This brings about the appearance that the body of the artery is pierced in many places, and has lost its continuity; one has an impression on touching the artery in the diastole that one is coming into contact with sand falling.

In dropsy the pulse is large, frequent, slightly hard, and with a degree of tension, in the *askitēs** variety of the disease; in the
491 'drumlike' it is fairly large, not without strength, fairly quick, frequent, slightly hard, and with a degree of tension; in the 'throughout-the-skin' variety it is wavelike, fairly broad, and soft. In elephantiasis the pulse is small, weak, slow, and frequent. In jaundice without fever it is fairly small, fairly frequent, fairly hard, not faint or quick.

In subjects who have taken hellebore,* the pulse just before the vomiting, while they are undergoing compression, is broad, sparse, fairly faint, and fairly slow; as they are vomiting and retching it is uneven and irregular; as they recover, it is regular, but still uneven, though less so than before; when they are close to the normal state it is even, larger than before, and more vigorous. Those who in these circumstances suffer stoppage, convulsion, and hiccuping have a pulse which is small, faint, irregular, quick, and very frequent. In those who
492 experience suffocation it is small, faint, irregular, and uneven, but not frequent or quick; rather, it tends to slow down. It also manifests a certain wavelike quality, as well as broadness and sometimes also a little tension in the artery.

THE ART OF MEDICINE

[K i] There are three types of teaching in all, each with its place 305
in the order. First is that which derives from the notion of an end, by analysis. Second is that from the putting together of the findings of the analysis. Third is that from the *dialysis* of a definition; and it is this which we shall now embark on. This type of *dialysis* may be referred to not only as '*dialysis* of a definition', but also, as some call it, unfolding, or, in other terminology, simplification; still others call it explication.*

Now, some of the followers of Herophilus have attempted to produce a teaching of this kind, as also Heracleides the Erythraean. The teaching by putting together, too, has been attempted by these same Herophileans, and also by some of 306
the followers of Erasistratus, and Athenaeus of Attalia. But no one before us has written a course of teaching beginning from the notion of an end, from which notion* all arts are composed methodically. This teaching we have expounded elsewhere; here we shall concentrate on that related to definition. Just as it falls short, in both status and method, of that related to analysis, we shall equally find that it exceeds it for the purposes of overview of the whole and memorization of the individual facts. For all that arises from the *dialysis* of a definition is easy to remember, because the best definition contains within it the principal points of the entire art. Such a definition is called by some 'substantial', in contradistinction to other, 'notional' definitions: the latter derive from features incidental to the object under definition, the former from its very substance. The working-out of the whole of medical theory, part by part, has been written in many other of our treatises, which may be consulted for the three teachings. 307
Now, however, let us embark on the definitional one, adding this caveat, that only the chief points—as it were, the conclusions of the precise demonstrations—will be mentioned here.

1. Medicine is the knowledge of what is healthy, what is morbid, and what is neither.* It makes no difference if one

uses the term 'diseased' instead of 'morbid'. The term 'knowledge' is to be understood in its common, not its technical, sense.

What is healthy, what is morbid, and what is neither—each of these comes in three different categories: those of body, cause, and sign.* For Greek usage applies the adjective 'healthy' to the body which is the recipient of health, to the cause which brings about and preserves health, and to the sign which is indicative of it.* In the same way 'morbid' is used for recipient bodies, effective and preservative causes, and indicative signs. And so also for 'neither'. Medicine is in a primary
308 sense the knowledge of 'healthy' causes, and because of them, also of the other matters. In a secondary sense it is the knowledge of 'morbid' causes, and thirdly of causes which are 'neither'. Next after this it is the knowledge of bodies—first of all 'healthy', then 'morbid', then 'neither'. And the same applies to signs. In practice, however, the diagnosis of bodies takes place first, and this clearly is done by means of signs; only after this does one find the causes.

But since the categories 'effective', 'indicative', and 'recipient' are each of them employed in two ways, in general terms and with application to the present, it should be realized that medicine is the knowledge of both of these. The 'generally' healthy also has two senses: that of 'always' and that of 'for the most part'; and medicine is the knowledge of both of these, too. The 'neither', as cause, sign, and body, both generally and with application to the present, has three subdivisions in each case. The first is the sense of having no part in either of the opposites; the second that of participating in both; the third that of participating sometimes in one, sometimes in the
309 other. And of these, too, the second admits of a distinction; for it may participate in both equally, or in one more than the other.

