CHAPTER EIGHT

DIETETICS IN HIPPOCRATIC MEDICINE: DEFINITION, MAIN PROBLEMS, DISCUSSION

In the classical Greek literature that pre-dates the philosophers Plato and Aristotle, descriptions of dietary practice are particularly numerous in comedy, because it is a reflection of daily life. It is perfectly appropriate that a paper in this colloquium be dedicated to it.¹ The historians Herodotus and Thucydides, and later Xenophon, also give passing descriptions of the regimen of men or peoples. However, medical texts are the most important witness we have for the regimen of the classical Greeks, whether in health or sickness. Indeed, it is in the corpus of the sixty or so medical treatises attributed to Hippocrates, an important core of which dates from the second half of the fifth century or the first half of the fourth, that the Greek term *diaita* appears most frequently. In fact, this noun, attested for the first time in the sixth century in the lyric poetry of Alcaeus (once), then in the fifth-century lyric poetry of Pindar (twice) and the tragic poetry of Aeschylus (once), appears only seven times in the plays of Aristophanes, despite numerous references to diet. The word is used more frequently by the historians Herodotus and Thucydides: ten times in Thucydides, nineteen times in Herodotus. However, even if we add the twenty or so uses in Xenophon, this is no comparison to the Hippocratic Corpus, where the word is found just over two hundred times.² Thus, the noun *diaita*, which appeared relatively late in the Greek language, underwent an unprecedented expansion thanks to the first medical texts to have been preserved. It is a sign that dietetics is at the centre of these doctors' thought, or at least some of them.³

¹ J. Wilkins, "L'alimentation des élites sous le regard de la comédie grecque," Jean Leclant, André Vauchez & Maurice Sartre (ed.), *Pratiques et discours alimentaires en Méditerranée de l'Antiquité à la Renaissance. Actes du 18e colloque de la Villa Kérylos à Beaulieu-sur-Mer les 4, 5 & 6 octobre 2007*. Paris: Académie des Inscriptions et Belles-Lettres, 2008 pp. 157–170.

² See J.H. Kühn, Ulrich Fleischer, *Index hippocraticus*, fasc. I (1986), s.v. διαίτα; see also other related words (διαίτᾱ, διαίτημα, διαίτησις, διαιτητικός).

³ Further details on the history of the family of *diaita* to its first appearance can be found in J. Jouanna, "Réflexions sur le régime des peuples dans la Grèce classique (Hérodote, I, 133; Hippocrate, *Ancienne médecine*, ch. 5; Thucydide, I, 6) et sur le sens des mots de la

The historian of food can find a wealth of information amongst these early medical writers. It is the first corpus in Greece to offer systematic catalogues of food with their different natural or artificial properties. The catalogue of the treatise appropriately called *Regimen* provides the most accomplished example.⁴ It lists in a clear order the properties of cereals, meats and poultry, fish, vegetables and fruits. Amongst a mass of information about food products, their preparation or methods of conservation, we learn that the Greeks ate dog, fox and hedgehog.⁵ However, the principal originality of these doctors lies not only in having laid out these catalogues of food, which pre-date the classifications that Aristotle was to develop, but above all in having discussed, for the first time in Greek thought, important problems relating to regimen. It is on these important problems that this paper on Hippocratic dietetics will focus.⁶

We must begin by clarifying what Greek doctors understood by the Greek word *diaita* (δίαίτα) (from which derive the English words 'diet' and 'dietetics'), since the modern definition, which restricts diet to food, does not correspond exactly to the conceptual understanding of the ancient doctors.

famille de δίαίτα," *Revue des Études grecques*, 2008/1, pp. 17–42. Despite its importance, the concept of *diaita* has been little studied. See P. Laín Entralgo, "El sentido de la 'diaita' en la Grecia clásica," in *Athlon. Satura grammatica in honorem F.R. Adrados*, II, Madrid, Gredos, 1987, pp. 485–497, which has a contestable first section on the original meaning of *diaita*. The author reconstructs (without textual support) an archaic *diaita* connected with the concept of microcosm and *catharsis* (purge/purification), which precedes the development from the archaic *diaita* to a rationalised *diaita* thanks to pre-Socratic philosophers. See also A. Thivel, "L'évolution du sens de ΔΙΑΙΤΑ," in *La lengua científica griega I*, J.A. López Férez ed., Madrid, 2000, pp. 25–37: A. Thivel's more philological study uses a hypothetical etymology to determine the fundamental meaning of *diaita* (whose meaning is flexible), rather than examining the meaning of related terms, which we can try to establish from the oldest attestations examined in the chronological order of appearance.

⁴ *Regimen* 1, ch. 39 ff., Joly CMG I 2, 4, 162 ff. (= 6,534 ff. L. = Jones 4.306 ff.). See also the catalogue of foods at the end of the treatise *Affections*, ch. 47–60, Potter 5.70–86 (= 6,254–269 L.). On these catalogues and the development of dietetics, see R. Joly, *Recherches sur le traité pseudo-hippocratique Du Régime*, Paris, Les Belles Lettres, 1960, pp. 99–181; W.D. Smith, "The Development of Classical Dietetic Theory," in *Hippocratica*, M.D. Grmek ed., Actes du colloque hippocratique de Paris, 4–9 septembre 1978, Paris, C.N.R.S., 1980, pp. 439–448; see also, on the place of the treatise *Regimen* in the history of dietetics, Id., "Regimen, κρήσις and the History of Dietetics," in *Tratados hipocráticos*, J.A. Lopez Férez ed., VII^e colloque international hippocratique, Madrid, 1992, pp. 263–271.

⁵ *Regimen* 1, ch. 46, Joly CMG I 2, 4, 168, 22–27 (= Jones 4.318 = 6.546, 14–20 L.).

