

Natural Philosophy and Principles of General Pathology in the Galen System (as Exemplified by the “Ars Medica” Treatise). Part 2

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Abstract. The present article is the second part of a historical-medical commentary on Galen’s treatise *Ars Medica*, translated from the ancient Greek. The author will argue that interpreting Galen’s natural philosophical concepts and terminology requires us to appreciate the interdisciplinary character of his approach to medicine and to analyze its contents in a wider general-theoretical philosophical context.

Ars Medica contains important assertions of a general scientific (philosophical and medical) character. In this work, Galen presents his vision of the general principals of pathology and summarizes his views on the basic problems of practical medicine. Galen frequently defends the principle of teleology, and, in order to support his opinion, turns to the idea of homoeomeries, one of the fundamental concepts in his medical philosophical system. With a certain amount of conventionality, it is possible to think of Galen’s view of homoeomeries as proto-scientific. In his opinion, the mechanisms underlying the development of a multi-staged illness could be manifested at the homoeomeric level. Examining the process in question, Galen starts from the assumption that a normative state is distinguished from a pathological state by the extent to which an organ retains the ability to carry out its functions. Natural philosophical concepts are illustrated with practical examples. In *Ars Medica*, Galen enumerates the basic criteria, which, in his opinion, allow us to distinguish a state of health from a state of disease. Galen places special emphasis on the principles of treatment and disease prevention. His judgments are based on data gathered as a result of his practical medical work.

Keywords: history and philosophy of medicine, Galen, *Ars Medica*, pathology, homoeomeries

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Earlier we focused on the fact that the condition of the human body in Galen’s system is characterized by a description of a dynamic balance of three tetrads [1, 2]. The treatise *Ars Medica* [3] reminds us that two tetrads – wetness and dryness – have defining significance for the description of “healthy,” “diseased,” and “neutral” conditions [4]. Four primary elements – earth, air, fire and water – make up the foundation for the formation of the human body. In Galen’s natural philosophical system, all material objects are aggregates of these primary elements, brought together in various proportions. Galen thus consistently warns against an understanding of this unification as an infusive mixture: primary elements are mixed in a substance, but they do not merge. For example, the primary element “earth” remains essentially

“earth,” and does not turn into “fire” or “water.” Thus, a material object is a unity of unified proportions (or combinations) of primary elements, each of which retains its specificity within the complex, unified structure.

Naturally, one or another primary element can predominate in this structure, while others are represented in a smaller volume. This creates an object’s predisposition to a certain property (for example, “earth” is an element which is believed to be colder than “fire”). In regard to this question, a variety of interpretations of this unity existed in ancient natural philosophical and medical traditions (from Empedocles to Galen) [5]. However, for the majority of scholars concerned with the division of primary elements, the image of the world conformed to this concept.

In Galen’s system, two other tetrads – substances (cold, hot, warm, and dry) and liquids (black and yellow bile, phlegm and blood) – de-

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scribe the various conditions of a living organism: “A body is healthy in a general sense when it retains from birth a good mixture of simple elements and a symmetry of organs consisting of such elements. A body exhibiting health at present is healthy at the present time. Moreover, one could say that when a body is healthy, the mixture of juices and the symmetry within it is good, not in a general sense for all bodies, but concretely for one. The body that is healthy in a general sense contains a good mixture [of elements] and is always well-balanced. But a body that is healthy in a majority of situations slightly diverges from this state... While a body that in most circumstances is ill is a body with a condition that can be distinguished from a calamitous condition, but is still worse than a neutral condition. Because a body’s state can be neutral (in other words, neither healthy, nor ill) in three ways – unrelated to any particular opposition; related to both; related to one, but not the other – then, according to its first meaning, a body will be in a neutral state when it is neutral in the exact meaning of the word, that is neutral between (ideally) healthy and (absolutely) ill. And some people are this way in a general sense; that is, they are this way from birth. A body that is in a neutral state at present is – at the given moment – located in between an (ideally) healthy and (absolutely) ill state. However, among those who are healthy in a general sense, some are always healthy at any age; some are healthy most of the time, while others go through particular changes. A body that is in a neutral state of health in the second sense is connected to both oppositions from birth, either in one and the same part, or in two different parts. After all, a body can temporarily have a well-balanced mixture of elements in one of its parts; or it can constantly possess a well-balanced mixture, but contain a defect in the organization, size, quantity, or arrangement of one or another part; or instead, it can be healthy in all of these parameters, but nonetheless possess an incorrect mixture. Additionally, such a body can have defects in many parts and by any of the aforementioned parameters. And, as happens more often than not, a body can remain consistently in this state, or it can change in some way” (fragment 3) [4, p. 113–114].

Again, as in *In Hippocratis de natura hominis librum commentarii III* [2, p. 555–652], we are focusing on concepts of “symmetry,” which were key for Galen. Symmetry of all elements of the tetrads

and a good balance of all liquids will signify that a body is healthy in all ways. The doctor’s task is to analyze and to correctly assess the presence or absence of symmetry and a well-balanced mixture. It is in just this way that the clinician develops his logic [7]. On one hand, he sees actual aberration in bodily function, while on the other hand, he understands perfectly well that he may come across symptoms having no relation to the underlying disease [8]. In the first part of this article, we showed that, even in situations requiring immediate surgical intervention, Galen does not forget about the necessity of interpreting the clinical situation under his observation from the position of principles of general pathology [4]¹. Internal diseases force the doctors to adopt such an approach from the very beginning, otherwise they are impossible to detect. Of course, such an approach requires the inclusion of clear and basic definitions. For example, Galen’s approach to the concept “healthy body” is described in the following way: “In sum, there are bodies that are healthy in a general sense, and there are bodies that are healthy at present that can also be described as in a state of current health, and, as we already said, there are two types of body that are healthy in a general sense – those that are always healthy and those that are healthy in a majority of situations. Bodies that are always healthy are in the best condition, while those that are healthy most of the time deviate slightly from this condition. These states are detected by studying characteristics related to their essence and (out of necessity) the behaviors and symptoms, which we also call features, associated with these states” (fragment 5) [4].

In this way, the author prepares the reader for the proper interpretation of an illness’s symptoms, which are referred to as “verified by an illness’s traits.” Galen states: “After all, some of these indicate the presence of health, allow for the prediction of future health, and contain a reminder of previous health. The traits of a disease allow for diagnosis of the disease in question, or they indicate the presence of an illness in anamnesis, or they allow for a prognosis regarding the length of the illness. There are neutral traits as well, which indicate neither a state of health, nor a state of past, present, or future illness. While some of these

¹ The source includes a published historical-medical commentary on fragments 1–33 of Galen’s treatise *Ars Medica*, translated into Russian from the ancient Greek.

traits do not indicate any information regarding a state of health, others can indicate a state of health and state of disease equally well. Some indicate a state of health in some way, and a state of disease in another way, while others sometimes indicate a state of health, and sometimes indicate a state of disease, and this related past, present, and future conditions in connection with health and disease. Some ancient doctors considered all of these traits to be prognostic; however, these traits help define both present and past conditions. Diagnostic and prognostic traits are of great use, but anamnestic traits are less so" (fragment 4) [4].

In the widely known work *On the Use of the Parts of the Human Body*, Galen presents his system of anatomy and physiology in great depth and detail. However, this is not the only treatise of the Roman doctor that historians of anatomy and physiology should consult. For example, a fundamental part of Galen's arguments about the arrangement of the nervous system is found in his treatise *De placitis Hippocratis et Platonis*² [9, 10]. Approaching the second half of the second century, there was no consensus about which organ in particular should be thought of as the "origin of the nerves," that is, the principle central nervous system [11]. In the context of a teleological perspective on human and animal vital functions, this question had an even more important significance – in which organ of the human body was the center for decision making regarding arbitrary (or volitional) body movements. For the pre-scientific period this question had the same significance as it does for modern physiology – the explanation of higher forms of intellectual activity with the help of the arsenal of neuroscience. From this explanation came the anatomical foundation for the localization and functioning of the higher parts of the soul. Two points of view existed regarding this question. One was repeatedly formulated by Plato and Herophilus. The first placed the higher part of the soul in the brain, while the second developed this concept through the use of autopsies to describe cerebrocranial nerves. Another point of view was suggested by Aristotle and

supported by doctors who shared the ideas of the stoic philosophers (for example, Chrysippus of Soli and Praxagoras who taught that the source of the nerves was the heart) [9, 12]. In *Ars Medica*, Galen develops his system of anatomy and physiology within the school of thought that organs are arranged hierarchically. Without this, in Galen's opinion, it is not possible to correctly discuss clinical observations. Galen states: "There are all together four types of organs. There are primary organs and others that grow out from them. A third type does not create others and does not grow from others, but has functions that are not separable from the functions of other organs. The essential primary organs are the brain, heart, liver, and kidneys. Growing from these organs and assisting them are the following: nerves and the spinal cord from the brain, arteries from the heart, veins from the liver, vessels delivering semen from the kidneys. Cartilage, bones, ligaments, skin, glands, fat and simple muscle exist independently. All the other parts, as those enumerated above, exist independently; however, they are in need of arteries, veins, and nerves. In regard to hair and the finger and toe nails, one does not speak of life, but only of generation. These are the various types of body parts" (fragment 6) [4].

Having defined the basic criteria necessary for the analysis of clinically observed phenomena, Galen transitioned to concrete examples. *Ars Medica* presents Galen's scientific perspective on the human body. First and foremost we will mention his deep belief in the integral and balanced character of the functionality of the human body, as well as of its individual parts. Such an approach distinguishes a unity of the body's essential characteristics – a normative state of health and a state of pathology are defined by the same criteria but, in relation to them, appear differently. Using this method, Galen attempts to construct a universal theoretical and practical system possessing significance for a general history of science.

If the principle of symmetry and good mixture turn out to be universal, then it should allow for definitions of the phenomena of normal anatomy (physiology) corresponding to Galen's definition of a healthy body, and the phenomena of general and specific pathology observed in the body of the sick. We will examine a more important part of Galen's system – his understanding of the brain. Galen initially focuses the reader's at-

² The translation of this treatise from the ancient Greek was carried out in the Department of the History of Medicine, National History, and Culturology at the I.M. Sechenov First Moscow State Medical University and has been accepted for publication in the journal *Voprosy filosofii*.

tention on the basic issues comprising the subject of his research: "Each of the mixtures will be described in time, thus we will begin with the brain. There are five interrelated types of these traits. The first is the condition of the entire head. The second is the correct or incorrect functioning of the sensory organs. The third is the condition of the ability to act. The fourth is the condition of thinking ability. The fifth is the condition of the physical functions. And, additionally, there is one more trait distinguishable from all those enumerated above – the ability to avoid external influences. The general condition of the head can be determined by its size, shape, and the condition of the hair. After all, a small head is an obvious trait of a poor brain. However, a large head is not necessarily a sign of a well-organized brain. But if a head becomes big due to the strength of the brain contained within it, then it is a good sign, whereas it is a bad sign if the head is big simply due to the quantity of flesh from which it is made. It is possible to distinguish such occurrences by the shape of the head and by that which is growing from the brain. Concerning the shape of the head, if it is correct, then this is a good sign. Concerning that which grows from the head, it is a good sign if a person's neck is strong and the head is well-placed in regard to the other bones, and that all nerves are well fed and correctly situated" (fragment 7) [4].

