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SANATORIA IN GRÆCO-ROMAN EGYPT; APPROACHES TO HEALING HERITAGE

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Abstract

Sanatoria is a health institution for patients of different diseases, particularly chronic diseases. These health resorts present fresh-air treatment, heliotherapy, balanced diet, physical exercises and professional medical treatment. By the 19th century, sanatorium was used a successful therapeutic method for curing tuberculosis. Building sanatoria expanded on large scale in Europe, America and reached as far as the Middle East including Egypt. These centers became part of the healing heritage around the world. Tracing the origin of the sanatoria, they coincide with the sanatoria in Græco-Roman Egypt. Seeking for divine intervention, sanatoria were annexed to the temples of Egypt. By the second century BCE, a small chamber in the upper terrace of the temple of Hatshepsut at Deir El-Bahari was used as health center. The sanatorium of Dendara temple combined two therapeutic procedures; incubation and healing statues. The temple of Seti I at Abydos and the temple of Imhotep at Memphis (*Asklepeion*) were well-known sanatoria for sick people. The temples of Serapis and Isis at Canopus and Menouthis were described as healing centers. The present paper throws the light on the devolvement of the sanatorium in the modern world comparing it with the Egyptian sanatoria during the Hellenistic and Roman times. The study aims to analyze the similarities between the same health resorts in two different times. Furthermore, the paper throws the light on the differences between the concept of healing program applied in the sanatoria of Græco-Roman Egypt and those found around the world during the 19th and 20th centuries.

Keywords: sanatorium, healing, tuberculosis, temple, Egypt

1. SANATORIUM IN THE MODERN WORLD: INVENTION AND DEVELOPMENT

In Collin English Dictionary, sanatorium is defined as; "*an institution for the medical care and recuperation of persons who are chronically ill*," "*a health resort*" and "*a room in a boarding school where sick pupils may be treated in isolation*." It is derived from the Greek word "*σανατόριο*" which means "*hospital*" (*COBUILD Advanced English Dictionary*). The name sanatorium was derived from "*sanare*" which means "*to cure*" or derived from "*sanitas*" meaning "*health*"; both were used at that time in accordance to the source

quoted, but in the fullness of time the former was favored (Warren 2006, p. 472, no. 3).

Sanatorium was used a successful therapeutic method for curing tuberculosis in the modern world Barberis et al. 2017, p. 58: E 11; Martini et al., 2018, E 323; Daniel 2006, p. 1865). This disease was the most common disease-causing death in Europe and North America in the 19th century (Tuberculosis (TB) was attributed to contagion or miasma. Its characteristic diagnoses are chronic cough, often bloody, fever, and wasting with percussion and auscultation to show its lesions. Although its deathful results, Tuberculosis was remarked with less dramatic outbreaks as attested with cholera and smallpox. By the end of the 19th century, the death rate from tuberculosis exceeded the rate death from any other infections and diseases in Germany; Warren 2006, pp. 458-459).

It was attested that the climatic environment resulted in good rates in healing tuberculosis. Thus, staying in moderate climate was used as an effective therapeutic method for this disease. This was due to the common belief during that time that Tuberculosis was a result of poor life style and unhealthy environment surrounding the patient. Therefore, indoor environment was not recommended for TB patients (Warren 2006, pp. 458-459; Greenhalgh and Butler 2017, pp. 276, 277; Martini et al., 2018, E323; For the relation between the climatic circumstances and Tuberculosis see; Warren 2006, pp. 460-462).

Hermann Brehmer was a botany student who recorded his healing experience from TB in his doctoral dissertation entitled "*Tuberculosis is a Curable Disease*" in 1854. His curing was accomplished after travelling to the Himalayan Mountains. After his healing from tuberculosis, he established the first known sanatorium in Europe, particularly in Germany, in Göbersdorf in Silesia, a small village on the borders between Poland and Czech Republic. His sanatorium stressed on the climatic atmosphere as an efficient method of treatment (Wynn and Dixon 1912, p. 416; Warren 2006, pp. 458, 462-463; Eylers 2014, pp. 670, 677; Barberis et al., 2017, p. 58: E 11; Greenhalgh and Butler 2017, pp. 277.Martini et al., 2018, E323-E324).

Postcards depicted the sanatorium of Dr. Brehmer, which only received private patients, located among the Alps (fig.1). Dettweiler added "*the rest cure*" to the concept of the sanatorium of Brehmer. By this addition, the sanatorium became a crucial institution for curing poor patients. Both the sanatorium of Göbersdorf and that of Dr. Walther's at Nordach gained a superb reputation in Germany and even outside Germany (Wynn and Dixon 1912, pp. 416-417; Daniel, 2006, p. 1866; Warren, 2006, p. 458; Eylers, 2014, pp. 670-671).

Fig.1. Postcard of Dr. Brehmer's sanatorium in the Selsian village of Göbersdorf (modern: Sokolowsko) Eylers 2014, p. 672, fig.2.

German sanatoria were categorized into two types; those who served the elite people, and those who offered health service for workers which were increasingly used confronted to

tuberculosis. By 1899, about thirty-five sanatoria were exclusively erected to the treatment of TB receiving hundreds of patients. Large sanatoria such as that of Beelitz Heilstätten provided beds for two thousand patients. After that, erecting sanatorium spread throughout Germany, France, Switzerland, particularly in the region of Davis and England Valley where highly-costed sanatoria were opened for patients who can afford their stay (Eylers 2014, pp. 669, 671, 685, fig. 13).