⁶ On the Hippocratic diet within the study of food in antiquity, see E. Craik, "Hippocratic Diaita," in *Food in Antiquity*, J. Wilkins, D. Harvey and M. Dobson ed., Exeter, Univ. Exeter Press, 1995, pp. 343–350; see also Id., "Diet, Diaita and Dietetics," in *The Greek World*, A. Powell ed., New York-London, 1995, pp. 387–402.

In certain Hippocratic treatises, such as *Ancient Medicine* (which we will discuss below),⁷ *diaita* has a restricted meaning of alimentary diet, comprising food and drink. However, Hippocratic doctors also generally understand *diaita* to include exercise. For example, here is how the Hippocratic author of *Airs, Waters, Places* defines the regimen of inhabitants, which the itinerant doctor should observe when he arrives in a city that is unknown to him and where he is going to practise his art:

He should consider the regimen (δίαίταν) of the inhabitants, what their preferences are, whether they enjoy drinking, taking lunch at midday (ἀριστηταί) and are inactive, or whether they enjoy exercise and exertion, eat a lot and drink little.⁸

Exercise forms part of regimen, for the doctor should examine if the inhabitants are inactive or if they enjoy exercise or exertion. This example also reminds us that the Greeks established a clear distinction between food and drink.⁹ Thus, regimen is presented here as comprising three components: drink, food and exercise. This technical sense of *diaita* is a more specialised form of its usual meaning, which refers more widely to the ways of life or habitual behaviour of an individual or people, including their dwellings; food is not always the most important part of the notion of *diaita*.¹⁰

If we wish to be more precise about what Greek doctors understood by *diaita* over and above the principal triad of food, drink and exercise, we must add some secondary elements, in particular bathing and, sometimes, sexual relationships.¹¹

⁷ See *infra*, p. 145 and 147.

⁸ *Airs, Waters, Places*, ch. 1, Jouanna CUF II, 2,188, 2–5 (= Diller CMG I 1, 2, 26,2–4 = Jones 1.70–72 = 2.12,18–21 L.), with a detailed commentary on the passage in Jouanna, n. 2 of page 188 (= p. 254f.). We should compare this passage with a fragment of Euripides (917 Kannicht), where it is said that good doctors should examine “the diets” of the inhabitants of the city. The Greek word is the same, but it is used in the plural (δίαίτας). On this connection between medicine and tragedy, see W. Nestle, “Hippocratica,” *Hermes* 73, 1938, p. 24 and n. 2; J. Jouanna, “Hippocratic medicine and Greek tragedy,” in the present volume, chapter 4; A. Guardasole, *Tragedia e Medicina nell’Atene del V secolo A.C.*, Naples, 2000, pp. 77–79, 84, 269.

⁹ Moreover, the distinction is so clear in this treatise that the doctor considers that people cannot be both “big eaters and big drinkers”; see *Airs, Waters, Places*, ch. 4, Jouanna 194, 1f. (= Diller 30, 13f. = Jones 1.78; 2.20,10 f. L.).

¹⁰ In the second part of the same treatise, which is more ethnographic than medical, the word *δίαίτα* is used in a wider sense of “way of life” (ch. 18 regarding to Scythians’ way of life), alongside νόμοι, “customs.” The way of life comprises not only food, drink and exercise, but also, amongst other things, the place where one spends one’s life (cf. the two uses of the corresponding verb *διαίτέομαι* in the same chapter).

¹¹ The Hippocratic treatise *Regimen in Acute Diseases* ends with a discussion of baths

Finally, *diaita* can refer to the regimen of people who are in good health and to that of people who are sick. When it concerns patients, regimen is distinguished from treatment by medicines. Although the parts of medicine are not yet clearly defined in this period, doctors do distinguish between medicines/drugs (φάρμακα) and food (σιτία) in the treatment of diseases.¹² One of the characteristics of Hippocratic medicine is having developed dietetics, in addition to a more traditional pharmacy.

These admittedly general remarks on what doctors in the classical period understood by *diaita* allow us to see that the French word 'diète' has a more restricted meaning than the Greek word *diaita* from which it derives, since it usually refers only to the diet of patients. Moreover, it shows that the title of the conference in which this paper was presented, '*Alimentary practices and discourses*' only partially corresponds with ancient doctors' understanding of diet. For ancient doctors, food was only one part of the lifestyle that had to be taken into consideration in order to maintain or re-establish good health.

It was necessary to clarify this difference during the paper's 'starter', before tackling what constitutes this paper's 'main course': the main questions that the ancients asked about regimen, and the answers they proposed.

(ch. 18, 2.364–376 L. = ch. 65–68 Kühlewein 1.142–145 = Jones 2.120–124 = Joly CUF VI, 2, 65–67). There is also a discussion of the effect of baths in the catalogue of *Regimen*, ch. 57, Joly 180–182 (= Jones 4.342–344 = 6.570 L.). Sexual relationships are referred to by the terms λαγνείη and λαγνεύειν. See, for example, the catalogue of *Regimen*, ch. 58 (Joly 182,7–10 = Jones 4.344 = 6.572,1–4 L.), where it is said that the sexual act thins, moistens and warms people. The treatise also discusses other secondary elements, such as sleep and the quality of the bed.

