CHANGING POWER MECHANISMS AND ARCHITECTURE: METAVERSE AND NANOPASS EXAMPLE

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ABSTRACT

CHANGING POWER MECHANISMS AND ARCHITECTURE: METAVERSE AND NANOPASS EXAMPLE

The change and revolution that will be experienced in practically all professions, particularly with Industry 4.0, will lead to the birth of new professions as well as differentiation on existing professions. Because architecture is one of the most fundamental professions that emerges naturally in response to human needs, it will have a significant impact on all fields, including architecture. As a result of this interaction, the profession's importance and demand will grow in all sectors that the metaverse and web3 will develop, particularly virtual world design. As a result, the goal of this research is to see how architecture, which is one of the professions that has changed as a result of the information age, can adapt to this system in the face of metaverse technology, which is widely regarded as one of the most radical advances. An interpretative qualitative analysis was conducted during this process, and a model was attempted to be put forward using the inductive technique between the power relations of architecture and cultures throughout history. The example of Nanopass has brought up discussion about how it is compatible with the inferences made from the created model and the aspects of the emergence of the metaverse society. As a result, the never-before-seen demand on architecture will vanish, especially since the metaverse platform's decentralized nature would naturally effect the power diffusion stage.

ÖZET

DEĞİŞKEN GÜÇ MEKANİZMALARI VE MİMARLIK: METAVERSE VE NANOPASS ÖRNEĞİ

Başta Endüstri 4.0 olmak üzere hemen hemen tüm mesleklerde yaşanacak değişim ve devrim, mevcut mesleklerde farklılaşmanın yanı sıra yeni mesleklerin doğmasına da yol açacaktır. Mimarlık, insan ihtiyaçlarına cevap olarak doğal olarak ortaya çıkan en temel mesleklerden biri olduğu için mimarlık dahil tüm alanlarda önemli bir etkisi olacaktır. Bu etkileşim sonucunda başta sanal dünya tasarımı olmak üzere metaverse ve web3'ün geliştireceği tüm sektörlerde mesleğin önemi ve talebi artacaktır. Sonuç olarak bu araştırmanın amacı, bilgi çağının etkisiyle değişen mesleklerden biri olan mimarlığın, yaygın bir şekilde tek olarak kabul edilen metaverse teknolojisi karşısında bu sisteme nasıl uyum sağlayabileceğini görmektir. en radikal gelişmelerden. Bu süreçte yorumlayıcı niteliksel bir analiz yapılmış ve tarih boyunca mimarlık ve kültürlerin güç ilişkileri arasında tümevarım tekniği kullanılarak bir model ortaya konulmaya çalışılmıştır. Nanopass örneği, oluşturulan modelden yapılan çıkarımlarla ne kadar uyumlu olduğu ve metaverse toplumunun ortaya çıkışının yönleri hakkında tartışmaları gündeme getirmiştir. Sonuç olarak, özellikle metaverse platformunun merkezi olmayan doğası doğal olarak güç yayılım aşamasını etkileyeceğinden, mimariye yönelik daha önce hiç görülmemiş talep ortadan kalkacaktır.

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1. INTRODUCTION

Thousands of years ago, the first of our ancestors developed cognitive skills beyond any living being up to today. As a consequence of this, early humans had not relied on their instincts, as animals do, to continue their existence in the wild which was altogether against the odds of survival of our forefathers. This development has commenced the process of elevating humanity to the top of the food chain. However, in fact, humans did not possess any advantage, whether it be strength, agility, stealth, and so on, compared to predators (especially the Felidae family), except for the usage of their brains. This has allowed our ancestors to do things that could not be achieved, otherwise, by any other species on the planet. After that point, we were able to light a fire, make tools for hunting, gathering, mining, and build constructs that provided our species with a safer place for residency, socialization, and storage of food. Although shelter is required, along with food and water, for survival, it was not necessary that it was made by the humans themselves. Therefore, at this point, it can be said that humanity started to pursue 'better' options rather than being content with what nature provided to them. As a consequence of this desire, we see the first types of structures being made by our ancestors to protect themselves from cold, wild animals, and, later on, other humans. It can be argued that we have gained the ability to transform the environment around us to serve what we deem as mandatory. This obliged humanity to divert its human resources to invent new methods of constructing structures which is still ongoing even today. As a consequence of this, we see the emergence of architecture along with a concept of power that is not exercised only for the purpose of survival. Therefore, this point in the history of humankind can be accepted as the first instance where architecture, in its primitive form, engaged with the power relations within the society which became more visible in subsequent eras.

This neverending power struggle among mankind has eventually led to several revolutions in way of life, including agricultural, industrial, and soon automation. However, AI-driven production is an economic development that encompasses only the physical realm. Currently, another silent yet fundamental revolution awaits humanity. The digital revolution can range from cybernetics to persistent virtual worlds. As each of the aforementioned revolutions changed society and disrupted the way power was distributed in the system, the upcoming cyber transformation, this time, will not be affecting power relations because, in

fact, there is nothing to be affected. Currently, the social contract of the metaverse is being written as new NFT projects, which are considered primary actors in the metaverse, emerge on daily basis. One of which of these projects, namely Nanopass, has emerged as competing for the leadership of the industry which is the fictional environmental design. This should not be taken lightly since architects of the future will not only be dealing with building structures in the physical domain but also designing the assets which visitors of the realm are going to feel. This brings the following questions to the mind: (a) Which factors will affect the design choices of cyber environments and (b) How power relations will work in the metaverse for architecture?

In order to evaluate the aforementioned complex relationship between architecture and metaverse, this research will use an interpretive method, also known as qualitative research design, to analyze the collected data from different eras stretching from prehistoric to modern dates. Data of this study consists of structures built by diverse cultures, societies, classes, and sovereigns to convey different ideas, beliefs, values, and concepts that are primarily associated with the power itself. Furthermore, during the process of analysis, underlying reasons which caused architecture to adapt itself to changing situations will be tried to be identified by investigating a number of specific structures. Finally, in the conclusion part, an inquiry that will be made within the framework of causality will be provided in accordance with the data and the analysis made priorly.

Hypotheses of this research are as follows: (a) architects will design environments in the metaverse, (b) In the metaverse environment, architects will not be subjugated by the power

In the first chapter of this study, the prehistoric age starting from Göbeklitepe and Çatalhöyük, which are accepted as the first settled human societies, will be investigated in terms of the features of these structures, and the reason behind why they were built in the first place. Secondly, in the subsequent section, classical antiquity which consists of the ancient Egyptian, Mesopotamian, Greek, and Roman civilizations will be scrutinized in terms of their perspective of architecture along with what it functions for those societies and the degree of independence of architectural works from the concept of power. The research will extend its scope to the medieval era where more centralized power and architectural practices appear in addition to the existence of various different concepts of power. In this chapter, especially the gothic architecture and fortification technologies will be addressed and analyzed their relation to the power structure that was common in the era and how the

oppression of power encompass both architects and the public alike. Then again, chapter 5 will be focusing on the era of the Renaissance where old ideologies were exposed to heavy changes as well as the materialization of novel trends such as the Baroque style can be observed. Furthermore, the following chapter will be concentrating on modern times with an extensive examination of the Nazi Germany period alongside the importance they gave to the development of architecture in terms of power projection and consolidation. In addition, concepts of modernism and post-modernism will be discussed in this chapter. Then again, in this chapter, ideas of Foucault on architecture as a tool for control mechanisms will be disclosed and analyzed. In the end, a comprehensive interpretation will be made when determining the role of architects in the domain of metaverse.

2. THEORETICAL FRAMEWORK

2.1. PURPOSE OF THE STUDY

The purpose of the study is to determine the role of architects in the digital revolution which will bring the concept of metaverse to human daily life. Furthermore, this research will draw parallels between the transformation of power overages, its relation with architecture during this process, and currently forming the metaverse community in order to bring an explanation to the questions of (a) Which factors will affect the design choices of cyber environments and (b) How power relations will work in the metaverse for architecture?

2.2. METHODOLOGY

In alignment with the purpose of this study, a qualitative method is preferred to interpret the data in different forms and times. In order to collect this data, this study will feature an investigation of the concept of power in relation to architecture from the early neolithic age to the present. Furthermore, structures from this time period will be examined with respect to how the power affected the creation of them. Lastly, a futurist perspective shall be drawn with the ever-transforming meaning of power gives birth to the emergence of technology in form of the creation of an alternate reality computed in machines. A created model from this perspective with will use to discuss power symbols of architecture with case study.

2.3. WHAT IS POWER ?

According to Dahl (1957) power can be defined with the following analogy: “A has power over B to the extent that he can get B to do something that B would not otherwise do” [1]. Following the same mindset, if C is added to the equation with the condition of ‘C has power over A’, then it becomes clear that the power is a relative concept. Then again, the concept has been defined by Weber in a similar fashion as ‘the probability that one actor within a social relationship will be in a position to carry out his will despite resistances’ [2]. Then again, power itself constitutes a relation between components involved [1]. Moreover, the concept of power cannot be examined in a spectrum between positive and negative. Rather,

in some occurrences, two separate powers may make each other null, sometimes merge together and form even more powerful influence in the said relation. Another, power itself may cause another power to rise as in form of counterpower which may be qualified as the concept of balance of power [3].

In the context of architecture, power is a passive relation that is tied to the longevity of the buildings because structures can, in fact, get B to do something that B would not otherwise do. It would be appropriate to draw parallels in an actual propaganda tower and a monument in terms of the constant conveyance of ideas to a large portion of the public. Furthermore, architecture is deduced as a servant of institutional power, especially the global financial system. It would be wise to support this argument with the fact that “castles” of the global capital, namely Skyscrapers, are the latest projection of power. Furthermore, whether in cooperation or directly under the concept of power, the architecture has always been a crucial factor in creating a synthesis that would eventually drastically affect the change in which reality will be morphed into [3].

Power has been defined as a management mechanism that has evolved into different forms, beginning with physical power, which can be acknowledged as the major power source in the prehistoric period. To manifest into tangible form, this defined concept of power required symbols and meanings that made its presence felt. It exists as a system predicated on persons being aware of or continually remembering the factors they are under the influence of, according to these definitions.

The authority of the rest of society is made visible in this context by the elements utilized in the moldodovas' exterior embellishments, which can be considered one of the earliest construction elements in prehistoric periods.

In this context, the employment of architecture as a medium of transmission has culminated in its use as a sign of representation in the metaverse, or universe of codes.

2.4. SAMPLE SELECTION METHOD

Samples, which will be investigated throughout the study, are chosen because of their relation to the power and architecture. First of all, Molodova is investigated on the Pre-Pottery Neolithic Age because of the fact that it is the first human structure where design factors are utilised in order to convey an idea regarding the physical aptitude of the owner via animal bones and leathers the hunter have triumphed against the wild creature. Secondly, the subsequent section, namely Classical Antiquity, features Pyramids, Tower of Babel, Parthenon, and Colosseum as samples. Pyramids are included because they were one of the first of the mega structures (for that time) that were built for the burial of Pharaohs which held the ultimate power in Ancient Egypt as god-kings. Then again, Tower of Babel has been taken into account since it has represented the power of Babylonian kings via employment of folkloric narrative and imposing physical presence. Another, Parthenon is analysed since it is a clear indication of the victory, hence the power, of the Hellenic League against the invading Persians. Furthermore, the Colosseum is being discussed in this study due to the fact that it has been an aspiration of Roman imperial architecture which the aim was to present the power of Rome. Notre-Dame de Paris has been included as a sample because it had been used as an agent of religious authorities to inspire fear in the general public In addition, the Tower of London is covered since it was a structure that projected the power of English kings via presenting the idea of being imprisoned to the public. Furthermore, Medici Plaza has been deliberated in this study because it is one of the greatest examples of a private individuals' achievement of power in the changing era. Then again, cities have been examined in the context of power because of the reason that they were the main source of power during, and after, the industrial revolution which affected the whole of humanity to the core with presenting a new method for production, namely mechanised manufacturing.

In alignment with the purpose of this study, a qualitative method is preferred to interpret the data in different forms and times. In order to collect this data, this study will feature an investigation of the concept of power in relation to architecture from the early neolithic age to the present. Furthermore, structures from this time period will be examined with respect to how the power affected the creation of them. Lastly, a futurist perspective shall be drawn with the ever-transforming meaning of power gives birth to the emergence of technology in form of the creation of an alternate reality computed in machines.

3. ARCHITECTURAL SYMBOLS AND POWER RELATION THROUGH HISTORICAL PERSPECTIVE

In this chapter, study will present a historical narrative focused on exploring power relations in manifestation of architectural symbols. It is paramount for grasping the full gravity of this study which cannot be solved without, first, understanding the complex relationship between the perception of authority, which differs from era to era, and physical structures that cement this image in the eyes of the people. Investigation of this historical narrative will, first, start with drawing attention to the pre-pottery neolithic age where early manifestation of the concept of power can be observed; and will encompass a time period including Göbeklitepe, classical antiquity, mediaeval ages, renaissance, industrial revolution and beyond up to this date.

3.1. PRE-POTTERY NEOLITHIC AGE: CONCEPT OF POWER IN THE FIRST SETTLEMENTS

3.1.1. Göbeklitepe

Previously, experts believed that monumental sites were founded by hunter-gatherer communities where they first transmitted to settled life and began to utilize cultivation. However, the establishment of Göbeklitepe, which was erected by hunter-gatherer people before they switched to agriculture, refuted this belief. Göbeklitepe Archaeological Site, near Renick Village, about 18 kilometers northeast of Şanlurfa's city center, known as the "V52 Neolithic Settlement," was discovered in 1963 during a survey conducted in collaboration with the University of Istanbul and the University of Chicago. After the excavations began in 1994, a breakthrough occurred in terms of the unknown history of humanity. Following these investigations, it was discovered that Göbeklitepe was a 12000-year-old cult center[4].

Figure 3.1. Göbekli Tepe. T-pillars. Photograph I. Wagner [5].

Göbeklitepe can be perceived as a gathering spot for the Neolithic communities which is thought to be the first temple in human history. According to archaeologist Klaus Schmidt Göbeklitepe "is the first manmade holy place''. This structure is, as an assumption, built in order to provide the society with a common connection to stay together, namely religion. That is why Göbeli Tepe has a unique mark in the history of humankind. Religion, or a primitive belief system, occurred at Göbeklitepe which contains pillars and stone carvings with animal and human representations that give insight into the origin of this presumed religion. Although it can be just another gathering zone, excavations show that pillars found at the Göbeklitepe have representations of nature and humanity.

Figure 3.2. Schmidt, K., Göbekli Tepe, from the book 'The Neolithic in Turkey' [6].