There is, further, an ambiguity in the definition as a whole. For when one says that medicine is the knowledge of what is healthy, what is morbid, and what is neither, this can mean the knowledge of *all* individual things which are healthy, morbid, or neither; the knowledge of *what kind of* things are healthy, morbid, or neither; or the knowledge of *some* things

which are healthy, morbid, or neither. But the knowledge of all would be indefinable and impossible; the knowledge of some would be deficient and unscientific. The knowledge of what kind of things fall into each category is both scientific and sufficient for all the individual parts of the art, and so we say that this is what is contained in the definition of medicine. Let us, then, begin first with bodies, and consider of what kind are the healthy, the morbid, and those which are neither. We shall then turn to consideration of signs and of causes.

2. A body is healthy in the general sense when it has from birth a good mixture of the simple, primary parts, and good 310
proportion in the organs which are composed of these.* A body is healthy with application to the present when it enjoys this state for the time being. Such a body will also be (for the duration of its healthy state) of good mixture and proportion; but it will not be possessed of the best type of mixture and proportion, rather of that suitable to itself. Of generally healthy bodies, the 'always' healthy is the one with the best mixture and proportion, while the 'for the most part' is that which falls short of the best state by only a little.

A body is morbid in the general sense when it has from birth a bad mixture in the homogeneous parts, or a bad proportion in the organic ones, or both. A body is morbid with application to the present when it is suffering from a disease at the time when this term is used of it. Clearly such a body too—for the duration of its morbid state—will be subject to bad mixture in the homogeneous parts, or to bad proportion in the organic, or to both. And the 'always' morbid is that body which from birth is of a very poor mixture in all its simple, primary parts, or in some of them, or in the most important; or, equally, of extremely poor proportion in the organic parts—here similarly, in all, in some, or in the most impor- 311
tant. A body is morbid 'for the most part' when it is in a less bad state than this last one, but still not situated in the mean position.

Now, the 'neither' body has three subdivisions (that which has no share in either of the extremes, that which shares in both of them, and that which shares sometimes in one, some-

times in the other). Thus, according to the first usage the 'neither' body will be that which is precisely in the middle between the most healthy and the most morbid. And this one is further subdivided into that which is generally so—being such from birth—and that which is so with application to the present—being temporarily situated in this middle position between most healthy and most morbid. Again, the 'generally' category breaks down into the 'always', which remains such throughout all times of life, and the 'for the most part', which admits of some changes. According to the second usage, a 'neither' body will be one which has from birth some share in both opposite states, either in one part or in two
312 different ones. It will happen in one part if that part is well mixed with respect to *one* of the oppositions of effective qualities, or even if it is well mixed in both respects, but has some flaw in the construction, or size, or number of the parts; it may, conversely, be fine in all these respects (or in some of them), but wanting in respect of mixture. This simultaneous sharing in opposites can happen in different parts, too; and it may take place with respect to all of the opposed pairs of qualities.*

The 'always' will remain the same throughout all times of life; the 'for the most part' will undergo certain small changes. In the category of 'application to the present', too, there is a 'neither', in the second sense: either with respect to one part, in that some of its attributes are healthy and some diseased, or with respect to different parts. In the third sense, a 'neither' body will be one which is by turns healthy and diseased, as for example it sometimes happens that a healthy child becomes a diseased youth, or vice versa. This type of 'neither' cannot
313 strictly speaking occur at one time; but it may do so on a broad definition. One should be aware that 'the present' has two senses.

The various senses of 'healthy', 'morbid', and 'neither' in the context of *body*, and the characteristics of each, have now been adequately enumerated.

3. Next in sequence comes the consideration of signs. Here, too, we have the healthy—those diagnostic of present health,

or prognostic of future health, or mnemonic of past health—and the morbid—those diagnostic of present, mnemonic of past, or prognostic of future diseases. And there are the 'neither': those which are diagnostic, prognostic, or mnemonic of 'neither' states, as well as those which give no evidence at all about states, or those which provide no clearer indication of a healthy than of a diseased state, and those which sometimes indicate a healthy and sometimes a morbid one. And these apply to the three tenses—present, future, and past—in just the same way as the healthy and morbid. (In the terminology 314
of some of the ancient doctors, all these kinds of signs come under the heading 'prognostic', even if they are indicative of states present or past.) The diagnostic and prognostic are of great practical use, the mnemonic less so.

