

The «βιόδωρος υγείη» (life giving health) in hippocratic oath II as an enviromental ισονομία (isonomy)

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The last phrase in the text of the hippocratic oath II¹ refers to the principal obligation of the doctor to offer to every person the desirable life-giving health (πορσύνων πάντεσσι φίλην βιόδωρον υγείην). Nevertheless health, as an hippocratic conception and generally as a notion of the ancient physicians, philosophers and writers, derives from the balance of the environmental powers: this is the famous conception of the «isonomia» - elements. The replacement of the «isonomy» (=equal rights) with the «monarchy» of one or more environmental elements causes diseases, as clearly described in the hippocratic text «Airs, Waters, Places»,² an essential document of **medicine** and **oecistics** of the Antiquity.

Consequently, allow me, ladies and gentlemen, to use the three fundamental conceptions, that is **health** and its connection with the **isonomy** and the **monarchy**, to apply the axis of my thoughts in this brief paper of an architect - archaeologist, who has now the honor to speak to chief Asclepiades in this brilliant international congress for allergiology. Nevertheless, these conceptions consisting the body of the hippocratic philosophy have been the design frame from the well-known 5th b.C. century to the middle of the 19th a.D. century in the greek tradition of **oecistics**. This philosophy acts as preventive medicine not only for the person itself, but also for the settlement or the whole city, that is all citizens, as at least ancient Greeks defined the city. Moreover, as the text of the Oath II exactly refers: the desirable life-giving health ought to be given to **everyone**.

However, how such a good can be achieved? If we go back to the ancient greek sources, we easily point out principles and specifications for **the house** and **the settlement** - the part and the whole consisting the two scales of habitation, that is the architecture and the town-planning. These are deductions of a scientific field, which, in the period of Hippocrates, are given the name of «meteorology» or «astronomy».³ The application field of this science is the health of the citizens actually depending upon the meteorological phenomena. The physician had to know very well all these phenomena, in order to be able to achieve his work properly. Thus, these ancient specifications of architecture and town-planning are not formulated by morphological or aesthetic categories, as in our era, but by conceptions and physiological parameters such as «health», «welfare», «pleasant» and «useful». In only one paragraph of the Aristotle's work called «Politika»⁴ concerning the city, the words *health* and *healthful* are mentioned four times, while the word *safety* is reported only twice. As far as the house is concerned, also dominate conceptions such as *health*, *welfare*, *pleasant* and *useful*. Aristotle, however, and Hippodamus from Miletos, the great urban designer of

Antiquity, who planned the ancient city of Rhodes, where we are now gathered, used medical conclusions to formulate town-planning specifications and applied them in the urban space, always choosing the proper site or place. They also organized the space of the city as a life-giving shell offering health, welfare, pleasure and utility to its inhabitants.

The conception of health is first formulated in documents, as we know so far, by Alcmaeon⁵ in the last thirty years of the 6th century b. C. Health is the «balance» (=isonomy) of the powers in nature: wet and dry, cold and hot, bitter and sweet and other opposed powers. An interesting point is the provision that the interactions of these powers must be equivalent and balanced, so that the one cannot prevail over the other (=monarchy) to cause a disease. Consequently, health is based upon the *symmetrical* development of qualities, according to Alcmaeon, who, in this way, is completely differentiate himself from Pythagoras. The latter believed that «harmony» is the result of «monarchy», that is the absolute victory of the number over the matter. A similar formulation to Alcmaeon was also followed by Hippocrates, whose fundamental instruction was the correct analogy, that means the balance of elements or juices which causes the health of body (=eucrasia, εὐκράσια). On the other hand, disease is exactly the dyscrasia (=δυσκράσια) that is the discord of elements. These apparently theoretical formulations are applied in the field of oecistics, town-planning and architecture, as the architects and settlers take them seriously into consideration, as far as urban design is concerned. Contemporary of Hippocrates is the mentioned Hippodamus from Miletos, from whose name derives the well-known town-planning system, the hippodamian gridiron. However, Hippodamus was known in the antiquity as a «meteorologist», that is a representative of the new science of «meteorology» or «astronomy», which actually examines the physiological parameters of the city and habitation, that is the **soil**, the **sun**, the **air** and the **water**. Nevertheless, for all this first speak the physicians, as proved in one of the most important hippocratic works, the so-called «Airs, Waters, Places», already mentioned before.

