

HISTORICAL CONCEPTIONS OF A HEALTHY CITY: THE GREEK PARADIGM

Sophia Chatzicocoli and Athena-Christina Syrakoy

Abstract

Today much attention is being given to the concept of a "healthy city". However, the need for incoming paradigms is needed since this concept is still developing both as a term and as a real experience. The study of the historical experiences and examples can enrich the understanding of a healthy city's historical background and can help in learning from the past. Especially the Greek paradigm appears of a particular importance as the idea of the creation of healthy cities seems to be central in the Hellenic (Greek) culture, the first anthropocentric culture developed in Europe, which is perceived to form the base of the so called Western Civilization. The conceptions of a healthy city were supported by the Hellenic Mythology, Philosophy, Art and Science. The principles of the planning and design of healthy cities were expressed through various applications concerning the Greek cities and, especially, through the creation of specific settlements devoted to the restoration of health, such as Asklepieia. Asklepieia were centres of worship of the hero, divine physician and healing god, Asklepios and became the first health care centres in Europe. Asklepieia offered their healing environment and services for many centuries in the then Hellenic territory, from the pre-historic era and the War of Troy through the Classical, Hellenistic and Roman times to the early-Byzantine times until the total prevalence of Christianity. In Asklepieia the restoration of health was understood as a result

of positive interaction of physical, psychological, mental, spiritual, social, environmental, etc, factors.

Keywords:

Healthy cities; Greek Mythology; Greek history; Asklepieia.

Introduction

The contemporary Healthy City conceptions seem to be expressed mainly by the work of several local, national and international organizations. These conceptions are rooted in the international Healthy Cities movement of the end of the 20th century which is considered to first conceived in Canada in 1984 as a result of the "Healthy Toronto 2000: Beyond Health Care" symposium. The movement has since spread across the globe and now is said to involve more than 3,000 municipalities, all of which share a common objective: improving quality of life for and with their citizens (Hancock T. & Duhl L., 1988).

One of the organisations that offer a lot to a contemporary Healthy City conception is the World Health Organization (WHO). WHO

adopted a Healthy City Movement in the mid 1980's due to several factors related initially to the rising proportion of urban population. This proportion seems to be dramatically escalating as by 1900 one person in ten lived in a city; by 1948 the proportion was three in ten and by 2000 over half the world's population lived in cities (WHO, 1996a). Furthermore, the number of people jammed into many of these cities exceeds those of entire countries. The explosive urban growth, outdated and inactivating ambitious planning, seems to be at the root of most problems of city life. It is causing increasingly intolerable pressures on the most conditions for health such as proper food, housing, employment, safe environment, healthcare services, hospital and health facilities function, etc.

Other factors that can influence the contemporary Healthy City conceptions are the common problems of the cities. Contemporary cities share many problems such as too much traffic and noise, pollution, inadequate and insufficient housing, problematic access to healthcare or basic needs (food, water, etc). And the final factors that could justify a Healthy City Movement and form its conceptions are the common potential of the cities, as cities seem to share the same potential to become healthier.

WHO's conception is also related to its conviction that a Healthy City is not just an outcome, but also a process as it supports the following definition: "A Healthy City is one that improves its environments and expands its resources so that people can support each other in achieving their highest potential...a healthy city is conscious of health as an urban issue and is striving to improve it. Any city can

be a healthy city if it is committed to health" (WHO, 1995).

In symphony with WHO there are the efforts of other organizations such as the Pan-American Health Organization, the International Healthy Cities Foundation, the United Nations various agencies, in particular the UN Development Programmes, the UN Centre for Human Settlements, the UN HABITAT programme, the UN URBAN initiatives as well as the work of UNESCO, UNICEF, etc. (Web-sides sources). Furthermore, on 11 January 2004, the European Commission adopted a Communication plan titled: "Towards a Thematic Strategy on the Urban Environment" which introduces the Commission's conception and ideas concerning a strategic approach to understanding and upgrading the European urban environment (European Commission, EUROPA - COM, 2004).

Contemporary Conceptions of Healthy City Characteristics

The contemporary conceptions of the characteristics and qualities of a Healthy City have been expressed and described by several writers and organisations, who agree that there are certain qualities and characteristics that can make a city healthier, although it is widely recognized that no two cities have identical needs and priorities.

According to WHO (1996b) a Healthy City:

- Has a clean and safe physical environment.
- Meets the basic needs of all its inhabitants.
- Has a strong, mutually supportive, integrated, non-exploitative community.
- Involves the community in Local Government.

- Offers its inhabitants access to a wide variety of experiences, interaction and communication.
- Promotes and celebrates its historical and cultural heritage.
- Provides easily accessible Health Services.
- Has a diverse, innovative economy.
- Rests on a sustainable ecosystem.