4. In the case of bodies, the healthy are divided into 'generally' and 'with application to the present' (which are also called 'in health'); and the 'generally' further into 'always' and 'for the most part'. The 'always' are those with the best possible constitution, the 'for the most part' those which are not far short of them. Now, the diagnoses of these must proceed from the attributes that belong to these bodies in their very nature, and from the activities and symptoms that pertain to them as a necessary consequence; the latter are also known as 'specifically incidental'.*

What proceeds from the very nature of the best-constituted bodies is the balance of the homogeneous parts in respect of 315
heat, cold, dryness, and moisture; and the balance of the organic parts in respect of quantity and magnitude of their component elements, and also in construction and position of each of its parts and of the organ as a whole. What proceeds from the attributes which are necessary consequences of these homogeneous parts is as follows: with respect to the sense of touch, a balance between hardness and softness; with respect to the sense of sight, a good colour and balance between smoothness and roughness; in the context of activities, the perfect performance of them, which is also called 'excellence'.* What proceeds from the necessary consequences of these organic parts consists in the proportion and beauty of

the organs of the body as a whole, and also in the excellence of their activities.

Such are the diagnostic signs of the best constitution of the body. As for those which fall short of them while still remaining in the category of 'healthy', these give rise to some small fault in the mixture of the homogeneous parts, or in that of the organic parts—all of them, or some of them, or some in
316 each category. The types of fault correspond to the types of excellence: mixture in the homogeneous parts; number, construction, size, and position in the organic. But common to both is their unity, which is also known as 'continuity'.

The badness of morbid bodies, too, falls into these same categories, in accordance with each of the meanings of the term 'morbid'. In both cases the distinguishing mark is the perceptible impairment of function. Bodies which fall short of the optimum by only a little are themselves impaired, properly speaking; but this impairment is not yet perceptible. What distinguishes them is matters of degree, in terms both of performance of their functions and of ability to fight the causes of disease. 'Generally' morbid bodies are marked out both by the readiness with which they succumb to such causes and by a significant inferiority in the excellence of their activities. Midway between the two come the 'neither'—both the 'generally neither' and those with a certain latitude.

This latitude of health as a whole can be divided into three
317 parts, which themselves include considerable latitude. The first would be that of bodies in a healthy state, the second that of the 'neither', the third that of morbid bodies. Next in sequence are bodies which are already ill, which are marked off by perceptible impairments in their functions. Now, bodies in pain, and bodies whose motions are faulty, or have been lost completely, are clearly defined. But those whose activities are only not quite perfect, though they are easily distinguished over very long periods, are ambiguous in a shorter time; and as a result, according to this type of impairment, we have the state which participates in neither of the opposites of activity. As has been stated, this too is called 'neither', but only in the sense that all these phenomena are discriminated by the senses, not by the actual nature of the facts. Otherwise there

would be a danger of falling into the doctrine of perpetual pathology.*

So the signs of bodies which are in health but are actually either morbid or neither will differ in the size of the gap: we posit two opposed extremes, that of the best constitution and that of a disease that has just appeared, and we consider to 318
which of these the body in question is nearer. That which is nearer to the best constitution is healthy, and that which is further from that and nearer to the actually diseased is morbid. The one which appears between the two, equidistant from each, is the one we should call 'neither'.

5. The indications of the best constitution of the body have been enumerated. The inferior ones are the same in number, and can be separated according to degree. There are, then, three divisions; let us begin with the signs of the 'generally' morbid body, for the other two kinds of latitude will be clear from them. An account of the general types was given in the work on *The best constitution of our bodies*; we shall now be more specific. Let us first distinguish the parts.

There are four divisions of parts in all: some are principles;* others come into being as a result of those; still others are neither principles nor governed by others, but possess innately 319
the powers that manage them. Some are managed by both innate and external powers.

The principles are: brain, heart, liver, and testicles.* Growing out from them, and subservient to them, are: for the brain, nerves and the spinal cord; for the heart, arteries; for the liver, veins; for the testicles, the spermatic ducts. Parts which manage themselves are: in the simple sense, gristle, bone, ligament, membrane, gland, fat, and flesh. All the other parts which have in common with these the feature of being self-managed also require arteries, veins, and nerves. Hair and nails are not managed, but only generated. So much for the differences of parts.