Galen later uses this approach logically when assessing functions, for example, when he states "good or poor functionality are essential traits of an acting source". Galen thus structures the progress of his argument: "And determine if the head comes to a point near its base, and whether or not due to this the entire head is increased in size. This is a good sign because it means that the cerebellum, which some doctors also call the hind brain, situated behind and bordered by the lambdoid suture, retains its correct shape. This part of the brain is the beginning of the spinal cord, through which all of the body's nerves responsible for movement and action run. And the entire rear section is barely related to the senses, but very much related to actions, while the front section, conversely, is strongly related to the senses, and only insignificantly related to actions. Thus, strong nerves will descend from a well-organized part of the head, each one from its corresponding part. The same goes for the front part of the

head, in relation to small and large sizes, as well as the strength of the sensory organs located there for sight, taste, and smell. They are reciprocal features of one another and testify one for the other, in as much as each come from a source thanks to its good or poor quality, while the other is the source from which the other is derived. After all, good or poor functionality are essential traits of an acting source, acting on its own.

I refer only to those which come from a source as controlling actions. For example, quick wittedness is a sign of a brain made of delicate fabric, whereas dimwittedness is a sign of the thick brain fabric, learnability is a sign of the flexible brain fabric, and a good memory signifies strong brain fabric. Forgetfulness is a sign of instable brain fabric, fickleness is a sign of warm brain fabric, whereas steadfastness signifies cold brain fabric" (fragment 7) [4].

We now turn to Galen's opinion that a lot depends on an aberration in a liquid's mixture (in other words, an aberration in the mixture's symmetry). For example, extreme dryness of the brain defines the character of hair growth, the expression of the senses (in other words, the activity of the organs of hearing and smell), as well as the realization of neuro-physiological processes in the form of insomnia.

Following the simple mixtures, Galen outlines the complex mixtures: "Complex (in composition) aberrations in a mixture are the following. The first is a combination of hot and dry. In this case there are no discharges or stinging feelings, but there is a tendency toward insomnia and early baldness. Hair appears very soon after birth, receives good nourishment, and is black and wavy. The head is hot to the touch, and the color of the face before puberty is pink. If dampness coincides with warmth and both traits increase a bit in measure, the skin will be healthy and hot, the vessels in the eyes will be big, and there will be an abundance of secretions, hair will be straight and reddish, not want to fall down, and will be thick and weigh down the head due to a surplus of warmth. If the brain is excessively damp, then a lot more secretion will be observed. When a high level of dampness and warmth has been reached, the head will become diseased, and suffer from a surplus of secretions; it will be easily prone to damage from all that promotes warmth and moisture. A south wind is always injurious to such

people. Such people feel the best in a northerly wind. It is difficult for such people to deal with insufficient sleep: they are always sleepy, and, even when they are in bed, they suffer from insomnia, having a multitude of dreams, in which they are visited by gloomy visions, and the senses become insufficiently clear. If the brain is a lot warmer and slightly damper, then traits of a hot mixture with a slight tinge of characteristics of a damp mixture will predominate. Likewise, if the brain is a lot damper and slightly warmer, traits of a damp mixture will be clear and strong while traits of a hot mixture will be weak.” (fragment 10) [4].

Naturally, a description of a significant number of variations of mixtures, of one or another deviation, should be illustrated by a clear description of a norm—what a symmetry of mixtures specifically looks like: “A correct mixture of liquids in the body of a living being have the following traits: the color of skin is between red and white, the hair is moderately red, and very wavy, the quantity of flesh is moderate, and in all traits a standard measure is observed. Such a body is situated exactly in between any two extremes, as extremes are thought of and referred to in relation to it. After all a fat body is called fat in relation to a norm, and a skinny body is called skinny also by means of such a relation, and the same goes for bodies that are fleshy or suffering from a lack of flesh, as well as bodies that are firm or soft, and bodies that are hairy or bald. After all, symmetry is that, which is not lacking in any these traits, but, just as the canon of Polycleitus, provides an example of all types of symmetry, thus symmetry to the touch will not appear soft, nor hard, nor hot, nor cold, and to the sight neither hairy, nor bald, nor fat, nor thin, nor having any sort of dissymmetry” (fragment 16) [4].

Now we turn to an interesting moment in Galen’s discussion on the interaction of the organs between one another: “More often than not the entire body will become hot from a hot heart, except when the liver strongly resists it... Dryness of the heart results in a muted pulse and an ire that is not easily ignited, but wild and difficult to stop, and more often than not an excess of dryness of the entire body, if the liver does not resist this. Traits of a damp heart are a pulse with soft tones and a character which is easily excited to rage, but appeasable, and the entire body is overly damp, if the liver does not resist this” (fragment 12) [4].

Here, in our opinion, Galen is speaking about an attempt to comprehend the phenomenon which is well-known in current physiology as a suppressing or potentiating interaction of the organs and their systems. Galen views this mechanism through a prism of a mixture of liquids or substances, that is, through a dynamic balance of components of two tetrads that define a normal or altered functioning of the body. Here a third important component has significance – the functions of three parts of a soul defining their intended purpose. It is specifically for this reason that Galen argues for the possibility of a reciprocal neutralization of a display of temperament and a manifestation of an aberration in the balance of liquids due to opposing influences of the heart and liver. We remind the reader that the so-called “appetitive” part of the soul is located in the liver. In Plato’s *Timaeus*, he likens it to an insatiable beast creating impulses of a physiological character that are difficult to control, such as the feeling of hunger and the passion of gluttony [13]. The latter is especially important in the context of the significance given in the tradition of Hippocrates and Galen to the influence of diet on an individual’s health. In an environment where the quantity of pharmacological resources was limited, diet was one of the most important instruments a doctor of that time had in his arsenal. Accordingly, the ability of the higher parts of the soul to restrain the impulses of the lower “appetitive” parts of the soul were extremely important for maintaining health. Earlier, we wrote a lot on the relationships of the spiritual and corporal ideals, the psychosomatic unity in pathogenesis and other important aspects of the influence of the soul on the state of the body in Galen’s study [1, p. 192–279]. In *Ars Medica* we come across Galen’s arguments regarding another aspect of this problem – the liver’s suppression of manifestations of the heart’s activity. Naturally, reverse processes also take place: “Traits of a liver that is too hot are breadth of the veins and an abundance of yellow bile. With age, black bile and blood also manifest themselves, and therefore the entire body is warmer, than normal for such people, only if the character of the heart does not act in opposition. Such people also have a lot of hair in the hypochondrium and on the stomach. Characteristics of a liver which is too cold are tightness of the veins, a profusion of phlegm, blood (and, in such cases when the heart does not

act in opposition) a body which is too cold, and an absence of hair on the hypochondrium and on the stomach. Signs of a liver which is too dry are thick blood, which is too dry and in insufficient supply, veins, which are somewhat dry, and consequently, a body that is also dry, if the heart does not act in opposition" (fragment 14) [4].

In our opinion, similar passages from *Ars Medica* (or other treatises of Galen, which are dedicated to such issues) should be understood as an attempt to develop the study of the psychosomatic unity of the human body in both normative and pathological states. In the given situation, Galen shows how the activity of two parts of a soul expressed through the function of the organs in which they are localized can affect each other. It is worth noting that Galen's arguments about the natural philosophical bases of general pathology do not constitute mere abstract theorization. All that the author says in *Ars Medica* about mixtures and substances, he verifies with concrete practical examples, elucidating the significance of his theoretical calculations: "Traits of a stomach that is too dry by nature are the following – a person who quickly begins to experience thirst, but only requires a small amount of quenching liquid, as he is overburdened by a larger quantity of liquid, which causes a churning in his stomach, and a tendency to love overly dry food. A stomach which is too hot by nature digests food better than it absorbs food, and digests especially well that, which is rigid by nature and difficult to cook, likewise, that which is easily cooked spoils in such a stomach. Such people prefer hot food and drink, but cold food will not damage their stomach, if they eat such food in moderation. A stomach which is too cold by nature causes a healthy appetite, but it digests food poorly, especially when food is difficult to cook and cold. After all, food in such a stomach quickly sours. Therefore, such people are subject to heartburn and prefer cold food, but overeating is very dangerous for them. And such a stomach also does not tolerate a large infusion of cold food, just as a hot stomach cannot tolerate an infusion of food which is too hot. Poor mixtures in a stomach which are caused by an illness differ from poor mixtures which are innate in that, when suffering from an illness, the sick desire food with the opposite quality, as opposed to food of the same quality, which is what people with innate

poor mixtures desire. Complex mixtures in the stomach deriving from a combination of traits are recognized as combinations of simple traits. But it is necessary to be careful when observing the traits enumerated above in order to distinguish them from those situations of which we will speak of shortly. After all, the condition not just of the stomach but of the organs situated in the chest – the heart and lungs – cause a tendency toward thirst or its absence, as well as a preference for cold or hot drink" (fragment 18) [4].

In the text of *Ars Medica*, Galen consistently develops his thought on assessing the traits of a norm and pathology through the prism of a teleological principle. It is specifically the quality of the realization of that function which is defined by the Creator for one or another part of the body and is an indicator of the condition of the latter. If a function is fully realized, then the organ is healthy. If it fails, then the organ is diseased. Furthermore, the degree to which a function fails defines the assessment of the damage (the stage of a disease) of an organ. We have already remarked on the particularity of Galen's arguments on this topic above: it is as if he has set up a scale between two extreme conditions of "absolute health" and a "manifested disease". It is specifically in regard to the expression of an aberration in functionality that he distinguishes at what point the state of a concrete body is located on this theoretical scale. Preservation of function allows for a body's condition to be classified as healthy (or closer to healthy), whereas a disorder of a function allows for a body's condition to be classified as ill (or in a state of disease). In Galen's opinion, this approach is the key to the detecting a disease of the internal organs. After all: "It is simple to detect a divergence from the norm in relation to size, shape, quantity or position of separate parts of the body, if they are available to the senses. Some of those divergences that are unavailable to the senses are difficult to detect, while others are impossible to detect... It is completely understood that each of these divergences from the norm do harm to the functionality of each of these parts. Also, it is not always possible to detect what is inside the body. For example, we have observed that one individual's stomach was so small, narrow and closely situated to the hypochondrium that it was even possible to detect it by touch during inspection. We have also observed a person who had a

urinary bladder that was so deeply situated and small that, by his own description, he would feel a heaviness in the region of the urinary bladder as soon as he delayed urination. But I have not come across any other situations in which the deformation of internal organs has been so easy to detect. Therefore, it is necessary to attempt to detect them, in as much as it is possible, by the correct or incorrect functioning of an organ, following, if not reliable information, then a scientific guess..." (fragment 21) [4].

