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## Hephaestus the God of Artisans as an Architect Model

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### Abstract

As an interdisciplinary contribution, the aim of this study is to provide a sample to specify the need to be an architect and offer a cultural perspective on what are an architect's skills and how an architect tests his ability by taking Hephaestus the god of craftsman in the Greek mythology as a model. It will also be shown how these historical traces influenced various architects of the time. Especially, Hephaestus' features mentioned based on the oldest texts of Greek culture like Homer's *Iliad*, *Odyssey*, Hesiod's *Theogonia*. In order to emphasize the continuity of this mentality, will be briefly mentioned some considerable architects from ancient, mediaeval, Ottoman and contemporary times.

The goal of the study is also to accentuate the transfer of master builders' abilities from generation to generation, and to understand the soul and mind power which create the peerless works of the art of construction based on master and apprentice relationship. Thus, at least the connection between the main features of the Ottoman and Turkish architecture, and Antiquity, can be also revealed.

### Keywords

antiquity, late antique, Ottoman, building art, God symbol, craft, architect, traditional tracks, master-apprentice

Beginning of agriculture, ten thousand years ago in Mesopotamia, caused the spread of settled life. It's known that the large trees coves like oak and caves are the first natural shelters by the help of nature that human make it a guide. As a thanking to nature for what he learned from nature, mankind has personifies first the inexhaustible power of nature, in the lenght of time the significant achievements and events in the social life and described them as immortal gods and goddesses.

After the invention of writing, It was specified in a Sumerian poem belonging to the third millennium BC, that “wood, metal, leather, basket processing, constructing a building and writing is an art (craft)”. It is noteworthy that both writing and craftsmanship were improved in ancient cultures and proved continuity.<sup>1</sup> Existence of a sense of God in the pioneer of a lot of works like Egyptians regarded Thot as God of writing and Greeks believed goddess Athena was responsible for the mind works, is also parallel to this continuity.<sup>2</sup> In the absence of writing, ancient people has developed religious beliefs, important works of their ancestors and the lessons to be learned from good and bad such as a story to remain in mind. This verbal recording has performed almost a social memory function. Therefore, mythology considered as a science and science sources has clarified lots of social event by the help of rich story accumulation reflects divine in ancient time, hymn, epic, poetry, writing, painting, sculpture and relief art.

When we look at god Hephaestus's identity, he was seen as deified a God by increasing of importance of the sculpture and gold-silver mining that origin of these were dating more history in the. Because God Hephaestus had icons.

According to myths, the goddess Hera gave birth alone god Hephaestus. He was ugly and lame inborn. He was kept away from the eyes and he gave attention to learning metal working under the volcanoes.

<sup>1</sup> Hristidis, 2005, pp. 46-48; Aiskhylos, *Prometheos Desmotes*, 476-483; Ovidius, *Metamorphoses*, I, 96-113 and XV, 75-95

<sup>2</sup> www.tarihpedia.com/misir\_tanrilar\_thot.html

According to legend, he fell to the ocean from the sky, then, here, he was rescued by the sea goddess Tethys and Eurynome, and these goddesses looked at him in a submarine cave for nine years. During this time, Hephaestus showed them his gratitude by making precious jewellery such as necklaces, needles and bent helix.<sup>3</sup> Here, in cult of Hephaestus, Naxos, Crete and Lemnos islands were specifically stated. Both this case have shed light on the development of mining in this region and reflected in place of metal art objects falling from the sky.<sup>4</sup>

Hephaestus, God of volcanoes, becomes the god of the un-extinguished fire from his breath and especially metalworking in the Classical era. He creates objects made in copper, tin, gold and silver by using anvil log and fire clamps.<sup>5</sup> Hephaestus, called artisans and skilled, becomes an inventor by the help of his hand and heart (the mind).<sup>6</sup> Also he is called "taught" with Athena the goddess of wisdom.<sup>7</sup> For example, for his mother, he had made a trapping and gold throne that had indissoluble chain. Indeed, apart from himself, even if God, nobody knows how to solve these chains.<sup>8</sup> He had done trivets that had the wheel with his knowledgeable hearts.<sup>9</sup>

