adaptation, I do believe that this is not how the Oath was originally intended to be used. Rather than an Oath taken as students complete their formal education, it was likely used at the beginning of one's education in the art of medicine. The moral code found in the Oath was meant to be ingrained so that, upon completion, the carefully observed and practiced code of conduct has become second nature. While it is admirable that modern medicine seeks to preserve some kind of moral standard in its education by the inclusion of the Hippocratic Oath, saying the Oath does not do much in the way of moral formation. Moral formation takes time, experience, and habit.

Even so, some of the provisions of the original Oath are not particularly necessary today. There are legal structures in place to protect patients from the very abuses of power proscribed in the Oath. The Health Insurance Portability and Accountability Act (HIPAA) in the United States protects patient privacy under threat of legal ramifications. Individual states license physicians to legally practice medicine; this license can be revoked for a number of reasons, most all of the reasons being a violation of some protection put in place for the benefits of patients. There are even patient cases that go to court in order for a third party to decide what exactly the patient's best interest is.⁴⁷

⁴⁷ See the 2017 case of Charlie Gard.

But despite not necessarily doing much in the modern age in the way of developing a moral code under which physicians can operate, the Oath clearly has an objective benefit. If it did not, the Oath would not still be recited 2500 years after its composition. The nature of that benefit, however, is the topic of another paper.

APPENDIX

THE OATH

1 "Ομνυμι Ἀπόλλωνα ἰητρὸν καὶ Ἀσκληπιὸν καὶ Ύγείαν καὶ Πανάκειαν καὶ θεοὺς πάντας τε καὶ πάσας, ἵστορας ποιεύμενος, ἐπιτελέα ποιήσειν κατά δύναμιν καὶ κρίσιν έμὴν ὅρκον τόνδε καὶ συγγραφὴν τήνδε: ἡγήσεσθαι μὲν τὸν διδάξαντά με την τέχνην ταύτην ἴσα γενέτησιν έμοῖς, καὶ βίου κοινώσεσθαι, καὶ χρεῶν χρηϊζοντι μετάδοσιν ποιήσεσθαι, καὶ γένος τὸ ἐξ αὐτοῦ άδελφοῖς ἴσον ἐπικρινεῖν ἄρρεσι, καὶ διδάξειν την τέχνην ταύτην, ην χρηίζωσι μανθάνειν, άνευ μισθοῦ καὶ συγγραφῆς, παραγγελίης τε καὶ 10 άκροήσιος καὶ τῆς λοίπης ἁπάσης μαθήσιος μετάδοσιν ποιήσεσθαι υίοῖς τε έμοῖς καὶ τοῖς τοῦ έμὲ διδάξαντος, καὶ μαθητῆσι συγγεγραμμένοις τε καὶ ὡρκισμένοις νόμφ ἰητρικῷ, ἄλλφ δὲ οὐδενί. διαιτήμασί τε χρήσομαι ἐπ' ἀφελείη καμνόντων κατὰ δύναμιν καὶ κρίσιν ἐμήν, ἐπὶ δηλήσει δὲ καὶ ἀδικίη εἴρξειν. οὐ δώσω δὲ οὐδὲ φάρμακον οὐδενὶ αἰτηθεὶς θανάσιμον, οὐδὲ ύφηγήσομαι συμβουλίην τοιήνδε· όμοίως δὲ οὐδὲ γυναικὶ πεσσὸν φθόριον δώσω. ἁγνῶς δὲ καὶ 20 όσίως διατηρήσω βίον τὸν ἐμὸν καὶ τέχνην τὴν έμήν. οὐ τεμέω δὲ οὐδὲ μὴν λιθιῶντας, έκχωρήσω δὲ ἐργάτησιν άνδράσι πρήξιος τῆσδε. ἐς οἰκίας δὲ ὁκόσας ἂν έσίω, ἐσελεύσομαι ἐπ' ἀφελείη καμνόντων, ἐκτὸς έων πάσης άδικίης έκουσίης καὶ φθορίης, τῆς τε άλλης καὶ ἀφροδισίων ἔργων ἐπί τε γυναικείων σωμάτων καὶ ἀνδρώων, ἐλευθέρων τε καὶ δούλων. ἃ δ' ἂν ἐν θεραπείῃ ἢ ἴδω ἢ ἀκούσω, ἢ καὶ ἄνευ θεραπείης κατὰ βίον ἀνθρώπων, ἃ μὴ χρή ποτε 30 έκλαλεῖσθαι ἔξω, σιγήσομαι, ἄρρητα ἡγεύμενος εἶναι τὰ τοιαῦτα. ὅρκον μὲν οὖν μοι τόνδε έπιτελέα ποιέοντι, καὶ μὴ συγχέοντι, εἴη έπαύρασθαι καὶ βίου καὶ τέχνης δοξαζομένω παρὰ πᾶσιν ἀνθρώποις ἐς τὸν αἰεὶ χρόνον: παραβαίνοντι δὲ καὶ ἐπιορκέοντι, τἀναντία τούτων.