By the middle of the nineteenth century to the mid-twentieth centuries, sanatoria spread in Europe on a great scale to heal patients of tuberculosis. These centers also presented a good atmosphere during the period of convalescence (recovery) including many activities such as; outdoor excursions on foot or on horseback beside their main treatment program. During their stay, patients enjoyed hast, a balanced diet, fresh air and sunlight. Certain physical exercises under medical supervisions were also included in the routine of the patients (Martini et al., 2018, E323-E324.).

The German Nordach in the Black Forest was one of the leading sanatoria where physical exercises were attested. This institution was established by Otto Walther, a pupil of Brehmer, in 1889. The same regimen of this sanatorium was followed in the luxurious British Brompton Hospital Sanatorium (Warren 2006, p. 464).

By the beginning of the 20th century, the Italian Biagio Castaldi suffered himself from pulmonary tuberculosis, personally experienced the positive effects of a balanced diet and a stay in the mountains. In 1858 publication, Castaldi reported that this disease is obviously rare in the areas which are above 1000 meters, namely in mountains and hills (Martini et al., 2018, E324). Prominent scientists such as; Johan Lukas Schönlein and Alexander von Humboldt believed that TB did not exist in the mountainous regions. One of the prominent mountainous sanatoria in Europe was the enormous Beelitz-Heilstätten nearby Berlin. It was located hardy 40 meters above the sea level and overwhelmed with the Alpine atmosphere (Eylers 2014, pp. 670-676).

In the same period in Italy, it was believed that the maritime clime had an obvious positive effect in healing pulmonary tuberculosis and decreasing the diagnosis of the disease in its initial stage. Antonio Sciascia was the first one who used heliotherapy in the treatment program of tuberculosis, claiming that the forms involving the lymphatic ganglia, joints and bones, skin, serous membranes and kidneys were those which could benefit most (Talenti 2017, pp. 1-2; Martini et al., 2018, E324).

By the 19th century, the Italian physician Giuseppe Barellai inaugurated the first marine medical hospice for children who suffered from tuberculosis. These institutions offered fresh air, good hygienic conditions and the exposure to the sun as well as sea baths; all these factors helped in healing the patients. Barellai became the real promoter of such health resorts in Italy. By the end of 1867, five health hospices were established in Italy. The first seaside hospices were opened in Viareggio and Rimini in 1874 by the Bolognese Opera Pia Ospizi Marini. The Italian marine hospices were well presented through the essay of Doctor Gaetano Pini who carefully related many existing experiences and encouraged the existence of this type of health institutions. The geographical location

of Italy which owns a long seashore as well as the local community helped in the rapid spread of this type of hospices (Talenti 2017, pp. 2-4; Martini et al., 2018, E 324).

In the newly founded Kingdom of Italy, the first mountain "*medical settlements*" were instituted in Florence in 1853, in Prato in 1864 and in Pistoia in 1866. In 1871, the Piedmontese Marine Hospice opened in Loano in Liguria. This was the first Italian hospice for children and young people of both genders affected by bone, articular, cutaneous and glandular tuberculosis. In the early years of the 20th century, again in Loano, the Hospice instituted summer and winter resorts for schoolchildren who were "*frail, lymphatic, children of tuberculosis sufferers*" in another building that it owned. These children, who have tuberculosis (TB), are sunbathing outside at the Cashmere Hills Sanatorium. From the 1940s, effective drugs and vaccines were available, and all TB sanatoriums were closed by the 1960s (Talenti 2017, pp. 2-4; Martini et al., 2018, E324).

In the 19th century, Edward Trudeau introduced the sanatoria to North America. After his recovery from the TB, He was inspired with the sanatorium of Brehmer and decided to establish a similar one in Saranac. His institution was sponsored by the elite New Yorkers and was assisted by the promising physician Alfred Loomis. The sanatorium of Trudeau was inaugurated in 1885 and named "*The Little Red Cottage*." He paid special interest to heal the TB patients from the workmen, either male or female. The Saranac institution became the health resort for many physicians and surgeons from America and Canada such as; Edward Archibald and Norman Bethune from Montreal (Warren, 2006, pp. 464, 469; Daniel, 2006, pp. 1867-1869).

Later one, the idea of building sanatoria reached the countries of the Middle East. Ben Smim Sanatorium (1955-1975) was the most leading sanatorium in Morocco to receive TB patients. It was designed by the French protectorate aiming to provide qualified medical care in a hygienic natural atmosphere. This institution was located in the mountainous region of Azrou in the Middle Atlas. A Hotel in this region was transformed to function as a sanatorium and was known as "*Sanatorium Hélios*". A qualified staff of doctors and nursing staff offered a perfect medical care for French and Moroccan patients. The building of the sanatorium still exists in Morocco but it is completely neglected (Hjiej et. al., 2014, pp. 102-103).

In Egypt, Helwan was chosen to build the first modern sanatorium to receive the patients of TB due to its fresh and moderate climate. The Grand Hotel next to the Japanese Garden in Helwan was transformed into the so-named "*The Fouad First Sanatorium*" (Kamel 1947, p. 6). This institution is located in the northeast part of the city. Together with the famous six springs of Helwan, the Sanatorium of Helwan gained a superb reputation as a health resort during that time. Famous figures as well as members of the elite class went to Helwan Sanatorium seeking for medical care which was offered by a qualified medial staff (Kamel 1947, p. 6; the springs of Helwan were mainly six springs; two springs of sulphury water used baths, two other springs of the same water used in free bathing. The last two springs were of mineral water were discovered in 1939. For the medial value of these springs in curing diseases see; Kamel 1947, pp. 3-6) (fig.2).