Hephaestus dominates the volcano that he worked in and founded workshops. Although he was ugly, he had married Charites representing beauty, elegance and dazzling, also he got married Charis Aglaie. Everything, made by him, was so beautiful!<sup>10</sup> In addition, Hephaestus was shaped and knead the first woman Pandora's body by the help of mud. Thus, this statue symbolizes sculpture art.<sup>11</sup> Hephaestus had made thrones and stools for immortals; scepter for the mortal kings given by immortals. Also he had made weapons, armor and helmets for God-nobles.<sup>12</sup>

Addition to this craftsmanship, Hephaestus was also an architect. He had made a palace with brilliant columns for each of the gods in Olympus. Also he had made a host of glittering bronze with his hand and heart ( the mind).<sup>13</sup> He also made a room that had thick doors with beam and a hidden lock nobody could not turn, for his mother.<sup>14</sup> Therefore, Hephaestus, god of skilled craftsmen, was skilled in both fine arts, crafts and tectonics, he was also a clever inventor. All these facts determine that formation of the gods are related to the value of social life. So Hephaestus represents engineering, inventorship and creativity of the human.

In this context, in terms of architectural profile, we can see by the help of the examples from different civilisations and periods, that some architectes had different abilities and professions similar to Hephaestus.

### a) Mythology

**Daidalos:** Daidalos, name means "ingenious". Daidalos was an Athenian that was a member of the royal family came from descended of Cecrops. He is an artist who is also architect, sculptor and mechanic tool inventor. Almost lifelike sculptures are attributed to him. "Labyrinth" that he made it at the instance of King Minos of Crete has the architectural significance.<sup>15</sup>

### b) Ancient Greek and Roman Period

There are various statements on the architecture and architects in Rome where there was an officer called *aedilis* who was responsible for civil engineering works. For example, Plato (6th century BC) says: *To make large structures such as walls, shipyards, and temples, first of all, we should question our*

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<sup>3</sup> Homeros, *Ilyada*, XVIII, 400-402

<sup>4</sup> Grimal, 1997, pp. 247-249

<sup>5</sup> Homeros, *Ilyada*, XVII, 88-89; XVIII, 474-477; XXI, 331-342, 355-367; XXIII, 33; Homeros, *Odyseia*, IV, 614-617; VII, 90-93; Hesiodos, *Theogonia*, 861-866; Grimal, 1997, s. 248

<sup>6</sup> *Ilyada*, XVIII, 143, 380; XIX, 368; XXI, 355; *Odyseia*, VIII, 286, 297

<sup>7</sup> Homeros, *Odyseia*, VI, 232-234

<sup>8</sup> Grimal, 1997, p. 248; Homeros, *Odyseia*, VIII, 266-284

<sup>9</sup> Homeros, *Ilyada*, XVIII, 372-377

<sup>10</sup> Hesiodos, *Theogonia*, 945-946

<sup>11</sup> Hesiodos, *Theogonia*, 570-584; Grimal, 1997, p. 249

<sup>12</sup> Homeros, *Ilyada*, II, 100-104; VIII 195; XIV, 238-241; XXI, 315-316

<sup>13</sup> Homeros, *Ilyada*, I, 606-608; XVIII, 369-371; XX, 10-12

<sup>14</sup> Homeros, *Ilyada*, XIV, 166-168

<sup>15</sup> Grimal, 1997, pp. 134-135

architecture knowledge and from whom we have learned this art. If we witness that we managed to create many beautiful buildings on our own or with our well-known masters, then we can take our part in the similar state affairs. This statement shows the importance of the master-apprentice relationship. Roman writer Sallustius (1st century BC) says "agriculture, marine and construction are all associated with human virtues." This sentence reflects the glory of this profession.<sup>16</sup>

These outstanding specimens have probably continued the master-apprentice relationship. Their works display the geometric and engineering dimensions of architecture. In addition, from the BC 5th century, these works are epitomes of architecture and aesthetics, architects and creativity, architects and art both in Anatolia and Greece.