Moreover, excavations revealed that there are no residential buildings inside the site. Thus, it might purport that Göbeklitepe, in fact, is a sacred place for the community [6]. In contrast to Çatalhöyük, Göbeklitepe has no permanent residency. From that knowledge, it may be inferred that Göbeklitepe represents a holy site for the early stage of humanity. In order to support this argument, hunter-gatherers do accept Göbeklitepe as a gathering zone. Moreover, Schmidt argues that hunter-gatherers from across the region gathered here periodically, while pooling their resources temporarily to build the monuments for some kind of a ritual purpose, and left thereafter [7]. Therefore, it might be the reason why there are no permanent residential buildings in Göbeklitepe.

Although there are many animal bones were discovered in the lower layers of the excavation of Göbeklitepe, these begins to diminish as higher levels were reached. Hence, this diminishment of animal bones might refer to a shift of attention of the society from hunting to cultivation in the time when Göbeklitepe has been constructed. In addition, Schmidt [6] suggests that the existence of human bones in the filling material supports the presumption that Göbeklitepe was primarily used as burial grounds where they are opened after a certain period of time. This might imply that there had been distinct rituals practiced for the descent and humans. Furthermore, archaeological sites merely 32 kilometers away from Göbeklitepe have unearthed a prehistoric habitation where mankind’s oldest domesticated wheat strains can be found. Radiocarbon technique has revealed that agriculture has originated 10.500 years after Göbeklitepe has been founded. Also, after 1000 years, it can be seen that monuments of Göbeklitepe were built.

In addition, the nearest water source to Göbeklitepe can be reached after a long hike. This is a conflicting behavior with the innate human instinct to be around drinkable water and food resources [7]. One of the most important, and perhaps the most perplexing situation, regarding the discoveries made in Göbeklitepe, is that a Neolithic hunter-gatherer community could have achieved built such a structure that is distant to, as mentioned before, water and food sources. Indeed, the workforce required to construct such a monument requires a continuous supply of food that cannot be provided by the hunter-gatherer lifestyle. Since there is no constant acquisition of sustenance, Göbeklitepe is believed to be a temporary location that is used in unknown time cycles.

Schmidt argues that if villages are considered as churches, then Göbeklitepe is to be a cathedral, which possesses utmost importance for people who are more than 50 kilometers away from it. Furthermore, he strongly believes that the embodiment of spirituality and religion has played a key role for humanity to develop cultivation and domestication since those cannot be seen nearby, contrary to the belief where it has happened vice-versa [7]

In Çatalhöyük, daily routines are believed to cause the emergence of social rules. However, occasional visits to Göbeklitepe are thought to give birth to a belief system for people around it throughout the generations. Therefore, it, also, can be assumed that those people had materialized an abstract notion, namely spiritual belief, and made it something that can be seen. Builders that constructed Göbeklitepe might be brought their younglings along with them which is presumed to ensure the continuity of their belief.

This is the starting point for a whole front of innovation." Indeed, the region is home to a number of domestication "firsts," including the first domesticated wheat, which emerged only 30 kilometers away at Nevali Çori about 500 years after the Göbeklitepe monuments were built" [7]. Nevali Çori will be discussed in depth in the following chapter.

Göbeklitepe is a place where oral tradition has come together with a materialized concept of belief where it has affected the community in terms of advancement and establishment of shared values. This was, as humanity knows so far, the first instance where our ancestors have embedded ideas into structures. Perhaps thousands of years ago, this embodiment was required for people to have a mutual morality that is agreed upon to be regarded as sacred. Therefore, it strengthens the hypothesis that Göbeklitepe is the first man-made religious structure.

Scholars believe that the Eden narrative in the Bible, which has been written thousands of years after the transition from hunter-gatherer societies to agricultural settlements, is an anecdote to represent this change. Schmidt supposes that, ironically, that the downfall of Göbeklitepe was caused by the advancement from hunting to cultivation. This also resulted in that the forests and the soil around Göbeklitepe being depleted, and did not provide further use to the communities around it. In consequence, the ecology of the land has shifted into the dry wasteland that can be observed today [8].

Furthermore, it is believed that the construction of Göbeklitepe led to the subsequent advancement of urbanization of communities. Schmidt expresses this phenomenon as “First came the temple, then the city.” Therefore, Göbeklitepe can be considered as the first step towards the establishment of civil societies. Furthermore, if it is true that Göbeklitepe is the first temple, then it is also true that it is the first constant place for conclaves.

However, as Schmidt argues that it was, indeed, the other way around: the rigorous, coordinated labor to construct such monoliths, in fact, set one of the cornerstones for the creation of more complicated communities in terms of rules, behaviors, and so on (7). Like Çatalhöyük, Göbeklitepe had to have a unique feature to convince people to stay together as a society. This is a need reached especially after shelter requirements are met. Subsequently, architecture had gained a different role of materializing ideas and supporting communities’ unification through assisting the creation of social fabric. The figures found at Göbeklitepe can be seen at similarly aged settlements such as Jerf el-Ahmar (Syria), hundreds of kilometers away from Göbeklitepe, and at relatively younger villages closer to hand in Anatolia, such as Nevali Çori [7].

- T-Pillars and Nevali Çori: In accordance with the current knowledge regarding Göbeklitepe, it can be assumed that it was the first place where religions started to originate. T-pillars found during the excavations contain different types of animals and human figures alike. These carvings are as follows: (a) humans with stylized arms, (b) snakes, (c) spiders, (d) boars, (e) foxes, (f) birds, (g), and any sort of beasts that can be found around [7]. It can only be their representation of their ethos about the nature of actual conceptualization of it.

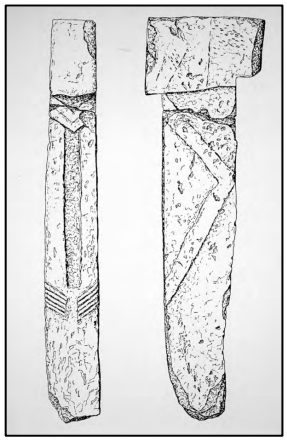

Figure 3.3. Nevalı Çori. Decorated pillar/T-pillars. Drawing courtesy H. Hauptmann [6].

There are two large T-shaped columns, with supposedly possess hands and garments to represent humans, at the center of Göbeklitepe (figure 5). Humans at the center of other beings can be interpreted as the basic belief where humanity and nature are thought to be living in a sort of coexistence. Schmidt assumes this belief as one of the earliest shamanic traditions and proposes that the T-shaped pillars depict human figures, most probably their ancestors, although structured religion of polytheistic deities have appeared much later in Mesopotamia where larger temples and palaces dedicated to these deities can be found. The sole presence of human figures found in Nevali Çori, on the other hand, may lead to the conclusion that these people left aside the notion of taking humans to the center. As can be seen in figure 6, there is no representation of animals on T-shaped pillars in Nevali Çori. This strengthens the hypothesis that Nevali Çori, in fact, could be closer to Çatalhöyük in terms of belief system since both societies consider humans to be the only supreme being on planet Earth.

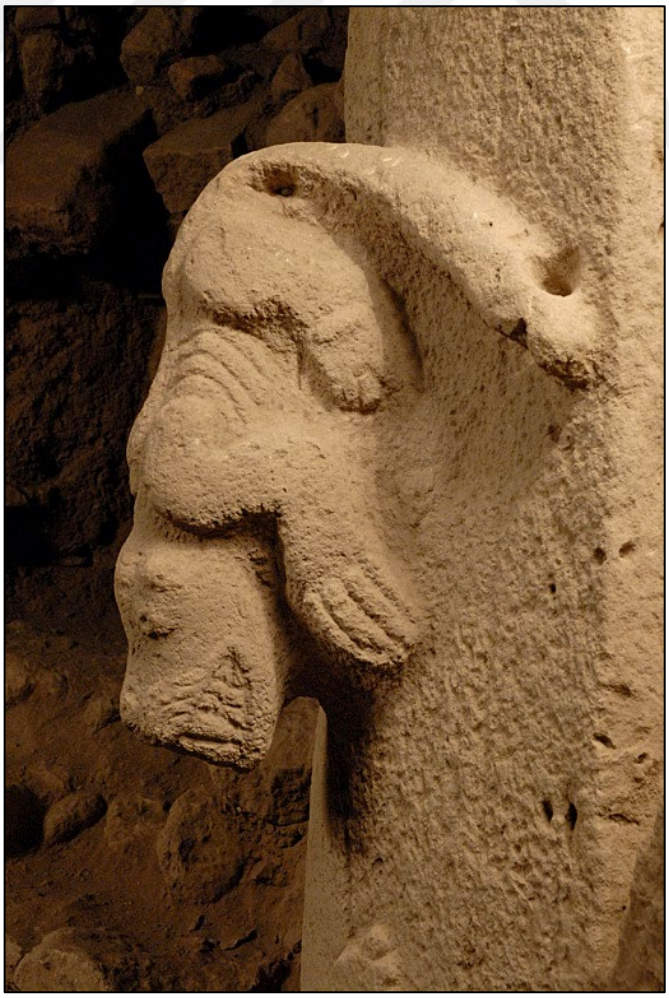

Figure 3.4. Animal figure, Göbeklitepe [9].

One of the arguments supporting this argument can be deduced that the Çatalhöyük, which has managed to remain as a society, may have these effects.

Power can be defined as “enough the ability to control people or things” [10]. In the beginning, the concept of power has been centralized around higher beings. Because of that, the power originally belonged to the ‘god or gods’. For instance, when a thunderstorm or a drought occurred, people thought that these were doings of gods, often displeased ones.

In accordance with the fact that such an ancient structure, which is thought to be a religious building, is encountered in the known history, may provide insight regarding the perspective of humans of the Neolithic era on the concept of God that is imagined by them as the highest level of power. This indicates that the existence of the notion of power is not tied to complex societies such as modern nation-states, and emerged when there were a limited number of people presented in a community. As humans started to live together in that era, consequently, it has given birth to the idea of power to which they submitted themselves. As Schmidt and his fellow researchers explain that 500 people, at minimum, were required to process 10 to 50 tons of stone pillars at local quarries, transport them at least a quarter-mile away, and place them [11]. This revelation refutes the prior belief that this amount of people could not be together and work for a unified goal at that time.

In consequence, even before the dawn of civilizations, and the existence of architecture as a structuralized profession, Göbeklitepe is, in theory, dedicated to the first holder of the power: the God [12].

3.1.2. Çatalhöyük

Çatalhöyük, located in Konya, Turkey, is the first known place where the dawn of community can be observed. It has been a part of the UNESCO World Heritage Site since 2012. Furthermore, Çatalhöyük as a Neolithic community can be traced back to 7100-5700 years ago, which is also known as the most populated city at that time, and one of the oldest settlements where the buildings and housing features can be found. This establishment is thought to provide shelter for 5000-8000 residents. As a result of living together, humans begin to increase their level of social interactions, which can cause both good and bad outcomes. Moreover, the findings in excavations indicate that, from the beginning, kinship

and other relationships played a significant role in the gathering, and distribution of food; hence resulting in the evolution of human society [13]. In addition, the lifespan of humans of the Neolithic period had been short outside of the settlements due to the number of factors such as animal attacks, cold, and tribal feuds; therefore the need for the community became crucial.

Figure 3.5. Çatalhöyük excavation area [14].

The remains of humans discovered at the Çatalhöyük archaeological site led to the conclusion that there was a place where the deceased was buried in the interiors of the houses and that they lived alongside them. Nearly in every household in Çatalhöyük, it can be found that the dead relatives of residents were buried beneath their living spaces. Furthermore, presenting gifts to their deceased kins might be interpreted as that they have developed some sort of an ancestral spiritual belief system [15]. Then again, according to Ian Hodder, graves that are built below houses are an effort to use their belief system and cultural fabric to create a social history of the said settlement. Therefore, it is considered to be the first settlement that presents social history as a part of daily life.

3.1.2.1. Belief with Architecture

Michael Balter, an associate of Ian Hodder, argues that Hodder has accumulated enough evidence throughout nearly a decade of studying Çatalhöyük to safely assume that the

housing in the Neolithic era constitutes the core of socializing, and a location for people to learn social rules and become domesticated in this manner [16]. Therefore, it can be said that habitants of Çatalhöyük shared a perspective on the notion of a house more than just a shelter. As a consequence, it can be accepted as a piece of evidence for the role of architecture to transcend the original purpose which was to create a safe space and become something that assists the development of the society itself.

Figure 3.6. Picture of seated woman [17].

Religion, or spirituality in the Neolithic ages, is connected with the house. Conducted excavations revealed that animal parts can be found within walls. It might refer to two inferences on those scenarios that might be relevant to each other, or might not. Firstly, residents were to that because animal parts can reinforce the walls or buildings for a longer lifespan. Secondly, it can be assumed that they have created a belief system around animalism. In this context, Hodder believes that residents included animal parts in walls in

order to bind the spirits of animals into the houses to make use of the spirits in terms of power and vitality [16].

With the bones added to the walls of the buildings, the society of the period, which was thought to believe that the building was sanctified, began to establish a relationship between architecture and the newly born religious power.

When the aforementioned information is analyzed together, it can be said that space (settlement) and belief intertwine together in order to create a continuous transmission of belief to the descendants over long periods of time.

Repetition of these practices over generations might have given birth to the phenomenon of religion. As residents continue to live together with their departed ancestors, they create a habit, thus, develop a belief based on their memories.

In addition, a seated woman figure has been found in Çatalhöyük excavations where it has been representing a goddess or an entity that has been believed to be a superior being compared to humans. This figure is supposedly attributed to fertility and the abundance of food. Furthermore, this is the first example where such credit is given to a higher entity in the Neolithic period [16]. This can be assumed as that people at that time did not only think about the reproduction of offspring, i.e. fertility but also attributed it to agriculture as productivity. Balter, in this context, said that the archaeobotanical evidence unfolded that the habitants had cultivated wheat and barley, as well as lentils, peas, bitter vetch, and other legumes, since the foundation of the settlement[16]. Çatalhöyük is not the first of the cities but also where domestication of plants can be found. In addition to that, Çatalhöyük is also the first place where the first evidence regarding the domestication of cattle has occurred. These advancements in securing the food supply caused both technological and social improvements. As a result of these signs of progress, power relations among the community have started to flourish.

3.1.2.2. Domestication of Human

As humanity began to live together in Neolithic settlements, it raised a need for regulations that can control people's daily life in order to combat such unwanted activities as thieving, murder; and common ground for ventures like trade and distribution of responsibility. Hodder (1969) believes that the evolution of social hierarchies and spiritualistic belief

systems were to be of paramount importance to administer and codify yet already progressively getting complicated interpersonal, intragroup, and intergroup relations. Thus this hierarchy above the community started to regulate their daily life[15].

