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The Ecology of Health in Herodotus, Dicaearchus, and Agatharchides

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‘Environmental determinism’ is the idea that climate, geography, or other environmental factors cause people to look and behave the way they do. Scholars of classical antiquity have seen this theory at work especially in the Hippocratic *Airs, Waters, Places*, but also in Herodotus’ *Histories* and the ethnographic texts that follow them.¹ As Rosalind Thomas has shown, ancient Greek authors often associated environmental factors, especially climate, with certain health outcomes. The ethnic Others who were thought to inhabit markedly different climates were therefore prime material for theorizing the effect of environment on health; Thomas gives the name ‘the ethnography of health’² to Greek writers’ use of ethnic Others to theorize health. Greek writers also associated good health with their own earlier stages of development. Hesiod’s golden race, for example, neither grows old nor suffers physical ailments (Hes. *Op.* 109–120).

In this chapter, I consider the relationship between good health as an attribute of distant times and of distant peoples. Ancient Greek writers believed health to be an outcome not only of certain environmental accidents, such as climate, which humans must suffer passively, but of the ecological relationships humans undertake with the rest of nature. I then consider to what extent these ecologies of distant times and far-off places could be abstracted from time and space and applied in the Greek present. In the process, I show that agriculture is crucial to Greek theories of health and that Greek ‘ethnographies,’ descriptions of ethnic Others, and ‘cultural histories,’ Greek accounts of their own deep past, constitute a single discourse, which I call ‘the ecology of health.’ In Greek classical and Hellenistic thinking about good health, human interventions play as great a role as environmental accident, and in some cases Greek writers represent good health as largely under human control.³

**Dicaearchus’ golden age and the Hippocratic corpus**

In his *On Abstinence* (third century CE), Porphyry uses Dicaearchus’ second-century BCE *Bios Hellados*, or *Life of Greece* to support his argument against eating meat.⁴ In this work, which is typically categorized as ‘cultural history’ or ‘historical anthropology,’ Dicaearchus adapts Hesiod’s metallic races to divide early Greek history into three distinct ecological phases marked by a particular mode of subsistence: life under Cronus (*ho epi Kronou bios*), the
pastoral life (ho nomadikos bios), and the agricultural life (ho geōrgikos bios). In Dicaearchus’ scheme, Greeks degenerated as they proceeded through these stages. The first bios was “the best” and the people who lived then were “the most excellent.” Quoting Hesiod’s Works and Days, Dicaearchus says that they were rightly considered a “golden race.”

According to Dicaearchus, the earliest Greeks were vegetarians who ate the spontaneously growing fruits of the earth. This was not an ethical vegetarianism, however, but an accidental one, since human beings had no art with which to cultivate food or herd animals. As Dicaearchus says (Dicaearch. 56A = Porph. De Abst. 4.2):

All things are reasonably said to have grown spontaneously (automata); for human beings did not procure anything themselves, being still ignorant of agriculture or any other art (technē). This very thing was the reason for their being at leisure, living life without toil or care, and, if it is appropriate to assent to the opinion of our most accomplished doctors, the reason why they didn’t get sick. For one could find no precept more conducive to their health than to avoid the production of excesses, from which they kept their bodies entirely pure. For they neither consumed food that was stronger (ischurotera) than their nature but only such that their nature could overcome, nor more than is moderate because of its ready availability but for the most part less than would seem sufficient because of its scarcity . . . But to those coming after, who pursued great things and fell into many evils, this way of life naturally became desirable. The simple (litos) and spontaneous (autoschedios) food of earlier people is made clear in the later saying ‘enough of oak,’ which is what the first person who changed [from the earlier way of life] probably said.

While the golden age is idealized in general, Dicaearchus’ emphasis on health is striking. What about the “spontaneous” food of the earliest Greeks makes it so healthy? One way to understand this passage is by comparing it to discussions of health in the Hippocratic corpus, a collection of medical texts dated to between 430 and 400 BCE, most of which were written on the later end of this range. Dicaearchus does not mention Hippocratic doctrine explicitly, but other scholars have noted that he uses Hippocratic vocabulary to explain the healthiness of this first diet, and have read the Life of Greece as influenced by the earlier Hippocratic writings. In Hippocratic theory, some foods are stronger than others and food competes with other aspects of regimen to determine the health of the body. Yet despite the fact that Dicaearchus explains the healthiness of the earliest diet by way of Hippocratic theory, the life of Greeks under Cronus is difficult to map directly onto Hippocratic regimen, which is much more contingent on other variables than Dicaearchus’ model allows. In the Hippocratic corpus, foods are rarely good or bad per se; they are good or bad for certain constitutions and in certain seasons: this is the principle at work in Regimen in Acute Diseases. Furthermore, Hippocratic medicine makes subtle distinctions not only between agricultural or pastoral products, or even land and sea animals, or fruits and vegetables, but between barley as opposed to wheat, pork as opposed to beef (Hp. Acut. 2.39ff.). If Dicaearchus’ regimen were simply Hippocratic, we would expect a more detailed breakdown of particular foods.

Moreover, when uncultivated foods are discussed in the Hippocratic corpus, they are emphatically not recommended (Hp. VM. 3):

[The people of the past, who ate what the earth produced] suffered many terrible things from their excessive and beast-like way of life, ingesting things raw and
untempered and those possessing strong powers \( \textit{megalas dunamias} \). Those \([\text{then}]\) suffered just as they would suffer now, falling into severe pains and illnesses, and quickly into death... For this reason I think that \([\text{the people of the past}]\) harmonized their food with their natures and discovered the sort of food which we now eat. From wheat, after soaking, pounding, grinding, sifting, mixing, and baking it, they made bread.