Additionally, the following list contains eleven characteristics of a Healthy Community/City as they are conceived and outlined in Trevor Hancock's and Leonard Duhl's (1988) work. According to this work a Healthy Community/City should have:

- A clean, safe physical environment of high quality (including housing quality)
- An ecosystem that is stable now and sustainable in the long term.
- A strong mutually supportive and non-exploitative community.
- A high degree of participation and control by the public over the decisions affecting their lives, health and well-being.
- The meeting of basic needs for food, water, shelter, income, safety and work, for all the people in the city.
- Access to a wide variety of experiences and resources, with the chance for a wide variety of contact, interaction, and communication.
- A diverse, vital and innovative city economy.
- The encouragement of connectedness with the past, and the cultural and biological heritage of city dwellers and with other groups and individuals.
- A forum that is compatible with and enhances the preceding characteristics.
- An optimal level of appropriate public health and sick care services accessible to all.
- High health status (high levels of positive

health and low levels of disease).

In line with the above are the following six characteristics of a Healthy City as they are identified by Len J Duhl (2000) who states that:

- Healthy cities/communities have a sense of history to which their citizens relate and upon which their commonly held values are grounded.
- Healthy cities are multidimensional... and have a complex and interactive economy.
- Healthy cities strive for decentralization of power and citizen participation in making decisions about policy.
- Healthy cities are represented by leadership that focuses on the whole of a city and can visualize both parts and "wholes" simultaneously.
- Healthy cities can adapt to change, cope with breakdown, repair themselves, and learn both from their own experience and that of other cities. Healthy cities are those that support and maintain their infrastructures.

The above concepts on Healthy Cities qualities and characteristics seem to be part of a wider effort aiming at making cities healthier in which local, national and international organizations as well as individuals, communities and cities collaborate and contribute offering information and examples (Chatzicocoli S., Syrakos T., (2006). As the problem seems to be increasingly demanding and the various efforts are still searching for new ideas and practices, further examples and experiences might be of great help. Historical examples can offer a valuable source of information and experiences contributing significantly to the understanding of the evolution of the Healthy City conception.

The Hellenic World Philosophical Conception

The basic ideas and conceptions of the Hellenic (Greek) Philosophy, Art and Science are considered to have their origin in the Hellenic Mythology as, according to several writers (P. Decharme, 1878, p. 44) it is "...mythological at form but philosophical at substance." Furthermore, other writers (Aldo Rossi, 1982, p.134) seem to believe generally that the Hellenic city "...embodies the passage from nature to culture and this passage... is conveyed to us by myth." as "...the reality of Greek art and Greek cities presupposes a mythology and a mythological relation with nature".

These abstract philosophical ideas leading the passage from nature to culture were codified

and expressed through attractive mythological stories which through the time were carrying their meanings to the future generations.

Thus, the deep roots of the Hellenic world philosophical conceptions concerning a healthy and consequently healing environment might be searched into the mythological stories connected with the notion of "health". One of these stories is the Myth of Asklepios, in which the origin of the philosophical ideas and conceptions of health were considered to be embedded.

However, the worship of Asklepios (Asklepius* or Aesclepius*, etc, as his name appeared later in the Latin language), was first spread as that of a hero of the prehistoric era, who lived and served as a physician, in the region of Thessalia



a.

b.

Figures 1a and 1b: Images of Asklepios. Picture 1a) Marble statue of Asklepios (Asklepieion of Epidaurus, Greece, Classical era). Picture 1b: Marble bas-relief showing Hygieia and her father Asklepios. Their symbols: the snake and medical instruments are also depicted (Asklepieion of Beroia, Macedonia, Greece, Hellenistic era). (Photos: S. Chatzicocoli).

[Thessaly]* on the central Hellenic mainland. His prehistoric existence is connected with the Argonauts (Homeros [Homer]*, 8th century BC, or earlier, a, Hesiodos [Hesiod]*, 8th century BC, a, Apollonios of Rhodes, 3rd century BC, etc), Hermes Trismegistos (Neoplatonic School of Thinking, 3rd century AC) and the Trojan War, where Asklepios' two, considered as biological, sons, Machaon and Podaleirios, served as physicians and leaders of the forces from Trikke, Ithomi and Oihalia, cities of Thessalia [Thessaly]* (Homeros [Homer]*, 8th century BC, or earlier, b, B 731).

The disagreement among the historians and archaeologists, on the chronology of the existence of Asklepios, is connected with the long lasting debate concerning the dating of the above major events of the prehistoric Hellenic world.

Asklepios, having been a hero seems to have become a God in the Hellenic Mythology between the era of Homeros, and the 7th century BC, where Asklepieia were widely recognized and built. During those centuries, several myths were formed to support the divine presence of Asklepios in the Hellenic Mythology.

With those myths Asklepios was understood as the basic God of Health, who represented the Healing Art in general. The Healing Environment was seen as an important component of the Healing Art and the Healing Man-made Environment was understood also as a component of the Healing Environment (Chatzicocoli S., Syrakou A.C., Syrakos T., 1997). The conception of Asklepios was also identified through the presence of his mythical children that had been given to him who represented

his divine properties. Among Asklepios' mythical children, the most prominent, was Hygeia (Health), who became the goddess of health and provides the etymological origin for the word "hygiene". Panakeia (Cure for all diseases) was considered as another Asklepios' daughter from which derives the concept of a "panacea". Among Asklepios' mythical children there were also Aigle (Luminosity), Iaso (Healing), Akeso and Akesis (Remedy/Cure), Eumarion (Well-being), Alexinor (Defense against diseases), Telesphoros (Recovery), etc. (Picture 1a and 1b).