The basic approaches to diagnostics follow from here. First of all: "When the source of an illness is not accessible to the senses, then knowledge in the realm of anatomy, as well as the study of the functions of the organs have great significance for its description". Secondly, starting from this, it is necessary to carefully study the external manifestations of an illness, considering them as a manifestation of processes of pathological changes to the work of the internal organs: "In relation to sick bodies, that is, those which are ill, it is necessary to make a diagnosis based on visible changes in size, color, shape, number, positioning, stiffness or softness, warmth or coldness; it is necessary to detect latent deviations, speaking generally, by a failure in functionality, or by secretions, or by pains, or by an unnatural heaviness, or furthermore by more than one, or by all of these symptoms" (fragment 22) [4]. Galen goes on to illustrate his opinion with concrete examples. He demonstrates a number of traits that allow for the diagnosis of the disease of a number of organs: the brain (the nonsensical behavior of a patient, "the deceit of the senses and imagination" and others), the heart (an aberration in breathing, tachycardia, pulse rate and others), the liver (a surplus or insufficiency of fluids, a change of diet and secretions, heaviness and pains in the region of the liver and others), the stomach (changes in appetite, stool, belching, nausea, vomiting and others), the chest cavity (aberrations in breathing, coughing, pains and others), the trachea (aberrations in breathing, the voice, pains and others). At the end of this discussion he concludes that the diseases of other organs can be diagnosed in the same way ("by a feeling of weight, pain, a failure in functionality and composition of secretions"), and makes a general clinical conclusion as well, that "an unnatural weight signifies an accumulation of phlegm, irritation, carcinoma or a tumor".

Galen develops his idea of the prognostics of diseases, using the concept of "precursors to illness" (fragment 24) in relation to poorly articulated aberrations in the functions of the organs that indicate pathological processes beginning in a person's body [4]. Depending on the degree of their articulation, it is possible to make a prognosis regarding the likelihood of a serious disease developing. Here, as earlier, Galen is guided by the teleological principle. He illustrates it with the striking example of a disorder to the functions of the sensory organs. A criterion for their diagnoses is a patient's false senses, unsubstantiated by a healthy person's empirical observations, such as false smells, unnatural noises and sounds, and distorted visual images.

Following the "precursors of an illness" by the measure of its progression, stable traits of pathology emerge: "Traits evinced by those who are already sick presage either recovery or death; the first are called healthy, and the second are called by nature unhealthy and by sight mortal. These traits are defined, speaking generally, by good or poor functionality, and in particular, by the functioning of the separate parts of the body previously mentioned, initially the primary parts, then the parts related to the primary parts, and finally those possessing their own [actual] position, but receiving nourishment from the primary parts. The fourth type, along with those already enumerated, are the traits that, on their own, do not have prognostic significance, but have such a significance by coincidence and will eventually make it possible to make a prognosis, just as it is possible to make a prognosis for the entire body by examining secretions. By these traits, a prognosis is made by the principle of related pathologies and by secretions – beginning with what are essentially signs of good digestion or, conversely, indigestion." (fragment 25) [4].

The process of making a diagnosis forces the doctor to assess factors affecting the body in relation to the duration of an illness and the perspective of reestablishing the health of the patient. Here we return to the concept of healthy, neutral, and unhealthy "causes" that is so important to Galen's system (fragment 26) [4]. These "causes" imply all the possible effects, capable of influencing the body, approximating (or moving away from) it in relation to conditions of absolute health or a neglected illness. In order to better un-

derstand Galen's logic, we have suggested a theoretical experiment with a scale having these concepts as extreme coordinates. The "causes" or, in other words, the various effects, push the body to one or the other of the two extreme points on this fictitious scale. We emphasize that what is being discussed is not only external effects, but also internal factors, and specifically the passions of the human soul that can contribute to the development of an illness and complicate recovery. Galen strengthens the concept of "cause", using the expression "causes of changes": "Now then, taking stock of what the necessary causes of change are, we will find for each of these a sort of healthy cause. Thus, one sort is that which is related to the surrounding atmosphere, a second is related to the movement of the entire body or its separate parts, a third is related to sleep or wakefulness, a forth is related to food and drink, a fifth is related to secretions or their suppression, and a sixth is related to the spiritual passions. All of these causes must somehow out of necessity influence the body. The surrounding air warms or cools, dries or dampens the body, or forces it to experience some of these processes simultaneously or changes its essence as a whole. In the same manner sleep or wakefulness by necessity produce the same results. The same relates to food and drink, as well as secretions or their suppression... All of the types of healthy causes enumerated here are a certain type of material; with proper use, they become promote health, but if moderation is not observed, they become causes of illnesses. Thus, it is already clear that various substances of external things turn out to be healthy and unhealthy for us, but that the same substances under different circumstances can be both healthy and unhealthy. For example, when a body is in need of movement, exercise brings it health, and rest results in illness, but when the body is in need of relaxation, rest brings it health, an exercise results in illness. The same goes for food and drink and everything else... And there are two criteria of that which brings something healthy or results in illness: the quality or quantity of a conveyed trait..." (fragment 27) [4].

After directing his attention to the "precursors of illnesses", taking the patient under his observation and making a diagnosis, the doctor must initiate timely and effective treatment. Considering the texts of Galen in which he provides com-

mentary on the works of Hippocrates, we have turned our attention on a number of occasions to the basic principle in therapy that an opposite is treated with an opposite. Galen aphoristically emphasizes: "Nature is a master and the doctor is a servant". It is specifically for this reason that it is important to find the internal mechanism for the development of aberrations (changes in the balance of liquids and substances) and clearly understand which "causes" effect a sick body. He realizes that even in circumstances of surgical interventions (fragments 30–36) the doctor is not capable of healing the patient. The art of medicine consists of acting on objective processes in the human body with the goal of directing them in the direction of healing (toward the terminus of "absolute health" on our theoretical scale), as opposed to the further progression of illness. It is specifically in this way that Galen develops his ideas: "The goal is to treat what is still possible to treat, directing progression in the opposite direction. If, for example, a person has an improperly healing fracture and the extremity takes on an unnatural shape and hardens too quickly such that a bone callous has formed on the still fresh fracture, it is necessary to separate the bones and put them together again properly, and then subsequently splice them together... Similarly, complete evacuation is required, if puss or blood accumulates in the stomach or in the intestine or in the trachea or in the lungs. Upon an overabundance of food or drink, when it is still fresh, reparation of the condition takes place through evacuation... That which is under the skin can be drawn out through an incision, cauterization or through the aid of a cauterizing treatment. The same relates to diseases of the natural cavities, such as the chest. On the whole every time when something in opposition to nature appears in any part of the body, treatment will consist of its complete eradication, or, if that is not possible, its removal. If something is opposing nature not in kind but in quantity, then the goal of treatment is the reduction of a quantity. The best method of treatment is chosen starting from a general condition of [illness], and the [condition] of the affected part. It is necessary to return that which has been made unnaturally rough to a naturally smooth state, scraping bones and softening the trachea and tongue with thick noncorrosive fluids. And for that which has become unnaturally smooth, it is necessary for

a natural roughness to be returned to it through moderately acrid cleaning treatments" (fragment 37).

In the fragments of the *Ars Medica*, which are dedicated to principles of treating disease, Galen very thoroughly analyzes practical situations related to the disorder of the liver's functionality. In our opinion, he intentionally emphasizes the diseases of this organ (it is important to keep in mind what was stated earlier regarding the location of the longing parts of the soul and passions within the liver, as a factor contributing to the development of diseases in the conceptual framework of the psychosomatic unity of the body). Thus, in his opinion, if liquid had accumulated within the places of where the vessels narrowed within the liver, then it was necessary to reduce the liquid, prescribing the patient light food and drink, after which the liquid would be removed first from the organ, and then from the body. However, Galen remarks that the liver is also the "origin of the veins" and therefore "by its nature it feeds not only itself", but "sends its strength" to the veins. It follows from this that the strength of the liver should not be reduced through weakening infusions, as in such a circumstance not only the liver would lose strength, but also the veins of the entire body. Galen concludes by this principle that, when treating the liver, "it is necessary to add condensing medicines". However, when choosing medicines it is necessary to keep in mind that the given organ is situated deeply in the body, and consequently, a medicine should be chosen the "strength" of which will not be depleted: "And thus, let this medicine remove from the liver all which is unnatural and let the liver preserve a natural symmetry of juices. We must also see whether or not the mixture of juices have changed in this organ due to the quality of liquids which have accumulated within: if phlegm predominates in the liquid, it is necessary to see if it has become colder, or, if bile has accumulated, it is necessary to see if it has become hotter. Having treated the aberration in a mixture out of necessity, we must make the organ completely healthy. And it is necessary that the treatment is performed with the aid of an opposing quality... that is, in as much as the organ has become warmer, it is necessary to cool it by an equal measure. So here it is also necessary to know what kind of mixture of liquids is naturally good" (fragment 39).

The example given by Galen perfectly illustrates the principle of treating an opposite with an opposite. The ideas of preventative medicine supporting and regenerating the treatments outlined in the concluding fragments of the *Ars Medica* also relate to this principle.

Similar treatment by Galen's reasoning is put into place when, for various reasons, the complete recovery of the patient is not possible (for example, for middle aged or elderly patients). When returning the body to a condition of absolute health is, by definition, not possible, it is at least possible to slow down the transfer of the condition to the point of "absolute illness", or, in other words, death (fragments 41 and 42). Galen indicates that there are three types of preventative medicine. The first is intended for the perfectly healthy person and relates to the part of the art of medicine dedicated to the study of the nature of health. The second is intended for the healthy person and relates in essence to preventative medicine. The third is for the ill and it relates to treatment, the goal of which is to change the juices and to extract them from the body. Supporting and regenerative treatment, in Galen's opinion, is necessary for those recovering from an illness as well as the elderly. He believes that "healthy causes", that allow for "correcting" the conditions of such patients are those "that deliver the body quick and safe satiation". He classifies moderate locomotion, food, drink and sleep as "healthy causes", and additionally includes "exercises" that require the use of "oscillation, walking, massage, and hydro treatments".

Thus, the *Ars Medica* is an exceptionally important source for the history of medicine, containing the fundamental principles of Galen's general pathology. The treatise has a clear and well thought-out internal structure. Its author begins with the methods of scientific thought in the medical profession, and gives the natural philosophical basis for the concepts of "health" and "illness" and later consistently describes the processes taking place in the body in the case of one or another aberration of its normal functionality. At the end of the work, Galen formulates the basic principles of a medical intervention. The Russian translation of the *Ars Medica* allows Russian historians of medicine to more thoroughly assess the significance of the universality of the system of anatomy and physiology presented by Galen.