The domestication process of humans, or settled life, in short, deemed social regulations as a must. Social interactions, communication, and relations between other members of society become part of daily life. All types of societies have to have rules or regulations for the continuation of the community since rule-breakings or intentional harm is a basis for social discontent that may lead to quarrels among the society that can hinder the social and technological developments. Then again, in this era, social regulations are not maintained through oral or written laws; but they are presented as expected behaviors from every member of the society should they want to be accepted. These expected behaviors are thought to be transmitted between parents and their offspring via daily practices within the house. As stated by Hodder (1969) this is one way in which each individual would have been internalized and indoctrinated into social rules. In contrast to Çatalhöyük, Greek civilization spread rules and accepted behaviors in Agora, which is some kind of place for gathering, socializing, and trading [18].

Moreover, as residents of Çatalhöyük spend more and more time living and sharing memories together, they have created the spirit of the place. However, the architecture alone cannot create a spirit, yet, it can provide a shell that a soul can attribute to by the people who are using the building itself [19]. So, the concept of the house is an important symbol for residents of Çatalhöyük because it is the primary place that facilitates socialization, and production.

Instead of social rules are being imposed by a central authority, they are enforced via manipulating public rituals. Hodder (1969) argues that rules practiced in Çatalhöyük have emerged as the result of continuous repetition, which is sanctioned by elders and heads of families, for hundreds of years[20].

Moreover, that kind of routine on daily habits for years might have been evolved as a social culture for living together. Similar to education, culture and habit is formed within the home itself. This can be interpreted as one of the secondary duties of architecture. In conclusion, architecture does not only create enclosed spaces but also provides an opportunity for the formation of the social fabric that can metamorph into the community.

That can be accepted as another duty of architecture. In conclusion, architecture not only creates encloser space also creates a social fabric to be a community.

3.2. CENTRALIZATION OF POWER IN ANCIENT CIVILIZATIONS

Ancient history is accepted to start with the invention of writing in approximately 3500 B.C. With this advancement, humanity gained access to more reliable sources of information with scripts where accurate attribution is made possible when determining the nature of artifacts. Furthermore, it has eased the process of discerning the ideas and belief systems that have been commonly accepted by the people at that time, as well as understanding what those humans hold the dearest.

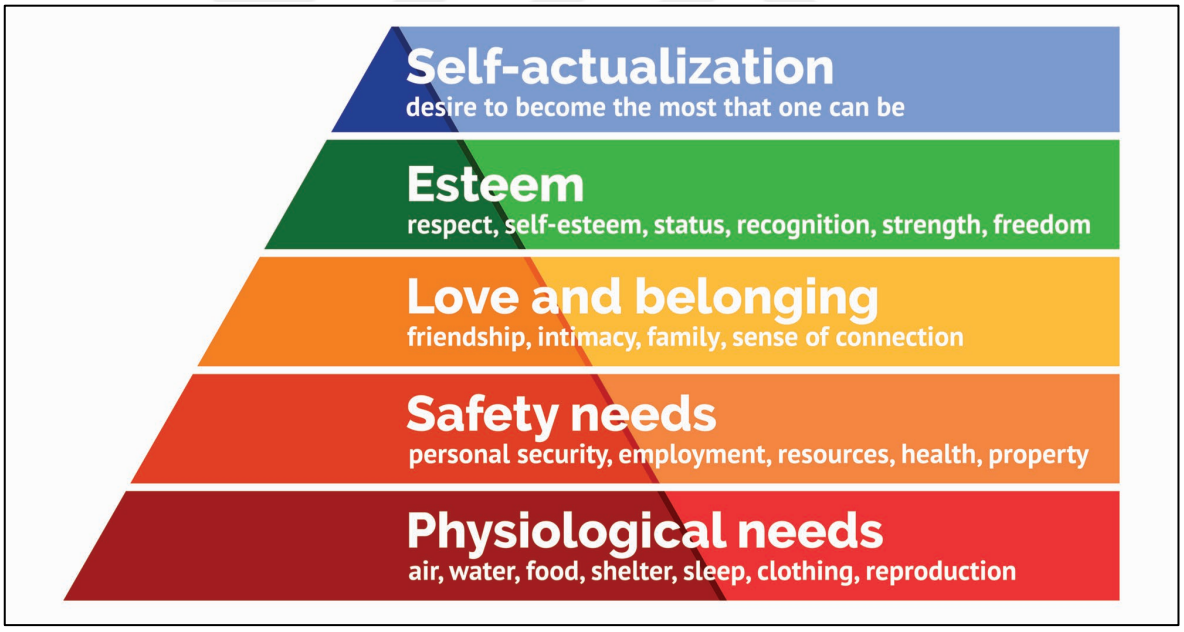

Figure 3.7. Classification of Maslow Hierarchy of Needs Theory [21].

As humanity has developed itself, their needs also increased accordingly. Thus, inevitably, specialized professions such as architecture, engineering, and politics have manifested in order to address the demands of advancing societies. According to Maslow's theory, as humans fulfill their basic requirements such as food and shelter, they tend to accomplish more complex and subjective needs. Therefore, it is natural for a society that has ensured its basic needs would pursue others. For example, after a society completes its basic needs such

as food, security, and shelter, it inclines towards a new system of thought that pursues complex developments. In order to achieve these complicated advancements, first, the safety of society must be ensured. This notion of security is not only against another country but also refers to the security within the society. Therefore, some societies have agreed to transfer some of their rights to a single person or a family to let them guarantee the safety of the whole society. This later has evolved into a more complex political system, namely monarchy.

3.2.1. Relocation of Power: God-Kings of Egypt

Ancient Egyptian society, which has been revered as one of the most important communities because of its contribution to the advancement of humankind, is the perfect case for the analysis of this age. These advancements are believed to be the consequence of the settlement of this society near the Nile River which assisted them to cover basic needs easier compared to other civilizations. In addition, the geography of Egypt consists of rich, dark soil that inclined this region to be called Kemet meaning the Black Land. Then again, natural fortification provided by the Sahara Desert has ensured the communal security of Egypt against rival societies to the west. However, it also caused Egyptians to refrain from fighting in that region because of the fact that supplying food and water would have been immensely difficult. Furthermore, because of the favorable geographical position of Egypt, it has become an important trade and transit route in the region.

However, being close to the Nile River had its own shortcoming of frequent flooding of nearby villages located in the Nile Delta. This has caused Egyptian society to advance in geometry, calculation, calendar, documentation, and other techniques to counter this problem. Therefore, the necessity of formulating a solution has also resulted in the emergence of the accumulation of knowledge which they had transferred to the subsequent generations.

3.2.1.1. Progress and Prosperity

What was needed for the ancient Egyptian to continue its existence as one of the centers of development of that time was the separation of society into classes with levels of privileges. This is thought to be procured with shared history and myth narratives. This is a clear

indication that the habit of artificially creating mutual values has continued in the ancient Egypt, similar to Çatalhöyük. This idea can further be explored by analyzing the fact that the society of Egypt has started from the nuclear family structure and progressed towards a complex civilization with segmented classes, common customs, and perspectives. Then again, successive generations have been exposed to these ideas, thus, created the necessary cause for banding together.

While humans have centered themselves within the ecosystem of other living beings, in Egypt, this situation has evolved to represent humans as a reflection of God. Furthermore, there are humanoid figures that portray polytheistic gods of Egyptian religion, akin to those that can be found in Göbeklitepe. This can be accepted as a point when humans transit to deification. This can be inferred as a tool of the sovereign to ensure its continuity of power over its subjects. Furthermore, it is only possible while the nation is unified under one flag or common cause. This process of nation-building is thought to be the result of the unceasing transmission of the narrative that is purported by the ruler himself/herself. This notion depicts itself in the case where kings of ancient Egypt do not only qualify themselves as sole holders of power but also are bestowed with divine right to do so. So, this assisted their quest for consolidating their power over the society by not only preventing people to rise against their ruler but also a sacred being. However, the deification of kings does not change the fact that human beings are mortal in nature. Hence, the god-kings of Egypt supposed that they would become much stronger in the afterlife itself. This thought of the afterlife might have unintended but surprisingly progressive consequences that manifested itself with the development of funerary practices. Hence, the technique of mummification of the dead has appeared as a consequence of the importance that Egyptian people held in that regard.[20]

Ancient Egyptians believed that they were going to use the gold and other items buried with them in the afterlife. This is why they are buried along with their jewelry. This had an artificial impact on the increase of the value of goods since it is believed that the deceased person is going to be judged in the afterlife according to the richness he/she accumulated during his/her lifetime on Earth. Moreover, in addition to the tradition of being buried with one’s wealth, pharaohs are buried with their servants, since they would also be in need of tending once they pass away to the afterlife.[20]

The value that the ancient Egyptians put emphasis on the concepts of death and afterlife can further be deduced from the fact that they have built Mastabas, some sort of primitive tomb, in order to prevent the disturbance of the eternal rest of the Egyptian royalty. Therefore, it can be said that the importance the ancient Egyptians held for the comfort of the dead has, in fact, caused architecture to progress. In consequence of this value regarding the deceased, they have invented new methods to construct such buildings for dead kings, which eventually resulted in the making of Pyramids. As a consequence, it can be said that architecture has become a powerful tool for the sovereign and religion alike.

3.2.1.2. Imhotep

Imhotep, considered one of the most important people in the history of ancient Egypt, was a pharmacist, physician, and most importantly an architect that has invented the method of stone-dressed building, and using of columns in architecture, that is still in use today. Furthermore, Imhotep is the only person to hold the title of High Priest at that time. However, one of the many important achievements of Imhotep is that he is the individual behind the transformation of Mastabas to Pyramids. These achievements have not gone unnoticed by the ancient Egyptian pharaohs and the society itself. Just as pharaohs are considered to be gods in addition to their personality of being kings, Imhotep also received the honor of deification 100 years after death as the god of medicine and healing. This can be analyzed as the humanization of God and deification of man have occurred at the same time in ancient Egypt. Therefore, it can be said that the existing is subjected to change in accordance with the events that the societies experience.

The reward bestowed to Imhotep may be inferred as the unification of beliefs of Göbeklitepe, where humans can be found in the center, and Stonehenge when the figure of humanity started to leave its place to higher beings. In addition, a period of 100 years that follows the death of Imhotep might be required in order to alter the history in regard to cement the idea that he is, in fact, a god.

3.2.1.3. Necropolis, Ceremonies, Industry for Afterlife

Necropolis consists of words necro, meaning dead, and polis, meaning city to define “city of the dead” where people of the ancient time used as the cemetery. As previously discussed, the ancient Egyptians used architecture to provide comfort to their ancestors and individuals

of high reverence. Necropolis features many mastabas and tombs that host many ancestors of the ancient Egyptians. Furthermore, these Mastabas are sealed after the deceased is buried in order to immortalize them and provide them unsevered rest for all eternity.

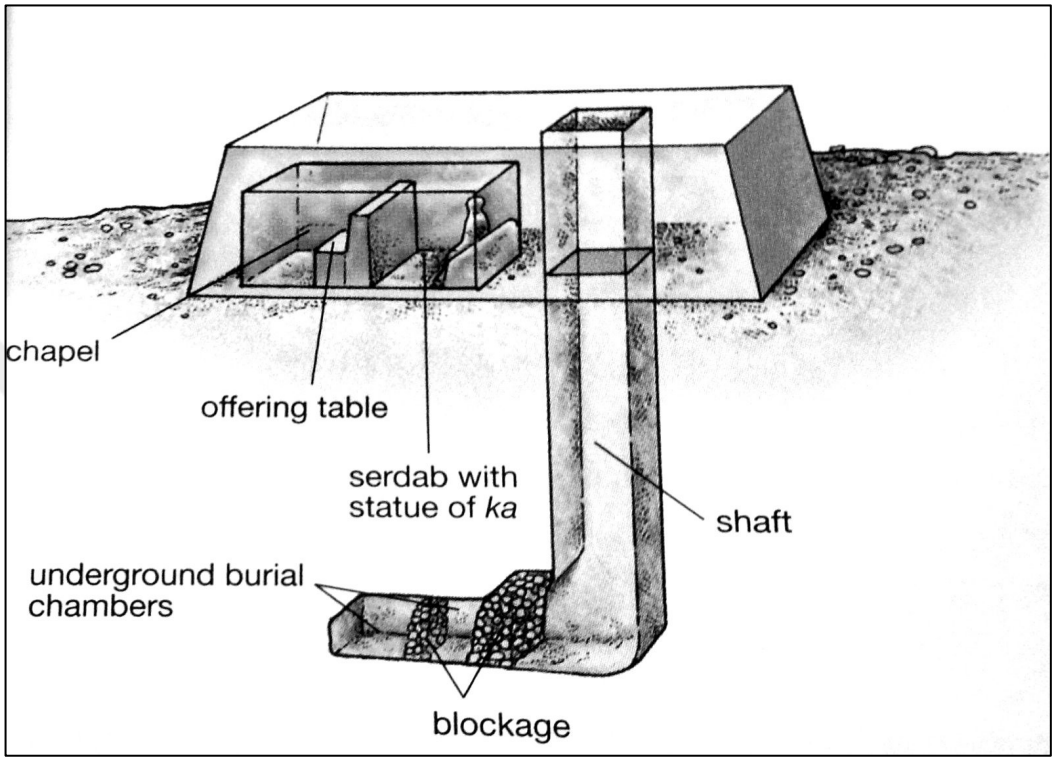

Figure 3.8. Drawing of Mastaba [22].

Then again, as mentioned before in ancient Egypt burial ceremonies have unique importance for society. Before the great architect Imhotep, these ceremonies took place in Mastabas. The absence of storage facilities in Mastabas clearly indicates the fact that they are not temples but graves. Furthermore, the Egyptians supposed that writing and stashing ritual texts in those tombs would eternalize the rite of burial. Subsequently, the discovery of the Pyramids, funerary inscriptions have been found all over the place. In accordance with their beliefs, the common people of ancient Egypt wanted to obtain those rites of passage to the afterlife as it has belonged to a very specific group of people, namely royalty. As a result of this, the privileges of this exclusive class have been usurped by ordinary people who believed those rites and rituals would grant them a better passage to the afterlife [23].Consequently, many private sectors have emerged in order to produce the materials such as jars, wrappings, and limestones used in either the construction in Mastabas or utilized during the mummification process. Subsequently, it can be said that a considerably important part of the economy of ancient Egypt is dedicated to the preparation of the deceased for the afterlife.