When Dicaearchus talks about the food of the first \( \textit{bios} \) not being “stronger” than the constitution of the people of that time, he is alluding to Hippocratic teaching about the “strong qualities,” \( \textit{megalai dunamiai} \), of certain foods also explored in this passage. But a close comparison of the two reveals that Dicaearchus disagrees with the Hippocratic opinion of ancient diet. Whereas \textit{On Ancient Medicine} argues that ancient diet overpowered a good proportion of people (whose constitutions, of course, differed), Dicaearchus says that the ancient diet benefited people precisely because it did not overpower them. In \textit{On Ancient Medicine}, health progressed because people adopted diets that harmonized with their different constitutions, eschewing \( \textit{akratos} \), “untempered” foods animals eat “such as those that grow from the earth: fruits, bark, and grass,” in preference for bread, which is produced by “soaking, pounding, grinding, sifting, mixing, and baking.” By contrast, the \textit{Life of Greece} associates good health with foods that spring spontaneously from the earth and without the application of agriculture. The \( \textit{technē} \) at play in each author is also subtly different. Both Dicaearchus and the Hippocratic author contrast ancient and modern diet, but the mechanism for distinguishing them differs: Dicaearchus emphasizes agriculture, while for the Hippocratic author, cooking has made all the difference. Thus, Dicaearchus applies some Hippocratic vocabulary, but his theory of nonagricultural diet is incompatible with the Hippocratic treatment of the same subject in \textit{On Ancient Medicine}.\(^1\)

Although the \textit{Life of Greece} and \textit{On Ancient Medicine} both discuss “strong qualities” in foods and their effect on health, they have opposing philosophies of human progress. That ancient opinion was divided about the quality of life in the ancient past is well known and Dicaearchus and the author of \textit{On Ancient Medicine} represent the two basic positions well, at least in respect to health and diet. For Dicaearchus and others of the ‘pessimistic’ view, health has declined as human diet has advanced; these writers characterize humans’ earliest food as “simple” and healthy. For the author of \textit{On Ancient Medicine} and other ‘progressivists,’ time and \( \textit{technē} \) have only (or largely) made things better;\(^1\) these writers characterize uncultivated foods as “raw” and “untempered” and associate good health with the arts of later times.

However, there is another set of texts we can use to contextualize Dicaearchus, texts that, like the \textit{Life of Greece}, describe health in general terms and attribute health or illness to the characteristics of groups rather than individuals. These texts treat ethnic Others, peoples contemporary with the ancient Greeks but distant from them in space; we generally call these texts ethnographies.\(^1\) In what follows, I examine two ethnographic accounts, one in Herodotus’ fifth-century BCE \textit{Histories} that preceded Dicaearchus’ \textit{Life of Greece}, and another in Agatharchides’ third-century BCE \textit{On the Erythraean Sea} that followed it,\(^4\) posing new answers to the logic of health behind Dicaearchus’ work and exploring the interaction among these three texts. The ethnographies express philosophies of human development very similar to the ‘progressivist’ and ‘pessimistic’ philosophies characteristic of cultural history, and make arguments to their readers about the advisability of certain diets just as the \textit{Life of Greece} and \textit{On Ancient Medicine} do.
Herodotus’ Histories: meat and milk vs. bread

In the third book of Herodotus’ Histories, Cambyses sends a delegation of Icthyophagoi, “Fish Eaters,” to the Aithiopes, a people living in Africa. While ostensibly there to extend the hand of Persian friendship, the Icthyophagoi have in fact been sent to spy. Herodotus says that Cambyses is especially interested in whether the Table of the Sun really exists, a table that is supposed to produce food spontaneously for the Aithiopes year round. The scene unfolds comically as the Aithiopes systematically reject most of the gifts the Persians present, thereby providing a running commentary on Persian (and also Greek) culture which James Romm has aptly dubbed “ethnologic satire.” Particulary interesting for present purposes are the Aithiopian king’s comments on the Persian diet (Hdt. Hist. 3.22.11–3.23.5):

And when he came to the wine and learned how it was made, he took exceedingly great pleasure in it, and asked what the Persian king ate and what was the highest age a Persian man could attain. And they said that he ate bread, explaining the nature of [the growing of] wheat, and that 80 years of life was the greatest measure allotted to a man. To these things the Aithiopian said that if they ate shit (kopros) it was no wonder they lived so few years; for they would not be able to live even that long if they didn’t sustain themselves with this drink (indicating to the Icthyophagoi the wine): for in this they had been beaten by the Persians. To the Icthyophagoi asking in turn about their way of life and life-span, the king said that most of them reached 120 years, and some lived even longer, and that their food was boiled meat and their drink milk.

Although the Aithiopian king appreciates the gift of wine, a trope in other ethnographic texts, he calls bread, the staff of both Persian and Greek life, kopros, “shit,” and attributes the Persians’ relative short-livedness to this dietary mistake. The Aithiopes, by contrast, consume only meat and milk, the products of pastoralism rather than agriculture, and it is to their diet that they attribute their longevity. Just as Dicaearchus placed good health in a nonagricultural time, so does this passage of Herodotus’ Histories locate good health in a nonagricultural space, Aithiopia, where people do not cultivate crops according to the story. Although neither the Persian delegation nor the Aithiopian king align their diets with particular temporal phases of cultural development, the scene juxtaposes the pastoral food of the Aithiopes with the agricultural food of the Persians in the same way that temporal schemas like Dicaearchus’ account of Greek bioi juxtapose phases of civilization characterized by different diets. The encounter Herodotus stages between the Persian envoys and the Aithiopian king is not only an ethnologic satire, but also a biting parody of culture-heroism; here, the Persian delegation, like Dionysus or Heracles, brings agricultural products to the Aithiopes, but they reject most of these gifts, preferring the ecological practice of pastoralism that has ensured their longevity. Rather than validating Greek agriculturalism and civilization as scenes of culture-heroism typically do, this encounter between Aithiopes and Persian envoys calls into question whether Greeks should have adopted agriculture or should continue to practice it now.