6. Next let us consider the signs of the mixture of each. We shall start with the brain. There are five kinds of indications in all [*or*: five innate kinds of indications]: first, the state of the

head as a whole; secondly, the excellence or badness of the perceptive faculties; thirdly, that of the active faculties;
320 fourthly, of the commanding faculties; fifthly, of the natural faculties.

Another type in addition to all these [*or*: in each of these five categories] is change coming about as a result of external influences. The state of the brain as a whole is taken from its size and shape and from the nature of the hair. A small head is the specific sign of a poor state of the brain. A large head, however, is not necessarily a sign of a good state: if it has become so as a result of the power located there, which has created this abundance of matter for its use, it is a good sign; but if as a result merely of the quantity of matter, it is not good. The two may be distinguished by the shape of the head and by the parts growing from it. The shape should be well proportioned; this is always a good sign. The parts growing from it: it should be strong-necked and well set in relation to the other bones; its nervelike parts should all be well nourished and enjoy a good tension. The proper shape of the head is just like that of a precisely spherical piece of wax, depressed slightly on each side. It will thus follow that the front and
321 back parts will be more curved than is the case with a sphere, and the sides straighter. If the extent of the protrusion at the occiput is less, examine also the nerves and the neck, as well as the other bones. For if these are as they should be, then the defect has come about through a lack of matter, not a weakness of faculty. If these are inferior, then the principle is weak. Usually these deficiencies of the occiput are attended by weakness of the above-mentioned parts; cases where it is not so are in fact quite rare. And examine the head which is pointed at the occiput with the same criteria which apply when the whole head is large. Here too, if the cerebellum has a well-proportioned shape, it is usually a good sign.

This part is called by some doctors the 'hindmost brain', which accurately describes its position, where it is marked off by the 'lambda-shaped suture'. This part is the principle of the spinal cord, and through it of all the active nerves throughout the animal. This hinder part in itself has to do with very few perceptive nerves, but a very large number of the active ones;

similarly the other part, situated in front, has to do with a 322
great number of perceptive ones, but few active. Thus, a good state in these will lead to strength in the parts growing out from each.

The same distinctions apply in the parts to the front of the head, at the face. One should examine whether they are small or large; the shape; and the relevant perceptive faculties—sight, taste, and smell. The parts that grow from a principle, and the principle, give reciprocal indications of each other's excellence or badness. In the case of the commanding activities, however, their excellence or badness is an indication of the principle alone and in itself. What is meant by commanding activities is those which arise from the principle alone. Quick-wittedness is an indication of a fine substance in the brain, while slowness of intellect is an indication of a thick one; aptitude to learn an indication of a substance which takes impressions easily; and memory of a stable one. Similarly, inability to learn indicates a substance which takes impressions with difficulty, and forgetfulness one which is loose and fluid. Changeability of opinion indicates a hot one, while stability indicates a cold one.

It would appear that two types of indication still remain 323
from those which we initially undertook to discuss: that of the natural activities and that of external influences. These are both covered by one argument. If the brain is well balanced in respect of the four qualities, it will be at the mean in terms of all the factors already mentioned, and also at the mean with respect to excretions (those evacuated by palate, ears, or nostrils); and will be very little harmed by any external influence—things which heat, cool, dry, or moisten. Such people have reddish hair as infants, fairish hair as children, and genuinely fair hair as adults; it is halfway between straight and really curled; they are not prone to hair loss. These and subsequent indications are to be understood as referring to well-balanced habitations; the remarks on hair as referring not just to places, but to the mixture of the humours, which is related to the mixture of humours in the brain. If it is hotter 324
than the mean, but well balanced in respect of the other opposition, then if the excess of heat is considerable all the

above indications will be very marked; but if the excess is small, hardly noticeable. This point should be taken to apply equally to all the parts regarding the indications that we shall mention for all the mixtures.