**Hippodamos of Miletos** (5th century BC). Theoretically, the first urban planning is thought to begin with Hippodamos of Miletus. Hippodamos intended to build planned cities so people can live a relaxed and happy life and implemented his plans with the growing knowledge of philosophy and democracy of the period after the fall of Miletus by Persians. Hippodamos style grid plan cities consist of structure islands which are formed by perpendicular and parallel streets. In the modern studies, it is stated that he may have learned this model from the ancients.<sup>17</sup> After the ancient times, many city was built according to grid plan.

**Ictinus** (5th century BC) was one of the most famous architects of Athens. His well-known works are Parthenon on the Acropolis, the Temple of Eleusinian Mysteries, and Temple of Apollo Epicurius. He worked together with Callicrates in Parthenon. Corinthian column capital was first seen in 5th century BC at the temple of Apollo Epicurius at Bassae, therefore it is said that this type of capital is the invention of the architect of the temple, but also it's attributed to the sculptor, Callimachus.<sup>18</sup>

**Phidias of Athens** (Pheidias, 490-430 BC) is the son of Kharmides and become one of the great Athenian craftsmen with the support of tyrant Pericles and built the Goddess Athena Temple in the Acropolis of Athens. Actually, Phidias was a skilled sculptor. Hageladas and Hegias are known as Fidiad's masters. Phidias is referred as the sculptor of Olympian Zeus statue, Ephesus Amazon statue and the other sculptures attributed to him as well as Athena Parthenos in Athena Lemna and Athena Promakhos in the Acropolis of Athens.<sup>19</sup>

**Skopas** (4th century BC) was from Paros island and worked at the Mausoleum in Halicarnassus. Also, he was both the architect and the sculptor of Alea temple.<sup>20</sup>

### c) Late Antique and Byzantine Period

The nearest term to describe the profession of architect is *mechanikos* or *mechanopoios* (Lat. *mechanicus*) in the Late Antique and the Byzantine period. Two other terms used sometimes in the sense of architect, *architekton* and *oikodomos* signify experienced master builders. Although there are different opinions and definitions, *mechanikos* can be defined shortly as a trained architect who have knowledge on engineering. This definition is consistent with the description of Vitruvius (1st century BC) in *De Architectura*, the earliest written source on architectural theory, remaining today.<sup>21</sup>

Detailed information about the training and works of the architects is located in Pappos of Alexandria's *Collections*.<sup>22</sup> His give information about *mechanike teoria* (Mechanics knowledge). Geometry, arithmetic, astronomy and physics are the theoretical part and metalworking, construction, carpentry and the art of painting are the practical part of mechanics. Pappos also mentions that the man, who has been trained in the previously mentioned sciences and arts, in addition has a versatile mind, would be the best inventor of mechanical devices and master builder.<sup>23</sup>

Agathias of Myrina (ca. 532-582) in his *Historia* and Procopius (ca.500-554) in *De Aedificiis* use the term *mechanikos* and *mechanopoios* while talking about two architects of Hagia Sophia, Anthemios of Tralles and Isidoros of Miletos.

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<sup>16</sup> Platon, *Gorgias*, 514b-c); Sallustius, *Bellum Catilinae* II.

<sup>17</sup> Robertson, 1983, pp. 171-173

<sup>18</sup> Harvey, 1990, p. 321; Boysal, 1967, p. 38

<sup>19</sup> Harvey, 1990, p. 321; Boysal, 1967, pp. 33-37; Robertson, 1983, pp. 114-115

<sup>20</sup> Robertson, 1983, p. 143; Boysal, 1967, p. 73

<sup>21</sup> Vitruvius, *De Architectura* I, 1, 1, 11-12

<sup>22</sup> Downey, 1946-1948, pp. 99-118; Downey, 1948, pp. 197-200; Schibille, 2009, p. 362