In order to further identify the philosophical ideas and conceptions of the Hellenic world concerning a healthy and healing environment one has to try to decode them following the myth of Asklepios. According to the most prominent of Asklepios' myth (Hesiodos [Hesiod]*, 8th century BC a,b, Apollodoros, 2nd century BC, Homeric and Orphic Hymns, Inscriptions, etc), Asklepios' father was God Apollon [Apollo]*, the third greatest deity in the Hellenic Dodekatheon, son of Zeus, the father of Gods. Asklepios' mother was the human princess Koronis, daughter of king Phlegias (meaning The Fiery), who reigned over the Hellenic region of Thessalia in the prehistoric era. Goddess Artemis, Apollon's twin sister, also played a central role in Asklepios' myth. According to Chatzicocoli S. (1997, 1999 and Chatzicocoli S., Syrakoy A.C., 2004a), the conception that is represented in this mythological thesis might be that "... philosophically, the healing environment, had its origin in the divine healing powers of nature and the fire of human effort, and it was understood to be a product of harmonised collaboration between nature and man."

Continuing Asklepios' Myth, we have to notice that Asklepios' mother, Koronis deceived God Apollon, though she was expecting a child by him, by taking the human Ischis (meaning Strength) as her husband. The punishment was inevitable. Apollon's twin sister, Artemis, Goddess of morality, brought about the death of Koronis. Thus, "... the golden rule No 1, in the healing environment philosophy, is formed which says: Any time humanity forgets the divine nature of the healing art and begins seeking for independent and arrogant human strength (Ischis), it will be punished" (Chatzicocoli S. 1997, 1999).

Back to the Myth, we have to mention that Apollon rescued his son, Asklepios, from Koronis dead body and carried him to Mount Pelion where he delivered him to the wise Centauros Chiron (meaning Handman), Zeus' brother, surgeon and medical tutor. Asklepios became the best of Chiron's students and God of healing. For the healing environment philosophy, that means another statement saying "...the healing of the health care environment can be restored, if it is not too late for that, and planning and design for a healing environment should be reinforced by studies" (Chatzicocoli S. 1997, 1999).

Back to the Myth, we see finally that the resurrection of the dead person by Asklepios' miraculous medicine caused the punishment and death of Asklepios by Zeus' lightning. That was because the natural balance was upset. Hence "...the golden rule No 2, in the healing environment philosophy, is formed which says: Any time humanity forgets the human nature of the healing art, it will also be punished" (Chatzicocoli S. 1997, 1999).

If we wanted to go deeper trying to recognise the conceptions of the philosophical characteristics and requirements of the healthy and healing environment, then we should initially search the philosophical properties and characteristics embedded in the divine healing powers of nature. These divine healing powers of nature were expressed by Asklepios' divine origin, represented in the Myth by his ancestors, God Apollon and Goddess Artemis (Chatzicocoli S., Syrakou A.C., Syrakos T., 2001a).

God Apollon and his twin sister Goddess Artemis philosophically represented the general and abstract idea of the divine healing powers of nature (Homeros [Homer]*, 8th century BC, or earlier, b, Homeric Hymns, 8th century BC, or earlier, Orpheus or Orphic Hymns, 8th century BC, or earlier, Apollodoros, 2nd century BC, Decharme P., 1878, Chatzicocoli S., Syrakou A.C., 2004b) (Picture 2a and 2b). For example, Apollon was the physician of the gods. That means "...as philosophical characteristic of the notion of Healing Environment: Respect to the natural healing powers" (Chatzicocoli S., Syrakou A.C., Syrakos T., 1997).

Apollon was the God of sun. He represented the life-giving sunlight and warmth. Decoding this Apollon property we could recognize the conception that the healthy and healing environment characteristics should include: "Natural and spiritual light, meaning good environmental conditions as well as concern about spiritual welfare" (Chatzicocoli S., Syrakou A.C., Syrakos T., 2001b).

He was also the God of natural beauty of the countryside and its divine strengths. That also could lead to a characteristic for the healing environment: "Preservation of the natural

beauty" (Chatzicocoli S., Syrakoy A.C., 2004c). Apollon was considered to be the leader of the Nymphs, beautiful virgins, spirits of wild forests, rivers, lakes and mountains, who represented the natural harmony and were often nurses of gods and heroes. He was also the leader of the three Charities (Graces), who represented the delightfulness of art. That could be interpreted as healthy environment characteristic proposals: "The healing environment should also show respect to the spirits of wild nature and natural harmony (running waters, plants, etc) and moreover, should be supported by art works, art performances and art facilities" (Chatzicocoli S., 2002).

Statues of Apollon show him as a handsome young man with eternal youth, health and graceful strength. He usually holds a snake, a

symbol of medicine, or lyre, a symbol of music, peace and harmony, or even a bow and arrows, symbols of punishment to the unfaithful.

Interpreting Apollon's symbols, we can recognize as healthy environment characteristics and preposition that: "...The healing environment should accommodate the medical (health care) activities and should stress, symbolically, the medical achievements in order to strengthen the people's belief in the final, positive results. The healing environment should also be reinforced by music, creating a peaceful atmosphere, and a sense of harmony. Finally, the punishment to the unfaithful of the above rules should be symbolically reminded to maintain the healing environment conditions" (Chatzicocoli S., Syrakoy A.C., 2004b).



a.

b.