7. The signs, then, of heat in the brain, apart from those already mentioned, are: that all the parts about the head are red and hot; the veins in the eyes are visible; after birth the hair grows quickly on the head. In cases much hotter than the correct balance, the hair becomes black, strong, and curled; in cases of a small excess, they are first fairish, later turning black; as they grow older they suffer hair loss, the more so the hotter they are. In such people the excretions by palate and nostrils, eyes, and ears are small and well 'cooked', so long as
325 they are enjoying perfect health. But when the head is filled—and this happens in these cases continually, especially where care is not taken over diet—these excretions become larger in quantity, but still fairly well 'cooked'. The cause of this filling and heaviness of the head is the consumption of heating foods and drinks, and smells, and indeed all external influences, including the ambient air. And still more if these bodies are not only hot but also wet; such mixtures are content with little sleep, and the sleep is quite light too.

The indications of a brain that is colder than it should be are: that its excretions by those channels that belong to it are larger; the hair is straight and red, and not liable to loss; it starts growing a long time after birth, being at first fine and insubstantial. Such cases are easily harmed by cold influences, and simultaneously with such damage they fall prey to catarrhs and mucus. It can be observed, too, that the parts about the head are not hot to the touch, or red, and the veins in the eyes are invisible; and the subjects are rather prone to sleep.

326 The indications of a dry brain are: a lack of excretions in those channels, and acuteness of perceptions. They are insomniac, have very strong hair, which grows very quickly at birth, curled rather than straight; and they become bald early.

The wetter brain has straight hair, which is not liable to baldness at all; its perceptions are hazy; there is a great deal of

excretion; sleep is long and deep. So much for the simple imbalances.

8. First of the compound imbalances is the hot and dry. Here they are lacking in excretions, endowed with acute perceptions, extremely insomniac, and become bald early. The first appearance of the hair is very fast and vigorous; it is black and curled; the head is hot to the touch, and red up to the time of full growth.

When heat is combined with wetness, then if each of these qualities is only slightly in excess, there is a good colour; heat; the veins in the eyes are large; the excretions considerable and 327
moderately 'cooked'; the hair straight and blondish, not prone to baldness; but the head is liable to being filled and made heavy by heating substances. And even more so if they are made wet, since then they acquire a mass of excretions, too. But if they reach a high level of wetness and heat, the head will be morbid, full of excretions, and easily harmed by moistening or heating influences. The south wind* is the constant enemy in such cases. They are best off in north winds. They find difficulty in staying awake for long periods; but when they try to sleep they are sluggish but at the same time insomniac, and prone to vivid dreams. Their vision is hazy, and their perceptions imprecise. Now, if the brain is much hotter than the norm, but only a little wetter, the indications of the hot mixture will predominate, but with a faint trace of those of wetness; conversely, if it is much wetter, but only a little hotter, the indications of wetness will be clear and pronounced, and those of heat faint. (This same argument applies to all the compound imbalances.) 328

The mixtures of the brain which are at once cold and dry render the head cold and devoid of colour, as far as their own effects are concerned. The distinction which was made at the outset should always be borne in mind: we should consider to what extent the parts within it are altered by the mixture of the humours. To begin with such mixtures are without veins in the eyes, and liable to harm from cold influences, so that their state of health is an uneven one: they are sometimes extremely light in the head, and lacking in excretions; some-

times apt to succumb to catarrh and mucus and small influences. Their perceptions are in youth acute and perfect in every respect; as they grow older they quickly deteriorate; in brief they are quick to grow old in all matters concerning the head. For this reason they also go grey early. At birth their hair comes with difficulty, and is insubstantial and red; in the fulness of time, as either cold or dryness comes to predominate, they do not go bald. But conversely, if it happens 329
that the dryness comes to predominate greatly over the wetness, but the cold only slightly over the heat, such people will go bald.

The wet and cold mixtures of the brain make people sluggish and somnolent, of poor perceptions, full of excretions; their heads easily cooled and easily filled, liable to catarrh and mucus. But they do not go bald. Such are the signs of the mixtures of the brain. On the basis of these you may by extension know the diagnoses for each of the organs of sense.

9. It will suffice to give an account of the eyes. All those which are clearly hot to the touch, which move readily and often, and which have thick veins, are hot. The cold are those opposite to these; the wet, those which are both soft and full of moisture; the dry, those which are both rough and hard.