I swear by Apollo Physician, by Asclepius, by Health, by Panacea and by all the gods and goddesses, making them my witnesses, that I will carry out, according to my ability and judgment, this oath and this indenture. To hold my teacher in this art equal to my own parents; to make him partner in my livelihood; when he is in need of money to share mine with him; to consider his family as my own brothers, and to teach them this art, if they want to learn it, without fee or indenture; to impart precept, oral instruction, and all other instruction to my own sons, the sons of my teacher, and to indentured pupils who have taken the physician's oath, but to nobody else. I will use treatment to help the sick according to my ability and judgment, but never with a view to injury and wrong-doing. Neither will I administer a poison to anybody when asked to do so, nor will I suggest such a course. Similarly I will not give to a woman a pessary to cause abortion. But I will keep pure and holy both my life and my art. I will not use the knife, not even, verily, on sufferers from stone, but I will give place to such as are craftsmen therein. Into whatsoever houses I enter, I will enter to help the sick, and I will abstain from all intentional wrong-doing and harm, especially from abusing the bodies of man or woman, bond or free. And whatsoever I shall see or hear in the course of my profession, as well as outside my profession in my intercourse with men, if it be what should not be published abroad, I will never divulge, holding such things to be holy secrets. Now if I carry out this oath, and break it not, may I gain for ever reputation among all men for my life and for my art; but if I transgress it and forswear myself, may the opposite befall me.48

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⁴⁸ Hippocrates. *The Oath*; trans. Jones and Potter.

BIBLIOGRAPHY

- Argarwalla, Pankaj K. "Training Showmanship: Rhetoric in Greek medical education of the fifth and fourth centuries BC" in *Studies in Ancient Medicine*, v. 35. Horstmanshoff, et al. eds. Leiden: Boston: Brill, 2010.
- Asheri, David, Alan B. Lloyd, Aldo Corcella, Oswyn Murray, and Alfonso Moreno. *A Commentary on Herodotus Books I-IV*. Oxford: Oxford University Press, 2007.
- Aristotle, Waterfield, Robin H. *Aristotle: in twenty-three volumes. 17: The Metaphysics: books I IX. Reprint.* The Loeb classical library 271. Cambridge, Mass.: Harvard Univ. Press, 2003.
- Aristotle, H. Rackham, Aristotle, and Aristotle. *The Nicomachean Ethics. Second edition. Loeb Classical Library 73*. Cambridge, Massachusetts: Harvard University Press, 1934.
- Briant, Pierre. "Darius I." Oxford Research Encyclopedia of Classics, December 22, 2015.
- Cairns, Douglas L. Aidōs: The Psychology and Ethics of Honour and Shame in Ancient Greek Literature. Oxford: New York: Clarendon Press; Oxford University Press, 1993.
- Cañizare, Pilar Pérez. "The Importance of Having Medical Knowledge as a Layman: Hippocratic Treatise Affections in the context of the Hippocratic Corpus" in *Studies in Ancient Medicine*, v. 35. Horstmanshoff, et al. eds. Leiden: Boston: Brill, 2010.
- Carella, Michael Jerome. *Matter, Morals, and Medicine: The Ancient Greek Origins of Science, Ethics, and the Medical Profession*. American University Studies, v. 110. New York: P. Lang, 1991.
- Carrick, Paul. *Medical Ethics in the Ancient World*. Clinical Medical Ethics Series. Washington, D.C: Georgetown University Press, 2001.
- Craik, Elizabeth M., and Hippocrates. *The "Hippocratic" Corpus: Content and Context*. Abingdon, Oxon; New York, NY: Routledge, 2014.
- Dean-Jones, Lesley. "Physician: A Metapaedogogical Text" in *Studies in Ancient Medicine*, v. 35. Horstmanshoff, et al. eds. Leiden: Boston: Brill, 2010.
- Demont, Paul. "Schole." Brill's New Pauly, October 1, 2006...
- Edwards, Walter Manoel, and Robert Browning. "Stobaeus, 'John of Stobi." Oxford Research Encyclopedia of Classics, March 7, 2016.