On the other hand, elements of the Aithiopian way of life distinguish the Aithiopes very clearly from those who inhabit Dicaearchus’ golden age. The majority of Aithiopes may believe that the Table of the Sun produces food for them spontaneously, but Herodotus tells us that this is a trick of the Aithiopian leadership. Of the Table, he says (Hdt. Hist. 3.18):

There is a meadow in the area surrounding the city quite full of boiled meats of every sort of quadruped. Every night, it is each time the duty of those in office to place the
meats on the table, and during the day everyone who wishes to comes and feasts. But the locals say that the earth yields these things each time.

The Aithiopes eat pastoral products which seem to them to spring spontaneously from the earth but are in fact supplied secretly by the Aithiopian leadership. For most Aithiopes, there is little practical difference between a truly spontaneous, “golden” diet and what they experience, but this difference—and the deceit it involves—undercuts the Aithiopes as a paradigm to be emulated.

The fact that the Table is not what it seems also affects Cambyses and his army. After Cambyses’ spies return to him and report what they have seen and heard, Cambyses becomes enraged and sends his troops against Aithiopia. This march is a complete disaster. Cambyses, who had before been so keenly interested in the Table of the Sun, ironically fails to provision his army appropriately. As a result, they march desperately backward into a developmentally earlier way of life (Hdt. Hist. 3.25.13–23):

Before his army had completed a fifth part of the journey, suddenly all of the food they had brought ran out, and after the food was gone they ate the pack-animals, until they also ran out . . . As long as the soldiers could get anything from the earth they survived by eating grass; but when they came to the desert, some of them did a terrible thing, selecting by lot one man from each ten and eating him.

This passage is not only a famine narrative, but also an imagined journey into a nightmarish version of human beginnings. Herodotus does not explicitly compare the army’s declining diet to the dietary phases of cultural histories, but he employs the same language to imagine the scene. Instead of eating animals raised for that purpose, like goats or sheep or cows, the soldiers eat their horses. Instead of gathering berries and other products of the earth, as in the golden age, they eat grass. Finally, they arrive at the point where the human diet collapses in on itself, and consume one another. As in On Ancient Medicine, where the earliest humans ate “fruit, bark, and grass,” so too are the Persians forced to eat grass as a last resort before turning to cannibalism. Cambyses’ troops have not only marched into the past, they experience the worst version of the past imagined by progressivists.

It is impossible to determine the direction of influence, but On Ancient Medicine is an important intertext for another Herodotean famine narrative. In book 8, Xerxes’ retreating army falls ill and dies after consuming a diet of grass and bark (8.115, 117). Like On Ancient Medicine, both famine narratives in the Histories denigrate nonagricultural diets and associate them with particular foodstuffs, especially bark and grass. Rather than promoting health as they do in the Life of Greece and Herodotus’ Aithiopia, nonagricultural foods in these passages lead to illness and death.

Although the famine that afflicts Xerxes’ army in book 8 occurs at a distance from Cambyses’ embassy to the Aithiopes in book 3, Cambyses’ army experiences their own famine directly after the embassy and perhaps as a result of the misinformation the Persian envoys take to him about the Table of the Sun. Herodotus recognizes the true nature of the Table, but the Persian envoys probably do not. Cambyses’ foolishness is, of course, not confined to this episode, but inasmuch as he has been misled by the incomplete report of the Icthyophagoi and seduced into believing that all of Aithiopia is a land of natural abundance, the famine his troops suffer results from his misplaced confidence in the Aithiopian diet. For this reason, Cambyses’ army’s decline and the Aithiopian king’s discourse on diet must be read in conversation with one another. The Aithiopian king has made an argument for a meat-based diet over a bread-based one. Cambyses’ army’s fate, however, especially read in conjunction with Xerxes’ army’s
decline in book 8, places a strong limit on this advice. Readers who look back on book 3 in light of book 8 might conclude that meat-based diets are too risky to be attempted. They can lead not only to illness, but also cannibalism, the confusion of appropriate and inappropriate “meats”.\footnote{23}

An army marching on foraged foods is not going to get very far, as Herodotus’ readers probably knew, even if they might not have known that human beings cannot digest grass and bark (as On Ancient Medicine implies). However, when read in concert with the Aithiopian-Persian exchange in book 3, these famine narratives activate readers’ questions about the different diets that are explicitly discussed by the Aithiopian king. Readers who, after encountering the Aithiopian criticism of Persian bread, wonder whether agricultural foods might not be best for their health and longevity, are perhaps comforted by the fate of Cambyses’ and then Xerxes’ armies.

This scene may convince readers that a nonagricultural diet is appropriate for some peoples but not others, those who are native to a region but not those who invade it. At the very least, these famine narratives can lead readers to question the Aithiopian king’s assertion about the connection between agricultural products and ill health, especially when Herodotus’ revelation about the deception behind the Table of the Sun has primed them to mistrust the king.

The fact that the Aithiopian king approves of the gift of Persian wine complicates this set of passages further. The Aithiopian king elevates milk and meat over bread, but admits that wine has ameliorated the Persians’ otherwise poor diet: “The Aithiopian said that if they ate shit it was no wonder they lived so few years; for they would not be able to live even that long if they didn’t sustain themselves with this drink [indicating to the Icthyophagoi the wine]: for in this they had been beaten by the Persians.” Bread is definitely bad for one’s health, but wine is not; it is in fact conducive to health. The Aithiopes’ appreciation for Persian wine is an ethnographic trope, but also, as James Romm points out, evokes the Cyclopes of Odyssey 9 in particular.\footnote{24} Like the Aithiopes, the Cyclopes are nonagricultural pastoralists, and like them they too have a fondness for wine. But the reference to Odyssey 9 is more troubling than it may first appear. Readers who have the Polyphemus episode in mind will remember the juxtaposition of pastoralism and cannibalism in Homer’s text—Polyphemus washing down Odysseus’ men with milk (9.296–7)—before the Cyclops is “beaten” by Odysseus’s gift of wine (9.347ff.). Whether or not the Homeric passage has provided Herodotus with an explicit model in the Aithiopian episode, the parallels between the two further undermine the Aithiopian king’s advice, or at least how to apply it. The episode opposes pastoral and agricultural diets through the comparison of bread and meat (and milk), and then complicates this opposition with the Aithiopes’ and Persians’ shared appreciation for wine. The Aithiopian king’s concession that wine is a true pleasure—and even a healthful one—underlines his denigration of bread, but it means that neither he nor the reader can place agricultural bios entirely beneath pastoral bios. The Histories draws attention to the problems with agriculture but does not adjudicate between bioi or advocate consistently for one over the other.