¹² For example, *Diseases II*, ch. 72 (Jouanna CUF X 2, 212, 2–7 = Potter 5.326, 14–20 =, 7.110,5–10 L.), at the start of the treatment for the condition called 'anxiety' (*Phrontis*): "In this case, give them hellebore to drink; purge the head, and after purging the head, give them a medicine (φάρμακον) to drink that purges them from below, and then the patient will drink ass' milk. He will eat food (σιτίζοις) in as small a quantity as possible, unless he is weak; the food will be cold, laxative and will not be bitter, hot, oily or sweet." On the distinction between medicines (φάρμακα) and diet in general (διαίτα), see *Regimen in Acute Diseases*, ch. 1 Littré (= ch. 1–3 Kühlewein), which contains a criticism of the *Cnidian Sentences*, a work that is currently lost (apart from a few fragments). After having criticised in this ancient treatise the use of medicines based on purgatives (Joly 36,16 = Jones 2.62 φάρμακα ἐλατήρια), the author of *Regimen in Acute Diseases* continues, saying (Joly 37,2f. = Jones 2.64): "even on diet (διαίτα), the ancients wrote nothing valuable; this is a great lacuna." We find an even more general statement in the treatise *Nature of Man*, ch. 9 (Jouanna CMG 190,9–12 = Jones 4.26 = 6.54,14–17 L.) where treatment (θεραπείη) is clearly divided into two branches, pharmacy (φαρμακείη) and diet (διαίτα *vel* διατήματα).

To adhere to the conference topic, I will focus above all on problems relating to an alimentary diet and leave exercise to one side, without wishing to pass over it in complete silence, since the balance between what we call nutrition and physical activity was judged essential by one Hippocratic doctor in his definition of good health.¹³ Yet even when restricting the subject in this way, I will have to be selective, due to the breadth of the Hippocratic Corpus, which is comprised of some sixty treatises which belong neither to a single author nor medical school. I have chosen three areas for discussion: diet and peoples; diet and human nature; diet and the environment.

Concerning the diet of peoples, modern readers will immediately think of the Mediterranean diet, which is highly praised by nutritionists and dieticians. However, were the Classical Greeks aware that there existed an alimentary diet proper to the Greeks and distinct from other peoples? This question is prompted by a comparison between two texts which have not, to my knowledge, been previously compared: the historian Herodotus and the Hippocratic author of *Ancient Medicine*.

Let us first consider the passage in Herodotus, who contrasts the alimentary practices of the Persians with those of the Greeks, during their festival meals (1.133):

The day which the Persians are accustomed to celebrating most is a person's own birthday. On this day they think it normal to serve a more abundant meal than on other days; on this day, the rich are served an ox, a horse, a camel or an ass, which are roasted whole in the ovens, whilst the poor are served lesser kinds of livestock. They eat fewer courses, but more desserts that are not all served together. This is why the Persians say that the Greeks eat meals only to stave off hunger,¹⁴ because after the meal they do not have any substantial dessert, and if it were given to the Greeks, they would never stop eating.

¹³ The author of the treatise *Regimen*; see ch. 69, Joly CMG 202, 1f. (= Jones 4.382,16 = 6.606,9 L.): "Good health comes from the balance between the two (i.e. food and exercise)."

¹⁴ This interpretation differs from the translations of the twentieth century, which all take this phrase in the sense of: "stop eating whilst still hungry," without considering other interpretations. In fact, commentaries from the twentieth century do not question the meaning of this passage; see W.W. How, J. Wells, *A Commentary on Herodotus I*, Oxford, 1912 (with numerous reprints), ad loc., pp. 114–115, and more recently D. Asheri, A. Lloyd, A. Corcella, *A Commentary on Herodotus, Books I–IV*, Oxford, Oxford University Press, 2007, vol. I, p. 168 (commentary in English by D. Asheri, who largely reproduced his Italian commentary published in *Erodoto. Le storie, libro I La Lidia e la Persia*, Fondazione L. Valla, 1988, p. 344, with various additions). However, the present translation was previously adopted in the nineteenth century, notably by Pierre-Henri Larcher in his commentary and edition of Herodotus (1786; new edition by L. Humbert 1880). For a detailed justification of this interpretation, see J. Jouanna, quoted in n. 3.

The contrast between these two alimentary practices is seen from the Persians' perspective.¹⁵ The comparison rests essentially on the difference in size between portions and desserts. The Persians eat fewer portions but more desserts, whilst the Greeks hardly eat desserts, but more portions. It seems to me that the implicit idea that leads the Persians to judge their diet to be superior to that of the Greeks is the notion of pleasure: the Persians are gourmets who appreciate desserts, whilst the Greeks, according to them, are content with a diet that staves off hunger.

This contrast between the alimentary practices of the Greeks and other peoples is also discussed in a passage from the Hippocratic treatise *Ancient Medicine*, but conversely, the point of view is this time Hellenocentric (ch. 5):

In my opinion, nobody would have even sought for medicine, if the same diets (διαιτήματα) had suited both the sick and those in health. What is certain is that even today, those who do not use medicine—barbarians and a small number of Greeks—maintain (when they are sick) the same diet as those in health, only following their pleasure, and would neither forego nor restrict the satisfaction of any of their desires, or even reduce the quantity.¹⁶

Like the previous passage, this one establishes a difference between the diet of the Greeks and that of another people or peoples. However, whilst in Herodotus, the Persians wish to show the superiority of their diet over the Greeks, the medical writer shows the superiority of the Greeks' diet because it is adapted to the state of the patient. This reversal is due to a change in values. According to the medical writer, the superiority of the Greeks is both scientific and ethical: scientifically superior because they discovered the art of medicine; ethically superior because they know to renounce pleasure to restore good health. This notion of pleasure, explained in the medical text to describe barbarians (and a minority of Greeks) seems to confirm that pleasure is, in Herodotus' text, the implicit notion that allows us to understand the judgement of the Persians. They judge their alimentary practices to be superior to those of the Greeks because they have a more refined diet whose aim is not (or not only) to stave off hunger, as the Greeks' diet, but also to satisfy their desires and pleasures.¹⁷ Conversely, the Greeks

¹⁵ On the diet of the Persians, see H. Sancisi-Weerdenburg, "Persian Food. Stereotypes and Political Identity," in *Food in Antiquity*, *op. cit.* (n. 6), pp. 286–302 (with bibliography); see also P. Briant, *Histoire de l'empire perse*, Paris, Fayard, 1996, pp. 297–306 (the discussion concerns the royal table; a single sentence from Herodotus' text is quoted).