Figures 2a and 2b: 2a) Image of God Apollon (marble statue, Olympia, GR, 5th Century BC) and 2b) Goddess Artemis (statue, Versailles, FR, copy, Hellenistic era). (Photos: S Chatzicocoli and AC Syrakoy).

Goddess Artemis, Apollon's twin sister, who brought about the death of Asklepios' mother for her unfaithfulness to Apollon, may be another source of origin and healthy environment conceptions research. Goddess Artemis, according to the Hellenic Mythology (Homeros [Homer]*, 8th century BC, or earlier, b, Homeric Hymns, 8th century BC, or earlier, Orpheus or Orphic Hymns, 8th century BC, or earlier, Apollodoros, 2nd century BC, Decharme P., 1878), was always described as a virgin huntress, a female athletic figure. That may mean that "...for creating a healing environment the preservation of the natural virginity and the wild nature proximity is needed as well as facilities for mild athletics (of the female origin of Goddess Artemis)", (Chatzicocoli S., Syrakoy A.C., Syrakos T., 1997). Artemis also appeared to be the Goddess of Celini (the moon), representing purity and morality. Hence, "...the healing environment should also be supported by purity, such as pure fresh air, pure fresh water, pure building material, etc. and, furthermore, the healing environment should support moral life activities" (Chatzicocoli S., 2002).

Symbols of Artemis appeared to be the wild animals (symbols of pure wild nature) and bow and arrows (symbol of punishment). Thus, according to Artemis' symbols, "...animals and wild nature as well as the punishment to the unfaithful and arrogant catastrophers of healing conditions, should be symbolically included in the healing environment" (Chatzicocoli S., 2002).

The Hellenic World Applied Examples

The conceptions of a healthy city were expressed also by various applications on the Greek cities and some settings particularly

devoted to health, such as Asklepieia. Asklepieia were centres of worship of the hero, divine physician and healing god, Asklepios and, in fact, they were the first health care settings and Medical Schools in Europe. The first Asklepieion was considered to be founded by Asklepios himself in Thessalia, during the era of Trojan War. Asklepieia, starting from central Greece, were spread throughout the Mediterranean Basin and beyond. As one of the out of the Mediterranean Basin examples we can mention here the Asklepieion of Bahrain, which used to be the ancient Greek island of Tylos, during the Hellenistic era (Vine P.). Asklepieia offered therapeutic treatment for many centuries in the then Hellenic territory, from the War of Troy though out the Classical, Hellenistic and Roman times to the early-Byzantine times and the total prevalence of Christianity (approximately the 6th century AD).

A kind of holistic healthcare was offered in Asklepieia through the conception of the illnesses as a result of interaction of physical, psychological, mental, spiritual, social, emotional, environmental, etc, factors (Chatzicocoli S., Syrakoy A.C., 2000).

Asklepieia were of various types. One of these types was the independent and self-contained "city like type", as this type of Asklepieia were situated far from an urban setting and included all the amenities of a city. The most famous Asklepieia of the ancient Hellenic world were paradigms of this type. One of these Asklepieia, probably the most famous in the Antiquity, was the Asklepieion of Epidauros, which had been the archetype and the origin of many other Asklepieia as Pausanias (2nd century AD, B.26.8.) wrote: "...the most famous sanctuaries of Asklepios had their origin from Epidauros."

This Asklepieion, being out of the main roads of the Roman Empire troops, had also the chance to survive the extended alterations done in certain Asklepieia by the Romans, during the Roman occupation, to adapt them to cover their different and mostly practical needs. Therefore, Asklepieion of Epidauros, including all the amenities of a city, without major alteration through the time, can be considered as a relatively pure paradigm of the physical manifestation of the philosophy concerning the healthy and healing environment and a healthy city conception in Ancient Greece. The concept of the healthy environment was understood, as we have seen, to be originated in the divine healing powers of nature and the fire of human effort and it was identified as a product of harmonised collaboration between nature and man.

The required human contribution to the creation of a healthy environment seemed to be consisted of the respect, preservation and best use of the natural healing power and resources (sun, air, water, natural beauty and virginity, etc.), and a well-designed and built environment for the appropriate accommodation for healthy procedures deriving from the philosophical requirements of the healthy environment concept (Chatzicocoli S., 1994).