In cultural histories, works like On Ancient Medicine, Works and Days, and the Life of Greece, the writer’s philosophy of progress is consistent and unified. But different episodes of Herodotus’ Histories, and even different aspects of the same episode, echo different philosophies of human progress simultaneously. As I argue in the following section, Agatharchides’ On the Red Sea is ambivalent about human progress as well.

**Agatharchides’ On the Erythraean Sea: fish vs. locusts**

Agatharchides’ second-century BCE work On the Erythraean Sea, like Dicaearchus’ works, has been lost to us in its original form, but Diodorus Siculus, the first-century BCE writer of
universal history, relies on him heavily. In Agatharchides, we meet the Icthyophagoi, or “Fish Eaters,” again, this time themselves the ethnographic subject. The Fish Eaters are in fact not a single people and Agatharchides begins, in Diodorus’ telling, with those who live right along the coast of the Red Sea. The Fish Eaters, as their name implies, generally eat fish and only fish, and though they must take trouble to prepare their food and occasionally turn to mussels instead, they never go hungry. In the general course of events, the ocean brings to shore every day and even twice a day, an _apiston plēthos pantoiōn ichthyōn_ “an unbelievable abundance of every sort of fish” (F 32b = DS 3.15.4). The “unbelievable abundance of every sort of fish” the Fish Eaters gather verbally echoes the Aithiopes’ meadow “quite full of boiled meats of every sort of quadruped” in Herodotus (3.18), discussed above. Unlike Herodotus’ Aithiopes, Agatharchides’ Fish Eaters must gather their food themselves, but the abundance of their food supply associates their lifestyle with the life under Cronus that Dicaearchus describes. Agatharchides concludes his description of these Fish Eaters (F 39b = DS 3.17.5): “Thus, the people who inhabit the coast between the straits live in this way. Because of the simplicity [haplotēs] of their diet they rarely fall ill, but they are much shorter-lived than we are.”

Agatharchides attributes the good health of the Fish Eaters to the _haplotēs_ of their diet, its “simplicity,” or “singleness.” They eat a simple, unrefined food, and only one kind of it. This simplicity is paralleled in the diet of Dicaearchus’ earliest Greeks, who are said to eat food that, though unspecified, must be kept simple, _litos_, by humanity’s ignorance of art in general and agriculture in particular.

Agatharchides’ Fish Eaters are, however, not quite exempla of well-being. Their simplicity of diet wards off illness, but they are not as long-lived as “we” Greeks are, Agatharchides says, or as Herodotus’ long-lived Aithiopes are. Like the Aithiopes whose diet seems spontaneous but is not, the Fish Eaters’ diet is abundant and healthy, but only up to a point. Agatharchides does not say why the Fish Eaters die young in Diodorus’ telling, though Photius, a later transmitter of Agatharchides, blames a lack of toil (F 39a = Phot. _Bibl_. Cod. 250.40, 450a): “Because of the _haplotēs_ of their diet they succumb to few diseases, but they are deprived of years of life inasmuch as they maintain a way of life that is less arduous than others.” Whatever the reason, this disjunction between the Fish Eaters’ good health and short lives, between what the simplicity of their diet achieves for them and what it fails to achieve, associates the Fish Eaters with the golden age and at the same time distances them from this ideal.

On Photius’ reading of Agatharchides, it is possible to maintain the link between the simplicity of the Fish Eaters’ diet and good health, and to quarantine their short life span as a result of their idleness, though this too may ultimately be seen as an effect of their overly abundant source of food. Later in Diodorus’ telling, Agatharchides offers a much clearer counter-argument to simplicity of diet as a promoter of health. The Locust Eaters, who live on the border of the desert west of Agatharchides’ Fish Eaters and Aithiopes, eat only locusts, just as the Fish Eaters eat only fish (F 59b = DS 3.29.1–2): “For in the springtime in their land, powerful west winds drive out from the desert an unspeakable multitude of locusts, distinct for their size and with ugly, dirty-colored wings. From this source they have abundant food for their whole life.”

Like the Fish Eaters, who enjoy an “unbelievable abundance of every sort of fish,” the Locust Eaters feast on an “unspeakable multitude of locusts.” But the Locust Eaters die from a most terrible disease, eaten from the inside out by _pterotoi phtheires_, “winged worms” or “lice” (F 59b = DS 3.29.7): “With such a dissolution of their bodies these people bring their lives to an unhappy end, happening upon such a reversal either because of the peculiarity [idiotēs] of their food or the air.”
This illness, which seems to be the universal cause of death among the Locust Eaters, Agatharchides attributes either to bad air or to the “peculiarity” of their diet. Although he is uncertain of the cause, the fact that the Locust Eaters, who depend on insects, themselves die as nourishment for other insects seems to point to their diet as the culprit; the association at least casts a pall over what they eat. In any case, inasmuch as their diet is a source of their illness, Agatharchides places a limit on the effectiveness of the simplicity of diet. A food can be very simple, singular, and nonagricultural, like the locust, but still inappropriate for human consumption.