Thus, I shall refer to all these as well the environmental frame, where man lives in. The correct selection of the latter can provide the «life-giving health», so man has to take into account the conclusions of the medical experience. The hippocratic text is at this point very clear, as shown in the following quotation: «Therefore, on arrival at a town with which he is unfamiliar, a physician should examine its position with respect to the **winds** and to the risings of the **sun**. For a northern, a southern, an eastern, and a western aspect has each its own individual property. He must consider with the greatest care both these things and how the natives are off for **water**, whether they use marshy, soft waters, or such as are hard and come from rocky heights, or brackish and harsh. The **soil** too, whether bare and dry or wooded and watered, hollow and hot or high and cold.»⁷

The archaeological excavations in the cities and houses of the classical period prove how carefully the above referred data are estimated, especially with respect to the choice of the area for the location of the settlement was. I roughly mention the archaeological data of our investigation in the city of Maroneia⁸ in Thrace. Homer reports that Ulysses used the wine of this city to make drunk the giant Polyphemos. The city of Maroneia is located on an inclined ground (not on a prevented «pit» according to the hippocratic description), directed southern-west, southwards and

southern-east, protected from the northern winds by the mountain Ismaros. The houses, as our example shows, are orientated southern-west and are enclosed by a yard or yards. The rooms are escalated with the oikos and the andronites (=men's room), (the two most important spaces of the ancient house), which are located at the higher part of the site. It should be noted at this point that the enclosure and the yard appear almost at the same period, at the time physicians and architects-town planners develop their thoughts about the meteorological speculation. Therefore, one notes that with these building-plans and measures, good standards are created for airing and sunlighting intending to the «meteorological isonomy» of the sunbeams during winter and summer, as mentioned by Xenophon in his «Memoirs».⁹

The experience of the Antiquity still survives in the Byzantine Period, operating as a town-planning Regulation and becoming a powerful Law, as shown in the chief legal document, the so-called «Exavivlos»¹⁰ written by Armenopoulos (14th century). This work is based on earlier laws and provisions. I indicate at this point only the basic thoughts of the Prooemion (=Introduction) of Exavivlos, considered so far as the corner-stone of the correct town-planning organization of cities, towns and villages: «four are the elements, fire, air, water, soil» but their interrelations must be arranged by a very well organized order. This structure and balance in the interaction of the four fundamental elements correspond to the ancient conception of «isonomy», consisting of the condition for a healthy environment, either in a city or in a small town or in a village. It is very interesting to mention at this point that these physiological specifications are defined in a different way as concise matters of fire-security, wind-protection, humidity or bothering functions, such as e.g. the location of baths, tanneries, bakeries, whether they are located in a city, village or small town and according to the action of the winds in winter and summer. This was an important experience transmitted as mentioned from generation to generation during the whole Byzantine and Post-byzantine Period until the 19th a.D century. They formed practical guidelines not only for the architects but also for the whole population as proved by another category of documents, the so-called «Ekfraseis»¹¹ (=descriptions). They are descriptions of cities and villages written by scholars, such as Kameniates for Thessaloniki, John Phocas (1185) for Tripolis in Lebanon, Bessarion and Marc Eugenicos for Trepizond or for the village Petrina in Laconia and others. Among others, in these descriptions, outstanding position have the physiological parameters of the cities, that is the water, their soil, the winds and their orientation and especially the symmetrical and balanced connection of the elements interaction. This is the most excellent thing in cities together with the mixing of winds (= «ἡ τῶν αἰθρῶν κράσις») and the mild temperature. To achieve this balance the proper regions are chosen with inclined soil and proper orientation according to the area, as shown by examples of cities in the Byzantine and Post-byzantine Period following the ancient greek planning. The study for example of the houses in ancient Priene¹² in Asia Minor (350 b. C.) demonstrates that the organization of the houses takes into consideration the motion of the winds and the soil inclination. In this way, the sunbeams reach the threshold of the roofed space in front of the house, called «prostas», with an inflection of 84,8 degrees in the 22nd of June - the summer equinox- providing for a shady, cool life inside the house. On the other hand in the 22nd of December during the winter equinox, the inflection is 31,5 degrees. Therefore, the sunbeams enter the house deep enough, throwing light to most of its spaces, offering to the inmates the mild warmth of the winter sunlight.