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APPENDIX

ΓΑΛΗΝΟΥ ΤΕΧΝΗ ΙΑΤΡΙΚΗ¹

34. Κάταγμα τοίνυν ἔστι μὲν τῆς ἐν δστῷ συνεχείας λύσις. ἀνίατον δὲ ὄν, ὅσον ἐπὶ τῷ πρώτῳ σκοπῷ, κατὰ δεύτερον τινὰ τρόπον ἵατόν πως γίνεται. πρῶτος μὲν οὖν σκοπὸς ἡ σύμφυσις οὐ δυναμένη διὰ σκληρότητα τοῦ μορίου γενέσθαι. δεύτερον δὲ ἡ δέσις διὰ πώρου δεσμοῦντος ἐν κύκλῳ τὸ κάταγμα. γένεσις δὲ τῷ πώρῳ, καθ' ὅσον μὲν ἐξ ὕλης καὶ ἀποφύσεως γίνεται, κοινὴ πρὸς τὰ ἄλλα, καθ' ὅσον δὲ ἐγγύς ἔστιν δστῷ τὴν ἰδέαν, ἐκ τῆς ἐκείνου τροφῆς. μαλακὸν δὲ καὶ παιδικὸν δστοῦν καὶ συμφῦναι δυνατόν. σπάνιος δὲ καὶ ἡ τοῦδε τοῦ πάθους γένεσις ἄνευ συμπλοκῆς, ώς τὰ πολλὰ γάρ οἱ παρακείμενοι μύες ἄμα τοῖς ἄλλοις σώμασι πάσχουσι, διγγυμένων τῶν δστῶν, ὥστε καὶ ὁ σκοπὸς τῆς θεραπείας διττός, ἔτερος μὲν ὁ ἐπὶ τοῖς δστοῖς, ἔτερος δὲ ὁ ἐπὶ τοῖς ἀμφ' αὐτὰ σώμασιν. ὁ μὲν δὴ τοιοῦτος ἐν ταῖς τῶν σαρκωδῶν μορίων ἐπιπεπλεγμέναις διαθέσεσιν εἴρηται. περὶ δὲ τῶν καταγμάτων ἐν τῷδε ὁρτέον. ἐπεὶ γάρ καὶ τούτων ἡ ἴασίς ἔστιν ἐκ τῆς πωρώσεως, ἵνα δ' αὐτὴ γένηται, τῆς οἰκείας τροφῆς τοῦ δστοῦ δεῖ περίττωμα πρὸς τὴν τοῦ πώρου γένεσιν ὑποβεβλῆσθαι τῇ φύσει, τὸ περίττωμα δὲ τοῦτο καὶ τῇ ποιότητι καὶ τῇ ποσότητι σύμμετρον εἶναι χρή, διὰ τοῦτο ἀγωγῆς δεῖται τῆς τοσοῦτον καὶ τοιοῦτον τὸ ἐπιβρέον αἷμα τοῖς δστοῖς παρασκευαζούσης, ἐξ οίου τε καὶ ὃσου γενήσεται πῶρος. ἐπεὶ δ' ἐκχεῖται τοῦτο διὰ τῶν σηράγγων τοῦ κατεαγότος δστοῦ, σκοπεῖν αὐτοῦ χρή τὸ πλῆθος τε καὶ τὴν ποιότητα, καὶ οὕτως ἡ ἔηραντικωτέραν ποιεῖσθαι τὴν ἀγωγὴν, ἡ ὑγραντικωτέραν, ἀπερ ἐπὶ πλέον ἐν τοῖς τῆς θεραπευτικῆς μεθόδου γράμμασι λέλεκται.

35. Νεύρου δὲ καὶ τένοντος νύγμα διά τε τὸ περιττὸν τῆς αἰσθήσεως, καὶ διότι συνεχές ἔστι πρὸς τὴν ἀρχὴν τὸ μόριον, ἔτοιμον ἐπικαλέσασθαι σπασμοὺς, καὶ μάλισθ' ὅταν

μηδὲν διαπνέηται πρὸς τὰ ἐκτός, τυφλωθείσης τῆς τοῦ δέρματος τρώσεως. τοῦτο τοίνυν χρὴ ἀναστομοῦν, καὶ ἀναξηραίνειν οὔσια λεπτομερεῖ, διϊκνεῖσθαι δυναμένῃ πρὸς τὸ βάθος ἄχρι τοῦ τετρωμένου νεύρου. λέλεκται δὲ καὶ περὶ τούτου τελέως ἐν τοῖς τῆς θεραπευτικῆς μεθό δου γράμμασιν. ἐν μὲν οὖν δὴ ταῖς ἀπλαῖς τοῦδε τοῦ γένους διαθέσεσιν ἡ τῶν ὑγιεινῶν αἰτίων ἰδέα τοιάδε.

36. Κατὰ δὲ τὰς συνθέτους ἐπιπέπλεκται τοῖς ἔλκεσιν πρώτη μὲν ἡ κοιλότης, ἣν οὐκ ἄλλην διάθεσιν, ἀλλ' ἔλκους ἡγοῦνται διαφοράν. ἔστι δὲ οὐ διαφορὰ τό γε τοιοῦτον, ἀλλ' ἔτερόν τι γένος ὅλου τοῦ νοσήματος, ἐν ᾧ τῆς οὔσιας αὐτῆς ἔστιν ἀπώλεια. καὶ τοίνυν καὶ ἡ ἴασις ἐπὶ διττῷ πάθει διττοῦ δεῖται σκοποῦ. ἡ μὲν γάρ τῆς συνεχείας λύσις ἐνώσεως, ἡ δὲ τῆς οὔσιας ἀπώλεια γενέσεως χρήζει. λελεγμένοι δ' εἰσὶν διλύγον ἔμπροσθεν οἱ τῆς γενέσεως σκοποί. καὶ μὲν δὴ καὶ ώς χρὴ πρῶτον ἴασθαι τήνδε τὴν διάθεσιν, εἰθ' ἐξῆς ἐνοῦν ἐπιχειρεῖν, αὐτὴ τῶν πραγμάτων ἡ φύσις ἐνδείκνυται. δταν οὖν ἀναπληρωθῆ μὲν τὸ κοῖλον, δμαλὸν δὲ τὸ ἔλκος ὑπάρχῃ, τὸν ἔτερον τῶν σκοπῶν ἀνηρῆσθαι συμβαίνει. μέσης γάρ τῆς νεογενοῦς σαρκὸς ισταμένης τῶν χειλῶν τοῦ ἔλκους, ἐνωθῆναι μὲν ἀδύνατον τὰ διεστῶτα, σκοπὸν δ' ἄλλον ἴασεως ἐξευρεῖν χρή. τὴν δ' εύρεσιν ἐκ τοῦ κατὰ φύσιν ἔξομεν, δ περιποιῆσαι τῷ μέρει προσήκει. κατὰ φύσιν δ' ἦν αὐτῷ σκέπεσθαι δέρματι. τοῦτ' οὖν ἡμῖν ἔστι ποιητέον, ἢ, εἰπερ ἔστιν ἀδύνατος ὁ σκοπὸς, δμοιόν τι δέρματι. τὴν γοῦν σάρκα δερματώδη ποιητέον ἔστιν. ἔστι δὲ τοιαύτη, ἔηραινομένη τε ἄμα καὶ τυλουμένη. ἔηραινόντων δὲ καὶ στυφόντων ἀδήκτως ἔσται χρεία φαρμάκων εἰς τὰς ἐπουλώσεις. οὕτως δὲ κξν ὁύπος ἐπιτραφῆ, σκοπὸς μὲν ἀπορρόψαι φάρμακον δὲ ὑγιεινὸν τὸ ὁυπτικόν. εἴρηται δ' αὐτῶν ἐν τοῖς περὶ φαρμάκων ἡ ὕλη. καὶ μὲν

¹ Ars medica. Ed. C.G. Kühn. Claudii Galeni. Opera Omnia. Vol. I. Leipzig: Knobloch, 1821. S. 224–304 (repr. Hildesheim: Olms, 1964. S. 305–412) (Cod: 16,776: Med.).

δὴ καὶ εἰ φλεγμονή τις, ἡ θλάσις, ἡ σκίρδος, ἡ οἰδημα κατὰ τοῦ ἔλκους εἴη, θεραπευτέον ἐκεῖνα πρότερον διὰ τῶν εἰρημένων μεθόδων. οὕτως δὲ καὶ εἰ ἐπιρρέει τι τῷ ἔλκει, κατὰ τὴν τῶν ἐπιρρέοντων ἴασιν. ωσαύτως δὲ καὶ εἰ δυσκρασία τις εἴη κατὰ τὸ ἡλκωμένων, ἐπὶ τὰ τῆς δυσκρασίας πρότερον ἵεναι βοηθήματα. καὶ περὶ μὲν τούτων ἄλις.

37. Ἐπὶ δὲ τὸ περὶ τὴν διάπλασιν ἵτεον ἥδη γένος, εἰς πλείους διαφορὰς τεμνόμενον. ἀλλ’ ἀπὸ τοῦ σαφεστάτου τὴν ἀρχὴν τῷ λόγῳ θετέον, ὅ κατὰ τὴν τοῦ σχήματος ἔξαλλαξιν γίνεται. τῶν μὲν οὖν τοῦτον ἀνομένων οἶόν τε τὸ σχῆμα τῶν πλείστων μορίων ἐπανορθοῦσθαι, τῶν δ’ ηὔξημένων οὐκέτι. σκοπὸς δ’ ὃν οἶόν τε θεραπεῦσαι, πρὸς τούναντίον ἀπάγειν τῆς διαστροφῆς. εἰ δὲ κατάγματος οὐκ ὁρθῶς διαπλασθέντος ἡμάρτηται τινος κώλου σχῆμα, πωρωθῆναι φθάσαντος, ἐὰν ἔτι πρόσφατος ὁ πῶρος ὑπάρχῃ, κατάξαντα χρὴ διαπλάττειν αὐθίς ὁρθῶς, εἴτα πωροῦν. ἔστι δὲ ἡ ἔμφραξις ἐκ ταύτου γένους τῶν νοσημάτων. ἡ μὲν ὑπὸ γλίσχρων καὶ παχέων γινομένη χυμῶν, ἔνα μὲν ἔχουσα καὶ αὐτὴ σκοπὸν ἐναντίον τῷ πάθει τὴν ἔμφραξιν· αὕτια δὲ ὑγιεινὰ τά τε ὁυπτικὰ καὶ τμητικὰ τῶν φαρμάκων. ἡ δ’ ὑπὸ κόπρου σκληρᾶς ἔμφραχθείσης ἐντέρῳ, προτέραν μὲν ἔξει τὴν τῆς σκληρότητος ἐπανόρθωσιν ἔξ ὑγρῶν καὶ λιπαρῶν κλυσμάτων, ἔξης δὲ τὴν κένωσιν ἐκ δριμέων. ἡ δ’ ὑπὸ λίθου κατὰ κύστιν, ἐν μὲν τῷ παραυτίκα τὴν μετάθεσιν· ἴασεως δὲ παντελοῦς ἔνεκα τὴν διὰ τοῦ κομιδήν. ἡ δὲ τῆς παρὰ φύσιν ἐν μορίῳ περιεχομένης ὑγρότητος ἴασις ἐν τῇ παντελεῖ κενώσει, καθάπερ ἐπὶ τῶν ἐμπύων. ἡ δὲ ἄμετρος πλήρωσις ἐν ἀμέτρῳ κενώσει, καθάπερ ἐπὶ τοῦ κατὰ τὰς φλέβας αἷματος. ωσαύτως καὶ δοσὶς κατὰ γαστέρα, καὶ ἔντερα, ἡ ἀρτηρίαν τραχεῖαν, ἡ πνεύμονα πύον ἡ αἷμα περιέχεται, παντελοῦς κενώσεως δεῖται. τοῦ δὲ πλείονος ἐδέσματος, ἡ πόματος, ἔτι δοντος προσφάτου, κατὰ τὴν ἀποκένωσιν ἡ ἐπανόρθωσις. ὅσα μὲν οὖν ἐν πνεύμονί τε καὶ θώρακι περιέχεται, μετὰ βηχῶν μὲν ἡ κένωσις, ὑπὸ δὲ φαρμάκων λεπτυντικῶν ὅσα δὲ καθ’ ἥπαρ, ἡ φλέβας, ἡ ἀρτηρίας, ἡ νεφροὺς, ἡ τοι δι’ οὔρων, ἡ γαστρός. ἀλλὰ δι’ οὔρων μὲν ὑπὸ τῶν λεπτυνόντων σφιδρῶς· διὰ γαστρὸς δὲ ὑπὸ τῶν ἐλκτικῶν τε καὶ ἀναστομωτικῶν. ὅσα μὲν οὖν κατὰ τὴν ἄνω γαστέρα, δι’ ἐμέτων· ὅσα δὲ