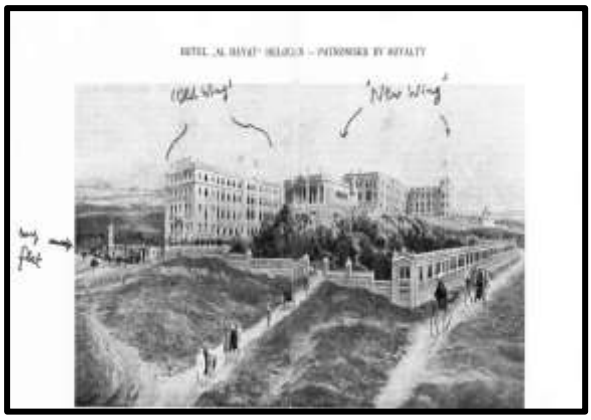

Fig.2. Al Hayat Hotel, later transformed and known as "*the King Fouad Sanatorium*" in Helwan
Hardman 2008, p. 4

A comprehensive development program was proposed by the architect Abdel-Monem Hassan Kamel (Kamel 1947) to put the Fouad Sanatorium on spot. A public railway facilitated the transportation to the new health resort of Helwan. It took just 30 minutes form Helwan Sanatorium to down town Cairo by train (Moore 2014, p. 95, fig. 4).

This health institution was managed by one of the prominent Swiss pulmonary doctors during that time called Dr. Erich Zimmerli. He was invited by the Egyptian government to come to Egypt due to his outstanding skills and expertise. He applied the Swiss model on Helwan Sanatorium then in Alexandria in both the Anglo-Swiss Hospital and his private practice (Hardman 2008, pp. XI-XlI) Worth information and photographs concerning the stay of Zimmerli's in Helwan are presented by his son who mentioned the formal visit of the ministry of Awqaf to this health resort (Hardman 2008, pp. 5-11).

1. Sanatorium in Græco-Roman Egypt:

In the Græco-Roman period, certain Egyptian temples were used as healing centers. Temples are Dendara, Memphis, and Deir El-Bahari were well-known centers of medical treatment of the sick and particularly for the cure of mentally and emotionally disturbed. The treatment offered may in fact have been practiced in Egypt earlier before and they attracted patient from all over Egypt. The sanatoria annexed to Egyptian temples were equivalent to medical or magical clinic or hospital where sick or injured people seek for the healing intervention of the deities and the wisdom of the priests of the temple. Unfortunately, few such structures remain nowadays. However, there are rooms at some temples that were thought to be used as a sanatorium. These buildings are as follows;

2.1. The Sanatorium of Dendera:

The sanatorium at Dendera existed at least since the early of Ptolemaic era. However, the present standing building today only dates rather back to the early Roman period (Daumas 1956, pp. 35-57; Westendorf 1984, cols. 376- 377; Laskowska-Kusztal 1995, pp. 281-287; Kitat 2006, pp. 61-62; Abouelata 2018, p. 127).

The sanatorium of Dendera reflects the healing, more likely the magical procedures used for curing patients in ancient Greece where incubation and hydrotherapy played a crucial role. Admittedly, the sanatorium of Dendera temple, and other healing chapels were rather connected to the House of Life which were annexed to the temples of Egypt. It was known that the House of Life where the place in which sacred texts and magical formulae for curing were preserved and were used together with the study of professional medical treatments (Abouelata 2018, p. 127. Nunn 1996, pp. 112-119).

The sanatorium of Dendera is a remarkable healing resort where two therapeutic procedures were combined together; Incubation and healing statues were once

existed in this place (Ghaliongui 1963, p. 38; Wildung 1977a, col. 1101). It lies in front of the Roman mammisi behind the Coptic Basilica which is located to the north of the mammisi of Nectanebo. This building gives us a chance to imagine its architectural plan and elements. It is a square building which is 25 m. in length. The level of the highest room is 2.50 m. mud bricks with square Limestone blocks are the main materials used in building the sanatorium. The sanatorium consists of a central courtyard surrounded from four sides with four axial corridors which lead to a maze of mud-brick stores or small rooms. A pedestal *in situ* bears traces of inscription that indicates the function of this building as a sanatorium (Daumas 1956, pp. 35-57; Frankfurter 1998, pp. 162-163; Wilkinson 2000, pp. 74-75; Kitat 2006, pp. 61-62; Abouelata 2018, p. 127) (fig.3).

Fig.3. General view for the sanatorium of Dendera
Kitat 2006, fig. 13

During the excavations of E. Baraize. The director of the Service work, a beautiful block of sandstone was discovered. This block which is 1.31 m in length and 1.35 in width, bears lines of magical inscription talks about as Follows: "*when you come. You and your son Horus, his enemies will not exist, their evil does not occur*". A second inscription places every part of the human body under the protection of a certain deity, a traditional inscription which was expected to be found in such a healing center (Daumas 1956, pp. 42-45; Kitat 2006, pp. 61-62).

2.2. CHAPEL OF IMHOTEP AND AMENHOTEP SON OF HAPU AT THE TEMPLE OF HATSHEPSUT AT DEIR EL-BAHARI:

By the Ptolemaic period, Imhotep was one of the most essential gods who had a special reputation for healing the sick by incubation (Milne 1914, pp. 96-98; Westendorf 1984, cols. 376- 377; Philips 1986, pp. 77-83; Kitat 2006, pp. 101-102; Lajtar 2006, pp. 16-20; Renberg 2017, pp. 448-483; Abouelata 2018, p. 127).