¹⁶ J. Jouanna, *Hippocrate. L'ancienne médecine*, CUF, Paris, Les Belles Lettres, 1990, p. 124.

¹⁷ Here appears a problem that was later to be developed in Plato's *Gorgias*, namely the

judge their alimentary practices superior to those of the barbarians in the case of sickness, because they know to renounce pleasure and desire in order to serve a higher interest: good health.

This does not mean that the Hippocratic doctor, by contrasting the Greeks' diet with that of the barbarians, had a simplified view that the Greeks' diet was uniform. Apart from understanding that a minority of Greeks, like barbarians, did not know medicine, he knows, like other doctors, that diet can vary amongst the Greeks.

First, Hippocratic doctors were aware that the Greek diet could vary from one city to another. Indeed, the author of *Airs, Waters, Places* (in the passage defining *diaita* discussed above) recommends that the doctor, on his arrival in an unknown city, observe the diet of the city's inhabitants, implying that a city can be characterised by a general tendency of its inhabitants' diet. Herodotus' testimonium similarly speaks of the simplicity and frugality of Pausanias' Laconian mode of dining, which he contrasts with the luxury and sumptuousness of the Persians' way of dining prepared by the cooks of Mardonius.¹⁸ The contrast between Persia and Greece is all the larger because the diet of the Lacedaemonians was notorious for its austerity, even amongst the Greeks.¹⁹

Moreover, doctors observed that within a single city, groups of inhabitants could differ in their diet. For example, the author of *Nature of Man*, when he distinguishes between individual illnesses caused by individual diet and general illnesses caused by the air that is inhaled by all, distinguishes categories of individuals according to the diet that they follow: adopting the tripartite division of *diaita* (drink, food, exercise), he contrasts drinkers of wine with drinkers of water, eaters of wheat bread with eaters of barley biscuits, and those that do a lot of exercise with those that do little.²⁰

One of the differences within the Greeks' diet that particularly attracted doctors' attention is the number of daily meals: some take a single meal in the evening (dinner, δεῖπνον), whilst others take two meals, one at midday

contrast between the cook (watching over the body's pleasure) and the doctor (watching over the patient's wellbeing).

¹⁸ Herodotus, *Histories* 9.82.

¹⁹ Xenophon, *The Constitution of the Lacedaemonians*, ch. 2, 5 and 5, 3.

²⁰ *Nature of Man*, ch. 9, Jouanna 188, 18–20 (= Jones 4.24–26 = 6.54,1–4 L.). The passage on the different diets deserves to be quoted in its context: "It is clear that the diet (τὰ διαιτήματα) of each of us cannot be the cause of disease, since it attacks everyone in turn, young and old, women and men and, without distinction, those who drink wine and those who drink water, those who eat barley bread and those who eat wheat bread, those who do a lot of exercise and those who do little."

(lunch, ἄριστον), and the other in the evening. The technical medical vocabulary itself testifies to doctors' attention to this difference. Indeed, we find for the first time in the Hippocratic Corpus a compound Greek verb to mean taking only one meal a day: μονοσιτεῖν.²¹ In the classical period, outside the medical literature where it appears thirteen times, we find this verb only twice, in one and the same passage, at the end of Xenophon's *Cyropaedia* (8.8.9). He describes the diet of the Persians:

In former times it was their custom (sc. the Persians) to eat only a single meal (μονοσιτεῖν), so that they might devote the day to activity and exercise. Of course, nowadays the single meal (τὸ μονοσιτεῖν) still prevails, but they begin to eat at the hour when those who have lunch earliest begin their meal, and they spend their time eating and drinking until the hour when those who go to bed latest have dinner.

Thus, this text informs us of another alimentary practice characteristic of the Persians, taking a single meal. In Cyrus' time, the single evening meal meant that time was not lost to eating, and that the whole day was dedicated to an active life and exercise before eating.²² However, this ancient practice changed into the decadence of the Persian customs of his own time that Xenophon wishes to show. Although continuing to eat only one meal a day, the Persians spend most of the day eating.

There is a tendency to contrast the diet of the Persians, comprising a single meal, with the diet of the Greeks, who ate two meals a day. However,

²¹ The verb μονοσιτεῖν is used three times in *Ancient Medicine* (ch. 10 bis; ch. 11); three times in *Regimen in Acute Diseases* (ch. 4, ch. 9 bis Littré); cf. once in *Regimen in Acute Diseases* (App.), ch. 18 Littré; cf. also *Nature of Man*, ch. 19 (= *Regimen in Health*, ch. 4), ch. 22 (= *Regimen in Health*, ch. 7); *Regimen* 3, ch. 81. It is no coincidence that this word appears primarily in treatises where dietetics plays an important role; see also *Epidemics* 7, ch. 3; *Internal Affections*, ch. 20; *Diseases of Women* 1, ch. 11. We also find the noun μονοσιτή, both in treatises where we also find the verb (*Regimen in Acute Diseases*, ch. 9; *Regimen*, ch. 60 bis and ch. 68), or in other treatises (*Epidemics* 2, 2, ch. 1; *Affections*, ch. 43; *Diseases of Women* 2, ch. 110). There is no corresponding compound term to refer to taking two meals a day. The opposite of μονοσιτεῖν is δις σιτεῖσθαι (*Regimen in Acute Diseases*, ch. 4 and ch. 9 Littré), or else the verb ἀριστάν or the noun ἀριστητής are used to refer to the act of taking lunch, which equates to two meals a day; for example, see *Airs, Waters, Places*, ch. 1 (quoted *supra*, p. 139): the fact of asking if the inhabitants take lunch comes down to asking if they have two daily meals, since the evening meal is eaten by everyone. On μονοσιτεῖν, see the brief comments by C. Moussy, *Recherches sur τρέφω et les verbes significant "nourrir"* (Études et Commentaires 70), Paris, Klincksieck, 1969, p. 107.