All are easily harmed by influences of the same kind as their own mixture, and improved by the opposite sort, when these are applied in moderation. (This point should be borne in 330
mind in the context of every diagnosis of mixture, in every part of the body.) Large eyes, in association with good proportion and excellence of function, indicate the large quantity of the well-balanced substance from which they have been formed. When not associated with these features, they show that that substance is large in quantity but not well balanced. Small eyes in association with good proportion and excellence of function indicate the substance to be small in quantity but well balanced; in association with poor proportion and poor function they signal that this substance is not only little but also bad.

The distinctions with regard to colour are as follows. Blue* eyes, shining with a moisture which is both small in amount

and clear, become so by the abundance of bright light; and black eyes in the opposite manner. Eyes of shades between these come about through causes intermediate in nature. Now, an eye can be blue because of the size, the brightness or forward position of the glassy substance, or the small quantity and clearness of the fine, watery moisture in the pupil. The coexistence of all these factors produces the bluest eye of all; if some of them are present but not others, this brings about 331
different degrees of lightness. Black eyes come about through the small quantity of the glassy substance, or its sunken position, or because it is not genuinely bright and lightlike; or because the fine moisture is greater in quantity, or not clear. Either some or all of these may be the causes. And degrees of blackness come about in the manner already outlined.

If the fine moisture is on the watery side, and greater in quantity, this demonstrates the moist nature of the eye. If, on the other hand, it is on the thick side, or less in quantity, the eye is drier. And increased hardness or fineness of the glassy substance indicates dryness; increased softness or deficiency of fineness, moisture.

10. Let us turn now to the mixtures of the heart, first reminding the reader that when we speak of greater heat, cold, dryness, or moisture of a part, these terms are relative to that part itself, not to some other object. Thus, if a heart is com- 332
paratively cold by nature, its mixture will still be much hotter than that of the hottest brain. Of the signs of heat (relative to the proper balance of a heart) some are inseparable and specific to the heart, such as the volume of breath, the speed and frequency of the pulse, courage and fearlessness in action. If, though, a very high degree of heat is reached, we see bad temper and crazy rashness.* Such people have hairy chests, especially the breastbone and the parts immediately below it. Usually with a hot heart the whole body will be hot, too, unless the liver counteracts this effect powerfully.

We shall come shortly to the indications for the whole body. But thickness of the chest, too, is a sign of heat, unless, again, the brain provides a powerful counterbalance. For the size of the spinal cord is on the whole in proportion to the

brain, and the size of the vertebrae corresponds to that of the spinal cord; thus, the whole spine, too, is on the same scale. And the chest is connected to that part of it which is in the
333 region of the back, in the same way as a ship is connected to its keel, so that of necessity its length will be equal to that of the back. As for its width, if the connection comes about in proportion to the thickness of the vertebrae, it will accord with them; but if from birth the heat of the heart predominates, inflating and widening throughout, the width will accord with the heat of this part. For this reason, too, a small head combined with a broad chest is the clearest indication of heat in the heart; while a big head combined with a small chest is a very specific indication of a cold heart. If the head is in proportion to it, then you must judge the heart by the other signs, for you will gather nothing from size of the chest.

In the case of a cold heart, the pulses are smaller than the norm, but not necessarily slower or less frequent. Breathing will be proportionate to the pulses, provided that the smallness of the chest is in proportion to the coldness of the heart; if the chest is larger than accords with the degree of coldness, the breathing will be not only smaller, but also slower and less
334 frequent. Such people are timid by nature, lacking in courage and hesitant; their chests are smooth, without hair. In the case of smallness itself, the same distinctions apply as above; and similarly regarding the heat of the body as a whole.

Dryness in the heart makes the pulses harder, and the spirit not readily aroused, but fierce and implacable. For the most part the body as a whole, too, will be drier, unless the parts about the liver counteract this. Signs of a moist heart are: soft pulses, a spirit readily moved to anger but also easily placated, and the whole body moist, unless the parts about the liver counteract this.

11. So much for the imbalances of the heart arising from combination of the fundamental qualities. With a hot and dry heart, the pulses are hard and large, fast and frequent; and breathing is of large volume, fast and frequent. And they are much faster and more frequent in cases where the chest has not grown in proportion to the heart. These people are the

hairiest of all on the breastbone and the parts immediately 335
below. They are quick to action, spirited, and speedy; fierce, unkind, reckless, shameless; tyrannical in character; bad-tempered and implacable. As regards the mixture of their bodies as a whole, and also the broadness of the chest, the same distinctions apply as above.