κατὰ τὴν κάτω, δι’ ὑπαγωγῆς. ὅσα δὲ ὑπὸ τῷ δέρματι, διὰ τοῦ μῆς, ἡ καύσεως, ἡ φαρμάκων καυστικῶν. οὕτως δ’ ἐνίοτε καὶ ὅσα κατὰ τινα κοιλότητα φυσικὴν, ως ἐπὶ θώρακος. ἐνὶ δὲ κεφαλαίῳ, τῶν μὲν ὅλων τῷ γένει παρὰ φύσιν ἐν τισι μέρεσι περιεχομένων σκοπὸς τῆς ἴασεως ἄρσις ἐστίν· εἰ δ’ ἀδύνατος γενέσθαι, μετάθεσις. ὅσα δὲ οὐχ ὅλων τῷ γένει παρὰ φύσιν ἐστίν, ἀλλὰ τῷ ποσῷ, σκοπὸς τούτων ἡ ἀποκένωσις. ἡ δ’ εὑρεσις τῶν ἴασομένων αὐτὰ μέρος μέν τι κάξεις αὐτῆς λαμβάνεται τῆς διαθέσεως· ἡ πλείστη δὲ ἐκ τῶν πεπονθότων μορίων. ὅσα δὲ ἐν τῷ τετραχύνθαι παρὰ φύσιν ἔχει, τὴν κατὰ φύσιν αὐτοῖς ἀντεισακτέον λειότητα· κατὰ μὲν οὖν ὅστοῦν ξύοντα, κατὰ δὲ τραχεῖαν ἀρτηρίαν ἡ γλῶτταν ἐκλεαίνοντα δι’ ὑγρῶν ἀδήκτων καὶ γλίσχρων. ὅσα δὲ τῷ λεῖα γενέσθαι παρὰ φύσιν ἔχει, τὴν κατὰ φύσιν αὐτοῖς ἀντεισακτέον τραχύτητα διά τε φαρμάκων ἴκανῶς ὁυπτικῶν καὶ διὰ βραχείας στύψεως.

38. Ὅσαι δὲ ἔμφράξεις ἡ στενοχωρίαι νοσήμασιν ἐτέροις ἔπονται, θεραπευτέον ἐκεῖνα πρότερον. δέδεικται δ’ ἐν τῷ περὶ τῆς τῶν νοσημάτων διαφορᾶς, ως φλεγμοναῖς, καὶ σκίρδοις, καὶ οἰδήμασι, καὶ ξηρότησιν ἐνίοτε ἀμέτροις, ἔτι τε μοχθηροῖς σχήμασιν αὐτῶν τῶν περιεχόντων σωμάτων ἔπειται πολλάκις τὰ εἰρημένα, καὶ θάπερ καὶ δύκοις τισὶ τῶν πέριξ σωμάτων. εἰ δὲ καὶ πρὸς ἄλληλα τῶν εἰρημένων ἐπιπλέκοιτό τινα, τὰς ἐνδείξεις ἔχει ποικίλας. ἀρκέσει δ’ ἐφ’ ἐνδός, ως ἐπὶ παραδείγματος, ποιήσασθαι τὸν λόγον· ἐπὶ πλέον γάρ ὑπὲρ ἀπάντων ἐν τοῖς θεραπευτικοῖς λέγεται γράμμασιν. ὑποκείσθω τοίνυν ἐπιρρέειν τινι μέρει πλῆθος αἵματος, ως διατείνεσθαι τὰ κατὰ τὸ μόριον ἀγγεῖα, μὴ τὰ μεγάλα μόνον, ἀλλὰ καὶ τὰ σμικρὰ τὰ πρότερον ἐκφεύγοντα τὴν δψιν, ἐκ δὲ τοῦ πεπληρῶσθαι φαινόμενα νῦν, ὕσπερ γε ἐπ’ ὁφθαλμῶν ὁρᾶται σαφῶς ἐνίοτε διὰ τὴν λευκότητα τοῦ χιτῶνος. εἰκὸς δὲ δήπου, καὶ ἄλλα τῶν μὴ ὁρωμένων ἀγγείων διατετάσθαι μεμεστωμένα, μηδέπω μηδ’ αὐτὰ φαινόμενα διὰ τὴν σμικρότητα. καὶ δὴ κίνδυνος ἐκχυθῆναι τὸ διῆδρούμενον ἐκ τῶν ἀγγείων εἰς τὰς μεταξὺ χώρας τὰς κενὰς, ἡ καὶ παρεκχεῖσθαι μικρὸν ἡδη. τοῦ τοιούτου πάθους ἡ ἴασις ἔξει μὲν δήπου σκοπὸν τὴν κένωσιν, ἡ, ἵνα σαφέστερον εἴπωμεν, ἀποκένωσιν. ἐπειδὴ τὸ πάθος ἦν ἐν τῷ πεπληρῶσθαι τὸ μόριον

άμετρως, ἀναγκαῖον δὴ, ἦτοι παλινδρο μῆσαν ἐκκενωθῆναι τὸ περιττὸν, ἢ δι’ αὐτοῦ τοῦ πεπονθότος μορίου. παλινδρομήσει μὲν οὖν, ἢ ὡσθὲν, ἢ ἐλχθὲν, ἢ παραπεμφθὲν, ἢ κατά τινα τούτων, ἢ κατὰ πάντα. δι’ αὐτοῦ δὲ τοῦ πεπονθότος ἐκκενωθήσεται, τὸ μέν τι φανερῶς τε καὶ αἰσθητῶς, τὸ δὲ εἰς ἀτμοὺς λεπτυνθέν. εἰ μὲν οὖν εἴη τὸ σύμπαν σῶμα πληθωρικώτερον, οὐ χρὴ διὰ τοῦ πεπονθότος τόπου ἐκκενοῦν. εἰ μὲν γάρ ἀμυχαῖς καὶ τομαῖς αἰσθητῶς ἐκκενώσομεν ὁδυνήσαντες, ἐπισπασόμεθα πλέον διὰ τὴν ὁδύνην. εἰ δὲ τοῖς θερμαίνουσι διαφορεῖν ἐπιχειρήσομεν, ἔλξομεν διὰ τὴν θερμότηρα πλέον εἰς τὸ μέρος, ἢ διαφορήσομεν. εἰ δ’ αὖθις βουλοίμεθα παλινδρομεῖν ἀναγκάζειν τὸ ἐπιβρύσεν, οὐκ ἀν δέξαιτο μεστὸν ὑπάρχον τὸ σῶμα. πρὸς ἄμφω τοίνυν ταῦτα χρὴ κενῶσαι τὸ ὅλον, ἢ ἀντισπάσαι γε πάντως εἰς ἄλλα χωρία τὸ ἐπιβρέον τῷ πεπονθότι· τοῦτο δὲ ἐργασάμενον ἀπωθεῖσθαι τοῦ μέρους πρότερον, ἢ διαφορεῖν ἐπιχειρεῖν. ἐτοιμοτέρα γάρ ἡ κένωσις, δσῳ διὰ μειζόνων. ἀποκρουσόμεθα δ’ ἐκ τοῦ πεπονθότος, εἰ στύφοιμέν τε καὶ ψύχοιμεν. ἀλλὰ καὶ τὰ κενωθέντα πρὸς ἔαυτὰ τὸ ἀποκρουσόμενον ἔλξει· δέδεικται γάρ καὶ τοῦτο διὰ τοῦ περὶ τῶν φυσικῶν δυνάμεων λόγουν. καὶ δὴ καὶ παραπέμψει τὰ ἀγγεῖα, τονθέντα τοῖς στύφουσι φαρμάκοις. εἰ μὲν οὖν ἀπαν οὕτω παλινδρομήσει, εῦ ἀν ἔχοι· καταλειφθέντος δέ τινος ἐν τῷ μορίῳ, ἐχρῆν, μὲν δήπου τεκμαίρεσθαι τοῦτο γλίσχρον ὑπάρχειν, ἢ παχὺ, καὶ διὰ τοῦτ’ ἐσφηνώσθαι δυσλύτως. δύναται δὲ καὶ μὴ τοιοῦτον δὸν εἰς τὰς μεταξὺ χώρας ἐκκεχύσθαι. τότ’ οὖν ἥκειν ἥδη καιρὸς ἐπὶ τὸ κενοῦν αὐτὸ διὰ τοῦ πεπονθότος, ἐπιθέντα τοῖς ὑπερκειμένοις ἀποκρουστικὰς τῶν ἐπιβρέόντων δυνάμεις. ἐκκενώσεις δὲ μάλιστα, εἰ κατὰ τὰς μεταξὺ χώρας τεκμαίροι περιέχεσθαι τι δι’ ἀμυχῶν τε ἄμα καὶ διὰ φαρμάκων διαφορητικῶν. ἀλλ’ ἐπεὶ τὰ διαφοροῦντα πάντα θερμὰ τοῖς δυνάμεσιν ὑπάρχει, τῆς δ’ αὐτῆς ἐστι κράσεως ἔργον τὸ δάκνειν, δταν ἀμετρότερον ἢ θερμὰ, φυλακτέον ἐν αὐτοῖς τὰ πάνυ θερμὰ, καὶ μάλιστα ἦν ἐπιπολῆς ἢ τὸ πεπονθός. ὁδυνήσεται γάρ οὐ σμικρῶς, ἢν ἄμα τε πεπόνθῃ καὶ δάκνηται, δόδυνη τε πᾶσα παροξύνει τὰ ρέματα. τὸ μετρίως οὖν θερμὸν ἐπὶ τούτων ὀνώδυνον, ἔτι δὲ μᾶλλον, ἐὰν ὑγρὸν ὑπάρχῃ. καὶ μέντοι καὶ ἴκανόν ἐστιν διαφορῆσαι τὸ ἐπιπολῆς, εἰ καὶ μὴ σφιδρὸν εἴη τὸ διαφορητικὸν φάρμακον. εἰ δὲ τὰ μὲν ἐπιπολῆς ἀπαθῆ παντάπασιν ὑπάρχει,