²² In fact, when Xenophon speaks of Cyrus himself, he says that he did not have dinner without having first sweated from exercise (*Cyropaedia* 8.1.38). The use of a single meal amongst Persians is confirmed by Herodotus (7.120), where he alludes to Xerxes' diet, who did not eat lunch.

as we saw from the references in the medical texts, the alimentary practices of the Greeks varied from one Greek city to the other, and within the same city between its inhabitants.

In short, the response to the question whether there was such a thing as a Greek diet as opposed to the diet of other peoples varied according to the point of view one adopted. A historian like Herodotus could record the point of view of the Persians, contrasting their alimentary customs with those of the Greeks.²³ A Greek doctor could affirm the specificity of the diet adopted by the Greeks for their patients and contrast the Greeks with the barbarians. However, the doctors' observations on the diversity of diets adopted by the Greeks from one city to another, or within the same city, particularly on the number of daily meals, prohibit a simplified view of the alimentary practices of the Greeks as being in contrast to those of the Persians in the frequency of meals.

We turn now to our second problem of the relationship between diet and the nature of man.

The Greeks' superiority over the barbarians comes, as we have just seen, from their discovery of medicine. How did the Greeks discover it? According to the author of *Ancient Medicine*, it was because they were forced to modify their diet in order to adapt it to the different states of the patient, and they were successful in doing this. This necessary adaptation of diet to the nature of man, whether he is ill or in good health, forms the basis of a long history of dietetics that this medical writer retraces, beginning with the first discovery of the diet of people in good health, before coming to successive

²³ Herodotus presents more points of view on the dietary differences by varying the perspective within the peoples themselves that the Greeks considered to be barbarians. In the story about Cambyses' campaign against the 'long lived' Ethiopians (book 3, ch. 22 and 23), Herodotus contrasts the Ethiopian and Persian diet and the relationship between diet and length of life: the diet of the Persians, who live on average eighty years, who drink wine and eat bread made from cereals, is contrasted with that of the Ethiopians, who live up to one hundred and twenty years, and who drink milk and eat boiled meat. However, this time the perspective is that of the king of the Ethiopians, who discovers the diet of the Persians by interrogating the scouts that Cambyses had sent because they knew the language of the Ichthyophagi (Ethiopians). The king values the wine, one of the gifts offered by Cambyses and the drink of the Persians. Having interrogated the emissaries on the diet of the Persians, he declares not to be surprised that they do not live very long, since they eat "manure," alluding to the cereals that sprout from the ground, and he adds that their life would be shorter still if the harmful effect of their diet was not partially compensated for by the beneficial effect of their drink. I thank Paul Demont for drawing this passage to my attention.

discoveries of diets for patients. It is the first history of dietetics that is available to us in western thought.²⁴

In the beginning, the first men had a diet that was similar to that of animals. This forceful and bestial diet caused suffering and death. The Hippocratic doctor continues in ch. 3 (4–5):

4. “Pressed by this need, these people seem to me to have sought a diet adapted to their nature (τρόφην ἀρμόζουσαν τῇ φύσει), and to have discovered the one which we use now. 5. So from wheat [...] they produced bread, and from barley they produced cake. And experimenting with several ways to prepare this food, they boiled or roasted, mixed and blended the strong and uncompounded substances with the help of weaker substances so as to adapt it all to the natural constitution and strength of man (πλασσόντες πάντα πρὸς τὴν τοῦ ἀνθρώπου φύσιν τε καὶ δύνανμιν). They thought that, in the case of foods that were too strong, the nature (ἡ φύσις) of man would not be able to overcome them (κρατεῖν) if he ate them, and that pain, disease and death would come from these foods, whilst from foods that he can overcome (κρατεῖν) will come nourishment, growth and health.”²⁵

The author presents the essential idea in the first sentence: that food, in order to be beneficial, should be adapted to human nature. The rest of the text clarifies that we should understand this adaptation in the context of a relationship of forces. Food is defined by more forceful or less forceful properties, and human nature must have the force to overcome the ingested food so that it might be profitable. What we call digestion and assimilation is seen by this medical writer as a struggle of human nature, which must overcome the food in order to appropriate it. Finally, to avoid the harmful effects of a diet that is too forceful, man discovered different types of food preparation designed to eliminate what was too forceful and to enable human nature to overcome it. These methods of preparation, the most important of which are cooking and mixing, appear to be simple cookery; but, according to the Hippocratic author, they are already a type of medicine, because the discovery of a diet adapted to human nature leads to good health, whilst the primitive diet, forceful and bestial, was the cause of suffering, illnesses and death.

The author then considers the discovery of actual medicine, which occurred over three stages. These are discussed in ch. 5 (3–5):

²⁴ On the history of medicine as seen by the first Greek doctors and thinkers, see J. Jouanna, “La naissance de l’histoire de la médecine en Grèce à l’époque classique,” *Histoire des Sciences médicales* (Centenaire de la Société française d’Histoire de la Médecine, 1902–2002, Paris 29 and 30 novembre 2002), t. 37, n. 3, 2003, pp. 319–329.

²⁵ J. Jouanna, op. cit. (n. 16), p. 122 f.; transl. Jones, modified.