Some of the workers dug the earth, shaped the earth, prepared a layout, and implemented it. Artisans designed aesthetically looking sarcophaguses and sculptures demanded by the cults that conduct funeral practices. Whereas others produced incenses that were used for the purification rites, vessels for the organs, and woven linen for the mummies [23]. Therefore, it can be said that the belief system in ancient Egypt not only affected the profession of architecture but also influenced the development process of other occupations and fields.

3.3. BEGINNING OF CODIFIED POWER: LAWS OF HAMMURABI

Mesopotamia comes from the Greek words of Mesos, meaning middle, and Podemos, river, hence meaning altogether as “the land between rivers”. This historical region covers most of modern-day Iraq, Kuwait, southeast of Turkey, and northeast of Syria. This territory was home to many distinct and advanced (for that time period) civilizations. Although it is possible to study the societies in this region separately, this chapter will address them in a unified manner in which Assyrian, Babylonian, and Sumerians have opted for the analysis.

In addition to the belief that the first human settlements are centralized around this region, also writing has been invented there around the 3200 B.C. time period. Although Michalowski[24] argues that there were no metadiscoursal, essay, or philosophical work in the ancient Sumerian scripts, Çığ proves that as a wrong assumption by pointing to the stories written in the old Sumerian alphabet[25].In a story, Sumerians asked God whether plow or pickaxe is favored by him. In response, God has chosen the pickaxe because whereas one could use a plow only to grow food, he/she can use a pickaxe for agriculture, construction of houses, temples, and roads. Naturally, it can also be assumed that a civilization to invent writing could not have been advanced in other forms of technology and literature alike. In addition, the invention of writing has immensely affected the rate of accumulation of knowledge which has resulted in further improvements being discovered. Subsequently, this made politics within the society, the power politics, in particular, to be traced more accurately. Furthermore, the invention of writing might be a consequence of Sumerians’ desire to progress their society above the basic needs such as food and shelter.

Furthermore, the invention of writing has affected monotheistic religions in a great manner. For example, the great flood which is mentioned in the Bible and Qur’an alike, has a

narrative in the epic of Gilgamesh, long before those religions emerged. This is a clear indication that even in absence from the stage of history, Sumerian society, culture, and beliefs can be traced via the Torah and folklore [25]. Furthermore, it can also be said that the scripts of Sumerians have influenced the history and beliefs of other cultures even long after they ceased to exist.

After this period, the Akkadians have captured the territories of the Sumerians and made the whole of Mesopotamia united under a single empire, which is accepted as the first example of such a large state come into existence. Then again, it is also the first time where a central authority can be seen in Mesopotamia. After its dissolution, Assyrians and Babylonians have filled the power vacuum left by the absence of the aforementioned central authority. It can be argued that the Babylonians are, in fact, the continuation of Sumerians since they had inherited the Sumerian language and the culture, as they have also held great importance towards cities. In this regard, world-renowned king Hammurabi of Babylon has brought wealth from each captured city to his capital, Babylon. This has created an era of prosperity that was required for fueling social development. Thus, the necessity for certain social and legal rules began to be implemented arisen.

Figure 3.9. Sculpture of Hammurabi while taking laws from God, BC 1760 [26].

As similar to the ancient Egyptian practice, Hammurabi also used religion to create rules and used them to consolidate political power. According to the Babylonian narrative, Hammurabi established these rules by the divine grace bestowed by the sun god itself, and every member of society was expected to comply with those rules. Therefore, it can be said that the public found it difficult to question their leader who, now, had the faith and political power in his hand. Thus, the subsequent kings following Hammurabi had not only been a figure of political authority but also an important religious symbol similar to the god-kings of Egypt where they are believed to be the sole persons who can communicate with the gods themselves. Furthermore, according to the legend of the Tower of Babel, people wanted to commune with God by building a structure that can reach him. As a response to this effort, God has punished the men with differentiating their languages which made them unable to understand each other, thus, ensured that the tower would never be finished. This can be accepted as another narrative that favors the power holders in that era by securing the exclusive privilege of conversing with the god since people would never try the same thing again. Furthermore, as the society of Babylon used writing, this narrative is passed down to the following generations, further concentrating on the power of royalty. The influences of this story can also be found in the Torah.

Furthermore, unified religion made sure that social discontent regarding the language and race differences are not much effective in diminishing the administrative efficiency since the public had a higher rate of compliance with the laws. Therefore, in this era, religion and religious customs have been translated into numerous different languages in order to let everybody aware of them without any excuse.

3.4. REGULATORY POWER IN ANCIENT GREECE

Ancient Greece is the time period used when describing the city-state era of Greece and their colonies such as the island of Crete, which lasted between 1500 B.C. to 300 B.C. which they become a province of the Roman Republic. Furthermore, ancient Greek society is known for its contribution to humankind with the invention of philosophy, the concept of democracy, and many other advancements that influenced modern ideas to the core. Moreover, the ancient Greek civilization can be accepted as a symbol of development along with ancient Egypt in terms of their contribution to the natural sciences such as mathematics. There are

several important implications of these advancements such as the standardization process of measurements, numerical systems, and modularization which is one of the features of sacred architecture [27]. This indicates the fact that the architecture was subjected to some sort of rules and predetermined boundaries. Therefore, it can be said that the political authority had a solid understanding regarding the role of architecture on materializing thoughts.

In addition, the philosophical thought system used in the ancient Greek civilization had its share in the occurrence of these developments. Especially the Republic, which is written by Plato to describe the best administrative system, might indicate the fact that the ancient Greek civilization had progressed much onward compared to other societies.

Ancient Greek city-states preferred verbal laws instead of written ones. This, in theory, might have been subjected to degeneration and erasion due to the increased population or simply with the passage of time. In order to combat these problems, Draco, which is accepted as the first legislator in Athens, codified the rules of administration. Subsequently, the first checks and balances system over the power has been established since it would have been harder for aristocrats to bend the laws that are written and known by most of the society. Therefore, it can refer to the fact that humans have centralized the concept of power in order to prevent unjust politicians from taking arbitrary decisions in this regard.

Figure 3.10. Parthenon Acropolis, Athens [28].

Worship in ancient Greek society was a core aspect of their daily life. This idea can further be highlighted by the fact that the existence of many structures dedicated to different deities. For instance, the Parthenon, located in Acropolis, is one of the well-protected structures built for the Goddess Athena. Furthermore, the Parthenon was not only an architectural monument but it is also a landmark for the democracy of Athens. Surprisingly, as is the case in the seated woman figure of Çatalhöyük, the biggest temple was dedicated to a goddess. However, despite the fact that there were female deities, women had no right in ancient Greek society, and all the governmental institutions were dominated only by the decree of men at least 20 years old.

That is interesting that the biggest temple building for the name of the goddess but women have no part in the regime. Furhter, political power and rule establishing system control over men.

In 507 B.C. Cleisthenes has introduced the system of Demokratia which is made of Demos, meaning the people, and Kratos, meaning power. Consequently, the power did not consolidate by a monarch, rather, it belonged to the people.

3.4.1.1. Architectural Regulations

When somebody mentions ancient Greece, it is hard for one to not think about its architecture as well. It is due to the fact that architecture had always been a special interest for ancient Greek society. Therefore, as the administrative system has been codified as to written laws, so the rules of architecture were also predetermined by the political authority. These rules consist of the whole design process of buildings as well as determining which material is going to be used. With these limitations, they aimed to establish a general framework of allowed design choices and construction processes and did not allow even for slight changes. This has resulted in a uniformity of design factors where nearly all of the city consists of nearly identical types of buildings. Although these regulations existed before, it was Vitruvius who authored them into 10 books that explains the whole architectural procedure of ancient Greece including the first design for districts. According to those books, Vitruvius also explains permitted schematics for 3 orders of architecture, namely Ionic, Doric, and Corinthian [29]. These orders did not only defined the architectural products at that time but also restrained the design factors. Furthermore, since these structures have also consisted of religious representations manifested in the forms of temples, it is quite ordinary for them to

have predetermined rules of construction. Therefore, it can be said that these regulations postponed the evolution of architecture as well as undermined the role of architects in this context. Consequently, although the political system was subjected to change, the rules of architecture remained untouched. In fact, the books of Vitruvius have affected the architecture of the Renaissance period to the core, which will be discussed in the following chapters.

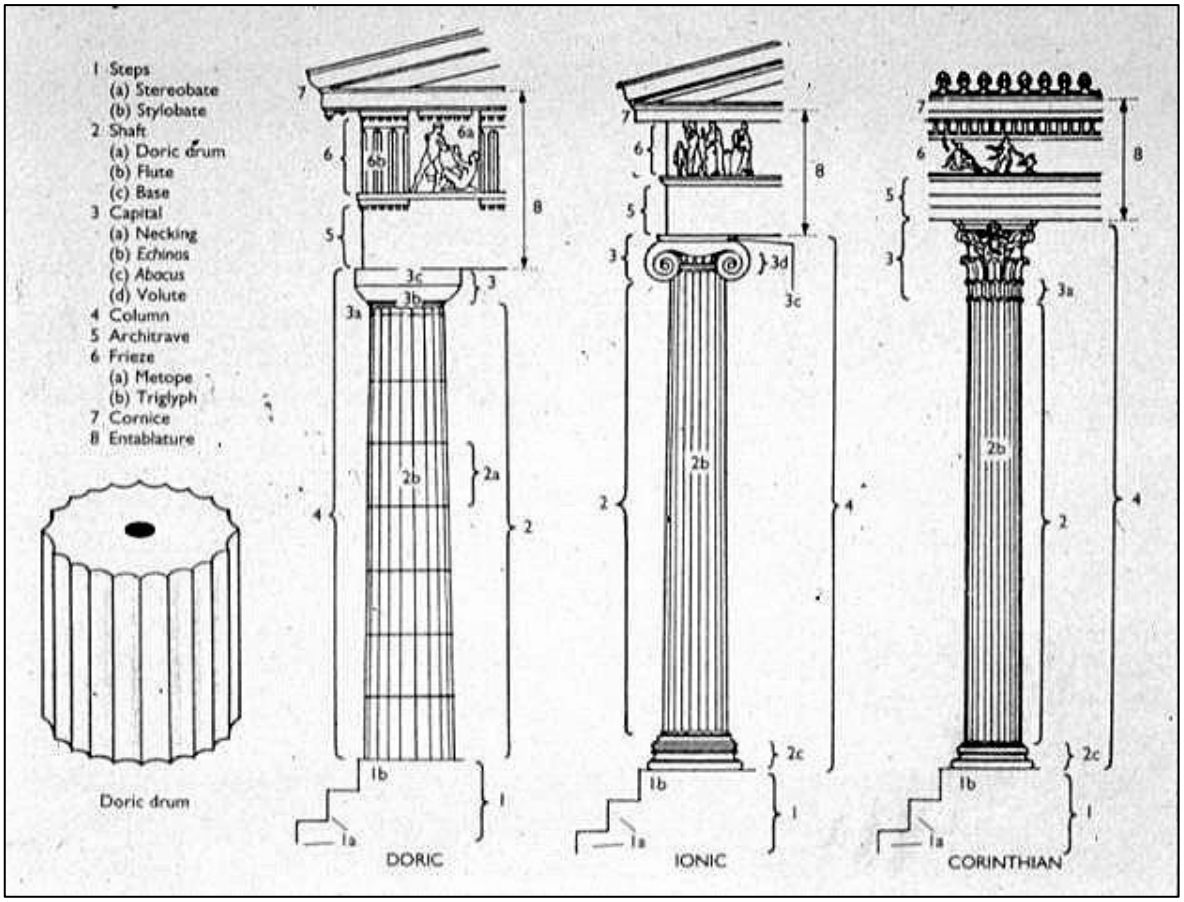

Figure 3.11. Drawing of Doric, ionic and corinthian order [30].

3.4.1.2. Gods from Own Image

Greek gods also ate, reproduced, and felt just like humans did. So, it may be understood that the Greek society has created gods in their own images [31]. Contrary to Egyptian gods, Greek deities behaved similarly to mankind. For instance, when Hera, goddess of family, found out that Zeus, her husband, and king of all gods, cheated her with Medusa, she cursed Medusa with petrifying eyes. This can be used in order to support the aforementioned argument regarding the similarity between the gods and humans in the ancient Greek society

where a goddess has felt the human emotion of jealousy. On the other hand, despite their humanization, power still belonged to the gods of Olympus. This is the first instance since the concept of power has shifted from humans to gods starting with Stonehenge when the transmission of power has started to return to the hands of men. Moreover, unlike the Egyptian myths where gods were described as human-like figures with animals parts, deities in ancient Greece were nearly identical to humankind in general perspective. This may indicate the fact that the Greek society saw gods closer to them. This also shatters the old narrative regarding the gods that they are unreachable. In fact, the ancient Greeks did not believe that the gods have created the universe, and it was the universe that gave birth to the gods. Therefore it can be inferred that humans at that time did not see deities as beings with unlimited power, rather, they saw them as their equals. Similarly, when Prometheus stole the fire from Olympus, which is a mountain that is believed to be where gods live, and gave it to the humans for the sake of their progression, Zeus was outraged and condemned him to eternal torture [31]. This anecdote, then again, refers to the situation where somebody gets punishment when he/she decides to rebel against the holder of sole power. This argument is similar to the myth of Tower of Babylon where people are severely punished for disobeying rules or directly to the higher being itself. Therefore, it can be said that the ancient Greeks believed, does not matter whether it is a myth, political rules, or architectural laws, all citizens are expected to follow the regulations.

As the people of ancient Greece believed equality between the men and gods made it possible for power to be reachable, thus stealable. Therefore, it made transmission of power easily flood from one concept to another. With this emergence of this thought, the concept of power has been taken as an accessible and transitive structure. Thus the power becomes something that can be stolen, sold, or transferred like a piece of land. Furthermore, holders of powers are required to change themselves according to the emerged situations in order to keep the system intact. Humanity had always mentioned the powers of invisible gods in their words, values, and traditions with their thought based on the idea that the world belongs to them.