With the exception of On Ancient Medicine, all of the texts I have examined associate health with the nonagricultural diets of earlier times and distant places, even if that association is sometimes qualified. In Dicaearchus, relative health is located at the edges of time, when humans did not know about agriculture, and in Herodotus and Agatharchides at the edges of the earth, places where some people have not adopted agriculture. The healthy foodstuff in these texts varies from naturally occurring vegetation in Dicaearchus to meat and milk in Herodotus and fish and fish alone in Agatharchides, and varies also in what makes them healthy. Whereas Herodotus’ Aithiopes attribute their health to a meat-based diet rather than a bread-based one, Dicaearchus and Agatharchides attribute health as much to the absence of technē, expressed in Dicaearchus by the adjective litos and in Agatharchides by the adjective litos and the noun haplotēs, as to a particular foodstuff. The ethnographies also helpfully outline failed diets, placing explicit limits on the simplicity of healthy eating. The question then becomes: what argument do these texts make to their Greek readers? If agricultural food can cause illness, do these texts suggest that Greeks should abandon agriculture or at least agriculturally produced foods, that they should no longer be “eaters of bread”? Does it matter that the healthy diets of the ethnic Others I have examined are somewhat compromised, by the Aithiopian king’s participation in the deception of his people, in Herodotus, and the short lifespan of the Fish Eaters, in Agatharchides?

The ecology of health and environmental determinism

My discussion thus far has analyzed Dicaearchus, Hippocrates, Herodotus, and Agatharchides without much attention to genre. This has revealed larger patterns that in some cases associate nonagricultural foods with spontaneous abundance and health, and in others associate them with illness and death, regardless of whether modern scholars classify the text in question as cultural history (Dicaearchus), history of medicine (the Hippocratic On Ancient Medicine), or ethnography (Herodotus and Agatharchides). This connection between health, diet, and ecology constitutes a discourse that transcends modern genre constructions. In her study of Herodotus and the Hippocratic corpus, Rosalind Thomas (2000) has demonstrated that medical and ethnographic texts in the fifth century BCE show evidence of having influenced one another. Cultural histories should be added to this mix.

Attending to chronology can illuminate how this discourse developed over time.27 While Dicaearchus could not have influenced Herodotus and most of the Hippocratic corpus, I suggest that Dicaearchus’ text was influenced by them—not only by the Hippocratic corpus, as others have argued, but by ethnographic texts as well. Nor was this influence unidirectional. As Stanley Burstein has observed, Dicaearchus’ cultural history went on to influence Agatharchides’ later ethnography.28 Agatharchides, like many Hellenistic ethnographers,29 is himself indebted to Herodotus and thus participates in this web of influence twice, through the ethnographic tradition and via Dicaearchus. I would like to call this web “the ecology of health,” an extension of Thomas’ term, “the ethnography of health,” which she uses to
describe the way that both ethnographic and medical writers use ethnic Others to think through medical theory.

Understanding cultural histories as a part of the Greek discourse about health and difference reveals the complexity of Greek environmental thinking. In the ecology of health, diet is not something that humans usually manipulate at will, nor is it represented as something they suffer passively, like climate. Rather, diet is correlated with certain modes of subsistence, automatic, pastoral, or agricultural, and these modes of subsistence themselves imply different ecological arrangements between humans and the rest of nature. In the ecology of health, ethnographic accounts are not only a place for Greek writers to think through medical theories and vice versa (as they are in Thomas’ “ethnography of health”), but they and cultural histories are modes of writing in which Greek writers theorize how the environment in which humans live and the way human relate to that environment affect human health.

The ecologies that affect human health are imagined in a variety of ways, from Dicaearchus’ four bioi to dependence on a single animal or insect in Agatharchides, but diet is always imagined as part of a larger life-system. In most of the texts I have discussed, the central contrast among these systems is between simplicity and refinement, with refinement often identified with cereal culture. In Dicaearchus and the Hippocratic corpus, which are chronologically oriented, earlier humans consume nonagricultural foods while later ones consume the products of agriculture. Even though Dicaearchus and the Hippocratic writers imagine different health outcomes for later, agricultural humans, they both make agriculture the turning point of health and emphasize agriculture as a process, a technē, as much as a product. Writers who are geographically oriented locate agriculture and its absence in certain places rather than in certain times, but the contrast between agricultural foods and nonagricultural foods still operates. When Agatharchides characterizes the Fisheater diet as “simple,” litos, he echoes the Life of Greece, which uses the same word to describe the earliest Greek bios, and, like Dicaearchus, connects “simplicity” of diet, nonagricultural diet, and good health.

The encounter Herodotus stages between the Aithiopian king and the Persian delegation is slightly different. While the Aithiopian king clearly distinguishes between his own meat-and-milk diet and the Persian diet of bread, he does not reject agricultural technē outright. His appreciation of Persian wine, which has presumably resulted from cultivated fruits, is significant. He does not reject agriculture in toto but bread in particular, and argues that a meat-based diet is more healthful. Through the Table of the Sun, this meat-based diet is associated with what is imagined to have been the Greeks’ first, spontaneous way of life, but the Aithiopian king stresses product rather than process; readers can assimilate the Aithiopes to an earlier stage of Greek life, but neither Herodotus nor the Aithiopes make this connection explicit. Nevertheless, the Aithiopian king’s criticism of Persian civilization is not confined to diet alone. He also rejects the dyed cloth, incense, and golden jewelry the Icthyophagoi have brought as gifts (3.21). The Aithiopian king cannot help admiring Persian wine, but it is the one aspect of Persian life that he considers superior to his own people’s. In general, he rejects the superfluities of Persian civilization in preference to his own way of life. He singles out bread as the cause of the Persians’ relatively short lifespan, but makes it clear that he would not adopt Persian customs even if the Persians and Aithiopes ate the same diet. Although Herodotus emphasizes agricultural product over agricultural process, agricultural products cannot be entirely isolated from the life systems in which they are embedded. The fact that the Persians rely on bread is connected to the way they clothe, adorn, and feed themselves, how they worship, and the natural resources they use in the process.