3. Those who sought and discovered medicine [...] began, I think, to lessen the bulk of the foods (σιτία) themselves and reduce their quantity to very little.
 4. But they found that this regimen, sometimes sufficient for certain patients and clearly beneficial for them, was not so in all cases, since some were *in such a condition that they could not overcome even small quantities of food*, and since such patients were thought to need a weaker diet, soups (ρύφήματα) were invented by mixing a small quantity of substances with a lot of water, and by reducing the strength of these substances by mixing and cooking.
 5. Finally, *the patients who could not even overcome soups* had to refrain from these and were put on a regimen of liquids (πόματα); these were regulated so that they were a fitting measure both in mixture and quantity, refraining from administering drinks that were too abundant, or mixed too little, or too insufficient.²⁶

The discovery of medicine rests on the same logic as the previous discovery of a normal diet: the patient must have the ability to overcome the food he ingests; thus, the force of his diet should be reduced in proportion to his state. However, whilst the diet of people in good health had been the object of a single discovery, even if it was susceptible to further perfection, medicine comprises three successive discoveries: three categories of diet corresponding to three degrees of the patient's state of weakness. First, a diet based on solid food (σιτία), then an intermediary diet between solids and liquids (soups, ρύφήματα); and finally a solely liquid (πόματα) diet.

However, the author warns against the simplistic view that it is necessary to diminish systematically, as a precaution, the force of the patient's diet so that he can easily triumph over it. He says that a diet that is too little or too weak is just as dangerous as a diet that is too abundant or rich, resulting in the fundamental difficulty, for medicine, of finding the best diet adapted to the patient's condition, which the author expresses in a famous passage (ch. 9, 3):

The tasks of the doctor vary greatly and require great exactitude. Indeed, it is necessary to aim at some measure (μέτρον). There is no measure—neither in number nor in weight—by reference to which we can know what is exact, apart from the feeling of the body (τοῦ σώματος τὴν αἴσθησιν). Also it is laborious to acquire knowledge so exact that only small mistakes are made here or there.²⁷

It is the “feeling of the patient's body,” i.e. how the patient feels, which acts as the measure that guides the doctor in his dietary provision. The doctor

²⁶ *Ancient Medicine*, ch. 5, Jouanna 124,9–125,4 (= Jones 1.20–22 = 1.580,14–582,9 L.); transl. Jones, modified.

²⁷ *Ibid.*, ch. 9, Jouanna 128,9–15 (= Jones 1.26 = 1.588,13–590,1 L.).

should find the point of equilibrium in nutritional provision adapted to the patient's condition that is neither so insufficient as to weaken the patient, nor so abundant as to strengthen the illness.²⁸

From this necessary relationship between food and the nature of the man who ingests it, the Hippocratic doctor draws the remarkable conclusion that medical research is the source of knowledge about human nature. "I believe," he says in ch. 20, "that in order to have any clear knowledge of (human) nature, medicine is the only source."²⁹ This knowledge is acquired through the study of the different effects produced by different diets on different individuals, which allows us to determine categories of individuals, for example those for whom cheese is a harmful food. In this way, the author of *Ancient Medicine* openly resists a philosophical medicine that claims, by contrast, that dietetics supposes prior knowledge of human nature, as is the position of the author of *Regimen*.³⁰

However, human nature is not fixed absolutely. It is influenced by environmental parameters, which the doctor should take into account in dietary provision, whether to re-establish good health or to preserve it. We tackle here the third category of problems relating to regimen, namely its connections with the environment. I will deal with two different problems: habit, which concerns culture, and the cycle of the seasons, which concerns nature, although Hippocratic doctors quote them in the same context. Thus, in the *Aphorisms* (1.17), we read that it is necessary to pay attention to habit and the seasons, amongst other factors, in the administration of diet.³¹

Each individual nature is influenced by alimentary habits, which doctors must take into account. They warn against the errors of imposing on a

²⁸ E. Craik, *art. cit.* (n. 6), pp. 346–347, stressed the notion of 'Hippocratic balance'. However, she does not quote this passage, which shows that Hippocratic doctors were aware of the difficulty of attaining this balance. The expression 'feeling of the body' is much debated, in so far as it is unclear whether it concerns the patient's feeling of his or her own body or the doctor's feeling of the patient's body; see J. Jouanna, *op. cit.* (n. 16), p. 128, n. 8 (= p. 174); M.J. Schiefky, *Hippocrates, On Ancient Medicine, translated with Introduction and Commentary*, Leiden, Brill, 2005, pp. 196–199.

²⁹ *Ancient Medicine*, ch. 20, Jouanna 146,9–11 (= Jones 1.52 = 1.620,14–622,1 L.).

³⁰ The author of *Ancient Medicine* quotes Empedocles as an example of medicine with a philosophical tendency. However, we also find in the Hippocratic Corpus the statement that it is not possible to determine diet without prior knowledge of human nature; see the statement of the author of *Regimen* at the start of his work (1, ch. 2): "I maintain that anyone who wishes to write correctly on the diet of man should firstly have knowledge of human nature."

³¹ *Aphorisms* 1.17 (Jones 4.106,9f. = 4.468,1f. L.): "Attention should also be paid to the season, the region, habit and age."

patient a change of diet that is too far removed from his habits. The most thorough reflection on the problem of habit and change is found in the treatise *Regimen in Acute Diseases* (ch. 9 and 10 Littré). Illness requires a change of diet. However, it is necessary to avoid too large a change because, even in a healthy patient, a change in diet is harmful. To illustrate the harm that change can cause to people in good health, the Hippocratic author takes the example of the routine of daily meals. We mentioned above that certain people are in the habit of taking a single daily meal, whilst others are in the habit of taking two. The doctor sets out in great detail the perturbations caused by a simple change of habitual diet over half a day, adding a meal in some, or taking one away in others. The conclusion is that in the dietary provision of patients, no addition or subtraction should be made that clashes with their habits, and that even in a healthy individual it is better to preserve an unhealthy diet than bring about a rapid change to a better one.³² This discussion in *Regimen in Acute Diseases* of the importance of habit became famous and was lengthily quoted by Galen in his treatise *On Habits*.³³

Our bodies are also influenced by the natural cycle of the seasons. To protect against these changes, diet should be changed accordingly to counteract the different bodily effects that the seasons produce.