The layout of the Asklepieion of Epidauros manifested, physically and symbolically, the philosophical ideas concerning the healthy and healing environment (Figure 3). From the entrance, located in the northern side, people were led through the whole Asklepieion towards the South. Visitors, patients, relatives or friends, on their way southwards, met the temple of

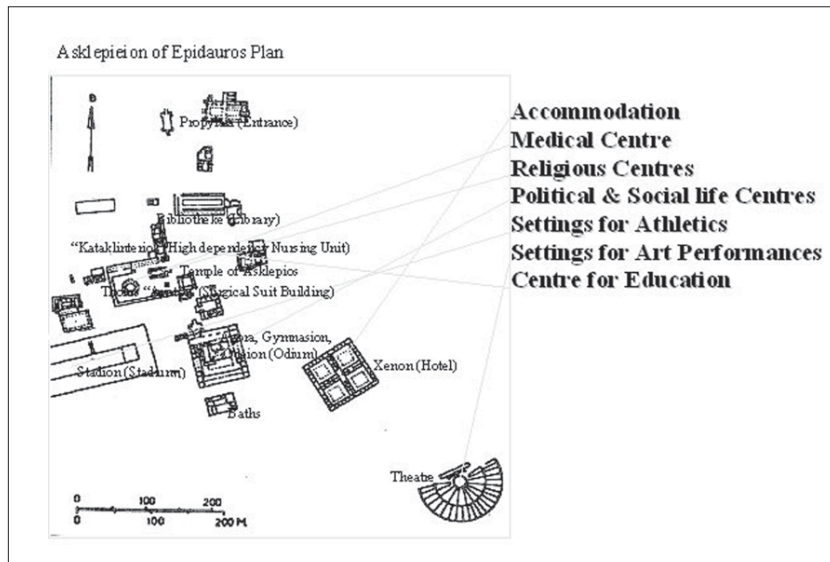


Figure 3: Plan of the Asklepieion of Epidauros, showing the included amenities, for supporting a holistic healthcare approach and a healthy setting conception. [Source: (Chatzicocoli S. 1999).

Asklepios in the centre, having at its rear the medical intervention units, and by its side the Bibliotheke (library). Continuing southwards people passed by the political, social life and athletic centres reaching the accommodation centre and finally the Theatre. It is interesting to notice that the Theatre, devoted to mental and spiritual therapy, seemed to act, through the layout, as the final and outmost destination. Furthermore, the Theatre was dedicated to God Apollon, who represented the sun and the Theatre's location, at the southern side of Asklepieion, probably stressed symbolically the most powerful position of the sun and Apollon's properties significant contribution to the healing process (Chatzicocoli S. 1999). According to the plan of the Asklepieion of Epidauros the facilities which were included were generally the following (Chatzicocoli S., Syrakoy A.C., Syrakos S., 2005):

A) Accommodation. In this category of facilities can be included the Priests' (staff) accommodation building, that was placed close to the Temple of Asklepios. There was also a Xenon (hotel) for the lodging of patients, their relatives and friends, strengthening the social support of the patients. That was a square building of 76.30 m long containing approximately 160 rooms arranged around four square courtyards surrounded by stoas with Doric columns.

B) Medical centre. That was placed by the side of the central area of the sanctuary. The medical intervention and clinical centre consisted of separate buildings, but in close proximity. Thymele or Tholos, a circular building and the most elaborate building within the sanctuary, was probably the surgical suit building. North

of Tholos, was a long narrow building, named, according to inscriptions, Cataklinterio or Enkoimeterion or Abato or Adyto (meaning Dormitory, Inaccessible, etc). All of the south side of the Avato, facing Tholos and Asklepios' temple, was opened into a stoa with a double row of Ionic columns. This building was the place in which the patients had to spend the night in order to be cured through the apparition of the god in a dream. Probably this was the pre- and post-operation ward and high dependency nursing unit. The dream most probably was the medical intervention experience in a state of half-hypnosis or anaesthesia, as recorded in the numerous dreams and cures description of the inscribed columns, which were found in the sanctuary (Strabon, 1st century BC, H, 15, Pausanias, 2nd century AD, B.27.3, Kabbadias P, 1900, Aravantinos A., 1906). These numerous cure descriptions were offered by the healed patients to the sanctuary of Asklepios.

C) Religious centres. The altar and the temple of Asklepios formed the main religious centre. The temple was centrally located in the sanctuary at the entrance of the medical centre unit. The Temple contained the gold and ivory statue of the god Asklepios in a seated position. The temple looking eastwards and having the rest of the medical centre complex at its back seems to protect the rest of medical centre unit function by monopolising the visitors' interest and discouraging their curiosity concerning what was happening at the back. Additionally, further temples and altars of deities with positive qualities, related to Asklepios and the idea of healthy life style and activities were spread throughout the sanctuary.

D) Political & social life centre. Although the

whole sanctuary layout supported a policy for enhancing political and social life opportunities the building of Gymnasion [Gymnasium]* is considered to be the main political and social life centre. This was a very large building 75,57 X 69,53 m. The interior of the Gymnasion was organised into several apartments, large halls, stoas, baths, out-door areas, etc. It was believed to have been dedicated to the exercise of the whole person, body and the mind, with physical exercise and rhetoric skills training lessons offered to the athletes and patients under the supervision of special trainers.

E) Settings for athletics. As athletics were considered to be an important factor for maintaining health, settings for athletics were to be of outmost importance. The Palaistra and Gymnasion combined with Baths and the Stadion [Stadium]* constituted a complete athletic unit. The Stadion was built in the 4th century BC maybe upon an earlier structure. It was 181,08 m long, that is approximately one Hellenic stadion as a metric unit (a Roman Stadium was 177,55 m long), in the shape of a regular parallelogram. Along both long sides there were raised benches of stone. There was a system for draining the rain water and cleaning the running track and on the north side where was an underground passage leading to ancillary buildings. The Epidaurian Games took place every four years in parallel with the Olympic and other athletic games.