3.5. HEIGHT OF HUMAN CIVILIZATION: ROMAN REPUBLIC

If one should attempt to make an interpretation about the interaction of the concept of power in the Roman Republic and Architecture; the power of the people should be examined

encompassing the Roman Senate, both as an institution and individual power of its members, since the will of the people has been represented, although not flawless, in the senate. However, it should not be perceived as that the Roman Republic was an actual democracy [32]. Another point regarding the Senate is that although it was a fundamental component of the Roman Republic as a political institution that is without a constitution, its role and authority were unclear. Therefore, the distribution of power between the legislation and the public could not be determined [33]. Furthermore, the Senate consisted of around 300 individuals, eventually rising to 600 after Sulla, and initially was an advisory institution despite the fact that it had primal influence on the politics of the Roman Republic [34]. Interestingly, although presence of written laws were missing, political life in the Roman Republic included clashing, different, and contesting of various perspectives in which conducted via the political participation of the public with voting on the elections of offices alongside with a possibility to get elected to one, acting as a member of the jury during tribunals and so on. Another curious point is that the name of a person often has played a crucial role in determining the results of an election rather than the political campaign that is employed [34]. Consequently, it can be said that these complex political structures are in fact the result of concentration of population to centres of wealth such as Rome itself [33].

Concentration of population into one place must have occurred to authorities that they were in need of a planned city for a problem-free expansion. In this context, the rules of architecture were codified by power itself, most probably in order to standardise the material in which planners would work when designing the expansion areas of the cities [35]. These orders not only defined the architectural products at that time but also restrained the design factors. Furthermore, since these structures have also consisted of religious representations manifested in the forms of temples, it is quite ordinary for them to have predetermined rules of construction. Such an aggressive unification of design would surely bear some consequences for other cultures in the region. As Häussler [36] put in his words:

> The city of Rome herself appears like a macrocosm of the whole empire. Deities from all the provinces were worshipped ; artefacts and products were imported from around the Mediterranean; Roman culture increasingly incorporated elements from all over her empire. Rome's superior role is convincingly communicated by its symbolic architecture of the Principate.

In the context of monumental architecture, the Colosseum is an enormous and methodologically convoluted building that requires wooden structures built in order to complete the construct [37]. This work of architecture was the largest amphitheatre erected in the city of Rome where violent activities such as animal fighting, prisoner executions, and duels between gladiators. Design choices of this construct indicate that one of the primary concerns was to provide visibility for each of the seats [38]. Not just Colosseum, but also structures such as aqueducts, bridges, and baths were agents of power to convey the image of civilization in which underlying reason was to persuade outsiders to submit to the superiority of Rome. Furthermore, the reason why monumentality of building was the primary concern in the architectural policy that is encompassing the whole of the empire might be Rome's desire to create a visible presence of its authority and strengthen the connection between the centre and border territories [39].

3.6. WALLS, CROWNS, AND CROSSES: TRIUMVIRATE OF MEDIEVAL AGES

The medieval era is the time period that lasted between the 5th and 15th centuries and can mainly be observed in the European and neighboring regions such as Asia Minor and North Africa. It is also called the "Dark Ages" since it comes after the fall of the Roman Empire which dragged the region into stagnation in terms of advancement and progression of the society. Subsequently, the kingdoms emerged within this time period in Europe which made the concept of power more visible compared to the other eras in history. It can be accepted as that the power, at that era, is able to shift rapidly between different classes and members of the society.

As the human population has increased exponentially during that time period, the whole of Europe began to be filled with villages. This has arisen the need for administrative efficiency since there were more people required to be managed in order to prevent the discontent and revolts that may threaten the power of sovereigns. Therefore, it was a natural response to give to this situation where feudal lords emerged to assist the ruler with his executive duties of running the kingdom where kings were not able to do all the work by themselves. This did not only create new bureaucratic centers but also give birth to new kingdoms altogether. Furthermore, most of the kingdoms used the system where the privilege of the ruling was tied to the birthright which is also called the successive monarchy. From military to

economic affairs, administrators and commanders were usually selected amongst the members of the nobility. However, in some cases, people with extraordinary ability that has no birthright would have been given the chance for an office at high places. Furthermore, members of the clergy also took responsibility in some countries where the sovereign is pious or in debt to the Holy See.

Oxford Dictionary defines the Feudal system as “the social system that existed during the Middle Ages in Europe in which people were given land and protection by a nobleman, and had to work and fight for him in return” [40]. According to this description, it can be said that the king always depended on his vassals to raise levies during the war and cultivate food in times of peace. This has enabled the sovereign to concentrate the development into the capital province and cement its power over the ordinary people by creating rival political entities within the system since vassals would fight among them until the absolute authority has been established much later in history[41]. However, this does not mean that kings were arbitrary rulers since the outbreak of revolts would endanger their position within the political system. Hence, it can be said that there was some degree of justice provided to the different classes of people.

When the population increased, the needs of the people broadened accordingly. This is, as aforementioned, why a ruler could not control or provide those needs alone by himself and requires different types of political systems to continue its existence as the sovereign over the people and vassals alike. Thus, it can be said that the new system, namely the feudal monarchy, is more complicated compared to the structures that can be observed in previous eras. In these complex political organizations, although the king still owned the whole of the country, they bestowed income and autonomy to his vassals. Furthermore, this system can be compared to the city-states of the ancient Greek civilization without the implementation of democracy.

The existence of numerous vassals with varying agendas within the same system, surely, caused problems to the sovereign from time to time. These problems may manifest themselves as local problems whereas the public, or local lord shows discontent towards the king. Furthermore, loyalty to a vassal does not mean that the son will also swear absolute fealty to the ruler. The promise of new, fertile lands, wealth, or simply more power may affect those allegiances to change towards a more favorable candidate, should it ever arise

within the political domain [41]. Hence, the king and the other members of the royalty require a pyramid-like system.

It is nearly impossible to sustain the system of different vassals with varying agendas existing within the same system without causing a problem.

Although the rulers have created a system to consolidate their powers over their subordinates, including the public and vassals, it was not enough to maintain control throughout the whole country. Therefore, another tool to accomplish this end, namely absolute authority, is the exploitation of religion which had immense influence over the common people as it is both revered and feared by the public. Therefore, it can be said that religion was crucial for kings as it assisted in their cause. Furthermore, the Papacy, in return, received support from the kingdoms across Europe which made it one of the centers of power during that time. All in all, Gothic architecture has been utilized to achieve the goals of both nobility and the Papal States.

3.6.1. Behind the Walls: the Feudal Power

In contrary to the ancient ages where walls are built in order to protect the most important parts of the settlements, in the feudal era, they encompassed the whole of the city. Thus, walls, stone ones, in particular, provided a great degree of safety to the societies within. This resulted in the creation of wealth, an increased rate of development, and long periods of peace times for the people. Furthermore, walls act as a force multiplier as in military regard which increases the time required for the sieging down a city. Thus, vassals were able to send more levies to their liege, as they would not need to leave large garrisons to defend the settlement. The advancement of the technology of building walls has occurred, it can be inferred that security was still a priority at that time over anything else.

As aforementioned, safety provided by walls created riches that attracted the attention of those who, mainly were rival vassals and kings, wanted to obtain for themselves. That is why this defensive technology was widely used throughout the ages starting from the ancient city of Uruk to China to the medieval time period [42]. In addition to the encircle the city with walls, the settlements and castles are built on high grounds in order to increase its defensive value since it would be harder to march armies and siege equipment such as

catapult and siege towers on a slope. Subsequently, this difference in elevation is also an indication of the fact that the hierarchy among the people was already established in this era. For example, lords, who held absolute power over their domain, were living on the terrain above where other people are living. It can be argued that this was not only for military purposes but also projected the power of the ruler as he was living in a higher place compared to the peasants. In consequence, it can also be accepted as the proof for the tangible effects made by the architectural products, namely buildings.

Figure 3.12. Franzensburg Castle. 1801-1836. Laxenburg, Austria [43].

3.6.2. Rule by Threat: Tower of London

Tower of London is a monumental building that was built by orders of William the Conqueror in fear of a public uprising and aimed to quell the rebellion in the minds of his opponents by inspiring fear. The White Tower, which took 20 years to be completed, featured masons from Normandy and stones from Caen, which also had a strong emphasis on Norman symbolism. The tower also represents the last time when England has been conquered. In addition to its original purpose, i.e . garrison, the White Tower had been used as Palace, Prison, and Fortress; as well as hosting the mint and arms manufacturing throughout its history. Another importance of the Tower of London is that executions of

three English queens took place at the location which had impacted Europe to the core [44-1].

In the context of architecture, power is a passive relation that is tied to the longevity of the buildings because structures can, in fact, get B to do something that B would not otherwise do. It would be appropriate to draw parallels in an actual propaganda tower and a monument in terms of the constant conveyance of ideas to a large portion of the public.Furthermore, whether in cooperation or directly under the concept of power, the architecture has always been a crucial factor in creating a synthesis that would eventually drastically affect the change in which reality will be morphed into[44].

Walls signify different kinds of power in the eyes of the people. Whereas other structures designed in order to cause fear to be sensed, fortification technologies, arguably, represent the feeling of security. However, this security also comes with a price, namely enclosure. It is true that fortification provides security against an external force, however, the power (king, lord etc.) can order all gates to be closed which results in imprisonment of individuals. There lies a delicate balance in terms of this symbolism. How much sense of security is opposed to the feeling of oppression? Then again, it comes down to how the authority masks or manipulates the way the power is perceived. For example, if the city is enriched with noticeable architectural works, whether they be oppressive, inspiring, or monumental, the sense of security may mean different things. As such, inspiring buildings may create the perception of "inside of the walls are better compared to the outside". Then again, oppression may lead to a relation between the power and its subjects resembling master-servant affinity.

3.6.3. Inspring Fear: Gothic Architecture and Scholasticism

The etymology of the word scholastic can be traced back to the 'Scholasticus' meaning one (usually refers to student/teacher) who attends school. Plato and Aristoteles were members of this thought, however, after the spread of Christianity in Europe, scholastic thought has been affected by religion [45].

In Medieval Europe, Gothic architecture can be seen as in company with scholasticism. Especially during the time period where the Pope was accepted as the supreme authority above the kings, he had possess immense power over all parts of Europe. In return, kings

were allowed to use the church as a way of establishing content among the general public via the voice of God. Thus it can be said that the architecture has created physical places that would act as a shell for the embodiment of power. Furthermore, in order to affect the public, churches have utilized the fear via statues that inspire fear within the hearts of the people. Therefore, it can be inferred as the fact that the political power has influenced, to realize its own ends, the design, and architectural trends across history.

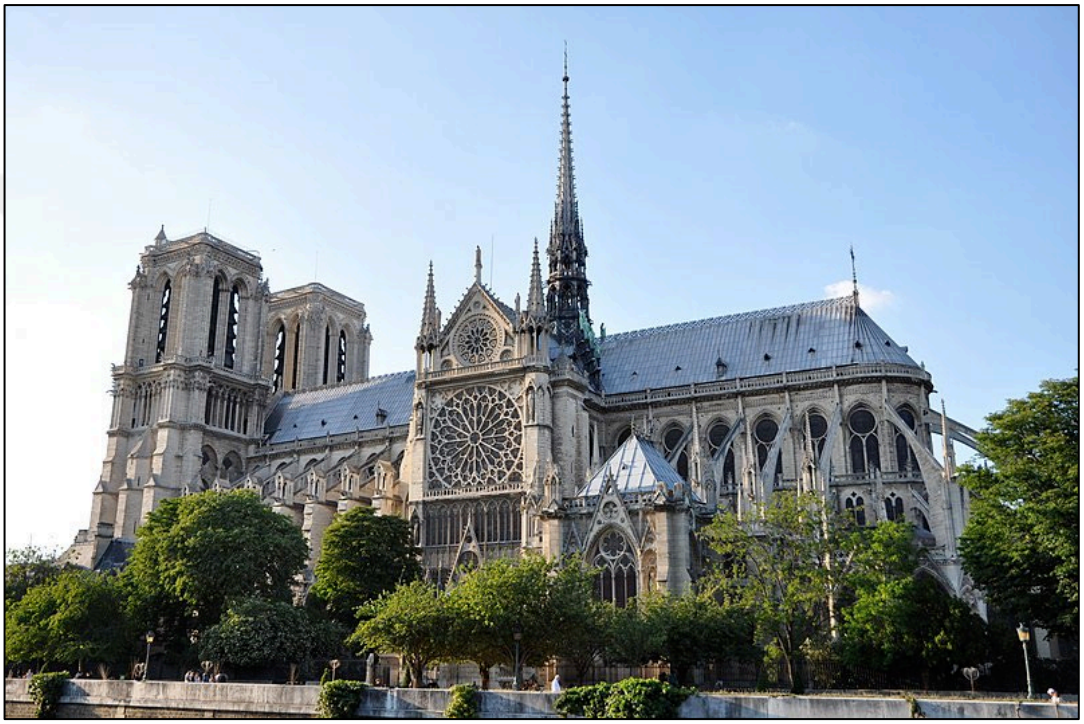

Figure 3.13. Cathédrale Notre-Dame de Paris [46].

One of the core aspects of Gothic architecture is the design factors used in it. In addition to the usage of scary figures outside of the religious buildings, more heart-warming symbols, such as stained glasses that display scenes from the Bible, were used within churches and cathedrals. It might refer to the fact that these visual representations were because the society was mostly illiterate at that moment, hence, required images to grasp the knowledge, narrative, and materialization of the religion. Notre Dame Cathedral is one of the most important examples in this regard. The cathedral possesses the characteristics of intimidation and enclosed meaning, which are the foundations of gothic architecture. Therefore, that is why churches are built in a way in which they are hard to understand when gazed from outside but become much more spacious from the inside. This situation can be used to support the idea that God, in fact, is seen as a scary and strict being, however, once a person

embraces it, he/she finds peace of mind and comfort within. Furthermore, the rose windows of Notre Dame Cathedral are in conjunction with the aforementioned idea. Moreover, the clergy had become in charge of teaching the public the religious rules, rituals, and expected behavior from a good Christian at churches; whereas, in Çatalhöyük society, these are thought at the house by the elders of the community. Therefore, it can be said that a strictly unified narrative aimed to establish a religious continuity for long periods of time.

The gothic architecture contains intimidation figures such as gargoyles which are regarded as the protectors of the church from evil and occasional thieving. In fact, these statues have actually the useful function of collecting rainwater to prevent the damage caused by it.

Figure 3.14. Picture of interior of Cathédrale Notre-Dame de Paris [47].

In addition to the material fear, which is ensured by the inclusion of dreaded figures, the church is also regarded as a place of the abstract form of it such as fear of God, hell, and so on. In fact, although the religious buildings are branded as the location for redemption, people had always been shunned by such concepts of the afterlife, namely heaven, and hell.

In consequence, the dread triggered by the church and the clergy has contributed to the fact that religion had absolute power in the daily life of the society since people were discouraged from questioning it. Thus, kings or their subordinate vassals were able to oppress and control the villagers, aristocrats, military men, and merchants via the practices of religion. That being said, the architecture also being influenced by religion in order to achieve the goals, whether it be political, social, or economic, of the clergy and sovereigns alike.