Imhotep was venerated in a small chamber located in the upper terrace of the temple of Hatshepsut at Deir El-Bahari (Hurry 1926, p. 49; Ghaliongui 1963, p. 41; Sauneron 1965, pp. 73-76; Risse 1986, pp. 622-623; Leca 1971, p. 99; Wildung 1980, col.147; Estes 1993, p. 130, 131; Halioua and Ziskind 2005, p. 30). This chamber dates back to the 2nd century B.C. during the reign of Ptolemy VIII (Kitat 2006, pp. 101-102; Risse 1986, pp. 622-623; Nunn 1996, p. 112; Halioua and Ziskind 2005, p. 31).

The upper terrace of the temple of Deir El-Bahari became a health restort for numerous visitors who were Egyptians as well as foreigners during the Graeco-Roman period. In this healing center, another Egyptian sage, who is Amenhotep son of Hapu was much venerated side by side with Imhotep (James 1967, pp. 240-241; Kitat 2006, pp. 101-102; Lajtar 2006, pp. 16-20; Renberg 2017, pp. 448-483) (fig.4).

Fig.4. The Ptolemaic portico and upper court of Imhotep and Amenhotep son of Hapu, temple of Deir El-Bahari
Lajtar 2006, fig.12

This Ptolemaic chamber seems to have been used as a sanatorium where the patients searched for cure by spending one or more night in it wanting for a therapeutic dream. Imhotep was described in this temple as "*the greatest physician with skillful fingers*" (Milne 1914, p. 96. Hurry 1926, p. 49; Risse 1986, pp. 622-623; Halioua and Ziskind 2005, p. 30). He was represented on the walls of this chamber as a complete deity holding a scepter in his right hand and the ankh in his left hand. Close to his representation, there is a hieroglyphic inscription "*I have given thee life combined with health and protection, I am thy protection*." (Hurry 1926, p. 56).

The western wall of the inner sanctuary leads to northern and southern rooms which were established by Ptolemy VIII and Euregetes II (145-116 B.C.). However, the colonnade and the walls of the court gain more interest than any other part because of being the ambulatory where patient waited there for miraculous healing. On the outside walls, serious reliefs where patients registered their names were sometimes followed by the name of Asclepios, Imhotep and Amenhotep son of Hapu, could be found. One of the graffiti belongs to "*Andromachos*" saying; "*Andromachos, a Macedonian, an unskilled laborer, came to the good god Amenhotep: he was sick and this god cured him in the same day*." These inscriptions clearly show the miraculous character of the cures happened there (Leca 1971, pp. 99-100. For further details see: Bataille 1951, pp. 47-126; Other gods were obviously connected with the process of the therapeutic incubation such as: Serapis, especially venerated in Canopus, Bes in Abydos and Meret Seger in Deir El Medineh; Wildung 1977a, col. 1101; Lajtar 2006, p. 81).

The east wall of the upper terrace has a broad walk running outside it. This walk, which was originally covered as a colonnade, was probably a lounge for the patients. Their names, are either scratched or painted on the walls to record their visit. These scratches known as graffiti were the commonest may to record the attendance of the patients (Milne 1914, p. 96. Ghaliongui 1963, p. 42).

There are two hundred votive inscriptions recorded on the walls of this place confirming that it was used by the patients till the 2nd century A.D (Ghaliongui 1963, p. 42; Milne 1914, p. 97).

According to Milne, this place was used till 200 A.D. The insecurity of life in upper Egypt and the barbarian tribes of Nubia which moved from the north to middle Egypt resulted in neglecting this therapeutic building at Deir el-Bahari. The graffiti, which include only the name of the patient

and rarely the date of his signature, were inscribed on low down on the walls. Weigall interpreted this evidence that men who scratched these inscriptions were sitting on the ground (Ghaliongui 1963, pp. 96-98; Leca 1971, p. 100).

It is very noticeable that the inscriptions along the entrance at the sanctuary are painted while those on the outer walls of the court are engraved. The inscriptions on the porch are painted but in a very bad condition (Milne 1914, p. 96; Leca 1971, pp. 99-100). The northern side of the court has no graffiti, while the southern side contains many painted inscriptions like those around the sanctuary. This led Milne to suggest that there was a side chapel walking as an elementary school at the southern corner (Milne 1914, p. 96; Ghaliongui 1963, p. 42).

Among the numerous inscriptions there is an inscription of Zoilos which considered being the only graffiti recording the name of a physician. Zoilos, who lived in the 3rd century A.D., was regarded the founder of alchemical literature because of being the author of 28 medical and alchemical books. Zoilos bore the title Ιμοω which was the abbreviation of Imhotep's name. Ιμοωης . He came to this place to investigate the cure wrought by the priests. (Sethe 1902, p. 25; Milne 1914, p. 97; Ghaliongui 1963, p. 42; Leca 1971, p. 100; Wildung 1977b, p. 99).

Another graffiti was inscribed on the southern wall: "*Eugraphios offers his homage before the lord god Asclepios and Amenothes and Hygeia be mindful us and grand us healing*." This inscription was repeated through painting with the same words on the porch in front of the sanctuary (Milne 1914, p. 97; Hurry 1926, p. 50; Lajtar 2006, p. 81).