διὰ βάθους δ’ εἴη τὸ κενώσεως δεόμενον, ἐπιτεῖναί τε καὶ αὐξῆσαι δεῖ τοῦ διαφορητικοῦ φαρμάκου τὴν θερμασίαν. κινδυνεύσει γάρ ἐκλυθῆναι, πρὶν εἰς τὸ βάθος ἐξικέσθαι, οὐ μὴν οὐδ’ ἀνιάσει τι τὰ ἐπιπολῆς, ὃν ψαύσει, διότι μὴ πέπονθεν. ὥστε καὶ νῦν ἐς ταῦτον ἄμφω συμβαίνει πρὸς τὴν τῶν θερμοτέρων τε ἄμα καὶ δριμυτέρων φαρμάκων χρῆσιν, τά τ’ ἐπιπολῆς ἀνεχόμενα, καὶ τὰ διὰ βάθους δεόμενα. ταύτην μὲν οὖν τὴν ἔνδειξιν ἐκ τοῦ μορίου τῆς θέσεως ἐλάβομεν. ἔξῆς δὲ σκο

39. πῶμεν, εἰ λείπει τι πρὸς τὴν ἵασιν· ἔοικε γάρ λείπειν οὐ μικρά. τῶν πεπονθότων αὐτῶν, ἐν οἷς ἐστι τὸ περιττὸν τοῦ ρέματος, ἔνια μὲν ἀραιὰ καὶ χαῦνα καὶ μαλακὰ τὴν φύσιν ἔστιν, ἔνια δὲ πυκνὰ καὶ πεπιλημένα καὶ σκληρά. τὰ μὲν οὖν πρότερα ῥάδίως ἐκκενοῦται. τὰ δ’ ἕτερα δριμυτέρων δεῖται τῶν κενωσόντων αὐτὰ, καὶ προσέτι λεπτομερεστέρων. ἀν δὲ καὶ κατὰ συχνοῦ κείνται βάθους, ἔτι δὴ καὶ μᾶλλον. αὗτη σοι πάλιν ἔνδειξις ἔτέρα παρὰ τῆς οὐσίας τοῦ πεπονθότος. ἄλλη δ’ ἀπὸ τῆς διαπλάσεως ἄμα καὶ θέσεως. ὑποκείσθω γάρ, εἰ οὕτως ἔτυχεν, ἐν ἥπατι τὴν προειρημένην εἶναι διάθεσιν, ἐν τοῖς στενοῖς πέρασι τῶν ἀγγείων ἐσφηνωμένων ὑγρῶν, ἥτοι γλίσχρων, ἢ παχέων, ἢ πολλῶν. ἄρο’ οὐχ ἔτοιμον ἐδέσμασί τε καὶ πόμασι λεπτυντικοῖς τὸ πάχος μὲν πρῶτον ἄμα τῇ γλισχρότητι λεπτομερὲς ἐργάζεσθαι· δεύτερον δὲ, μὴ διὰ τῶν ἀοράτων καὶ στενῶν μόνον, ἀλλὰ καὶ δι’ εύρειῶν ὁδῶν ἐκκενώσαι τὸ λυποῦν; εύρυτεραι γάρ εἰσι κατὰ τὸ ἥπαρ αἱ φλέβες, ὥσπερ καὶ πλεῖσται· τελευτῶσι δ’ αἱ μὲν ἐν τοῖς κυρτοῖς εἰς τὴν κοίλην, αἱ δ’ ἐν τοῖς σιμοῖς ἐπὶ πύλας. ὥστ’ ἥδη σοι ῥᾶστον, ἐν διποτέραις ἀν δσιν αἱ σφηνώσεις, ἐκκενοῦντα μωσ αὐτὰς, ἔλκοντα μὲν εἰς τὴν γαστέρα διὰ τῶν ἐλκτικῶν τε καὶ ἀναστομωτικῶν, δσα τῶν ὑγρῶν ἐσφήνωται, κατὰ τὰς ἐν τοῖς σιμοῖς φλέβας, ἐπ’ οὕρα δὲ προτρέποντα διὰ τῆς κοίλης φλεβὸς, δσα κατὰ τὰς ταύτης φλέβας. ἔτέρα δὲ ἐπὶ ταῖς προειρημέναις ἔνδειξις ἀφ’ ἥπατος, ως ἀρχῆς φλεβῶν. ἐπεὶ γάρ οὐχ ἐαυτὸ μόνον, ὥσπερ τὰ πλεῖστα μόρια τοῦ ζώου, διοικεῖν πέφυκεν, ἀλλ’ ἐπιπέμπει δύναμιν ταῖς φλέψι, κίνδυνός ἐστιν, ἐὰν ἐκλύσωμεν αὐτοῦ τὸν τόνον ἐπιβροχαῖς τε καὶ καταπλάσμασι χαλαστικοῖς, αὐτό τε πρῶτον ἀτονῆσαι περὶ τὴν ἐνέργειαν, ἀτόνους τε συμπάσας ἐργάσασθαι τὰς φλέβας. δθεν ἐπιμιγνύναι

χρή τῶν στυφόντων τι φαρμάκων ἐν ταῖς θεραπείαις αὐτοῦ. ἀλλ' ἐπειδὴ διὰ βάθους ἐστὶ συχνοῦ, κίνδυνος ἐκλυθῆναι τὴν δύναμιν τοῦ στύφοντος, ἐὰν μὴ ποδηγῆται πρός τινος ἑτέρας οὐσίας λεπτομεροῦς, οἷα περὶ ἡ τῶν ἀρωμάτων ἐστί. κάλλιον δὲ, εἰ αὐτὸς τὸ στύφον φάρμακον εὐθὺς εἴη καὶ ἀρωματῶδες· συμφύτους γὰρ ἔχον δύο ποιότητάς τε καὶ δυνάμεις ἵσχυ ρότερον ἐνεργήσει. καὶ τοίνυν ἐκκενούσθω μὲν καὶ ἥδη τὸ παρὰ φύσιν εἰς τὸ μόριον ἐνεχθέν· ἔχετω δὲ τὴν συμμετρίαν τῶν χυμῶν τὴν κατὰ φύσιν. ἐπισκεπτέον οὖν ἡμῖν ἐν τούτῳ, μήτι πρὸς τῆς τοῦ ὅρεύματος ποιότητος ἥλλοιώθη τὴν κρᾶσιν, εἰ μὲν φλεγματικάτερον ἦν, ψυχθὲν, εἰ δὲ χολωδέστερον, θερμανθὲν, ἵνα καὶ ταύτην αὐτοῦ τὴν δυσκρασίαν ἰασάμενοι τελέως ὑγιὲς ἀποφάνωμεν. ἰασόμεθα δὲ τὴν ἐναντίαν ἀντεισάγοντες ποιότητα, καθάπερ ἐν ταῖς τῶν δυσκρασιῶν εἱρηται θεραπείαις, εἰς δόσον ἔκαστον ἐγένετο θερμότερον, ψύχοντες εἰς τοσοῦτον. ὥστ' ἐνταῦθα πάλιν ἀναγκαῖον ἐπίστασθαι τὴν κατὰ φύσιν εὐκρασίαν αὐτοῦ. πῶς γὰρ ἀν εἰδείημεν, δόποσφ τοῦ κατὰ φύσιν ἐστὶ ψυχρότερον ἢ θερμότερον, ἢ πότε ψύχοντες παυσόμεθα, μὴ γινώσκοντες τὸ μέτρον τῆς κατὰ φύσιν θερμότητος; οὕτω δὲ καὶ εἰ τὸ ψυχρότερον γενόμενον θερμαίνομεν, μὴ γινώσκοντες τὸ μέτρον αὐτῆς τῆς κατὰ φύσιν ψυχρότητος, οὐχ οἶόν τε ἡμῖν οὔτ' εὑπορῆσαι τοῦ θερμαίνοντος οἰκείως, οὔτε παύσασθαι θερμαίνοντας.

40. Ἐπεὶ δὲ καὶ περὶ τούτων αὐτάρκως εἱρηται, μεταβαίνειν ἥδη καιρὸς ἐπὶ τὰ κατὰ τὸν ἀριθμὸν οὐ κατὰ φύσιν ἔχοντα. διττῆς δὲ οὔσης αὐτῶν τῆς διαφορᾶς, οἵς μὲν ἐλλιπές τι μόριον, ἐργάζεσθαι τοῦτο σκοπὸς, ὑπηρετοῦντας δηλονότι τῇ φύσει, καθ' ὃν ὀλίγον ἔμπροσθεν εἱρηται τρόπον. οἵς δ' αὖ περιττεύει, τοῦτ' ἐκάποτειν αὐτὸ, ἥτοι διὰ σμίλης, ἢ διὰ πυρὸς, ἢ διὰ φαρμάκου καυστικοῦ. ταυτὶ μὲν οὖν ἄπαντα σχεδὸν δυνατόν ἐστιν ἰάσασθαι, γεννῆσαι δ' οὐχ ἄπαντα δυνατὸν, ὡς ἐν τῷ περὶ σπέρματος ἀποδέδεικται λόγῳ. τινὰ δὲ καὶ ναὶ αὐτὰ μὴ δυνατὸν ἢ γεννῆσαι, ποιῆσαι γοῦν ἀντ' αὐτῶν ἔτερόν τι δυνατὸν, ὡς ἐπὶ τοῦ ὀστοῦ τελέως ἔξαιρεθέντος οὐσίαν ἐτέραν ἐν τῇ κατ' αὐτὸ χώρᾳ, διαφέρουσαν ὀστοῦ τε καὶ σαρκός. ἔστι γάρ ἡ γινομένη κατὰ τὴν χώραν αὐτοῦ καθάπερ τις σάρξ πωροειδῆς, ἢ πῶρος σαρκοειδῆς, καὶ τοῦ χρόνου δὲ προϊόντος ἐπὶ τὸ πωρωδέστερον