3.7. ARCHITECTURE AND CHANGE IN RENAISSANCE

The renaissance period, which started in the 15th century in order to facilitate the progress of art, natural sciences, and philosophy as a result of an uprising against scholastic thought. This period has emerged in Florence as the renowned Medici family supported the artists, scientists, and inventors to conduct their works without the oppression of any power including the church and strict sovereigns. As the renaissance was popular in the Italian city-states of Venice, Genoa, Milan, Rome, and Bologna, it has spread to the heart of Europe via Bruges, Ghent, and Antwerp. This caused major changes in academics and society to the core with the translation of the ancient Greek texts. In addition, the religious texts also have been started to translated and distributed to the common people which they did not fully grasp the whole narrative of Christianity where the church imposed, whether the truth or distorted reality, whatever it deemed necessary to influence people in accordance with the world view of the Pope at that time. Furthermore, The most important development, perhaps, that occurred during this time was the introduction of the notion of humanism which, later, caused the Protestantism and reformation movements throughout medieval Europe. In consequence of these developments, the absolute power of the religion started to experience a definitive and sharp diminish which, eventually, resulted in the disappearance of the obstacles that have long postponed the progress of the society.

Figure 3.15. Lorenzo de Medici 1449-92 surrounded by artists, by Gıovannı Gıovannı Da San (Mannozzı) [48].

The ideas carried by the renaissance were so widespread in the Italian peninsula that it was called the Italian Renaissance. In addition to social and cultural progress, this region was also an important center for trade and finance with Genoa and Venice being important ports. Therefore, it was possible for wealthy families of Italian city-states, merchants, nobles, and artisan guilds to handsomely compensate the Renaissance artists to represent their riches and extend their influence via the employment of art, painting in particular. The Medicis is, perhaps, the most renowned of the aforementioned elite, laid their backing to the Renaissance architecture and art. As the artists found their economic constraints are lifted, the movement gained momentum and further expanded into other regions. This, in reality, can be inferred as proof that the power elements were being in use and were subjected to a constant shift on the historical stage.

As a consequence of the aforementioned circumstances, the secularization of society appeared as the separation of church and the state which enabled humanity to return to progress which has stopped doing when the religion had absolute power over decisions regarding what people do and do not. In addition to this oppression, humanity has suffered from the Inquisition which was a tool of the church in order to combat heresy meanwhile both killing innocent people and confiscating their wealth. For example, Galileo, the father

of observational astronomy, is forced to accept the faith of the church that is the Earth, in fact, is flat.

As a tool of the religious authorities to impose its power, Gothic architecture started to be abandoned by many architects at the beginning of the Renaissance era. They quickly drifted away from the old design choices that inspire dread within the hearts of people and searching for new trends that is more pleasing to the eye. This pursuit reignited the influence of ancient Greek and Roman architecture in Medieval Europe and eventually resulted in the Baroque movement which consists of much simpler, measured, and natural design choices. This is the result of the translation of 10 books of Vitruvius related to the principles of architecture, which dates back to the ancient Greek era and is considered as lost knowledge. This is why the Gothic influence started to decline in the renaissance era. Furthermore, these works have guided Da Vinci to the discovery of the golden ratio which he, often, employed through most of his opuses.

Figure 3.16. The Cathedral of Santa Maria del Fiore [49].

Filippo Brunelleschi, one of the most influential and the first great architect of the Renaissance era, had spent years studying the ancient Roman and Greek buildings and texts. When he come back to his hometown Florence, he exercised the knowledge he gained and built the monumental dome of the Florence Cathedral. He was commissioned by the ruler of

Florence to construct a magnificent dome with a 42-meter diameter and an octagonal structure. Therefore, Brunelleschi invented a new method as he realized the fact that the demanded dome could not be built in conventional ways. Rather than using timber buttresses to reinforce the dome, he planned a stone rib body that is exposed to the outside view. Furthermore, two extra ribs were installed to the right and left of these major ribs. These ribs supported the dome from the bottom to the top with the help of medioxumous connections to create a link between them. Brunelleschi raised the dome and sharpened it to avoid the lateral loads from crumbling the walls since the hub where the dome was placed is colossal. Consequently, he accomplished to raise the greatest and most elegant-looking dome ever built.

Figure 3.17 . Dome of Cathedral of Santa Maria de Fiore from interior [50].

Brunelleschi, who is one of the most renowned architects of this era with erecting the dome of the Cathedral of Santa Maria de Fiore, materialized the change in the architecture by radically challenging the principles of the Gothic style. Subsequently, he laid the path for withdrawal of the architecture from traditional trends as he inspired autonomy in design choices to be employed for future buildings. This has resulted in both changing the relation

of power in conjunction with the religious authorities and local rulers, which in this case the Medici family, and ensured the autonomy of the architecture from all other constraints.

After the authority of the religion declined in this period, money has taken its place as the major aspect of the power as, now, it represented the ability of families, individuals, kingdoms to do something they wish to do. Gallery, the Boboli Gardens, the Belvedere, the Medici Chapel, and the Palazzo Medici were built by the orders of the Medici family in order to show the powers which they accumulated via the banking business they run for many generations. The fact that these structures persist in their existence even today may be accepted as that the Medicis projected their power to the modern world.

Figure 3.18. 'Una delle fontane dei Putti'. Boboli gardens [51].

Belvedere, then again, is built in order to provide a sanctuary to the family in case of a threat arises against them. This can be inferred as that the family used its wealth to both shows their power, and establish a safe zone at the same time. Therefore, architecture, which was used as a tool for political power in Babylon, and as a method of imposing the thoughts of

the Church during the medieval Europe period, started to contain both of these phenomena within.

Figure 3.19. Picture of Medici chaphel [52].

Figure 3.20. Frescoes in the Palazzo Medici Riccardi, Florence (1683-85) [53].

In addition to the fact that these structures were built in aesthetic concerns, the furniture and wall ornaments used within were also heavily reflected the significance that Medicis hold for the art. This was possible because the Medici family used its wealth to patron the artists while refraining from harsh treatment which nobility often employed at that time.

In addition to the art, the Medici family followed and supported the advancement of science altogether. However, despite the fact that the religion had started to lose its authority, Medicis could not oppose it directly. For instance, the family had withdrawn its backing to Galileo Galilei after the inquisition put him to trial. This is a piece of clear evidence for the case that the church had more weight in the balance of power between the Pope and the Medicis.

3.8. INDUSTRIAL REVOLUTION: BIRTH OF BOURGEOIS

3.8.1. Modernism and Post-Modernism In Conjuncture with Power Relations

With the industrial revolution introduced in the Europe, humanity started to embrace individuality which increased the mentality of being down to earth. As demands materize in accordance with the needs that brought by the change occurred in the era, the grip of traditional approaches started to be lessened in this process of transformation of society from agricultural one to a more complex, concentrated and relatively more automated society. Consequently, the modernist approach gained popularity due to the change in conditions in which ancient civilizations are found and Medieval Era that flourshed the same thought. Therefore, it can be said that modernism in architecture does revolve around the notion of rejecting the old thinking as a whole, and suggests the demolishment of the these constructs and replace them with new. In this matter, as it is important for the health of whole forest to detect and cut down old trees; it is essential for the safety of the society, the same must be done for the buildings that became a threat due to the corruption because of time passage. In order to examplify this matter, all the material used across the globe, construction sector uses 40% of them. Additionally, 90% of solid waste is produced during the demolishment process. Therefore, it can be argued that concentration of human population, which correlates with the modernism, caused increased rate in which these activities splurred during that time due to the expansion of many new occupations which demands new buildings with new needs.

On the other side, post-modernism is built around the idea of rejecting the values and notions which can be found on the age of Enlightenment, at the same time exhibiting a dedication towards anti-rationality of the era. The reason, as argued by post-modernists, for that way of

thiking is that rationality alone is unable to solve social difficidulities and change the conditions that humanity live on. In that manner, it can be inferred that post-modernism is a skeptical approach which has an against view for the metanarrative, as scholars of the thought call it. Meta-narrative, also known as Grand Narrative, is the process of rejecting the historical experiences and ties, that as argued in previous chapters, that were used to construct a social reality and cohesion to form a "supposedly functioning" [54]

When modernist and post-modernist thoughts juxtaposed together in context of power relations, modernists seem to be conferring with the authorities in terms of realizing their aims of contemplating population and providing opportunities for new sectors and technologies. On the other hand, post-modernists reject all ties related with modernist approach, including their predisposition towards the power holders, namely global capital shareholders and established politician elite.

3.8.2. Cities as a Source of Power

As one of the consequences of the industrial revolution, the cities have gained significant importance since the population would immigrate to the settlements where factories are mainly concentrated. Therefore, the city, which was primarily consisted of nobles, burghers, clergy, and military elite, had a transformation towards more complex communities where a new class emerged, namely the worker class. Therefore, it can be said that the political importance of the city has increased since it would be both center for the upper class as well as accommodating the newly found proletariat. Paul Hirst supports this view with the following sentences: "Cities are not just large towns. The city can only be fully understood as a political institution. It is defined by its role in governance.'' [55] Cities and urbanization policies, in fact, can be qualified as a process that is parallelly progressing with the deeds and demands of the authority itself. Furthermore, it is also true that governments are the ultimate decision-makers in terms of determining regions and districts for investment and the type of the allocated zone (industry, residential, commercial, and so on). Furthermore, since architects, who are the members of the only profession that has the ability and authorization to design structures, they themselves lack the necessary funds to materialize these projects. Therefore, they require financial backing from different sources such as the private sector and the government. Especially in cases where architects design a project that

is in favor of public interest, state subsidies are employed for the purposes of realization of these plans.

Then again, Paul Hirst[55] defines cities as a tool of national projection of economic and cultural power. In this context, cities are not just groups of structures but also institutions that represent the power of states both in the national and international areas. Furthermore, cities were the prime reason which caused the emergence and continuity of the concept of nation. However, as a result of the increased population, and complexity of society, cities, now, qualified as a problem that should be addressed by governments. Moreover, this institution has a crucial role in establishing a common culture for the independent, however, interconnected people. This idea has been evaluated by Paul Hirst as he explains the true purpose of Greek city-states as an “enduring model of the self-governing political community”[56].

3.8.3. Architecture and Oppression in the Third Reich

When analyzing modern architecture and its relation to power, Nazi Germany is a subject that cannot be discarded without mentioning. Because the government of the Third Reich wanted to renovate the German supremacy in terms of power projection via the usage of architecture in terms of building monuments. For instance, if Volkshalle, which was planned but never started construction, would have been built, it would be the biggest space ever built across the globe. In addition to the desire to show power, the Nazi government wanted its ideals to be seen by its people and other nations. Determination of these policies, as it was in nearly every policy in the Third Reich, were made by Hitler himself. This situation is described by Albert Speer in his book by following words: Speer Third Reich

> He worried lest the plans are carried out without the necessary sympathy with the deceased architect's vision. "1' d best take that in hand myself," he remarked [55].

These words, essentially, can be interpreted as that he planned to establish a strict authority over architecture to project the notion of new Nazi thought to the subsequent generations which Hitler imagined to last for a thousand years. In this context, monumental works of architecture and the building of Autobahn are the will of Hitler to show the power of Nazi Germany. Consequently, the public witnessed the political and economic power of its nation.

Then again, Speer, in an attempt to explain the obsession of Hitler with monumental architecture, remarked these words:

> Hitler under the pretentious heading of "A Theory of Ruin Value." The idea was that buildings of modem construction were poorly suited to form that "bridge of tradition" to future generations which Hitler was calling for. It was hard to imagine that rusting heaps of rubble could communicate these heroic inspirations which Hitler admired in the monuments of the past. My "theory" was intended to deal with this dilemma. By using special materials and by applying certain principles of statics, we should be able to build structures which even in a state of decay, after hundreds or (such were our reckonings) thousands of years would more or less resemble Roman models [55].

'Reich fund', which was in the direct control of Hitler to realize his plans in architecture, was used for the purposes of advancement and enrollment of workers for the building structures he wanted to build. However, municipal and state executives were not exactly aware of where this arbitrarily used money originated from. This financial mechanism has transformed into the 'Hitler Funds' in 1937. According to Jescot, this was an attempt to further cement the jurisdiction of Hitler on the decisions regarding the architectural policy [55]. Then again, Hitler's grasp on architecture, in addition to the reconstruction of Berlin and establishing the monumental landscape of a thousand-year Reich, may be interpreted as that he never realized his passion to become an architect himself.

Deutsche Erd- und Steinwerke GmbH (German Earth and Stone Works, DEST) was an SS-owned company that was established on April 29, 1938. This was the institution responsible for providing the required material and workforce for the governmental projects. Furthermore, the company attracted the attention of financial support and interest of SS officers which they utilized in order to realize their personal goals. Furthermore, the workforce of this establishment mainly consisted of forced labor, i.e. enslaved Jewish population which was used as workers to realize the architectural policy of Hitler. Then again, this has increased the pace for rebuilding Berlin.

In addition to DEST, Berlin architects assisted the SS in terms of the reconstruction of Berlin.

Thus, the interrelatedness of DEST and Berlin architectural policy extended as well to the involvement of Berlin architects with the SS.

Thus, it can be said that DEST attributed the Berlin project as a major achievement because of the concentration of resources which were produced mainly by the brickworks and stone-cutting workshops at KL Sachsenhausen and the quarries at KL Flossenbürg [56]. Furthermore, this success is also credited to the use of a workforce which consists of a non-German population that could be pushed to death.

Figure 3.21. Prisoners transporting stones on the "stairs of death", SS photo, between 1942 and 1944 (photo credits: NIOD, Amsterdam) [57].

Furthermore, the construction of the Cathedral of Light (in German Lichtdom), designed by Albert Speer, was one of the monuments built by the Nazi Party which they used as a location for rallies in Nuremberg between 1934 and 1938. This may refer to the inference that the Nazi Party, in addition to the political power, used religion as a tool to consolidate its authority over the people. However, in order to prevent the religious influence from shifting to the hands of the Vatican, Hitler signed Reichskonkordat (Reich Concordat) with the Holy See to forbid the participation of the clergy in politics. It was a necessity for the Nazi

government because it wanted to suppress the other figures of power within the nation. As an example of this, they signed the aforementioned treaty to draw certain lines that put the religion into a framework while limiting its power which had an evident influence over the German population. In consequence, priests and nuns were imprisoned with fabricated reasons and excuses.