2.3.CHAPEL OF IMHOTEP AT SAQQARA (THE ASKLEPION):

The chapel of Imhotep at Saqqara (the Asklepion), where the Greek god Asclepios appeared under the disguise of the Egyptian sage, was a famous pilgrimage center for everyone who searched for a cure (Laskowska-Kusztal 1995, pp. 281-287; James 1967, pp. 240-241; Kitat 2006, pp. 98-99; Renberg 2017, pp. 113-207, 394-447; Abouelata 2018, p. 127).

Imhotep's temple at Memphis, which was thought to be his burial place, was considered the most famous hospital and school of magic and medicine. It was located close to the Serapeum, the main cult center of Serapis, on the edge of that portion of the desert forming the necropolis of the city. Imhotep's temple at Memphis was considered a sanatorium for all sick people and barren women. This temple was destroyed by Theodosius II in 380 AD (Sethe 1902, p. 7; Hurry 1926, p. 43; Bataille 1951, p. IX; Wildung 1980, col. 146).

This temple was called by the Greeks the Asklepion, (Ασκληπειον). It was known that the ancient Greek Asklepion could be compared with the modern sanatoria. Many patients and their families travelled to visit the Askelpion on the island of Kos which date back to the fourth century BCE and that of Epidaurus that dates back to the fifth century BCE. In this healing spiritual building, the sick people received ritual purification, drinking water and bathing with water of the natural spring. After that, they wore clean special robes, presented offerings and paid homage to God Asclepios in his sanctuary. Then, the patients spent their night in the temple; a process which was known as incubation. They lied on *klinai* covered with

the skins of the scarified animals and received a sleep-producing potion. Meanwhile, the priests spoke into the ears of the patients the details of their required diets and the names of the medical plants for their medication. While waking, the patients had the illusion the god Asklepois appeared to them in their dreams and said to them their healing prescription. All these factors created a "*psychosomatic*" atmosphere in healing the patient (Sakula 1984, pp. 683-684; Sousa 2013, p. 240; Risse 2015, pp. 11-15).

The priestess of this temple of Imhotep at Saqqara had to be twin sisters (διδνμαι). These twin sisters (ιεροδονλου) presided each year over six main festivals of God Imhotep of major events in his career beginning with his birth continuing through his death till his deification. They received in return for their service four loaves a day, called Cylletis (κνλλαστις) (Hurry 1926, p. 130; Estes 1993, p. 130).

2.4.TEMPLE OF SETI I:

Abydos became the place where people came and wrote their dreams on a scrap of papyrus and waited for answer of God Bes which gained a superb reputation during the Græco-roman period. Bes was involved in the field of incubation. He played an important role as a protector of people during sleep, a time which was described to be dangerous causing terrifying visions and cast diseases. Therefore, Bes chased away any kind of evil spirits attaching the sleeper and sent him sweat dreams. By Græco-Roman Period, Bes became an oracular god (Dasen 1993, p. 79; Frankfurter 1998, pp. 169-172, 128-131; Bonnet 2000, p. 108; Kitat 2006, pp. 98-99).

The patients waited for one or two nights in the temple of Seti I "*The Memmion*" (Dasen 1993, p. 79; Frankfurter 1998, pp. 169-172, 128-131; Bonnet 2000, p. 108). This magical procedure was described in the Greek magical London 122 as follows: "*On your left hand draw Besa in the way shown to your below. Put around your hand a black cloth of Isis and go to sleep without giving an answer to anyone. The remainder of the cloth wrap around your neck*." The following formula describes the visions in which Bes appeared in the form of a warrior: "*What you draw is of this sort: racked man, standing, having a diadem on his head and in his right hand a sword that by means of a bent [arm] rests on his neck and on his neck and in the left hand award*." To dissolve the vision; the text instructs: "*If he reveals to you, wipe off your hand with rose perfume*" (Dasen 1993, p. 79).

Numerous Greek graffiti were engraved on the right wall of the great staircase running up westwards at the of Seti's temple. A chapel was added by Merenptah I adjoining it on the left or the southern side. Two walls of the staircase and of the passage leading to it, the graffiti are clustered together most thickly. Furthermore, many of these graffiti are only one feet above the level of the steps of the staircase. This is because that the chamber whose walls are plain, were never finished. Some of this graffiti date back to the 4th century AD reflecting that Bes oracular cult continued during the Byzantine Period. Some of these inscriptions were studied by Sayce (1888, pp. 377-380). According to his study, the earliest inscription belongs to Naukratis "Ναυκρατης", Megakles and Kaikos. Other inscriptions are engraved by Kopreias to Bes as follows:

Ενθαδε ιανεσκον και αληθεας ειοον ονει ρους

Αρποκρας ςε Ιεης Πανεαςος ναετης,

Ιρενς κοπρειαο φιλος γογος αρητγρος

Βησα πανομφαιω και χαρις ονκ ολιγη.

"*Here I slept and beheld true dreams: now Harpokrates is the inhabitant of the panic scene, the beloved offspring of the bedesman Kopreias, himself a priest of Bes, the sender of ominous voices; and not slight is the favour*" (Sayce 1888, pp. 379-380)

2.5. Deir El-Madina:

Although the practice of incubation is not proven before the Late Period, there is an earlier indication to such practice. On the stela of Qenher- khepeshef, of the twentieth dynasty, found at Deir el-Medina and kept in the British Museum, he mentioned; "*I have spent the night in this forecourt. I have drunk the water. My body has spent the night in the shadow of your face*" (Kitat 2006, pp. 102, 119-127; Abouelata 2018, p. 127; Heikinheimo 2018, p. 5).