<sup>23</sup> Downey 1948. *Collections*, III, coll.1022, 3

Also, during the reign of Justinianus, the reconstruction of the walls of Dara was carried out under the control of a *mechhanikos* named Khryses of Alexandria. Emperor summoned Anthemios and Isidoros to consult when the waters of the river flowing through the city. But the problem is solved with the construction of the dam has seen Kryses in his dream. Two *mechhanike*, Ioannes of Constantinopolis and Isidoros the Younger undertook the construction of Zenobia on the Euphrates. When the original dome of the Hagia Sophia damaged and partially collapsed in the earthquakes, the construction of the new dome is carried out by Young Isidoros.<sup>24</sup>

After the 6th century, almost, there is no source about the name of architects. It is known that the Bryas Palace (ca.830) was constructed under the inspection of Patrikes, and Pantocrator Monastery (first half of the 12nd century) was built by Nikephoros.<sup>25</sup>

The commonality of Vitruvius's and Pappos's definitions reveal that the architecture discipline of the Late Antique and Byzantine periods was formed as a science in about 1st century BC yet, and the architects were the successors of the ancients.

In the works of architects, it can be seen a transformation from theory to practice. From the last years of the reign of Justinianus, until the end of Byzantine Empire, depending probably on interruption in education, construction works should be carried out by *architektones*.

**Anthemios of Tralles:** His name appears first in Paulus Silentiarius's (520-575) *Eksphrasis*, in Procopius's *De Aedificiis* and Agathias of Myrina's *History*. He is the *mechhanikos* who was rebuilt Justinianus's Hagia Sophia with Isidoros of Miletos, after the Theodosian Church was burned down during the Nika Riots in 532. He probably studied in Alexandria. The authors of the time praise Isidoros skills and knowledge, but they identify Anthemios as the greatest architect of all times. Agathias mentions that Anthemios is a significant architect who has superior knowledge of mathematics and that "their mother must be proud of his sons."<sup>26</sup> Anthemios has produced geometric theories for solving practical problems. Fragments of his writings on parabolic burning mirrors and conical sections extend today.<sup>27</sup> It is understood that he is an inventor as well as being a gifted architect who is very knowledgeable in various fields. An anecdote that Agathias quoted reveal a different character of Anthemios. When he angered a famous *orator* named Zeno, he sneaks into Zeno's basement, he established a mechanism that creates a simulation of earthquake. He has created a terrible storm and noise, and lightning by reflecting light with mirrors.<sup>28</sup>

#### d) Renaissance

Especially, at the beginning of the 16th century, beginning with the Renaissance movement in Italy-Florence is reconstruction was noteworthy.

**Leon Battista Alberti** (1404-1472): Along with being an Italian Renaissance architect, he was also a playwright, musician and painter. He built the Tempio Malatestiano in Rimini. He worked in Florence and built a facade of Santa Maria Novella church.<sup>29</sup>

**Leonardo da Vinci** (1452-1519): He was the iconic name of the Renaissance. He was both painter, sculptor, architect, engineer, scientist, anatomist and mathematician. He prepared the plans of Milan's Cathedral and the waterways of the Lombardy Plain. Also, he designed 240-foot suspension bridge project for Sultan Bayezid II in Istanbul but he could not implement the plan. He discovered the first version of the photograph machine which is Camera Obscura (dark room)<sup>30</sup>. Mona Lisa and The Last Supper fresco in Milan Santa Maria Delle Grazie are the most well-known works of da Vinci.

**Michelangelo** (1475-1564): Michelangelo was a sculptor, architect, poet and painter who pioneered the Mannerist movement. Florence Laurentiano Library, the dome of St. Peter's Basilica in Rome, strengthening the walls of Florence, Sistine Chapel's frescoes and David, La Pieta and Mosè (Moses) sculptures can be counted as his works in the field of architecture.