F) Settings for art performances. The arts, combined with sentiments of pleasure and eudemonia that they can stimulate, were seen as another important means of balancing the disorder of illness and restoring harmony and health. Music, poetry, comedy and drama performances were considered to be essential

means of patient treatment. The Theatre was the main building for this purpose. It is believed to have been the best designed and constructed theatre in antiquity considering its harmonious proportions, elegance and its extraordinary acoustics with a seating capacity of 14300 spectators, which is still in use today. One of the principal sources of information about the musical contests that took place in this theatre is the dialogue in Platon's "Ion" (5th Century BC, a). In that dialogue we can learn about the customs and appearance of the rhapsodists and the performances.

G) Centre for education. Continuing education seemed to be an additional important means of strengthening a holistic orientation of the healthcare offered by the Asklepieion. Various activities in the Gymnasion, Stadion and the Theatre may be considered as educational and in addition a bibliotheke (library) seemed to help in that direction.

H) The natural environment. A sacred forest dedicated to the God was always attached to Asklepieia. A high quality natural environment was recognized to play an important role to the healing process. Therefore, it was represented and protected by various Gods, Goddesses and by the Nymphs. Nymphs were female spirits of the natural world, minor goddesses of the trees, forests, rivers, springs, mountains, seas, etc. They were responsible for the nature's wild beauty protection and they were often nurses of gods and heroes. Buildings also were always connected with the spirit of their natural environment. In addition water treatment facilities such as baths, wells and fountains were found all over the side of the Asklepieion as the mineral, hot and cold water were seen as important means of healing by cleaning and

strengthening the body and purifying the soul.

The above conceptions of the healthy and healing environments, encoded and represented in their simple and original form in the Hellenic Mythology and applied in Asklepieia, are extensively analyzed in the work of many philosophers of the Hellenic world. Among them we can mention here Hippocrates. Hippocrates (460-370 BC), the famous Greek physician and philosopher, was the most celebrated of the famous teachers in the Asklepieion and Medical School of the island of Kos and he has been internationally known as "The father of Medicine". Hippocrates was considered to be an Asklepiades, Asklepios's descendant of 18 generations by, Asklepios' son Podaleirios (Soranos of Ephessos, 2nd century AD). An important source of information can be considered the Hippocrates Collection and especially his treatise: "About Air, Water, Topos (Places)", which is dealing with the ways the physical (air, water, climate, orientation, ground fertility, cosmic powers, etc) as well as the political social and the general manmade environments of a "topos" can influence and form their inhabitants' characteristics, habits, behaviour and health.

Other sources of information can be Platon's philosophical work, mainly his "Politeia" (Platon, 5th century BC, b) and Aristoteles [Aristotle]* philosophical thesis, expressed mainly in his "Politika" (Aristoteles, 4th century BC). Aristoteles was also an Asklepiades, by both his parents, another descendant by Asklepios' son Machaon. This great philosopher was also known as the teacher of Megas Alexandros [Alexander the Great]*, the famous young Macedonian king and leader of the Pan-

Hellenes (Pan-Greeks)*, who extended the Hellenic territory and civilization to India.

Conclusion

It is valuable to look for examples and developed studies not only among contemporary cultures and experiences but also among various historical periods in order to approach a holistic conception of a "healthy city", as this conception is still developing as a term, as well as a real experience, and there is an urgent need for incoming paradigms.

One of the sources for the provision of historical examples is the Hellenic World which can offer the Mythological and Philosophical base, as well as a plethora of applied examples that can support a "healthy city" conception.

The most characteristic of the applied examples can be the example of the "city like type" Asklepieia. Asklepieia, as settlements devoted to health, had been acting as prototypes for the development of healthy cities in the Hellenic World. Greek cities included just the same type of amenities, although of a different scale and proportions, based on the same philosophical ideas with the same physical and symbolic manifestations, following the Aristoteles belief that "the first and necessary condition of a city is health" (Aristoteles, 4th century BC, book 7, 10). The main amenities that were included were: accommodation, the medical centre and various religious, political and social life centres, settings for athletics and art performances and centres for education, enriched by the required supporting services. All of these amenities were planned, designed and built in a carefully selected location and environment to fulfil the

qualitative and quantitative requirements of a healthy place. These requirements included beneficial site characteristics, orientation and natural resources, the loose layout and the perfect avoidance of deep planning in a natural environment which was in symphony with its healthy philosophical and mythological conception.

However, despite the fact that the contemporary conceptions of the characteristics and qualities of a Healthy City, expressed by various national and international organizations, are generally in line with those expressed by the Hellenic World of the past and despite the fact that it is believed that "...the memory of the city ultimately makes its way back to Greece, where urban artefacts coincide with the development of thought, and imagination becomes history and experience" (Rossi A., 1982, p. 134), the situation today seems different .

In the present both of the golden rules of the healing environment philosophy as noted before, according to the Hellenic Mythology, seem to be forgotten.