2.6. Temples of Isis and Serapis at Canopus and Menothis:

In Roman Egypt, the temples of Serapis and Isis at Canopus were described by many historians as healing centers remarked with a healthy climate. In the two temples of Canopus, patients were healed through incubation and by the implication of certain medical practices. The cult of Isis as an oracular healing deity was well attested in Canopus and confirmed by Strabo in the first century BCE. The historian described that "*Some writers go on to record the cures, and the others the virtues of the oracles there*." In the same era, Diodorus described the incubation of Isis in Canopus (Frankfurter 1998, pp. 162-164; Renberg 2017, pp. 327-393).

3. Sanatorium in Ancient Egypt and the Modern World; between Similarities and Differences

3.1. Similarities:

3.1.1. Design:

The design of the modern sanatoria is based on single or rooms of few beds which gave access to large terraces exposed to sun light. Thus, these rooms gave the opportunity for the so-called "*sun baths*" (Greenhalgh and Butler, 2017, pp. 277; Martini, et al., 2018, E324). The sun therapy began in the summer between 5.00 am and 6.00 am and lasted till before the sun midday sun. Avoiding the sun damage to the skin (erythema), the patient was exposed to the sun for about 15 days. During this period, the daily sun exposure increased gradually to avoid the dangers of the fast exposure of the sun baths (Greenhalgh and Butler 2017, pp. 277-278, fig.2. For further detail about the Rollier's program of gradual exposure to sun light in sanatoria see; Greenhalgh and Butler 2017, p. 278).

Moreover, spacious three-lined gardens surround the whole building of the sanatorium. These gardens provide fresh air and places for healthy walks. Patients stayed in the sanatorium for a long period from a maximum of six months to seven, eight or even sixteen years (Martini et al., 2018, E324). The design of the 19th -20th centuries-dated sanatoria is based on single or rooms of few beds. The rooms are distributed along long corridors. Example: sanatorium of rickets in Milan 1885 and the marine hospice of Anzio in Italy (Talenti 2017, p. 4, fig. 2;16-18) (fig. 5).

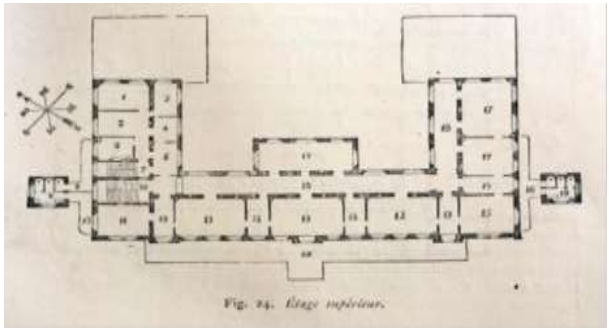

Fig.5. The plan of the hospice of Milan in Italy
Talenti 2017, p. 6, fig. 4

The ground floor Paimio sanatorium which was designed by the prominent architect Alvar Aalto in Southwestern Finland is divided into two wings. Wing A comprised a 100-m-long corridor along which the patients' rooms were distributed. The B wing contained the dining hall and the doctors' reception area. The final wing was in the upper floor and comprised the kitchen and the staff residence area (Heikinheimo 2018, p. 2, fig. 2).

A similar design had been carried out in the sanatorium of Dendara. It consists of a central courtyard surrounded by four axial corridors that give access to rooms. The design of the modern sanatoria is based on single room or rooms of few beds. The sanatorium of Dendara give access to about eleven similar partition or rooms. They were apparently used to isolate ill people separately (Westendorf 1984, cols. 376- 377; Kitat 2006, pp. 119-121) (fig.6).

Fig.6. The separated rooms in the sanatorium of Dendera
Kitat, *God of Medicine in Ancient Egypt*, fig. 12

3.1.2. HYDROTHERAPY:

Brehmer believed in the importance of the hydrotherapy of the patients in the sanatorium. Therefore, patients were subjected to ice cold douched under high pressure; a process that was personally supervised by Brehmer. This was one of the branches of his sister-in-law's spa. Few other sanatoria followed the steps of Brehmer in the field of hydrotherapy (Warren, 2006, p. 467).

Water played a major part of the therapeutic process inside ancient Egyptian sanatoria. A drainage system and healing statues and stelae were discovered at the sanatorium of Egyptian temples. Pouring water on such healing statues was in order to activate the magical formulae which were inscribed on them. Patients made use of holy water flowed from statues, placed on pedestals and then diverted to a small tank (This could be compared with the usage of water in the healing process in the Asklepion of Kos, see; Sakula 1984, pp. 683, 684) (fig.7).

Fig.7. The Healing statue (Cippi of Horus), Ptolemaic period, made of Shist, Metropolitan Museum of Art 20.2.23, New York
Magical stela or cippus of Horus | Ptolemaic Period | The Metropolitan Museum of Art (metmuseum.org)

Patients came to be immersed wholly or partially in sacred water to practice incubation. Four basins were found in sanatorium of Dendara (Sakula 1984, pp. 683, 684). According to Daumas (1956, pp. 35-57), the sanatorium of Denedra combined two therapeutic procedures. Incubation by receiving ill people who were prepared for the therapeutic dream and the process of pouring water on healing statues in order to activate the magical formulae which were inscribed on them. The last medical function was proofed by Daumas because of the existence of a drainage system and healing statues and stelae at this healing center (Ghaliongui 1963, p. 41; Frankfurter 1998, p. 47; Halioua and Ziskind 2005, p. 31; Kitat 2006, pp. 25-26; Leca 1971, p. 100).