μεθίσταται, κατ' ἀρχὰς σαρκοειδῆς μᾶλλον οὖσα. καθ' ὃ τι δ' αὖ μόριον ἀπολλύμενον οὔτε τὴν αὐτὴν οὐσίαν κατ' εἶδος, οὕθ' ὁμοίαν ἐργάσασθαι δυνάμεθα, τρίτος ἡμῖν σκοπὸς ἔξευρεῖν τινα κόσμον, ὡς ἐπὶ κολοβωμάτων. ἐπικοινωνεῖ δὲ δηλονότι τὸ γένος δόλον τοῦτο τῷ κατὰ τὸ πηλίκον. δόσον γάρ αὐτοῦ περὶ τὸ κατὰ φύσιν ἐστίν, ἐκείνῳ πλησιάζει. τὸ δ' ἐν τοῖς τῷ γένει παρὰ φύσιν ἀποκεχώρισται μόνον. ἐφ' οὗ πρῶτος μὲν σκοπὸς ἡ ἀφαίρεσις· εἰ δ' ἀδύνατος οὗτος, ἡ μετάθεσις δεύτερος, ὡς ἐπὶ τῶν ὑποχυμάτων. δόσα δ' οὐχ ὅλοις μορίοις, ἀλλ' ἐν μέρεσι μορίων ἐλλείπει τε καὶ ὑπερβάλλει τοῦ κατὰ φύσιν, ἀνάθρεψις μὲν ἢ γένεσις ἐπὶ τῶν ἐλλειπόντων, ἀφαίρεσις δὲ ἢ καθαίρεσις ἐπὶ τῶν ὑπερβαλλόντων δόθεν οὔτε σκοπὸς ἐπὶ αὐτῶν ἔτερος, οὗτ' ἱδέα φαρμάκων ἑτέρα κατὰ γένος. ἀλλ' ἐπὶ τὸ λοιπὸν ἔτι γένος ἵτεον τῶν ὕγιεινῶν αἰτίων, δπερ ἐνανορθωτικόν ἐστι τῶν παρὰ τὴν θέσιν ἐσφαλμένων σωμάτων, οἷον ἔξαρθρήματα καὶ ἔντερον ἐν δσχέω. γίνεται δὲ τὸ μὲν ἐκ βιαίας τάσεως ἢ ὁσεως· τὸ δὲ ἔξ ἀνευρύνσεως ἢ ῥήξεως τοῦ περιέχοντος· ὥστε καὶ ἡ ἰασίς τῷ μὲν ἐξ ἀντιτάσεώς τε καὶ τῆς εἰς τούναντίον, εἰ παρήλλαξεν, ὁσεως, τῷ δὲ ἐκ τοῦ στεγανὸν ἐργάσασθαι τὸ περιέχον. ἐξ ὧν δ' ἄν τις μεθόδων τὰ κατὰ μέρος ἔξευρίσκῃ, διὰ τῆς θεραπευτικῆς πραγματείας δεδήλωται.

41. Ἐξῆς δ' εἴη λέγειν, δόσα κατὰ τὸν ἔμπροσθεν λόγον ἀνεβαλλόμεθα. καλοῦσι δὲ αὐτὰ προφυλακτικά. τριτὴ δ' ἐστὶ καὶ τούτων ἡ γε κατὰ γένος διαφορά. πρώτη μὲν ὕγιαίνοντος ἀμέμπτως τοῦ ἀνθρώπου, δευτέρα δὲ ἡ μεμπτῶς, ἡ τρίτη δὲ νοσοῦντος. τὸ μὲν οὖν πρῶτον γένος ἐκ τῆς ὕγιεινῆς ἐστι πραγματείας, διττὸν ὑπάρχον, ὡς ἔμπροσθεν εἱρηται· τὸ δεύτερον δὲ ἐκ τῆς προφυλακτικῆς· τὸ δὲ τρίτον ἐκ τῆς θεραπευτικῆς. ἐν χυμοῖς δὲ μάλιστα τὴν σύστασιν ἔχει σύμπαν τοῦτο τὸ γένος, οὓς οὔτε γλίσχρους εἴναι προσήκει, οὔτε παχεῖς, οὔτε ὑδατώδεις, οὔτε πολλούς, οὔτε ἐπὶ πλέον θερμούς, ἢ ψυχρούς, οὔτε δακνώδεις, οὔτε σηπεδονώδεις, οὔτε δηλητηρίους. αὐξηθέντες γάρ αἰτίοι καθίστανται νοσημάτων. αὐξάνονται δὲ, ποτὲ μὲν ὑπὸ τῆς αὐτῆς αἰτίας, ἥπερ αὐτοὺς ἐγέννησε τὸ πρῶτον· ἔστι δὲ ὅτε συναλλοιοῦντες ἔαυτοῖς τοὺς κατὰ τὸ σῶμα χυμούς. σκοπὸς δ' ἐστὶ καὶ ἐπὶ τούτων ὁ τῆς ἰάσεως διττὸς, ἢ ἀλλοίωσίς τε καὶ κένωσις. ἀλλοιοῦνται μὲν οὖν, ἥτοι πεττόμενοι πρὸς

αύτοῦ τοῦ σώματος, ἥ ύπό τινων φαρμακωδῶν δυνάμεων, ἐν αἷς εἰσι καὶ αἱ θεραπεύουσαι τοὺς ιοὺς τῶν ιοβόλων ὀνομαζομένων ζώων, ἔτι τε τὰ δηλητήρια φάρμακα μεταβάλλουσαι. κενοῦνται δὲ ύπὸ τῶν θερμῶν ἵκανως φαρμάκων, καὶ καθάρσεων, καὶ κλυστήρων, καὶ ιδρώτων, καὶ ἐμέτων. αὗται μὲν αὐτῶν αἱ κοιναὶ κενώσεις. ἴδιαι δὲ ἐκ τῶν τόπων, ἐν οἷς ἄν ἀθροισθῶσι, λαμβάνονται, καθάπερ ἐν τοῖς ὑγιεινοῖς δεδήλωται, κατὰ τὸ τρίτον καὶ τέταρτον, καὶ μάλιστα περὶ τε κόπων ἡμῖν διεξιόντων, ὅσαι τε ἄλλαι τοιαῦται παράκεινται τοῖς κόποις διαθέσεις. ἐκκενοῦνται γάρ ἐτοιμότερον, οἱ μὲν ἐν ταῖς πρώταις φλεψὶ διὰ γαστρός· οἱ δ' ἐν ταῖς καθ' ἥπαρ δι' οὔρων· οἱ δὲ καθ' ὅλην τὴν ἔξιν δι' ιδρώτων· ὧσπερ γε καὶ οἱ κατὰ τὴν κεφαλὴν ἥτοι δι' ὑπερώας, ἥ διὰ ρινῶν, ἥ δι' ἀμφοτέρων· οἱ δ' ἐν ταῖς τοῦ θώρακος εύρυ χωρίαις διὰ φάρυγγος ἄμα καὶ βιηχός· οἱ δὲ κατὰ νεφροὺς ἥ κύστιν δι' οὔρων. ἀντισπάσεως δὲ κοινὴ συμπάντων τῶν μερῶν ἔνδειξις ἐπὶ τὰ πορόβωτάων, παροχέτευσις δὲ ἐπὶ τὰ πλησίον. ἄπαντα δ' οὖν, ὅσα θεραπεύει τὰς τοιαύτας διαθέσεις, ὑγιεινὰ προσαγορεύομεν αἵτια, καθάπερ νοσερὰ τὰ προσαύξοντα, καὶ οὐδέτερα τὰ μήτε βλάπτοντα, μήτε ὠφελοῦντα. δύναιτο δ' ἀντιτικαῖς αὐτὰ μηδ' αἵτια προσαγορεύειν δλως, οἶοί πέρ εἰσιν οἱ πολλοὶ τῶν σοφιστῶν, ἀμελοῦντες μὲν αὐτῶν τῶν πραγμάτων ἔξευρισκειν τὴν διαφορὰν, ἐν δὲ τοῖς ὀνόμασι τὸ πλεῖστον τοῦ χρόνου διατρίβοντες. εἴρηται δ' ἐπὶ πλέον ἐν ἑτέροις πρὸς αὐτούς. τὸ μὲν δὴ προφυλακτικὸν τῆς τέχνης τοιόνδε.

42. Τὸ δ' ἀναληπτικόν τε καὶ ἀναθρεπτικὸν ἐπὶ τῶν ἀνακομιζομένων ἐκ νόσου καὶ γερόντων. ὅποια δέ τίς ἐστι καὶ ἡ τούτων διάθεσις, ύπὸ τίνων τε μάλιστα αἵτιων εἰς τὸ κατὰ φύσιν ἐπανέρχεται, τελεώτατα μὲν ἐν τοῖς τῆς θεραπευτικῆς μεθόδου γράμμασι δεδήλωται· διὰ κεφαλαίων δ' ἀν ρήθειν καὶ νῦν. ἡ μὲν οὖν διάθεσίς ἐστι τοιάδε. χρηστὸν μὲν, ἀλλ' ὅλιγον τὸ αἷμα, καὶ σὺν αὐτῷ τὸ τε ζωτικὸν ὀνομαζόμενον πνεῦμα, καὶ τὸ ψυχικόν. αὐτὰ δὲ τὰ στερεὰ μόρια ξηρότερα, καὶ διὰ τοῦτο καὶ αἱ δυνάμεις αὐτῶν ἀρρωστότεραι, καὶ διὰ ταύτας δλον τὸ σῶμα ψυχρότερον. αἵτια δ' ὑγιεινὰ, τὰ τὴν εἰρημένην ἐπανορθούμενα διάθεσιν ἐνὶ μὲν κεφαλαίῳ περιλαβεῖν, δσα ταχεῖαν μὲν καὶ ἀσφαλῆ θρέψιν ἐργάζεται· κατὰ μέρος δὲ, ἐν ταῖς συμμέτροις κινήσεσι, καὶ σιτίοις, καὶ πόμασι,