- Galen, Friedrich Wilhelm Assmann, and Karl Gottlob Kühn. *Opera Omnia. Medicorum Graecorum Opera Quae Exstant*; v. 1-20. Lipsiae: C. Cnobloch, 1821.
- Galen, J. A. Beach, and W. J. Lewis. *On Hippocrates' On the Nature of Man*. Medica Antiqua. 1998.
- Galen, and R. J. Hankinson. *On the Therapeutic Method*. Clarendon Later Ancient Philosophers. Oxford: New York: Clarendon Press; Oxford University Press, 1991.
- Galen, Ian Johnston, and G. H. R. Horsley. *Method of Medicine*. The Loeb Classical Library 516–518. Cambridge, Mass.; London, England: Harvard University Press, 2011.
- Galen, In Hippocratis librum de articulis et Galeni in eum commentarii iv, in Claudii Galeni Opera Omnia, C.G. Kühn ed., vol. 18.1, Leipzig: Knobloch, 1829 (repr. Hildesheim: Olms, 1965): 300-345, 423-767.
- Gehrke, Hans-Joachim (2018). "Historiographical Methods" in Brill's New Pauly, edited by Hubert Cancik and, Helmuth Schneider, English Edition by: Christine F. Salazar, Classical Tradition volumes edited by: Manfred Landfester, and English Edition by: Francis G. Gentry.
- Grmek, Mirko D., Bernardino Fantini, and Antony Shugaar, eds. *Western Medical Thought from Antiquity to the Middle Ages*. Cambridge, Ma: Harvard University Press, 1998.
- Haldane, John. "Applied Ethics" in *The Blackwell Companion to Philosophy*. 2nd ed. Blackwell Companions to Philosophy. Malden, MA: Blackwell Pub, 2003.
- Herodotus, A. D. Godley. *Herodotus*. The Loeb Classical Library 117–120. Cambridge, Massachusetts: Harvard University Press, 1990), 1981.
- Hippocrates, and William Henry Samuel Jones. *Hippocrates. Vol. 1*: Nachdr. Loeb Classical Library 147. Cambridge, Mass.: Harvard Univ. Press, 2010.
- Hippocrates, and William H. S. Jones. *Hippocrates. Vol. 2:* Reprinted. The Loeb Classical Library 148. Cambridge, Mass.: Harvard Univ. Press, 2006.
- Horstmanshoff, H. F. J., and C. R. van Tilburg, eds. *Hippocrates and Medical Education: Selected Papers Read at the XIIth International Hippocrates Colloquium*, Universiteit Leiden, 24-26 August 2005. Studies in Ancient Medicine, v. 35. Leiden; Boston: Brill, 2010.
- How, W. W., and J. Wells. *A Commentary on Herodotus with Introduction and Appendixes*. Oxford [Oxfordshire]; New York: Oxford University Press, 1991.