Eleven Similar partition or rooms are found in this building. They were apparently used to receive ill people who were prepared for the therapeutic dream. Furthermore, within the corridors, bathtubs and four basins were excavated in this construction including a feet basin as well as a cistern. This comprehensive drainage system is a clear proof of the existence of the other therapeutic treatment which is the healing statues Water was poured on the healing statues which once existed in this site. Water flew after that on the ground of this building that was covered with a layer of plaster. Then, water was collected in the previous basins and pools to wash the sick part of the patient's body. The holy water was used to immerse parts of the body such as; legs, feet or the whole body (Daumas 1956, pp. 35-57; Wilkinson 2000, pp. 74-75; Kitat 2006, pp. 61-62; Abouelata 2018, p. 127).

3.2.DIFFERENCES

3.2.1. THERAPEUTIC DREAM (INCUBATION):

Incubation or the therapeutic dream was an important healing program that was carried out in the Egyptian sanatoria at night. Incubation was regarded one of the most important therapeutic methods which were applied in temples. It was a special case which enabled men to be in contact with the gods of medicine. Dreams could, accordingly, be divided into many types; unsolicited dreams in which gods appear to demand certain things, dreams in which they appear to give warnings, and dreams in which they answer their worshippers' requests such as: hoping for a childbirth, throne success or being cured from a certain disease which was the most common wish. This fact could be realized by Diodorus when he says that "*In Egypt, dreams are regarded, with religious reverence, especially as the prayers of worshippers are often rewarded by the indication of a remedy in a dream*" (Westendorf 1984, cols. 376- 377; Vernus 1986, col. 746; Wildung 1977a, col. 1101; Kitat 2006, pp. 27-29).

According to the ancient Egyptian beliefs, sleep was like death in which man's soul plunged in the world of death (Nun). During sleeping in the temple, the Egyptian can gain contact with gods through the magical formulae. The process of the Egyptian dream by incubation in the temple was described in various texts. First the patient entered one of the sanctuaries consecrated for therapeutic dreams. The patient should then pray the deity to reveal himself saying for example: "*Turn thy face towards me. Tis thou who dost accomplish miracles and art. Benevolent in all thy doings, Tis thou who givest children to him that hath none, tis thou who hast created magic, and established the heavens and the earth and the lower world. Tis thou who canst*

grant me the means of saving all" (Kitat 2006, pp. 27-29).

After waiting for a divine response, the god revealed himself in a dream beginning his speech by mentioning his name "*The god N spare to him, saying" and identifying the person he is addressing Art thou son (or father or wife etc.) of so and so ?*" Finally, the god tells the person what should be found in a certain place, or a box containing a certain book which should be copied replaced or followed. Therapeutic dreams, which was received by the patient himself or through a mediator between the god and patient, was usually carried out in temples for one or more nights. The center of incubation was close to the temple, in a separate building or a special chamber. Moreover, houses could also be used for incubation. Darkness was very essential for receiving sleep which was assisted by candle devices. These candles were thought to be effective in inducing cures. Other factors were also very essential in the process of incubation such as: incense, prayers, silence and of course isolation (Wildung 1977a, col. 1101; Kitat 2006, pp. 27-29).

Before the Ptolemaic period, incubation in Egyptian temples was individually carried out. Therefore, it was wrongly thought that the practice of therapeutic incubation has been lately introduced in Egypt. In fact, incubation, which was widely practiced in Greece, was obviously of an Egyptian origin (Ghaliongui 1963, p. 43; Wildung 1977a, col. 1101).

Various deities were involved in the process of therapeutic incubation. Isis, who was the main Egyptian goddess attributed with the invention of most healing remedies, was mainly associated with therapeutic dreams Diodorus Siculus attributed the principle of the healing dreams to this goddess (Ghaliongui 1963, p. 28; Wildung 1977a, col. 1101). The Temple of Denderah owned a great fame in the field of incubation during the Græco Roman period. This temple, mainly consecrated for the cult of Isis Hathour, was studied by Daumas in great detail. At Dendera, a mud brick sanatorium with separate rooms for patients was erected. The circulation of the rooms of this sanatorium around the central corridor reflect the function of the building as a suitable place for incubation arranged around the central corridor provided an appropriate site for the incubation treatment (Westendorf 1984, cols. 376- 377).

Perhaps the majority of visitors were women, as she was also the patron deity for women especially. At these sanatoria, patients came to be immersed wholly or partially in sacred water and to practice incubation. They spend the night in the hope of receiving a healing, or visionary dream, which was interpreted by the priests. It was hoped the dream would hold a message, or a recipe, from the gods about how healing could be fulfilled. Doubtless, in many cases, a cure was affected through the awakening of an expectation of cure in the sleeper himself. Thus, the temple sleep was used as a form of faith healing. Suggestions received during dreams that a cure had been affected were found to have achieved their purpose when the sufferer awoke. The more emotional and highly strung the patient, the greater the probability of cure (Abouelata 2018, p. 127; see; Meier 2009, pp. 1-8). The sanatorium of Dendera is similar in design and therapeutic program to the Asklepions of Greece in later times (see; Sakula 1984, pp. 684-686; Jarman and Mikirtichan 2015, p. 57).