καὶ ὑπνοις. εἰσὶ δὲ ὕλαι τῶν μὲν κινήσεων αἱ αἰῶραι, καὶ περίπατοι, καὶ τρίψεις, καὶ λουτρά. καὶ εὶ πολὺ βελτίους ἐπὶ τούτοις γίνοιντο, καὶ τῶν συνήθων ἔργων ἐπ' ὀλίγον ἀπτέσθωσαν. τῶν δὲ σιτίων κατ' ἀρχὰς μὲν ὑγραὶ, καὶ εὔπεπτοι, καὶ μὴ ψυχραὶ, προϊόντων δὲ καὶ αἱ τροφιμώτεραι, πόμα δὲ ἐπιτήδειον οἶνος, ἡλικίᾳ μὲν σύμμετρος, ἰδέα δὲ καθαρός τε καὶ διαυγής, ἥτοι λευκός, ἥ ύπόξανθος, ὀσμῇ ἥδυς, μέτριος ἐν τῷ γεύεσθαι, μήθ' ὑδατώδης τὸ πᾶν, μήτε τινὰ σφιδρὰν ἔνδεικνύμενος ποιότητα, μήτ' οὖν στρυφνότητα, μήτε δριμύτητα, μήτε πικρότητα. λέγεται δ', ὡς ἀρτίως εἶπον, ἐν τοῖς θεραπευτικοῖς ἐπὶ πλεῖστον ύπερ αὐτῶν· νυνὶ γάρ οὐ διελθεῖν ὅπαντα τὰ κατὰ μέρος ἡμῖν πρόκειται, μόνον δ' ἀναμνῆσαι τῶν κεφαλαίων, ὃν ἐν ἑτέραις πραγματείαις ἐποιησάμεθα τὴν διέξοδον, ἀς προσγράψας, ὁπόσαι τέ εἰσι καὶ ποῖαι, καταπαύσω τὸν λόγον ἐνταῦθα. [κατάλογος.] εἴρηται μὲν οὖν καὶ πρόσθεν, ὡς ἔστιν ἐν ἄλλῳ βιβλίον, ἐν ᾧ περὶ συστάσεως τῆς ιατρικῆς τέχνης διερχόμεθα. προηγεῖται δ' αὐτοῦ τὰ πρότερα δύο περὶ τεχνῶν συστάσεως. ἀλλὰ ταῦτα μὲν ἄμα τῷ νῦν περανθέντι χωρίς τῶν κατὰ διέξοδόν ἐστι πραγματεῶν· ἐκεῖναι δὲ τήνδε τὴν τάξιν ἔχουσι. περὶ μὲν οὖν τῶν καθ' Ἰπποκράτην στοιχείων ἐν βιβλίον ἐστίν. ἔξῆς δ' αὐτῷ τρία περὶ κράσεων. ὃν τὰ μὲν δύο περὶ τῶν ἐν τοῖς ζώοις ἐστὶ κράσεων, τὸ τρίτον δὲ ύπερ τῶν ἐν τοῖς φαρμάκοις. διὸ καὶ τὴν περὶ τῆς τῶν ἀπλῶν φαρμάκων δυνάμεως πραγματείαν οὐχ οἶόν τε κατανοῆσαι καλῶς ἀνευ τοῦ τὸ τρίτον ἀκριβῶς ἀναγνῶνται περὶ κράσεων. ἔστι δὲ καὶ ἄλλο βιβλίον μικρὸν, ἐπόμενον τοῖς πρώτοις δύο περὶ κράσεων, τὸ περὶ τῆς ἀνωμάλου δυσκρασίας ἐπιγραφόμενον· δομοίως δ' αὐτῷ καὶ ἄλλα δύο μικρὰ, τὸ μὲν περὶ τῆς ἀρίστης κατασκευῆς τοῦ σώματος, τὸ δὲ περὶ εὐεξίας. τρίβιβλος δ' ἄλλη πραγματεία ἡ περὶ φυσικῶν δυνάμεων ἐστιν· ἦν εἴτε μετὰ τὰ δύο περὶ κράσεων, εἴτε μετὰ τὸ περὶ στοιχείων ἀναγινώσκειν τις ἔθέλοι, δύναιτ' ὃν ἔσεσθαι. μετὰ δὲ ταύτην ἐν πλείσι πραγματείαις ύπερ τῶν ψυχικῶν ἐνεργειῶν διέξιμεν. ἐπεὶ δὲ εἰς τὰς ἀποδείξεις αὐτῶν οὐ σμικρὸν ὄφελός ἐστι τὰ διὰ τῶν ἀνατομῶν φαινόμενα, πρώταις ἐκείναις ἐγγυμνάσασθαι προσήκει. ἔστι δὲ χρησιμωτάτη μὲν αὐτῶν ἡ τῶν ἀνατομικῶν ἐγχειρήσεων. ἄλλαι δέ τινες ἐπ' αὐταῖς πλείσιον, ἐν δυοῖν μὲν περὶ ἀνατομικῆς διαφωνίας, ἐν ἐνὶ δὲ περὶ τῆς τῶν τεθνεώτων ἀνατομῆς· οἶς ἐφεξῆς δύο περὶ

τῆς ἐπὶ τῶν ζώντων. ἐν ἄλλοις δέ τισι κατὰ μέρος, ὅσα τοῖς εἰσαγομένοις ἐποιησάμεθα, τὰ περὶ ὀστῶν, καὶ ἡ τῶν μυῶν ἀνατομὴ, καὶ ἡ τῶν νεύρων, καὶ ἡ τῶν ἀρτηριῶν καὶ φλεβῶν, καί τινα τοιαῦτα ἔτερα. τῶν τοιούτων δ' ἐστὶ, καὶ εἰ κατὰ φύσιν τὸ ἐν ἀρτηρίαις αἷμα. τὰ δὲ τὰς ἐνεργείας αὐτῶν ἀποδεικνύντα, δύο μέν εἰσι περὶ μυῶν κινήσεων, τρία δὲ περὶ θώρακος καὶ πνεύμονος κινήσεως, οἵς ἐφεξῆς ὑπὲρ τῶν τῆς ἀναπνοῆς αἰτίων, οἵς ἔπειται τὰ περὶ φωνῆς. ὑπὲρ ἡγεμονικοῦ δὲ καὶ τῶν ἄλλων ἀπάντων, ὅσα περὶ φυσικῶν ἥψιχικῶν ἐνεργειῶν ζητεῖται, διὰ πολυβίλου πραγματείας ἐδηλώσαμεν, ἦν περὶ τῶν Ἰπποκράτους καὶ Πλάτωνος δογμάτων ἐπιγράφομεν. ἐκ τούτου τοῦ γένους ἐστὶ τῆς θεωρίας καὶ τὰ περὶ σπέρματος ἰδίᾳ γεγραμμένα, καὶ προσέτι τῆς Ἰπποκράτους ἀνατομῆς, οἵς ἄπασιν ἡ περὶ χρείας μορίων ἔπειται πραγματεία. εἰς δὲ τὰς διαγνώσεις τῶν νοσημάτων ἥτε περὶ τῶν πεπονθότων τόπων καὶ ἡ περὶ σφυγμῶν πραγματεία χρήσιμος ὑπάρχει, καθ' ἓν καὶ τὰς προγνώσεις διδάσκομεν. ἡγεῖται δὲ τῆς περὶ σφυγμῶν δύο βιβλία, τὸ περὶ χρείας ἀναπνοῆς, καὶ τὸ περὶ χρείας σφυγμῶν. αὕτη δὲ ἡ περὶ τῶν σφυγμῶν πραγματεία εἰς τέτταρα μέρη νενέμηται· πρῶτον μὲν τὸ περὶ τῆς διαφορᾶς αὐτῶν, δεύτερον δὲ τὸ περὶ τῆς διαγνώσεως, καὶ τρίτον τὸ περὶ τῶν ἐν τοῖς σφυγμοῖς αἰτίων, καὶ τέταρτον περὶ τῆς διὰ τῶν σφυγμῶν προγνώσεως. ἐκ τούτου τοῦ γένους ἐστὶ καὶ τὸ τοῖς εἰσαγομένοις περὶ τῶν σφυγμῶν γεγραμμένον. ἐννοῶ δὲ καὶ ἄλλο τι ποιῆσαι βιβλίον ἐν οἷον ἐπιτομὴν ἀπάντων, δπερ ἥτοι τέχνην περὶ σφυγμῶν, ἥ σύνοψιν ἐπιγράψω. χρήσιμον δὲ εἰς τὴν τοιαύτην θεωρίαν ἐστὶ, καὶ δι' ὧν ἐξηγοῦμαί τε ἄμα καὶ

κρίνω τὸ περὶ σφυγμῶν Ἀρχιγένους βιβλίον. εἰς δὲ τὰς προγνώσεις χρησιμωτάτη μάλιστά ἐστιν ἡ περὶ κρίσεων πραγματεία· προηγεῖται δ' αὐτῆς ἡ περὶ τῶν κρισίμων. ἀλλὰ καὶ ἡ περὶ δυσπνοίας πρὸς διάγνωσίν τε τῆς παρούσης διαθέσεως καὶ πρόγνωσιν τῶν ἐσομένων ἀγαθῶν ἥ κακῶν περὶ τὸν κάμνοντα χρήσιμος ὑπάρχει. ταῦτά τε οὖν ἄπαντα, καὶ σὺν αὐτοῖς ἔνια μονόβιβλά ἐστι γινώσκεσθαι χρήσιμα, καθάπερ τὸ περὶ τῶν προκαταρκτικῶν αἰτίων, καὶ τὸ περὶ τῆς ἱατρικῆς ἐμπειρίας, καὶ τὸ περὶ τῆς λεπτυνούσης διαίτης, ἔτι τε τὸ περὶ τῆς φλεβοτομίας πρὸς Ἐρασίστρατον, καὶ τὸ περὶ τῶν παρὰ φύσιν ὅγκων. ὡσαύτως δὲ καὶ τὸ περὶ πλήθους, ἔτερά τέ τινα τοιαῦτα. πάντων δὲ ἀναγκαιότερα πρὸς τὴν θεραπευτικὴν μέθοδόν ἐστιν τὸ τε περὶ τῆς τῶν νοσημάτων διαφορᾶς, καὶ τὸ περὶ τῆς τῶν συμπτωμάτων, καὶ τρίτον ἐπ' αὐτοῖς, ἐν ᾧ τὰς αἰτίας τῶν νόσων διέξιμεν, ἐφ' οἵς ἄλλα τρία, ἐν οἵς τὰς ἐπὶ τοῖς συμπτώμασιν αἰτίας ἐξηγούμεθα, τὰ τε περὶ τῆς τῶν ἀπλῶν φαρμάκων δυνάμεώς ἐστιν, ὃν ἔμπροσθεν ἐμνημόνευσα, καὶ τὰ περὶ συνθέσεως φαρμάκων, οἵς τὰ τῆς θεραπευτικῆς ἔπειται μεθόδου γεγραμμένης ἡμῖν ἰδίᾳ, καὶ τῆς τῶν ὑγιεινῶν πραγματείας. ὅτι δὲ καὶ πρὸ ἀπάντων τούτων ἐγγεγυμνάσθαι χρὴ τῇ περὶ τῆς ἀποδείξεως πραγματείᾳ τὸν μέλλοντα λογικῶς μεταχειρίζεσθαι τὴν τέχνην, ἐν τῷ περὶ τῆς ἀρίστης αἱρέσεως ἐπιδέδεικται γράμματι. περὶ δὲ τῶν ἄλλων συγγραμμάτων τε καὶ ὑπομνημάτων ὃν ἐγράψαμεν, οὐκ ἀναγκαῖόν ἐστι διεξέρχεσθαι νῦν, ὑπὲρ ἀπάντων γε μέλλοντας ἐρεῖν ἐτέρωθι, καθ' ἐν ἵσως ἥ δύο βιβλία τὴν ἐπιγραφὴν ἔξοντα, Γαληνοῦ περὶ τῶν ἰδίων βιβλίων.