Humanity forgetting its human nature and the divine nature of healing art, seeking for independent and arrogant human strength (Ischis=power and money) manages to destroy the natural healing powers. So a natural "punishment" begins. The main natural healing forces such as the air and the water, because of the pollution, and the sun, because of the hole in the ozone layer, can no longer heal but, on a contrary, they kill (Chatzicocoli S., 1997).

Having destroyed the main natural conditions for a healing environment, humanity seems to realise again their vital necessity to health care. This came more than 3000 years after

the establishment of the healing environment philosophy by the Hellenic Mythology, forming its theoretical level, and the application of such a philosophy to the Asklepieia, forming its practical level. However, because of the destruction of the natural components of healing environment, all the criticism, interest and demands are concentrated on the only component of the environment that remains still controlled by man, the designed and built environment, mainly the urban one.

The question is: How a small component, as the designed and built environment, even of big cities seems to be, can replace and restore the total whole? And finally an other question is risen : Whether or not and for how much longer, Asklepios and his mythical children, Hygeia (Health), Aigle (Luminosity), Panakeia (Cure for all diseases), Iasos (Healing) and Telesphoros (Recovery) will be able to serve the unfaithful and arrogant humanity?

References

- Apollodoros (2nd century BC), "Mythology". **
- Apollonios of Rhodes, "Argonautika", 3rd century BC. **
- Aristoteles [Aristotle]* (4th century BC), "Politika" **
- Aravantinos, A., (1906), "Asklepios and Asklepieia", Leon Eds, (1st ed. 1906), 2nd ed. 1975.
- Chatzicocoli S., (1994), "Evaluating the Healing of Health Care Environment", XIVth International Public Health Seminar on "Health Facility Design", International Union of Architects-Public Health Group (UIA-PHG), Japan Institute of Architects (JIA), Japan Institute of Hospital Architecture (JIHA), Sanjo-Kaikan, The University of Tokyo, Tokyo, Japan, 3-4 October.
- Chatzicocoli S., (1997), "The Asklepieion's Healing

Environment - Learning from the Past", "World Hospitals and Health Services", The Official Journal of the International Hospital Federation (IHF), Vol. 33, No. 2, pp. 22-27.

Chatzicocoli S., Syrakoy A.C., Syrakos T., (1997)"The Hellenic Mythology. A Source of Origin Research for the Philosophical and Ideological Foundations in Health Care", "Human Centred Design for Health Care Buildings", International Conference and Workshop. 28-30 August 1997. Trondheim, Norway. Proceedings edited by: Fottland I., Del Nord R., Eriksmoen K., Dilani A. Published by: Sintef Unimed - Health Care Research Institute, Trondheim, Norway. Printed by: Wennbergs Trykkeri, Trondheim. pp 107-111.

Chatzicocoli S., (1999), "Classification and Typological Aspects of Post-war Healthcare Environment", Doctoral Thesis, Department of Architecture, Polytechnic School, Aristotle University of Thessaloniki.

Chatzicocoli S., Syrakoy A.C., (2000), "Asklepieian Ideas Supporting Contemporary "Holistic" Healthcare Design", Chapter for Architecture, International Hospital Federation (IHF) Pan Regional Conference. Theme: "Working together for better health", Bahrain, 6-8 November.

Chatzicocoli S., Syrakoy A.C., Syrakos T., (2001a), "Greek Mythology. A Source of Philosophical and Ideological Principles", "Archaeology and the Arts", 79, June 2001, pp. 90-92.

Chatzicocoli S., Syrakoy A.C., Syrakos T., (2001b), "Greek Mythology and the Ideological Characteristics of the Healing Environment", "Archaeology and the Arts", 81, December, pp. 81-85.

Chatzicocoli S., (2002), "Mythology, Philosophy and Architectural Space in Ancient Greece", in "Architectural Theory, Human Science and Philosophy", K. Tsoukala (ed), Dep. of Architecture, Polytechnic School, Aristotle University of Thessaloniki, pp 254-275.

Chatzicocoli S., Syrakoy A.C., (2004a)"Asklepieia and the concept of the 'smart' hospital", The I.H.F. Pan-regional Conference "Towards the 'Smart' Hospital", International Hospital Federation, Aristotle University of Thessaloniki (Faculty of Medicine, School of Architecture), Main Auditorium, Aristotle University of Thessaloniki, Macedonia Palace Hotel, Thessaloniki, Greece, November 4-7.

Chatzicocoli S., Syrakoy A.C., (2004b), "Cultural characteristics of hospital 'smartness'", The I.H.F. Pan-regional Conference "Towards the 'Smart' Hospital", International Hospital Federation, Aristotle University of Thessaloniki (Faculty of Medicine, School of Architecture), Main Auditorium, Aristotle University of Thessaloniki, Macedonia Palace Hotel, Thessaloniki, Greece, November 4-7.

Chatzicocoli S., Syrakoy A.C., (2004c), "Planning and design for a culture of safety in Thessaloniki's Hospitals", "World Hospitals and Health Services", The Official Journal of the International Hospital Federation, International Hospital Federation, Vol. 40, No 3, pp 23-28.

Chatzicocoli S., Syrakoy A.C., Syrakos S., (2005), "The City as a Healthcare Campus", 25th Seminar UIA Public Health Work Programme, Union Internationale des Architectes - Public Health Work Programme (UIA-PHWP), Istanbul, Turkey, 2-5 July.