The clearest theory of the seasons' influence on the nature of man can be found in the treatise *Nature of Man*. Each of the four seasons is defined by two elemental qualities that affect the body: winter is cold and wet, spring hot and wet; summer hot and dry, autumn cold and dry.³⁴ Thus, a diet should be followed whose qualities are opposite to those of the season. Here is the diet that the author recommends in winter:

³² *Regimen in Acute Diseases*, ch. 9–10 Littré (= ch. 28–37 Kühlewein), Joly 47–51 = Jones 2,84–92 = 2.298–328 L. On the problem of change in this treatise, see J. Jouanna, quoted *infra* n. 44 [and in this volume ch. 2]. The dangers of a change in diet contrary to habit are also denounced in *Ancient Medicine*, using the same example of the frequency of daily meals (ch. 10–11, Jouanna 129–132 = Jones 2,28–32 = 1.590–594 L.). However, unlike the author of *Regimen in Acute Diseases*, changing from a single meal to two, or conversely from two meals to a single one, is not damaging for everyone, but only for people who are weaker than others. The importance of habit is also noted in *Aphorisms* 2.29. On the vocabulary of change in the Hippocratic Corpus, see P. Demont, "Observations sur le champ sémantique du changement dans la *Collection hippocratique*," in *Tratados hipocráticos*, *op. cit.* (n. 4), pp. 305–317.

³³ Galen quotes (ch. 1, Mueller 12,15–16,4) *Regimen in acute diseases*, ch. 9, Littré. He also quotes *Aphorisms* 2.29 (ch. 1, Mueller 9,15–18). However, he does not quote the discussion in *Ancient Medicine*, because he did not consider this treatise to be written by Hippocrates.

³⁴ *Nature of Man*, ch. 7, Jouanna 182–186 (= Jones 4,18–22 = 6.46–50 L.).

People who lead a normal life should adopt the following diet: in winter eat as much as possible and drink as little as possible; drink should be wine as undiluted as possible, and food should be barley bread and roasted meats; vegetables should be taken as little as possible during this season; this is the best diet to make the body dry and hot.³⁵

A clearer statement of the necessity to choose a diet that contrasts with the effects of the season can hardly be found. In winter, which is the cold and wet season, the diet should dry and heat the body. Conversely in summer, the diet should be cold and wet in order to provide a contrast with the hot and dry season, as the author says most clearly:

At the start of summer, man will use only soft foods, boiled meats, and raw or boiled vegetables and drinks that are as diluted and abundant as possible [...] it will be a diet of soft barley cake [...] Such a diet is necessary in summer to cool and soften the body. For the season is hot and dry, and makes bodies burnt and parched. Thus, one must protect oneself against this through one's way of living.³⁶

Unlike these two opposing diets, the diets of spring and autumn are transitional, allowing the transition from one diet to another, contrasting, one, by avoiding changes that are too large or rapid.³⁷ Thus, the problem of change during good health remains the same as dietary change during ill health.

We find a similar discussion of change of diet according to the seasons in ch. 68 of another, probably later, Hippocratic treatise, *Regimen*.³⁸ The

³⁵ *Nature of Man*, ch. 16 (*Regimen in Health* ch. 1), Jouanna 204, 22–206, 3 (= Jones 4.44,1–7; 6.72,1–5 L.); transl. Jones, modified. He returns full circle at the end of the chapter to winter, after having discussed the diet in the three other seasons. Here is what he says on diet in winter (ibid. ed. Jouanna 208,5–8 = Jones 4.46 = 6.74,9–13 L.): “A small quantity of very pure drinks, and food as abundant and dry as possible. Indeed, thanks to this diet the patient will sustain himself the best and will suffer least from the cold, for the season is cold and wet.” The two passages correspond and complement each other. The proposed diet is dry and hot, which contrasts with a cold and wet season.

³⁶ *Nature of Man* ch. 16 (= *Regimen in Health* ch. 1) Jouanna 206,8–16 = Jones 4.44, 14–46,26 = 6.72,10–74, 4 L.

³⁷ On the springtime diet, see *Nature of Man* ch. 16 (= *Regimen in Health* ch. 1) Jouanna 206, 3ff. (= Jones 4.44,7ff. = 6.72,5ff. L.); and on the autumn diet, ibid., Jouanna 206, 16–208, 5 (= Jones 4.46,30–34 = 6.74,4–8 L.). The springtime diet is transitional and should allow change from the hot and dry diet of winter to a cold and wet diet of summer; the autumn diet is also transitional and should conversely allow the change from the cold and wet summer diet to that of a hot and dry winter diet. The concern to avoid great change by these transitional diets is explicitly expressed regarding the springtime diet (“to avoid a sudden great change”).

³⁸ *Regimen*, ch. 68 Joly CMG 194–200 (= Jones 4,368–380 = 6,594–604 L.).

author of *Regimen* follows the same principle as that of the *Nature of Man*, i.e. that diet should be opposed to the qualities of the seasons.³⁹ However, whilst *Nature of Man* restricts itself to an alimentary diet, *Regimen* also adds recommendations about exercise. This addition is not due to chance, since the author of *Regimen* defines good health as the balance between food and exercise.⁴⁰ The main originality of the treatise comes from the fact that the author distinguishes between two audiences (ch. 68 and 69): on the one hand, the majority of people who, due to the needs of their profession, do not choose their food or drink, engage in the exercise or walks imposed on them, are exposed to the sun or cold more than is appropriate and have, moreover, a type of disorganised life (ch. 68); on the other hand, the minority of those who are able to refrain from other occupations so as to not neglect their health and are convinced that wealth serves no purpose without good health (ch. 69).⁴¹ To each of these two groups, the author dedicates a separate discussion. The discussion of seasonal diet is addressed to the majority, whilst he reserves for the elite the discovery he claims to have made of maintaining or re-establishing an exact balance between food and exercise, a balance that, we have seen, he defines as good health.⁴² Thus, according to the author of *Regimen*, alimentary practices are an aspect of a two-fold system comprising two contrasting and inseparable elements: food and physical activity. Modern doctors say the same.