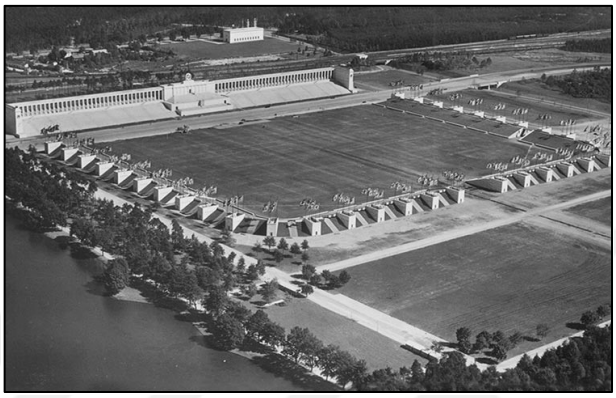

Figure 3.22. A Zeppelin Field postcard, 1938 [58].

Then again, Zeppelinfeld, which was designed by Speer, was used as a location for sports and gathering activities that projected the power of the Nazi Party to the whole of Germany.

Figure 3.23. Picture of Cathedral of Light [59].

Hitler saw old Reich Chancellery (in German Reichskanzlei) unfit to the might of the Third Reich. Therefore, he ordered his favorite architect, also one of his closest friends, Albert Speer to construct a new building that will adequately represent the German Empire. This new building was to be built on the west of Wilhelmstraße, which was the location of the old chancellery and required to be finished within a year in the Voßstraße. Speer employed

over 4000 workers and finished the project before the deadline is over which impressed Hitler. As a consequence, the renown and reputation of Albert Speer have increased throughout Germany. In addition, just before the construction for the project has begun, Speer has been degreed by Hitler as Generalbauinspektor (GBI), meaning 'General building inspector for the Reich capital'. Therefore, the office of Speer become the most influential decision-making mechanism in the German building economy. This can be inferred as the reward that architects who obeyed the authority. Furthermore, it is possible to draw parallels between ancient Greek and the Third Reich in terms of centralization of architectural policies and unchangeable mentality which prevented novelty in structures. As a consequence of consolidated authority over architectural decisions, the rebuilding of Germany, Berlin, in particular, gained significant momentum.

Subsequently, the necessity for establishing a continuous representation of the authority, the image of power in Germany, namely the Nazi government, increased the importance of architecture. In addition, according to Speer, the true goal of building a new chancellery for the Reich is to relay the spirit of his time and his ideas to the next generations of the thousand years Reich (55). This can be analyzed as that Hitler, who had an admiration towards the ancient Roman architecture, used architecture to project his ideals to descendants of the German population as Romans did in their time with the buildings they have constructed. Furthermore, this obsession can be inferred as the longevity of his plans towards the future.

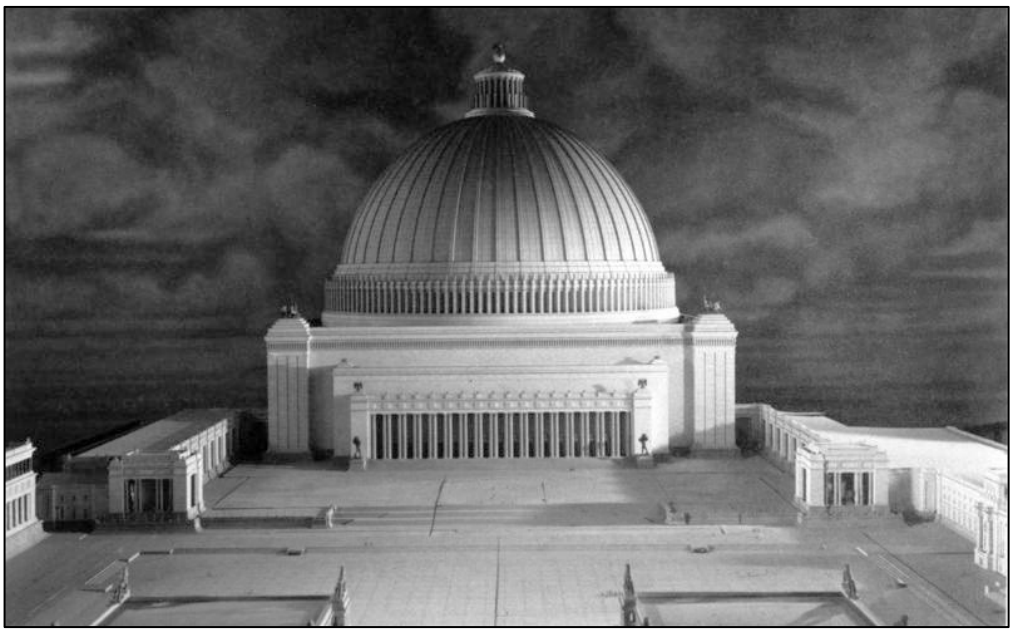

Figure 3.24. Model of the Große Halle, Volkshalle, Albert Speer [60].

In the 21st century, with the development of material and carrier system technologies, which have had their share of technological developments, architects have been able to start working more freely, especially in larger openings.

But it is obvious that even this freedom was not enough to eliminate the sterility of the architectural profession in production. This has resulted in the creation of technological design factors by means of renovation within the architecture itself.

Starting from Renaissance and the industrial revolution (which is still ongoing under the notion of industry 4.0), humanity developed new specialitalization areas, and continues to do so with passage of time. As Vitrivius pointed out the fundemental requirment of being an architect as a person who " multifacated master of whole process", implications of this in modern architecture can be traced to the need for cooperation between disciplines of architecture and engineer. This puts architecture on the center of a web of inter-disciplinary and multi-letarel practition of the art. The functionality and importance of architecture, from the beginning of 20th century onward, greatly enhanced due to the complexity of the technological, social, political and cultural developments such as two world wars followed by a cold war that endangered the whole of human population. Another, architecture has gained importance during this period of time because of the supply and demand relation which caused by the proliferation of human population across the globe.

An additional point to the argument regarding the role of architecture in 20th in context to the power relations is that some architects have become an idol, possibly due to the designing iconic sturctures. (Sykes, 2010). Then again, as discussed in the previous chapters, it is not a recent development that architects gained some level of fame. Furthermore, it can be said that the architecture continued to serve authorities such as state in this period of time. (artun 2012).

However, changes occuring in paradigms of design and production caused some scholars to put forward ambitious insights about the future. For example, Kwinter (2003) argues that possible eradication or shift in understanding of the profession of architecture, which theorised to be evolved to be the designer of social relations instead of constructing buildings. Consequently, architecture said to become more like a programme designer. These ideas eventually created the notion of "architecture without architect". For instance, architecture in the virtual world, namely metaverse architecture can be one of the best

examples for the referred concept. Then again, in the real world architecture, the architect is center of a multi-discipliner web, as discussed before, and the person has many advisors around. However, in the case of virtual architecture, the architect is in a condition where he/she merely entitled to assist and guide other individuals in the design period. As a consequence of these developments in the field, it can be argued that the knowledge and technology has a direct effect on architecture itself. In this context, as internet based virtual environments spread all around the world, the concept of “materialization” decline in importance whereas “realization” gains popularity, although the definition of reality getting blurred in the process and raises the question of “which reality?”

3.9. ARCHITECTURE AS A METAFORIC SYMBOL OF POWER

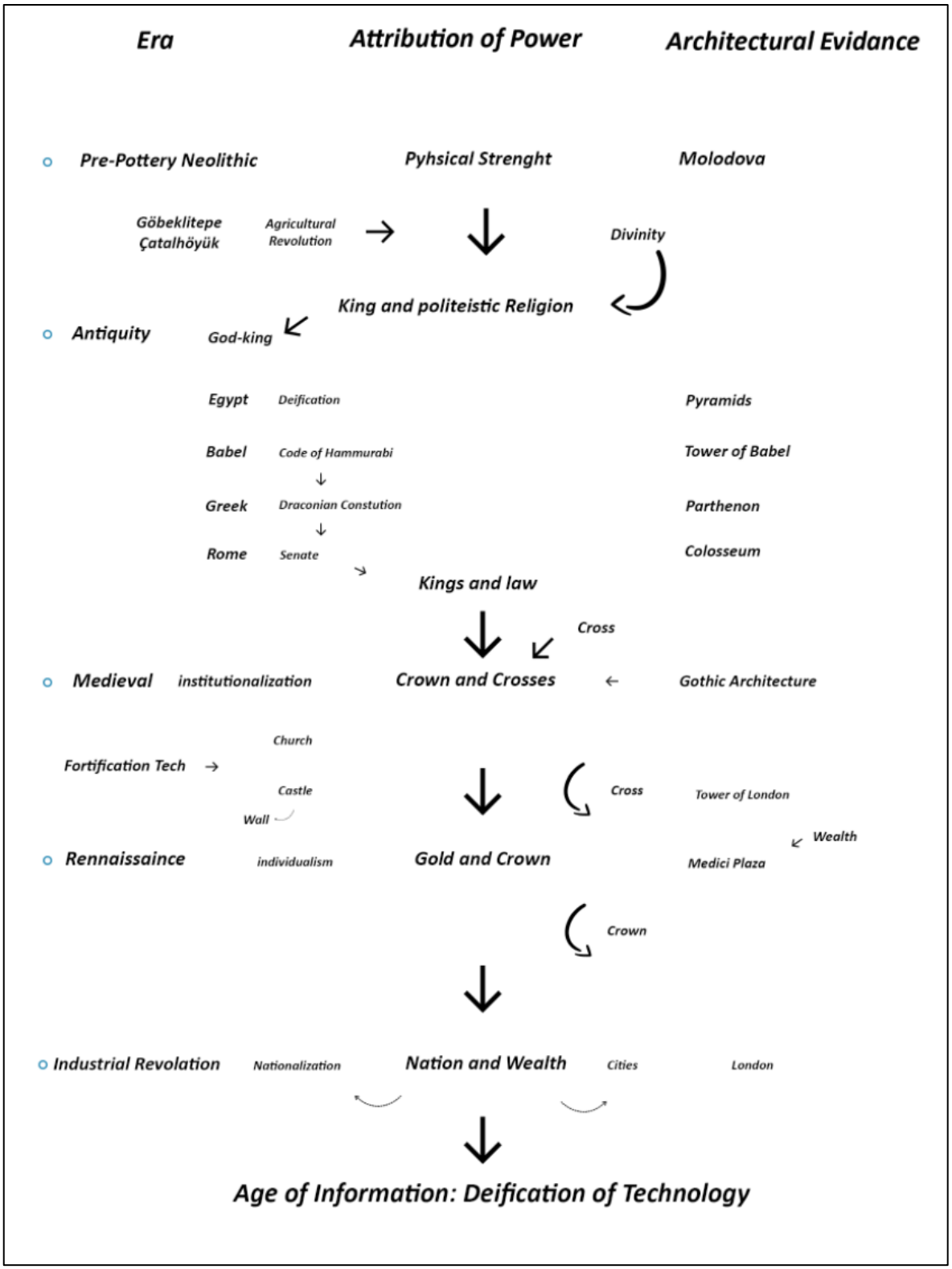

Figure 3.25. Power mechanisms and architectural evidence diagram, created by author.

To begin with, the formation of human societies were based on the hunter-gatherer living style which immensely required humans to be strong, agile and on their watch in order to survive. Therefore, the manifestation of the concept of power emerged around that time where people began to attribute it to abstract concepts. For example, animal bone, an abstract concept on its own, has become the symbol for representation of one's hunting ability of taking the life of its prey against its will Therefore, it can be said that power, in the beginning, is perceived as physical aptitude of individuals, mainly measured by the strength, agility, and shape of the body. On that stage, architectural evidence of this situation can be accepted as Molodovas where design factors began to incorporate with power when people used animal remains to project their status in the society.

However, as humanity discovered irrigation and cultivation, all the paradigms regarding survival, in which power played an immense role, have been subjected to a drastic change. Agricultural revolution, or settlement, caused humanity to grow more food than necessary which, subsequently, resulted in rapid increase in population. As a consequence, growth in sheer numbers of the public is required for an organised society in which some rights and responsibilities are distributed accordingly. In this era, the first roots of the religion can be found which coincide with the settled lifestyle. All in all, the concept of power has experienced a shift from individualistic determinants to a more social and cooperative approach.

With the aforementioned development, power belonged to polytheistic deities and their so-called embodiments, namely god-kings. This tradition can be traced back to Ancient Egypt where pharaohs reigned as “god-kings” where the power is uncontroversially exercised by the royalty. Power of these god-kings were so absolute that Pyramids, the biggest ever built structures at that time, were built in order to honour their souls in the afterlife. In this case, it can be said that the power developed through a process where the society experienced a common narrative via prolonged transmission of myths; meanwhile glorified by exposing the public to the sight of colossal architectural projects/symbols such as Pyramids.

In addition to Egyptian culture, the northern societies, namely Babelyonian, Greek, and Roman, invented new administrative technologies that would allow them to codify the relationship and responsibility between the power (authority) and the public. This phenomenon can be seen in Babylon as the laws of Hammurabi where “eye for an eye, tooth for a tooth” principle is preferred to maintain social order and justice. This, then again,

manifests itself from top to bottom where these laws have been legislated by the king himself in the name of the god. However, on the western side, Greek culture, primarily the city-state of Athens, instituted what it seems to be the first constitution ever written by men: the Draconian constitution. At this point, the power, in a way, is subjected to a set of rules, checks and balances in a convention of people at forums. Even though power is dedicated to polytheistic deities; these "gods" were made out of human's own image. This culture directly affected the Roman system of government and subsequent projection of power. Moreover, the cultural exchange resulted in a community where its members, i.e. citizens of the Roman Republic, shared greater freedoms, rights, and constitutional guarantees in which the upcoming era, namely the Mediaeval Age, would not likely provide its members. Therefore, it can be an indication that the laws of humans suppressed the laws of gods, and subsequently, the laws of monarchs who (as can be seen in ancient Egypt and Babylon) use religion to cement their power. Then again, being the monopoly in the legislative process, the senate can be seen as the primary figure of power by the public. In conjunction with the previous argument, it can be put forward that the Colosseum, in which both senators make public appearances, and sometimes make decisions on who lives or dies. Then again, as the Colosseum is designed in order to convey the power of the Roman state, and provide entertainment by, often, resulting in death of gladiators, criminals, and animals. In addition, the first signs of planned urbanization, along with the other hellenistic cultures, began during the Roman Era. It was, yet another, sign of power's influence over architeture and its works that are used to create a thousand years lasting structures. In consequence, this era has contributed to humanity with the formation of institutions so solid that they would last for centuries. This development would shape the next couple of centuries via institutionalised religion and even more complex power relations amongst the system.