In general, there is one important way in which ethnographic accounts differ from others that investigate the connection between ecology and health. Above, I discussed the two main
Greek views of human progress, one which celebrates technē and the other which does not. Herodotus’ and Agatharchides’ descriptions of distant diets resemble this scheme for evaluating the diets of distant times, but, perhaps surprisingly, do not adopt a single ‘pessimistic’ or ‘progressivist’ philosophy. In both writers’ ethnographic descriptions, nonagriculturalism can have a positive or negative outcome, or both. While Herodotus’ Aithiopian king prefers meat and milk to bread, the famine narratives that follow this episode explain health and illness differently, and cast doubt on the Aithiopian diet. In Agatharchides, health is associated first with a “simple” and nonagricultural diet of fish, and later with the avoidance of another simple and uncultivated diet, locusts. This ambivalence manifests within episodes as well as across them. Herodotus’ Aithiopes emphasize their diet in explaining their longevity to the Persian delegation of Icthyophagoi, but then show them a spring that Herodotus claims is the real reason for Aithiopian longevity (Hdt. Hist. 3.23.9): “If this water is as it is said to be, making such use of it would be the reason why [the Aithiopes] are long-lived.” The Locust Eaters’ illness in Agatharchides also receives a double explanation. They grow ill and die “either because of the peculiarity of their food or the air” (F 59b = DS 3.29.7), as we saw above. The dual or competing explanations that both authors provide are part of a larger phenomenon in ethnographic writing. Whereas cultural histories like the Life of Greece and the passage of On Ancient Medicine examined above advocate unequivocally for a pessimistic or progressivist view of human development, the ethnographies remain polyvocal and ambivalent about agriculture, and this changes how readers respond to their claims about how diet affects health.

In his criticism of the Persian diet, the Aithiopian king implicitly assumes that the Persians could change their diet if they so wished. In as much as health depends on diet, bread-eaters like the Persians can choose to eat milk and meat. But if Aithiopian health is just as much about a magic spring as their consumption of nonagricultural food, there is not much that the Persians can do to achieve their level of health. In Agatharchides, a similar problem arises. If the Locust Eaters sicken and die because they eat peculiar food, readers looking for healthy diets know that they should not eat locusts when looking for a “simple” diet. But if the Locust Eaters die because of the air they breathe, diet is no longer a guarantee of health, and the health-seeking reader is left wondering: should I eat unrefined foods, or not? Am I doomed to ill health because of my climate, or can I control my physical well-being by eating differently?

The health of Agatharchides’ Fish Eaters is not explained in multiple ways, but the fact that they are short-lived is significant. As we saw above, “because of the simplicity of their diet [the Fish Eaters] rarely fall ill, but they are much shorter-lived than we are,” (Agatharch. F 39b = DS 3.17.5). This short lifespan may be the result of the immoderateness of their eating and drinking cycle, or the fact that they do not toil, as Photius argues, but the end result is that readers cannot have complete confidence in the Fish Eaters’ diet. Although not denigrated as “peculiar,” the “simplicity” of this diet does not appear entirely attractive, in large part because Agatharchides’ statements about the Fish Eaters’ health and short lifespan stand side by side. The Fish Eaters’ short lifespan may not be the result of their diet, but Agatharchides does not say for sure and the reader is invited to associate diet with both good health in the short term and a short life in the long term.

Like the double explanations that account for the Locust Eaters’ illness and the Aithiopes’ health, the conflict between the Fish Eaters’ good health and short life represents these ethnographers’ engagement with a type of inquiry and method of argumentation that multiplies explanations. These doubled and absent explanations are more than a curious feature of ethnographic reasoning; they also shape how readers will evaluate the advisability of adopting other diets and engaging in other ecologies. In the case of the Aithiopes and Locust Eaters, diet is contrasted with a specific environmental factor (the Aithiopian...
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spring; the bad air in the land of the Locust Eaters) that would be difficult for a reader to replicate. Compared to these environmental factors, diet may seem more abstractable from environment and adoptable by readers who encounter the diets of geographically distant Others. But the environmental factors themselves are so specific that, if they cast doubt on whether diet or environment leads to certain health outcomes, readers may conclude that the health of ethnic Others is unavailable to them. In ethnographies, the ecologies that produce health are very difficult to determine. Human actions, including the bios humans adopt, make a difference, but environmental factors beyond human control continue to assert themselves.

Readers’ doubts about these specific diets in Herodotus and Agatharchides are amplified by the fact that these authors present peoples whose lives support both a pessimistic and progressivist view of agriculture. Even if a reader reaches a conclusion about the Aithiopian diet in Herodotus, the famines that the Persian troops suffer present an alternative evaluation of nonagricultural diet. The same is true for readers of Agatharchides, who encounter both Fish Eaters and Locust Eaters. Not only is the healthiness of these peoples’ individual diets uncertain, so is the advisability of adopting an agricultural or nonagricultural diet in general. Readers may choose to focus on one strain of thinking, either progressive or pessimistic, and order their lives accordingly, but they must actively ignore the other strain to do so.

The Life of Greece and On Ancient Medicine do not present the same problems for readers. In these texts, a single either pessimistic or progressivist view of nonagricultural foods is advanced and this diet is tied either to health in the former or illness in the latter. Eating the right foods or foods produced in the right way ensures good health without the complications of multiple explanations or environmental factors beyond human control. Health or illness is diet-dependent but it is not dependent on a certain climate or place. This is reflected in the universalizing features of time-bound rather than place-bound imaginings of nonagricultural ways of life. Although ostensibly about the Greek way of life, the Life of Greece describes the earliest lifestyle of human beings at large, as does On Ancient Medicine. This universalizing ties these texts to Hesiod’s Works and Days, which Dicaearchus self-consciously adapts. Although comprised of metallic genē, “races” rather than ages, as we tend to speak of them, Hesiod’s genē, with the exception of the demigods, populate the entire earth in turn. This universalizing releases health from the specific environmental factors of climate and place.