In conclusion, the first writings of Greek doctors constitute an extremely important source for the study of alimentary practices and discourses in classical Greek antiquity. This source seems relatively little known outside a circle of specialists in Greek medicine, even though medicine made a remarkable entrance into studies of ancient dietetics in *Food in Antiquity*, a

³⁹ There are close resemblances between the two discussions, although the reason why is debated. See J. Jouanna, *Hippocrate. La Nature de l'homme*, CMG I 1, 3, Berlin, 2002, pp. 52–54 and p. 335.

⁴⁰ This definition of good health is discussed at the start of the treatise in ch. 2, Joly 124,5–8 = Jones 4.226,19–228,25: “Man cannot be in good health if he eats without also undertaking exercise. For food and exercise, although they have contrasting properties, mutually combine for good health; for the nature of exercise is to use up what exists, and food and drink to replenish what is lost.”

⁴¹ On these two diets and two groups of audiences, see R. Joly, op. cit. (n. 4), p. 125 ff.; J. Ducatillon, “Collection hippocratique. Du régime, Livre III, Les deux publics,” *Revue des Études grecques* 82, 1969, pp. 33–42.

⁴² See *supra*, n. 40. The author reaffirms in ch. 69 (Joly CMG 202, 1f. = Jones 4.382,19f. = 6.606,9 L.) the understanding of good health as a balance between food and exercise (“good health comes from the mutual balance” of these two elements).

collection of papers published in 1995 in Exeter, one of the editors of which is John Wilkins, our colleague from Exeter, who is also present here.⁴³

Due to lack of time, I cannot discuss how these important problems tackled by Hippocratic doctors were further developed in Greek medicine or philosophy. Unlike the Persians, I do not have the option of multiple desserts. I will simply offer here a small dessert, as in the Greeks' diet, but one which, I hope, is worthy of consideration. It is an outcome and expansion of the doctors' reflection on the diet of individuals in the contemporary political discussions on the diet of the city found in book 6 of Thucydides' *History of the Peloponnesian War*, in the debate between Nicias and Alcibiades before the people's assembly of Athens about the issue of whether or not to undertake the expedition to Sicily. The medical metaphor is evident at the end of their antithetic speeches, where the two strategies are opposed: Nicias proposes, for the good of the city, a radical change of its harmful politics of exterior alliance by giving up the expedition, whilst Alcibiades, a supporter of the expedition, warns against a radical change of the interventionist habit of the Athenians, despite being harmful, because it would lead to the city's downfall. We can recognise here the problem of change and habit that was clearly and precisely discussed by the Hippocratic author of *Regimen in Acute Diseases*.⁴⁴ Any dietetic or political programme advocates

⁴³ Work quoted in n. 6. The fifth part of the work (pp. 336–379) is dedicated to food and medicine (Part Five: Food and Medicine).

⁴⁴ Thucydides 6.14 (Nicias) and 6.18.7 (Alcibiades). For a detailed comparison of the two passages, see J. Jouanna, "Politics and medicine. The problem of change in *Regimen in Acute Diseases* and in Thucydides (Book 6)," in this volume, chapter 2. Recently, G. Camassa, "L'idea del mutamento nel Corpus Hippocraticum," in *Medicina e società nel mondo antico*, A. Marcone ed. (Atti del convegno di Udine, 4–5 ottobre 2005), Florence, Le Monnier, 2006, pp. 16–25 (n. 30 and n. 38), whilst recognising the importance of my study, does not share my conclusion that the author of *Regimen in Acute Diseases* criticises traditional treatment. He opposes my position (n. 38, "Thus, I think the opposite to Jouanna"), by seeing a criticism instead against "a new trend, inspired by relativism" (p. 25), a new trend justifying change that is represented by *Places in Man*. However, this hypothesis does not refer at all to the polemic of *Regimen in Acute Diseases*, which criticises all doctors and not simply a new trend. I quote the passage from the *Regimen in Acute Diseases* ch. 8, Littré (ch. 26 Kühlewein) Joly 47,7–13 = Jones 2.82,4–84,11 = 2.278,8–280,1 L.: "I know that *doctors* do the opposite of what they should do. They *all* want, at the start of a disease, to firstly dry out the individual over two or three days, or even longer, before giving them soups and drinks. Perhaps it seems logical to them, at the moment that a great change is produced in the body, to contrast it with a great and strong change." The texts are more credible than hypotheses and we cannot ignore them. The author of *Regimen in Acute Diseases* wishes to affirm his originality against all other doctors. That he wishes to simplify reality in polemical exaggeration is another story. Besides, it is possible that the author of *Places of Man* who advocates change (cf. particularly ch. 45, Joly CUF XIII, 75,4–6 = Potter 8.90,10–12 = 6.340,5–7 L.: "all change outside the present state is

change. But how do we change whilst preserving the health of the individual or the social body? This is the difficulty. To recall the both sensible and subtle analyses of the first Greek doctors is useful, and could even be so today.

useful to the patient, since if he does not change, the harm increases"), could represent the practice criticised by the author of *Regimen in Acute Diseases*; cf. ed. Joly (CUF VI, 2, 1972, p. 47, n. 2): "we cannot rule out that our author takes this directly from this treatise [*Places in Man*], which could pre-date it." However, the general nature of the polemic in *Regimen in Acute Diseases* prevents us from establishing a particular link between the two treatises and deducing a relative chronology to the effect that *Places in Man* would be older than *Regimen in Acute Diseases*.