**Giovanni Lorenzo Bernini** (1598-1680): Bernini was a distinguished artist of Papacy. He was an architect, sculptor, painter, poet and he became the symbol of Baroque works. Architecture, lighting,

<sup>24</sup> Ousterhout, 1999, pp. 4 and 43-44; Downey, 1948, pp. 197-200; Schibille, 2009, p. 362

<sup>25</sup> Mango, 2006, pp. 320-321, n.14

<sup>26</sup> Agathias, *Historia* V, 3-9; Procopius, *Aedificiis* I.1.24, II.3.7-14; MacDonald, 1986, p. 53

<sup>27</sup> Huxley, 1959, pp. 12-19; Knorr, 1983, p. 60-70

<sup>28</sup> MacDonald, 1986, p. 55; Kaldellis, 2013, p. 357

<sup>29</sup> <http://www.nuveforum.net/1622-mimarlar/53723-leone-battista-alberti-italyan-mimar-muzisyen-ressam-oyun-yazari/>

<sup>30</sup> Çizgen, 1992, p. 9. See also: [www.uhbd.org/PDF/konya/.../serefnur\\_ozturk.pdf](http://www.uhbd.org/PDF/konya/.../serefnur_ozturk.pdf);

[brunelleschi.imss.fi.it/automobile/pdf/marinoni\\_engineer.pdf](http://brunelleschi.imss.fi.it/automobile/pdf/marinoni_engineer.pdf)

paintings and sculptures complement each other or are complementary in his works. Expression and motion are two important elements of Bernini's works. Funerary monuments, busts and group sculptures, fountains and San Pietro Square are among his works.<sup>31</sup>

### e) Ottoman and Turkish Period

After all these examples, some important data can be obtained when we consider Turkish Culture which embraces quite beautiful works of architecture and structures which are unique with their engineering style. In the classical Ottoman architecture, architects were also interested in some other art forms. For example, an architect could be a carpenter, engineer, politician and calligrapher at the same time. For example, Mimar Sinan was a carpenter.<sup>32</sup> On the other hand, some architects like Mimar Kasım Aga played an important role in the internal politics of Ottoman Empire. In the classical period, the master-apprentice relationship was especially important in Ottoman architecture education. Mimar Sinan, his foreman Davud Aga and Davud Aga's foreman Kasım Aga can be shown as examples of this situation.

The opening to the West with the Tanzimat period affected the architecture. In addition, in the 19th century, school education was taking the place of master-apprentice relationship and this was as important as to Westernize.

**Mimar Sinan (1489 / 90-1558):** Mimar Sinan is the genius artist, architect, and engineer of the Turkish world. He examined the other works belong to the various cultures and managed to create his own style by synthesising his observations without mimicry. Sinan, as the great architect of 16th century, also studied on the projects to meet the future needs of the growing city over time. Also he gave importance to acoustic. Mimar Sinan's has 375 works; 92 mosques, 52 small mosques, 57 madrasas, 7 Darul-kurra (places for reading Quran), 22 tombs, 17 alms-houses, 3 hospitals, 5 waterways, 8 bridges, 20 caravanserais, 36 palaces, 8 cellars and 48 baths.<sup>33</sup>

**Sedefkar Mehmed Ağa (?-1617):** He was the chief architect of the Ottoman palace at 1606. But he was dealing with a very different business until that year. He started playing tezene (a kind of reed) and began sedef (a kind of craft). He has been worked in various government jobs. He was administration in Diyarbakır and the judge in Damascus. He was Sinan's student between 1570-1589. Sultan Ahmet Mosque (Blue Mosque) is the one of his most important works.<sup>34</sup>

**Ahmed Kemaleddin Bey (1870-1927):** In 1887, at age 17 he enrolled in the Hendese-i Mülkiye Mektebi (now Istanbul Technical University). And he finished the school in the first place as an engineer in 1891. He got his architecture education later. In 1895, he, with the support of his master, Jachmund, was sent to Germany with a state scholarship to improve his architectural education. He studied in Charlottenburg Technische Hochschule in Berlin for two years. In 1908, he established the first professional chamber in this area with the name "Ottoman Society of Architects and Engineers". Mimar Kemalettin is one of the leading names of Turkish neoclassical style. This architectural style has targeted to create a national Turkish style. Although the goal of this style was being nationalist, architectural elements and decorations of the classical Ottoman buildings were often used<sup>35</sup>.