However, health in the Life of Greece and On Ancient Medicine remains strongly tied to certain time-bound ecologies. In Dicaearchus, the best bios is associated with a god, Cronus, whose time has certainly passed and with the absence of a technē, agriculture, which present-day Greeks have indubitably acquired. For Dicaearchus, bios is both a temporal category that describes different stages of human development and an atemporal “way of life” that can be abstracted from the stream of time and, at least theoretically, adopted by people at any time. The succession of bioi Dicaearchus describes, each one replacing the other in turn, points to the first, temporal meaning of bios, while the connections he draws between the health of the earliest bios and the advice of contemporary physicians points to the possibility for the second. But the fact that the diet of the earliest, healthiest Greeks depends on humans’ ignorance of the art of agriculture makes it difficult to experience this historical bios in subsequent times, including the time of Dicaearchus’ third-century BCE readers; how does one unlearn agriculture? In this sense, the first bios and its attributes are indeed lost. In On Ancient Medicine, health is also time-bound, but bound to the present and to the technē of agriculture, which is available to On Ancient Medicine’s Greek readers. In progressivist texts like On Ancient Medicine, health is more attainable than in pessimistic texts like the Life of Greece that connect health to a lost golden age.
In Dicaearchus’ *Life of Greece*, good health belongs definitively to a lost, pre-agricultural past. In Herodotus’ and Agatharchides’ ethnographies, aspects of that past live on in other places. Like Hesiod’s demigods who survive at the ends of the earth (*Op. 170–73*), some ethnic Others eat nonagricultural diets which spring, if not entirely spontaneously, then at least abundantly and without refinement from the earth and sea. Nevertheless, the tendency of ethnographic texts to omit or provide double explanations makes it impossible for readers to gauge the degree to which environmental factors, rather than diet, determine the health of these “golden” genē. Ethnographic texts tease their readers, first offering a path to golden-age blessedness and then withdrawing it by tying good health to environmental factors that lie outside human control.

In the ecology of health, temporal and geographic distances play a crucial role. Both types of distance encourage the imagining of alternative ways of being, including being in a particular environment. Distance provides the freedom to imagine alternatives, but it also frustrates Greek readers’ application of those alternatives. The health-giving or health-preventing characteristics of past times and distant places are to some degree specific to those times and places, and are to that same extent forever out of reach.

**Postcript: Porphyry’s environmental thinking**

In the last section I described the temporal and geographic constraints on health in the imagination of Greek classical and Hellenistic writers. When these writers locate health in a developmentally earlier time or distant, environmentally different place, health is difficult for Greek readers to abstract and adopt for themselves. A notable exception to this is the Hippocratic *On Ancient Medicine*, which, because it ties health to agriculture, makes health accessible to its readers, who already practice agriculture. Another interesting exception is Porphyry’s third-century ce *On Abstinence*, the cover text for the version of Dicaearchus’ *Life of Greece* discussed above. Although Porphyry lies outside the temporal bounds of this study, the logic of *On Abstinence* further illuminates the ecology of health I have described at work in earlier periods.

Porphyry’s aim in *On Abstinence* is to convince his friend Firmius Castricius, the work’s addressee, to abstain from killing and eating animate beings. Porphyry quotes Dicaearchus at the beginning of the fourth and last book, concluding that the earliest humans’ happiness resulted from their abstinence from meat, and that meat-eating went hand in hand with increasing war and injustice (Porph. *Abst.* 4.9). Dicaearchus’ life under Cronus was probably vegetarian, it is true, but we have seen how the diet of this earliest phase of human life depended at least as much on abstinence from agriculture as on an accidental vegetarianism. Yet Porphyry elides this fact, collapsing the distinction between the first *bios* and later agriculturalism which Dicaearchus works so hard to establish. The difference between Porphyry and Dicaearchus is made especially clear at the end of *On Abstinence* 3, where Porphyry quotes the same passage of Hesiod’s *Works and Days* upon which Dicaearchus based his life under Cronus, but comes to a different conclusion (Porph. *Abst.* 3.27): “We will imitate the golden race, we will imitate those who have been set free. For Aidōs and Nemesis and Dikê were their friends because they were satisfied with the fruit of the earth, for ‘the fruitful land bore for them of its own accord and with great abundance.’”

Like Dicaearchus, Porphyry considers the earliest human beings blessed, and calls for his readers to imitate them. But he reinterprets the significance of their diet. For Dicaearchus, the automatic abundance of the earth has been lost to human beings through pastoralism and the art of agriculture. For Porphyry, agriculture is precisely how people of his own time and
place can become golden once more. The earth no longer spontaneously produces food for human beings, but Porphyry evokes the spontaneity of the golden race as a promise to his readers: if you, like them, restrict yourselves to vegetarian food, i.e. agriculturally produced crops, you will be as abundantly satisfied as if the earth really were providing for you of its own accord.

Unlike Herodotus and Agatharchides, who associated nomadic and other pastoral diets with the golden age, Porphyry does the opposite. Because flesh-eating, rather than agriculture, is the defining contrast he draws between good and bad diets, these peoples’ dependence on meat, however abundant, associates them in Porphyry’s thinking with the corrupt present rather than the blessed past. In On Abstinence 4, Porphyry holds up a variety of ethnic Others, including Egyptian priests, Ioudaioi, and Indian Brahmans for his readers to imitate, but anticipates the arguments of those who would offer “the customs of Nomads, Trogloodytes, or Fish Eaters” in contradiction to his arguments. These peoples, Porphyry says, have been forced to eat meat “from necessity,” because their land is unsuitable for tilling, and are as much to be imitated as cannibals (4.21).

Porphyry simultaneously valorizes the pre-agricultural past and the agricultural present rather than opposing them as Dicaearchus and the Hippocratic author does. He harmonizes the past and present by making meat-eating, rather than agriculture, the crucial difference between phases of human development, and by associating the automatic abundance the earth literally produced in the past with the moral abundance he promises to his readers if they stop eating meat. Vegetarianism, as Porphyry imagines it, is limited to certain environments, but can be easily accommodated within the existing and dominant agricultural bios of his readers. Some nomadic peoples are environmentally prevented from being satisfied with agricultural products, but the abundant, cultivated earth in which he lives invites his readers to eat bread as the vegetarians they have chosen to become.33

Notes

1 See Kennedy and Irby, this volume. See also McCoskey 2012, 46–9 and Isaac 2004, 55–168 for an overview of the history of this theory in classical scholarship and the classical tradition. For a recent discussion of environmental determinism and human agency in AWP, see Presti 2012.