- Iamblichus. Iamblichi De Vita Pythagorica Liber. ed. Nauck, August. Petropoli, 1884.
- Johnson, Jenny Marie. "Barrington Atlas of the Greek and Roman World." Cartographic Perspectives, no. 37 (June 1, 2000): 96–98.
- Jouanna, Jacques. *The Birth of Western Medical Art*. in "Western Medical Thought from Antiquity to the Middle Ages". Grmek et al. eds. Cambridge, Ma: Harvard University Press, 1998.
- Joyal, Mark, Iain McDougall, and John Yardley. *Greek and Roman Education: A Sourcebook.* Routledge Sourcebooks for the Ancient World. Milton Park, Abingdon, Oxon; New York, NY: Routledge, 2009.
- Kahn, Charles H., and Fritz Graf. "Pythagoras (1), Pythagoreanism." Oxford Research Encyclopedia of Classics, March 7, 2016.
- King, Helen. "Soranus, of Ephesus, Physician." Oxford Research Encyclopedia of Classics, July 30, 2015.
- Langholf, Volker. *Medical Theories in Hippocrates: Early Texts and the "Epidemics."* Untersuchungen Zur Antiken Literatur Und Geschichte 34. Berlin: de Gruyter, 1990.
- Liddell, Henry George, and Robert Scott. *Liddell and Scott's Greek-English Lexicon, Abridged: The Little Liddell*; [for the Study of Classical Greek and Bible Study. Erscheinungsort nicht ermittelbar: Simon Wallenberg Press, 2007.
- Midgley, Mary. "The Origin of Ethics". in *A Companion to Ethics*. Singer, Peter, ed. Blackwell Companions to Philosophy. Oxford, UK; Cambridge, Mass., USA: Blackwell Reference, 1991.
- Miles, Steven H. *The Hippocratic Oath and the Ethics of Medicine*. Oxford; New York: Oxford University Press, 2004.
- Nutton, Vivian (London). "Galen of Pergamum." Brill's New Pauly, October 1, 2006.
- Nutton, Vivian. *Ancient Medicine*. 2nd ed. Sciences of Antiquity. London; New York: Routledge, 2012.
- Plato, and Walter R. M. Lamb. *Plato: In Twelve Volumes. 2: Laches. Protagoras. Meno. Euthydemus.* Reprinted. The Loeb Classical Library 165. Cambridge, Mass.: Harvard Univ. Press, 2006.
- Plato, and Robert Gregg Bury. *Plato: In Twelve Volumes. 11: Laws: Books VII XII.* Reprinted. The Loeb Classical Library 192. Cambridge, Mass.: Harvard Univ. Press, 2004.

- Presti, Roberto L. *The Physician as Teacher: Epistemic function, cognitive function, and the incommensurability of errors* in ""Studies in Ancient Medicine", v. 35. Horstmanshoff, et al. eds. Leiden: Boston: Brill, 2010.
- Rosenthal, Franz. "An Ancient Commentary on the Hippocratic Oath." Bulletin of the History of Medicine; Baltimore, Md. 30 (January 1, 1956): 52–87.
- Rowe, Christopher. *Ethics in Ancient Greece*. in "A Companion to Ethics." Singer, Peter, ed. Blackwell Companions to Philosophy. Oxford, UK; Cambridge, Mass., USA: Blackwell Reference, 1991.
- Skorupski, John. "Ethics" in *The Blackwell Companion to Philosophy*, Bunnin, Nicholas, and E. P. Tsui-James, eds. 2nd ed. Blackwell Companions to Philosophy. Malden, MA: Blackwell Pub, 2003.
- Smith, Wesley D. "Galen on Coans versus Cnidians." *Bulliten of the History of Medicine* 47, no. 6 (November 1, 1973): 569–85.
- Smith, William. A Dictionary of Greek and Roman Biography and Mythology. By Various Writers. Ed. by William Smith. Illustrated by Numerous Engravings on Wood., London. 2005.
- Soranus, and Owsei Temkin. *Soranus' Gynecology*. Softshell Books ed. Baltimore: Johns Hopkins University Press, 1991.
- Stobaeus. *Ioannis Stobaei Eclogarum Physicarum et Ethicarum Libri Duo, Ad Codd. Mss. Fidem Suppleti et Castigati Annotatione et Versione Latina*. Gottingae: apud Vandenhoek et Ruprecht, 1792.
- Taylor, C. C. W. "Cyrenaics." Oxford Research Encyclopedia of Classics, December 22, 2015.
- Taylor, Thomas. "Iamblichus' Life of Pythagoras." London: J.M. Watkins. 1986.
- Thucydides, and C. F. Smith. *History of the Peloponnesian War*. Cambridge, MA: Harvard University Press, 1919.
- Tsouna-McKirahan, Voula. *The Epistemology of the Cyrenaic School*. Cambridge: Cambridge University Press, 2007.
- West, Martin Litchfield. "Homeridae." Oxford Research Encyclopedia of Classics, December 22, 2015.
- West, Martin Litchfield. "Theognis (1), Elegiac Poet." Oxford Research Encyclopedia of Classics, March 7, 2016.

Wickkiser, Bronwen Lara. *Asklepios, Medicine, and the Politics of Healing in Fifth-Century Greece: Between Craft and Cult.* Baltimore: The Johns Hopkins University Press, 2008.