Therapeutic dream or oracles were also carried out by Greek prophets in Græco-Roman Egypt. For instance, a Greek dream interpreter call Ptolemaios son of a Macedonian general, is attested during the second century BCE at Saqqara. He was interpreting the dreams in the Asklepion, the temple of deified Imhotep. In the same vicinity, a painted limestone trade sign mentions the existence of a Cretan dream interpreter. This piece is preserved now in the Egyptian Museum (27567) and represents the shape of Apis bull. The accompanying text says; "*At the god's command I interpret dreams. Good fortune. The interpreter is a Cretan*" (Sousa 2013, p. 240).

3.2.2. HEALTHY ATMOSPHERE AND LIFE STYLE:

Modern sanatoria give access to large terraces exposed to sun light. Thus, these rooms gave the opportunity for the so-called "*sun baths*". Piéry and Roshem named the sanatorium regimen "*La cure hygiénodiététique*." The sanatorium regiment was based on main elements; air, food and drink, rest and exercise, sleep, excretions and the state of mind. In other words, the life style during the stay in the sanatorium was regarded more important than the medical treatment (Warren, 2006, p. 465).

The priority of all sanatoria was to expose to the maximum degree of fresh air. Thus, these institutions were always provided with balconies in which the patients spent the day. The rooms were provided with open windows with central heating to offset the cold. For instance, the patients' rooms in Paimio sanatorium in Finland were made of hybrid wood and wide metal windows. These health windows looked like a traditional double-gazed windows but they in fact made of a hybrid combination of wood and metal. They did not reach the ground level for hygienic purposes and were supported with a horizontal ventilation system (Warren, 2006, pp. 465, 466) (fig.8).

Fig.8. The museum room in Paimio sanatorium in Finland revealing the shape of the wide windows Heikinheimo 2018, p. 10, fig. 10

Rest and exercise were of major importance in the sanatoria. Both Brehmer and his pupil Walther believed in the importance of physical exercises for the patients. On the other hand, Dettweiler and Trudeau rather recommended rest for the patients. The former recommended resting in the reclining position in fresh air even in snow through sitting in sheltered terraces. At Görsberdorf, there were paths provided with benches for frequent rest. The sanatorium of Nordrach, physical exercises were attested especially for recovery phase. The majority of physicians recommended physical exercises during the recovery of the patients. It was noticed that exercise in active TB resulted in fever, weight loss and spitting blood. (Warren, 2006, p. 466).

Paimio sanatorium in Finland (1928-1982) give the opportunity for the patients to play

games. Alvar Paimio designed his sanatorium to ski-track-like walkways which took the shape of zigzags crossing the forest and circling around number of small pools. (Eylers 2014, pp. 679-678, figs. 9, 10; see; Heikinheimo 2018, p. 1-19).

Weber recommended sleeping in well ventilated rooms exposed to night air for children to ward off TB. (Warren, 2006, p. 466; Heikinheimo 2018, p. 5). The patient staying at the sanatoria was overwhelmed with "*natural surroundings*" or the so-called "*natural elements*" or "*the conditions of nature, sun, space and verdure*" (Eylers 2014, p. 678). Good nutrition was the second most crucial element in the sanatoria life style. They received sufficient food with up to daily seven meals. Plenty quantities of milk and fats, Cod liver oil was used in cooking and even strong wines and spirits were offered to the patients. Finally, the temperament and the patient's state of mind was considered during his stay in the sanatoria. Cornet stressed on the crucial role of the preserving the good temperament of the patient through sympathy and honesty (Warren 2006, pp. 466- 467).

3.2.3. PERIOD OF THE PATIENTS; PERIOD OF STAY:

During the Græco-Roman Period, staying in the sanatoria lasted for one or two days (Kitat 2006, pp. 61-62). On the contrary, staying in modern sanatoria lasted for longer periods. The patients of TB stayed at the sanatoria for minimum six months up to one or even two years and the result were not ideal. One third of the patients were ready for work after recovery. Despite of the majority of the patients improved through their stay in the sanatorium, they had limited effect on the mortality in the population (Warren 2006, p. 469-470, table 1).

4. CONCLUSION:

Health resorts known as sanatoria were bound to chronic diseases as early the 19th century. They became part of the healing heritage around the word. Tracing the origin of these institutions, textual and archaeological evidences confirm the existence of the sanatoria in the precinct of Egyptian temples during the Hellenistic and Roman times. Both the sanatoria of Græco-Roman Egypt and the modern known sanatoria were based on the necessity of isolating their patients. Thus, most likely a similar design was followed in ancient Egyptian sanatoria and the modern ones. Furthermore, the hydrotherapy was a remarkable healing factor practice in both of them. Despite of water usage, the concept behind using water in the two previous-mentioned types of sanatoria was obviously different. Water was used in modern sanatoria as a hygienic element and as important factor to control the fever of the TB patient. On the contrary, the ancient Egyptians rather used water due to its magical properties.

Admittedly, it is undisputable that the therapeutic methods in Egyptian sanatoria during the Græco-Roman period depended basically on the divine intervention beside medical treatment; this spiritual method was applied in the sanatoria of ancient Greece. On the other hand, modern sanatoria were not defined as spiritual buildings. The therapeutic methods in modern sanatoria rather depended on powers of the nature; the healthy atmosphere beside medical treatment. Fresh air, exposure to sun light, balanced diet, physical exercises and professional medical treatment are the main factors in the sanatoria of the 19th centuries and 20th centuries around the world.

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