The same organization and arrangement of solar conditions also characterize the Byzantine - Post-byzantine settlement of Galatista¹³ in Chalcidice, as shown in a parallel study of this settlement. The above referred arguments clearly demonstrate the inseparable continuity and practice of the hippocratic specifications, in the whole era of the Byzantine Empire. The translation of these specifications in many languages such as Latin, German, English, Bulgarian, Romanian, Russian and Arabic made them well-known, during all this period, to many populations in very large geographical areas of Europe, Asia and Africa. A last, relative text in greek dated in 1847 a. D., written by George Gazeš¹⁴ from Delvinaki of Epiros, who, without having direct information from the hippocratic documents, knows these specifications as traditional practical instructions and uses them for the foundation of a new settlement: it has to do again with the inclined soil, the water properties, the sunny fields (that is the correct orientation) and the concern for the direction of the winds (that is the air).

Ladies and gentlemen, I have tried so far, with the above mentioned analysis, to outline, as briefly as possible, the effects of the hippocratic and other relative medical documents until our era, the era of the industrial revolution and the arrogant technology in the town-planning and architecture. The above referred specifications are respectable and worthy, surviving in the course of centuries, creating balanced connections in the urban environment, where man actually experiences what Aristotle has promised as the mission of the city: «to make the citizen safe and happy».

To what extent nowadays are these specifications respected in the modern cities, small or large? To what extent the contemporary huge urban entities and in several cases uncontrolled and unmanageable masses are able to relax their inhabitants at work, entertainment and habitation, as their duty and mission are? It is a common thing to say that our era, so much magnificent as dramatic, has created a modern urban frame the main characteristic of which is the contradiction and antinomy of the aim and the effect, as far as the protection of the physiological and psychological parameters of the human existence are concerned. Traffic jam, air pollution, lack of correct sun-lighting because of the vertical, dense development of massive buildings without any free space among them, are crucial disadvantages for the hygienics of the cities. They have become in large parts pathogenic masses, dangerous for their inhabitants, who, at the first opportunity, go away from them to breathe fresh air, to drink life-giving water from natural fountains, to be in open air and enjoy any authentic and virgin landscape, still free from the «barbarian» invasion of the technology. If Hippocrates was alive today he would find out the tragic alteration that the fundamental elements for man's health, **Airs, Waters, Places** have suffered inside and outside the urban environment. It is precisely in town-planning and architecture that the specifications of Hippocrates are forgotten, ignored or violated during the last two centuries. May be because they were not recorded from the Antiquity in the form of an oath, as this was actually done with the hippocratic oath for the physicians.

I shall close my brief thoughts, ladies and gentlemen, referring again to the same conception of the life - giving health (=βιόδορος υγείη) of Hippocrates, that I mentioned in the beginning, comparing the enormous and gigantic development, which intervened from the hippocratic era until today, in two crucial fields for man's health and welfare: the medicine, on the one hand and the town - planning and architecture on the other. In the medicine, the tremendous progress of means and methods for the protection of man is really positive and promotes man's life - giving

health. Nevertheless, in the building industry and city, the humanistic mission of healthy and happy people appear to be completely different, since problems and risks arise, reported from everywhere, threatening our health.

Among the other various charges caused by the altered physiological parameters inside and outside the cities, where we live, here appear the allergic diseases as the interaction between «air pollutants and aeroallergens», as titles of articles in medical periodicals, such as the *Clinical and Experimental Allergy*, vol. 25, 1995.

Why, then, does Medicine make a positive progress offering life - quality to man, while do Town - planning and Architecture appear unable to serve man's needs? I am not a doctor, so I have not the possibility to speak about medical affairs and their interaction. However, allow me to envy the doctors, who in the function of their office have got a real commitment such as the Hippocratic oath, which defines their attitude and protects them from violating the rules at man's expense. How useful would perhaps be, if town - planners and architects had a similar document as a guide, to respect the physiological and psychological parameters in which man can live «safe and happy».

Thank you!