2 Thomas 2000, 28–74.

3 In what follows, I contrast agriculture with other modes of subsistence as Greek writers imagine them, including pastoralism and hunter-gathering. Though I explore the difference between agricultural and nonagricultural ecologies, this dichotomy is not a stable, structuralist opposition such as Levi-Strauss’s “raw” and “cooked.” It is in fact the unstable boundaries between diets that makes their representation so interesting.

4 For Dicaearchus’ effect on Roman theories of the past, via Varro, see Purcell 2003.

5 As Ax 2001 and Saunders 2001 demonstrate, the question of Dicaearchus’ “primitivism” has not been settled. Although I am comfortable calling his account of Greek history a “decline narrative” and his philosophy “pessimistic,” this is not essential for my argument. All one must agree to is that health declines as time proceeds, and that Dicaearchus’ text expresses nostalgia for this aspect of the earliest bios.

Hesiod calls the fruit of the golden race automatē (Op. 118). As Hunter 2014, 231–2 observes, it is too easy to equate Hesiod’s “automatic” abundance with the absence of agriculture, though this is how later authors (including Dicaearchus) interpret it. Cf. Schedel’s Op. commentary (Schedel, forthcoming) for a similar argument. See Bianchi 2006, 131 n.11 for other instances of automatai in Hesiod and Homer. Dicaearchus’ emphasis on spontaneous, “automatic” generation and the absence of techne also links this version of the earliest period of Greek history with the automatos bios well known from Old Comedy, for which see Ruffell 2001.

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7 Acorns had a mixed reputation in Archaic, classical, and Hellenistic sources. As food for pigs (e.g. *Od*. 10.242, 13.409; Arist. *HA* 603b 31), their consumption by human beings could carry negative connotations, but they were also associated with the city of peace in Hesiod (*Op*. 233), and the Hippocratic writers recommended them both raw and boiled in different circumstances (*Vict.* 55.28). Theophrastus describes several varieties, some of which are “sweet” and others toxic even to animals (*HP* 3.8.7; see Amigues 2003, 148 for modern species equivalents). As bitter and difficult to process, acorns stood for the undesirable, “primitive” past imagined by progressivists. When “sweet,” they stood for the abundant food of the golden age imagined by pessimists. See Dalby 2003, 2.

8 Jouanna 1990a, 85 dates the *VM* to the end of the fifth century. See Jouanna 1992, 523–63 for the dates of all the Hippocratic treatises.


10 See Wilkins 2006, especially 123–7.


13 On the modern construction of ethnography as a genre, see Hartog 1988, chapter 1; Woolf 2011, 13–19. and Skinner 2012. For the modern concept of “race” as distinct from the ancient (and slippery) concept(s) of ethnicity, see Kennedy, Roy, and Goldman 2013, xiii–xv, and Kennedy this volume, 10–1. Though McCoskey makes a persuasive case for using “race” to describe ancient categories of human difference, I prefer “ethnic Other” as a term that emphasizes the disjunction between ancient and modern racial and ethnic thinking, highlights the constructedness of ancient (and modern) racial and ethnic categories, and pays particular attention to the primary distinction made in ancient sources between “self” and “other.” In Greek thinking, an “ethnic Other” is a non-Greek, a human being who is perceived as different from the Greek self in origin, bodily appearance, and/or customs. Ethnic Otherness is to some degree inherited and to some degree performed, and thus can sometimes change.

14 Agatharchides, like Dicaearchus, survives in the citations of later authors. See Burstein 1989 and 2013.

15 I use the Greek transliteration to distinguish these Fish Eaters from those we will encounter later. For the *Icthyophagoi* as cultural ambassadors, see Longo 1987, 20.


17 Romm 1992, 57.

18 Finch 2010, 370 suggests that *kopros* is an allusion to manure, and that “the implication that the Persian’s bread was dirty because it was made from grain grown in manured soil refers to the common practice to improve crop yield by manuring the soil with dung from domestic animals or human night-soil.” While this may be so, I think that we should still take the insult to apply to agriculture in general, rather than a particular agricultural practice.


20 For the language and tropes of the famine narrative, see Garnsey 1988, 17–31.

21 As Thomas 2000, 39–40 argues, following Demont 1988, Herodotus here makes use of Hippocratic theories about the illness that can result from a change in regimen.

22 Thanks to Matt Newman for observing the parallel with Odysseus’ men and the Cyclopes in *Odyssey* 9.

23 Vernant 1979 has noted that the *Aithiopes* enjoy an idealized version of sacrificial cuisine, in which the ritual killing and cooking has already happened. The fact that Cambyses cannot access this food reinforces the realities of post-Promethean Greek life, in which humans must slaughter animals for sacrifice and cannot afford to eat sacrificial animals regularly. For more on the historiography of Greek sacrifice as well as new considerations, see Naiden 2013.

24 Romm 1992, 57–8 ties the wine in the *Aithiopian* episode to the Cyclopes in *Odyssey* 9 and Cambyses’ later intoxication and madness in the *Histories*. He says: “Alcohol can be a medicinal beverage to the Ethiopians because, in their golden-age innocence, they do not crave it immoderately; only for ‘advanced’ races like the Persians does it pose a hazardous temptation.” For an alternative reading of this passage, see Vernant 1979. For wine in ethnography, see Lenfant 2002. Mash 2010, 109 points out that the wine, being *phoínikēiou* (3.20), may imply a further joke: if the wine is not just palm wine, but Phoenician, the Persian’s best gift is not even really Persian!

25 Photius, the ninth-century Byzantine scholar, also transmits Agatharchides.

26 Although Herodotus’ and Agatharchides’ *Icthyophagoi* are lexically identical, I will call the people in Agatharchides “Fish Eaters” to distinguish them for the reader.
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For an overview of Archaic and classical ideas preceding those in this chapter, see Kennedy, this volume.


Woolf 2011, 32ff.

Agatharch. F 39b = DS 3.17.5.


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