Those with a predominance of both moisture and heat are less hairy than those just mentioned, but no less quick to action. Their spirit is not fierce, merely quick-tempered. Their pulses are soft, large, quick, and frequent. In cases where the chest is in proportion to the heart, breathing follows the same pattern as the pulses. If it is smaller, breathing is faster and more frequent than the previous case by the same degree that the chest is smaller. If the deviation in mixture is a large one, especially in cases of deviation towards the moist, there arise in addition to the phenomena mentioned diseases of putrefaction, as the humours are corrupted and decompose; and exhalation is greater and faster than inhalation; and in the pulses 336
the systole is fast.

With a cold and moist heart the pulses are soft, and the character timid and fearful, lacking in courage. These ones are also devoid of hair on the breastbone, and the least prone to wildness; they are also slow to anger. For the characteristics of the chest and the body as a whole, the same distinctions apply as above.

A cold and dry heart renders the pulses hard and weak, and breathing—in cases where the chest is small, in line with the coldness—well proportioned. If the chest is larger, breathing will be infrequent and slow. Such people are the least irascible of all; but if they are in some way constrained to anger, the passion endures. Their chests are the least hairy of all. The previous distinctions apply regarding smallness of the chest and also coldness of the whole body. But the following reminder should be given, which holds for all these statements equally. Whatever has been said on the subject of moral characteristics, here or in any other discussion of diagnosis of the mixture, applies to innate characteris- 337
tics, not to those—good or bad—which come about through philosophy.

12. The indications of a hot liver are: broadness of the veins; excess of yellow bile and, in the prime of life, also of black bile; warmth of the blood, and by virtue of this also of the body as a whole, unless the characteristics of the heart counteract this; hairiness of the areas around the upper abdomen and stomach. The indications of a cold liver are: narrowness of the veins; excess of phlegm; coldness of blood, and a cold state of the body as a whole, unless it is somewhat warmed by the heart; upper abdomen and stomach free of hair. A dry liver: the blood is dense, dry, and small in quantity; the veins hard; the state of the body as a whole dry. A wet liver: a large volume of moist blood; the veins soft; and the whole body so too, unless counteracted by the heart.

The indications of a hot and dry liver: the upper abdomen extremely hairy; the blood dense and also dry; a very large
338 quantity of yellow bile and, in the prime, of black bile too; broadness and hardness of the veins. And the whole body will be similar. Now, the warmth proceeding from the heart may override the cold proceeding from the liver, as also the cold may override the warmth. But dryness of the liver cannot be changed to its opposite by a moist heart. Moisture of the liver stands between these two: it has a greater capacity to be overridden by dryness from the heart than in the case of dryness by moisture of the heart, but a lesser capacity to be overridden than warmth, and still less than cold—that is the most easily overridden of all the qualities arising in the liver. It is, then, obvious that if the mixtures of both these principles coincide, the entire body will be constituted in accordance with those mixtures. (The indications of this will be mentioned shortly.)

The liver which is simultaneously hot and moist renders the area of the upper abdomen less hairy than does the hot and dry; the blood is extremely plentiful; the veins large; the state hot and moist, unless counteracted by the heart. If the excess
339 of both these qualities is more than is natural, the subject is vulnerable to diseases of putrefaction and bad humour, and especially so if it is the moisture that predominates rather than the heat. If, conversely, there is a great excess of heat but very little of moisture, such people are least prone to bad humour.

A cold and moist liver has a hairless upper abdomen; it produces extremely phlegmatic blood, and narrowness of veins; and the whole body is of the same nature, unless converted to an opposite state by the heart. A cold and dry liver renders the body short of blood, narrow of vein and cold, and the upper abdomen bare—unless, again, the heart overrides this.

13. Of mixtures of the testicles, the hot is the most erotic, liable to the production of males, and fertile; it leads to early growth of hair on the genitals and proximate areas. The cold is opposite in effect. The moist mixture produces a large quantity of wet sperm, while the dry produces a small quantity, reasonably thick.

The hot and dry mixture is productive of the thickest and 340
most fertile sperm, and from the beginning urges the animal most quickly towards congress. Such cases also grow hair most quickly on the genitals and on all the surrounding parts—above, up to the region of the navel, and below, down to the middle of the thighs. Though this mixture is highly prone to the sexual urge, it is also very quickly sated, and, if forced, liable to damage.