Chatzicocoli S., Syrakos T., (2006), The need for a healthy city programme in Greece, 19th International Association for People-Environment Studies (IAPS) International Conference "Environment, Health and Sustainable Development" Alexandria, Egypt, September 11-16.

Decharme P., (1878), "Mythology of Ancient Greece", Adamantiou A. (Translated into Greek), Sideris N. (ed), Athens.

Duhl L.J., (2000), "The Social Entrepreneurship of Change", Cogent Press, Putnam Valley.

European Commission, EUROPA - COM (2004), "Towards a Thematic Strategy on the Urban Environment", Environment, Urban Environment,

Thematic Strategy on the Urban Environment, 2004-2005.

Hancock T. & Duhl L. (1988), "Promoting Health in the Urban Context", WHO Healthy Cities Papers No.1, Copenhagen. FADL Publishers.

Hesiodos [Hesiod]*, (8th century BC a), "Theogonia". **

Hesiodos [Hesiod]*, (8th century BC b), "Women Catalogue or Heoici". **

Hippocrates, (460-370 BC), "About Air, Water, Topos (Places)". **

Homeric Hymns (8th century BC, or earlier), "To Asklepios", "To Apollon", "To Artemis", Hestia Editions, 1997.

Homeros [Homer]*, (8th century BC, or earlier, a), "Odysseia" [Odyssey]*. **

Homeros [Homer]*, (8th century BC, or earlier, b), "Ilias" [Iliad]*. **

Kabbadias P. (1900), "The sanctuary of Asklepios in Epidauros and the patients therapy", Athens. Neoplatonic School of Thinking, (3rd century AC), 18 Hellenic works of writing based on a lot earlier ideas. Some titles of them are: "To Asklepios", "Asklepios' terms to king Ammon", etc, translated into Latin language by Marcius Fissen by the title "Mercurii Trismegisti liber de potestate et sapientis Dei" in 1471.

Orpheus or Orphic Hymns, (8th century BC, or earlier), "Of Nature", "Of Apollon", "Of Nymphs", "Of Muses", "Of Charites", Hestia Editions, 1997.

Pausanias, (2nd century AD), "Hellados Periegeseis-Korinthiaka". **

Platon [Plato]* (5th century BC, a), "Ion" **

Platon [Plato]* (5th century BC, b), "Politeia" **

Rossi A., (1982), "The Architecture of the City", The MIT Press, (1st edition: "L'architettura della citta", Marsilio, Padua, 1966).

Soranos of Ephessos, (2nd century AD), "Biographies

of Physicians".**

Strabon [Strabo]*, (1st century BC), "Geographika" **

Vine P., "The Tylos Period (330 BC-622 AD)", in "Bahrain National Museum", State of Bahrain, Ministry of Information, IMMEL Pub., pp. 63-74.

Web sources: www.healthycities.org ; www.paho.org ; www.unhabitat.org; www.unicef.org; www.un.org; www.who.int

World Health Organization (WHO, 1995), "Twenty steps for developing a healthy city project", 2nd edition, WHO Regional Office for Europe.

World Health Organization (WHO, 1996a), "Healthy Cities for Better Health", WHO, Geneva, Switzerland.

World Health Organization. (WHO, 1996b), «The WHO's Healthy Cities Programme. A Crisis in Urban Health", WHO, Geneva, Switzerland.

*The terms in brackets [] state the Latinised or Englishised version of the presiding Greek terms.

**The ancient texts are available in several editions in Greece e.g.: Prof. G. Mistriotou, Athens 1880, 1895. Papyros, 1957, 1959. Zacharopoulos, 1939-1956. Kaktos, 1993, 1994, etc.

Sophia Chatzicocoli

Sophia Chatzicocoli holds a diploma in Architecture-Engineering and a PhD from the Department of Architecture, School of Engineering from the Aristotle University of Thessaloniki, Makedonia, Greece. She also holds a Postgraduate Diploma in Health Facility Planning, Council for National Academic Awards, UK, after following a Postgraduate Course in Health Facility Planning, Medical Architecture Research Unit, The Polytechnic of North London, UK. She is Assistant Professor, Department of Urban-Regional Planning and Development Engineering, School of Engineering, Aristotle University of Thessaloniki (AUTH), Thessaloniki, Makedonia, Greece. Her main research

interests include the planning, design and evaluation of health care systems and facilities (local, regional, national and international level), planning and design for "healthy" cities and communities, historical and cultural parameters in healthcare planning and design. She can be contacted at syrakoss@otenet.gr.

Athena Christina Syrakoy

Athena Christina Syrakoy has a BA in Architecture, a Graduate Diploma in Architecture, and a Postgraduate Diploma in International Studies in Vernacular Architecture from the Oxford School of Architecture, Oxford Brookes University, UK. She has also obtained a MPhil in History and Philosophy of Architecture, from the University of Cambridge. She is currently a lecturer at the Department of Architecture, Technical University of Crete, Greece. Her interests include historical and contemporary notions about the connections between health, architecture and cities from a social-cultural-religious perspective. She can be contacted at syrakoss@otenet.gr.