Also he is a writer and according to him, a good architect is fed by his/her society and affected by its architecture and blends his/her own skills with this heritage. He is familiar with the architecture of Anatolia and Asia. So, in his articles for various magazines, Mimar Kemalettin states that; knowledge of some travellers and tourists are full of bias as they have bad intentions against everything that is Turkish or Islamic. He also states that the value of Turkish architecture and the power of Turkish artists is neglected.

### f) Contemporary Period

It is clear that in our age architects continue to deal with other branches of art like the examples given above. As European culture outshines, we have selected a few examples of the architects of the recent period, from different countries.

**Dimitris Pikionis (1887-1968).** Architect and painter from Greece-Piraeus. He worked on the city

<sup>31</sup> Atasoy, 1978, pp. 41-42 and 89-97

<sup>32</sup> Mülâyim, 2009, pp. 224-227

<sup>33</sup> Benian, 2011, pp. 40-47; Ahunbay, 1989, pp. 131-139; <http://www.on5yirmi5.com/yazar/faruk-kirmizi/122352/tarihlerin-tahtinda-bir-mimar-sinan-kaldi.html>

<sup>34</sup> Çobanoğlu, 2003, p. 431

<sup>35</sup> Çobanoğlu-Ertuğrul, 2002, pp. 230-231

engineering. Acropolis, Filopappos Hill, Agio Dimitrios Lumbadiaris and Attica Irodu Odion landscaping are his attention-grabbing works.<sup>36</sup>

**Kosmas Xenakis** (1924-1984). The Greek architect, painter, sculptor decorator. He studied architecture but his paintings came to the fore. He gained French government scholarship so, he continued his education in Paris.<sup>37</sup>

**Albert Gabriel** (1883-1972). French architect, painter, archaeologist and explorer. He led the Art History department at Istanbul University between the years 1926-1930. Afterwards, he established the Istanbul French Archaeological Institute, which later named as French Institute of Anatolian Studies. He prepared monographs on the important historical buildings in Anatolia and Istanbul between 1930-40. Between the years 1908-1959, he organised more than forty travels to Turkey. At the request of the Turkish government, he studied on investigation, protection and restoration of the historical structures between the years 1925 and 1960.<sup>38</sup>

**Friedensreich Hundertwasser** (1928-2000). Jewish Viennese painter and architect. His mother noticed his interest in the art of painting when he was a child and sent him to art school. Hundertwasser always preferred an ecological architecture which means a life intertwined with nature.<sup>39</sup>

## Conclusion

As it can be seen in this short study, the architects who left us concrete living places like religious and royal structures in the past used their sophistication to show their skills and intelligence. Thus, today, they left buildings reflecting the historical and artistic values of their time. It is understood that they aimed at creating successful, symbolic, aesthetic, artistic, functional, unique and compatible architecture with taking the advantage of technological opportunities. Even, these works carry memory and document value. So, it seems that it is almost a necessity for architects to deal with the other types of art. This perspective is based on history and tradition of thousands of years and it is associated with Hephaestus' efforts. When you look through surviving archaeological monuments from the older generations, the architectural elements, as well as the written data, reveals the importance of the master-apprentice relationship. Indeed, the master-apprentice relationship and transfer are seen in many areas of occupations. Architecture is the art of making building. Besides the most common monuments throughout the history of Turkish culture, there are many samples that reflect the values mentioned above. Here architects' internal gains stand out.

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<sup>36</sup> Boçaris-Ofellas, p. 114

<sup>37</sup> PAVIAS-POLEMIS, p. 164

<sup>38</sup> [http://www.yapi.com.tr/etkinlikler/ressam-mimar-arkeolog-gezgin-albert-gabriel\\_47864.html](http://www.yapi.com.tr/etkinlikler/ressam-mimar-arkeolog-gezgin-albert-gabriel_47864.html)

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