If the heat is combined with moisture, the subject is less hairy, but has a greater quantity of sperm. He does not, however, have greater desire than the other type, but can undergo more encounters with impunity. If, indeed, both moisture and heat are present to a considerable degree, the subject cannot safely abstain from congress.

If the mixture of the testicles is moist and cold, the surrounding parts will be free of hair, and the subject will be late in embarking on sexual activity. He will not be prone to the sexual urge; and his sperm will be watery, small in quantity, liable to produce females, and infertile. The cold and dry mixture is in other respects similar to this one, but the sperm 341
is thicker, and extremely small in quantity.

14. The conditions of the whole body have been mentioned already, to the extent that they accord with heart and liver. Whichever part is more strongly endowed with one of the

fundamental qualities (which are also known as 'active') will impose that quality over the rest. But the phrase 'condition of the whole body' is used with particular reference to those parts which the observer encounters first. Such are, for example, the muscles, which surround all the bones, and are composed of both flesh pure and simple and the fibres around which they grow. The substance specific to muscles is both of these. And the vessels which come to them are like waterpipes, which do not supply their substance, but only serve for their maintenance.

Let us then mention the indications of mixture of the muscles, in the context of a well-balanced habitation. For ill-balanced habitations affect the skin, imprinting it with their own nature and thus destroying certain of the indications.
342 Thus, if in a well-balanced region, in summer, one exposes oneself naked to the sun, this will affect all those indications which regard complexion, and the relationship of soft and hard. But if both the region and the lifestyle of the subject are well balanced—not baking himself naked in the sun for a large part of every day, or (as some do) sitting perpetually in the shade in the manner of young maids—then indications of mixture will be accurate.

Now, since our argument has touched on this, let us consider the matter precisely. The indications of a well-balanced mixture with respect to the whole condition of the animal are: complexion, a harmony of red and white; hair, reasonably fair and generally curled; and a good balance of flesh in terms of quantity and quality. Such a body is precisely at the midpoint between all excesses, which are, indeed, considered and defined by reference to it. A thick body, for example, is called 'thick' in relation to this one, and similarly a fine body, or
343 fleshy, lacking in flesh, fat, hard, soft, hairy, or bare. There is no good balance of all these qualities other than one like the Canon of Polyclitus—the perfection of every type of balance, which would appear neither soft nor hard, neither hot nor cold to the touch; and, on inspection, neither hairy nor bare, neither thick nor thin—nor endowed with any other imbalance.

15. Bodies which are warmer than the correct balance, but not moister, or drier in their fleshy parts (our argument concerns this too), appear warmer to the touch to the same degree that they are warmer in mixture. They will also be hairier to the same extent, with less fat, red in complexion and black-haired. Signs of a cold mixture are: hairlessness, fat, feeling cold to the touch; and their complexion, as well as their hair, will be redder. If the cooling is great, the body will be a sort of livid colour; some doctors refer to such cases as 'leaden-skinned'. The dryer mixture is thinner and harder than the 344
well-balanced, to the same degree that it is drier, but in other respects similar. The moist mixture is similar, too, except that it is better endowed with flesh and softer.

16. Imbalances arising from combinations of the fundamental qualities give rise to a composite form of indications. That which is hot and dry will be hairy, hot, hard, lacking in fat, thin, and black-haired. If the heat is greater, it will also be black-skinned. A hot and moist mixture is smooth and fleshy, and hotter than the best mixture to the same degree as the increase in both these qualities. But when the increase is very great, there is vulnerability to the diseases of putrefaction, since poor humour may readily come about. If the increase in moisture is small, while the increase in heat is very great, such subjects will be only slightly softer and fleshier than the norm, but considerably more hairy; and the degree of heat to the touch will also be considerable. Their hair will be black, and their flesh lacking in fat. If the increase in heat is small, and that in moisture very large, the flesh will be soft, of great 345
quantity, of a colour composed of red and white; and they will be slightly hot to the touch. We may sum up the composite imbalances by saying that the indications of the dominant quality will always dominate.

The cold and moist mixture, with both qualities only slightly increased, is hairless, white, soft, dense, and fatty. If the increase is more, the changes will be analogous to the increase in these qualities; furthermore, the complexion and hair will be red, or livid if the increase in both qualities is