Mediaeval era began with the dissolution of the Roman Empire during the 4th Century A.D. and sparked an age of oppression. First of all, the power vacuum created by the fall of the empire is filled with local lords who were able to obtain control over the territory and the people along with it. These lords were able to hold their power due to the improvements conducted in the fortification technology. Therefore, it can be seen that the power balance between kings and feudal lords was flatter rather than steeper. This might be the answer for why the concept of private property has started to find foundations in political philosophy. Then again, in this era, the religion has become structurelized in a hierarchy which can be

inferred as a wave of institutionalisation affecting the one of the most revered authorities of that time. This allowed the church to control means of propaganda in which the church uses in accordance with the goals that clergy class put loyalty it has dedicated to. Furthermore, from an architectural point of view, Gothic structures have been employed by the christian sect can be explained as the usage of fear-inspiring buildings in order to ensure the loyalty and piety of the public. In addition to the church, kings hold great importance in the context of power. Various different kings have utilised monuments to affect the direction in which the power is perceived. For example, the Tower of London has always been a figure of tyranny imposed by kings, and expanded as the power gets more and more centralised. All in all, this era can be summed up as the disposition of monumental structures (Cathedrals, prisons, castles, churches etc.) to convey ideas that would shape the public opinion to an extent where the public is forced to submit in face of either crown or cross in a way. On one hand, there is fear of imprisonment in this world imposed by political figures; on the other hand, there is religion which presents a dogmatic projection where an individual is threatened by an eternal suffering in case of deviancy from the words of the church. Both actors in the domain of power had utilised architecture to press and validate their claims and used as symbolistic approaches. However, because of the fact that they were dominant powers, they, naturally, had to cause the emergence of opposing figures of power. Soon, the era was disrupted by these opposing forces which resulted with the occurrence of Renaissance.

The Renaissance is the rebirth period of Europe, and return of Greek culture to the scene of history. In this period, the importance of religion began to be questioned because of the scientific discoveries and liberalisation of art. Moreover, due to some developments in financial sectors, primarily in banking, sailing, and trading, allowed individuals to amass considerable amounts of wealth. This has further contributed to the increased scientific discoveries in that period. Because individuals started to obtain much more influence compared to any past point in time, it allowed them to twist the architecture to their bidding to sanction their own power to the society. One of the best examples in this case can be the Medici Cathedral and Medici Plaza in Florence. This alone can be a valid indicator for the fact that the balance of power within the political system between individuals and other authorities was already starting to flattening. This period eventually resulted with the emergence of the industrial revolution.

Industrialization of human societies brought new challenges for architects especially when vertical expansion of buildings were required because of the concentration of population near factories in order to save time. In this context, when power was in discussion, cities were main actors of the topic due to the fact that, now, with the increased economic capabilities provided both the national manpower and production output via machinization. Here, it can be seen that architects have, either willingly or via employment of the power, created those economic juggernauts. Cities such as London and Paris are the first ones that have been affected by this technological change and consequently first of the cities that encountered the problem of "proliferation" of its extent. This convention of the population in a limited space caused the emergence of nationalism which demanded because of the need of an upper-identity that was crucial to glue the society together. Eventually, cities enabled humanity to develop unpreceding capabilities such as electricity, computer, atomic energy, and soon full automation, metaverse, and many other futuristic developments that we are unable to utilize right now.

From elaborated persspective of this thesis, concept of power and using architecture as a symbol of these power mechanisms will be used as an analyzing method for the discussing the case study, Nanopass.

4. DEIFICATION OF TECHNOLOGY: AGE OF INFORMATION

Increase in the haste in which technological developments are realized and diffused within the public caused fundamental changes to occur in the whole of society. For example, automation, which provides fast, efficient, and near flawless production of goods and services, has started to take over human jobs that were not possible to be replaced by machines a couple of decades ago [62].

In the context of this research, architecture and cyber-space design studies began in the late 1990s and eventually evolved to a stage where parametric architecture has been the basis for designing digital environments. Christopher Alexander, who released Pattern Language in 1997, proposed that technological devices that are capable of assisting humans in designing from micro (house) to macro (cities) projects. Built upon fundamental principles of Pattern Language, Sims (2000), a video game that enables players to recreate the environment in which their characters would eventually "live on" [62].

In addition to the aforementioned point, individuals holding some sort of authority within the context and limitations of the game started to establish the concept of a power in the virtual world. Holders of this newly emerged power, in fact, do not possess it but only use reflection of its true potential. This is because companies hold the ultimate authority to make changes in games in which producers still hold the concept of power, even in an imaginary world. In 2018, worth of World of Warcraft, one of the most popular massively multiplayer online role-playing games, in-game money became more valuable compared to Venezuelan Bolivar [63]. Then again, decline in creativity, which might be caused by the authority to withhold the spread of an uncontrollable domain of influence, begs for a core change [652]. This change has already started with the crypto currencies in which anti-establishment system that has no supervising authority, namely Etherium.

Blockchains operate similarly to nested grids or local area networks (LANs); they are merely linked together with other devices sharing the same program. When a user wants to access one of these peer-to-peer (P2P) through a web browser, one must utilize a special software libraries such as Web3.js to operate on an application's front end (the graphical user interface as seen in a browser), via JavaScript APIs, to its other hand, namely the blockchain.. In Ether Network, users are able to create financial contracts, which are considered as smart, with

other users inside the system. This allows individuals to explore a world that is digital while interacting with other people in terms of economic activity.

4.1. STUDY CASE: NANOPASS

Nanopasses project is a non-fungible token (NFT) project that is distributed within the Ethereum network. The main goal of NFT projects is to create an ecosystem that will be the foundation for even more developments rather than profiting in the short or long run. One of the leading in the NFT industry, Nanopass project is trying to provide an experience solely based on fictional environmental designs that users might not witness for centuries later. These designs took place in 5 themes, namely Eastern Gem, Space Station, Underworld, Fantasy and Cyber-punk.

With its own currency, Nanopasses may be credited for the establishment of a virtual circular economy. Aforementioned environments do produce their value in the currency of the system which provides users with an opportunity to spend this money in other projects or different contents. In this context, it can be argued that the executives of the project used architecture as a symbol to convey ideas that can persuade people to put their money, and in conjunction faith, in the project. As discussed throughout this research, since the industrial revolution the money is a direct representative of power, in this case it is Ethereum compared to the gold, or USD in the past. Furthermore, this idea can further be elaborated through the introduction of the concept of “Nft Whales”. An NFT Whale is a person who holds a considerable amount of Etherium as NFTs in their inventory. So, if it is juxtaposed in a conjunction that resembles the model that has been induced from deliberations on the 3rd chapter; Virtual architecture has been used as a means to provide unequal distribution of power within the system. However, this time, architecture itself influenced the power relations within the system rather than assisting authorities to cement the concept. Additionally, it can be put forward that the liberalisation of architecture, in both sense of physical boundaries of the real world (i.e. capabilities of an architect alone) and unchained relationship with the power (as discussed before), will be achieved in the metaverse. You can find examples of said images and their worth in Ethereum.

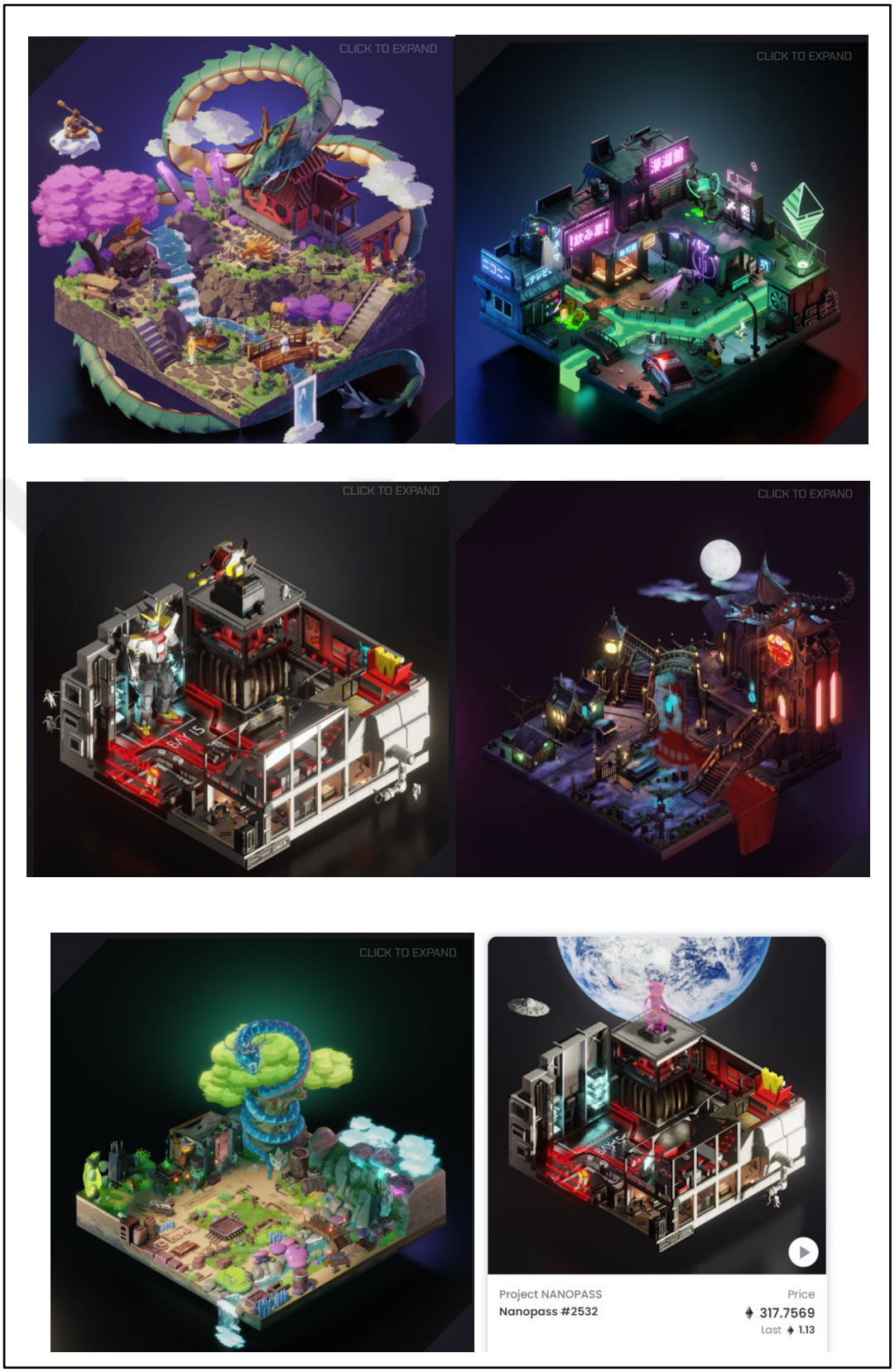

Figure 4.1. Row 1, column 1: Eastern Gem. Column 2: Cyberpunk. Row 2, column 1: Spacestation. Column 2: Underworld. Row 3, column 1: Fantasy. Column 2: Price of the ‘Space Station’, approx. 1M $ [61].

Along with the project of Nanopasses, O2 Lab, which is considered to be a sleeper project, emerged. O2 Lab soon enough become a hub encompassing Nanopass along with many interconnected projects such as Phantom Network (PXN) and other NFT Keys.

Nanopass is a project that features an early access experience that doubles as a plot of virtual land in the Nanoverse. Each fictional design is procedurally generated from a base set of 22 unique and animated assets. Passes grant weekly Black Boxes in which ownership of a pass gives 100% chance to get an allocation in the private presale for Phase 2 of the larger project [61]. Therefore it creates a tendency amongst the base of the project to hold the virtual properties they have minted into the blockchain. In this context, although producers have absolute say in the future of the project, they have no influence whatsoever on the rights and preferences of the users. Consequently, because the users have final say in the price of the products, it has created a virtual environmental fiction that can be considered as a new domain of power for individuals.

In an attempt to understand how the founder of Nanopass interprets the shifts in the paradigm of demand during the age of information, two questions have been asked in relation to their design choices and reasoning behind them.

Question 1) Did you aim for individuals to establish a deeper bond through the project through places?

Answer 1) “We decided to go with the land/world project as we believe it can help integrate more variety of assets in the future (such as our phase II agents to exist in these worlds). We also have the idea of implementing tokens to develop assets within these 5 different themes that allows the user to have full customization of their own choice. The idea is to provide a variety of themes as everyone in this space has differing tastes. Imagine clothes style, people prefer different colours, lengths, size, style etc.”

This can be interpreted as that the executive mind behind the project understands the changing dynamics of the demanded increased quality and variety in the product digital world. [64]

Question 2) Will users be able to interact directly with structures at some point? (Virtual places to visit)

Answer 2) “We aim to build an ecosystem where users can interact. The idea of bringing the physical world x digital world is inevitable and we believe that such value exists.”

Then again, the founder is planning to bring an environment that users can interact with which can be inferred as being one of the architects that build the metaverse space. Also it indicates the fulfilment efforts to obtain qualities of Web 3.0, namely social web, and Web 3D [64-65].

4.2. SYSTEMATIC STRUCTURE OF NANOPASS

In a subsequent shift in the perception of power towards money, technological development gained pace. In the light of this advancement, demand in information and computing technologies, as well as big data analytics, increased exponentially. Furthermore, analytics of complex data, via big data and artificial intelligence became feasible that would otherwise be not possible. One of the main effects of these developments, along with the adoption of new VR technologies in the future, will be felt at the heart of the gaming industry. In the virtual worlds of online games, dubbed as Massively Multiplayer Online Role-Playing Games (MMORPG), users were connected to each other in an online network. Although, the growth in number and variety of these types of games were achieved in the beginning, after a saturation point determined by the capabilities of industry has been reached. Subsequently, the demand for original ideas increased at an unprecedented speed and impact. [65] Therefore, as capabilities in the sector are increasing, reality of the virtually created environments may pose a shift in the value of physically experienceable habitat. However, this was not enough for ending the creativity crisis in the gaming industry because only big companies are capable of producing hyperreal VR games. Then again, with the introduction of web 3.0, the design will be able to be made by amateur or semi-professional small teams. This will allow more and more entry to the market as the barriers lift one by one. Subsequently, metaverse became a possibility both in terms of demand side and practical feasibility of the projects.

Compared to the traditional MMORPGs, the metaverse is presenting users with some rights which foremost can be attributed to the right to influence the environment that they have experienced. This change can be explored via the concept of NFT that had a primary effect on the distribution of power, inclining more towards the user base. Not only because of

rights, but also the possibility of profiting in the virtual world, NFTs attracted a considerable amount of volume traded in Ethereum which can sum up to hundreds of thousands dollars exchanged between users each day .

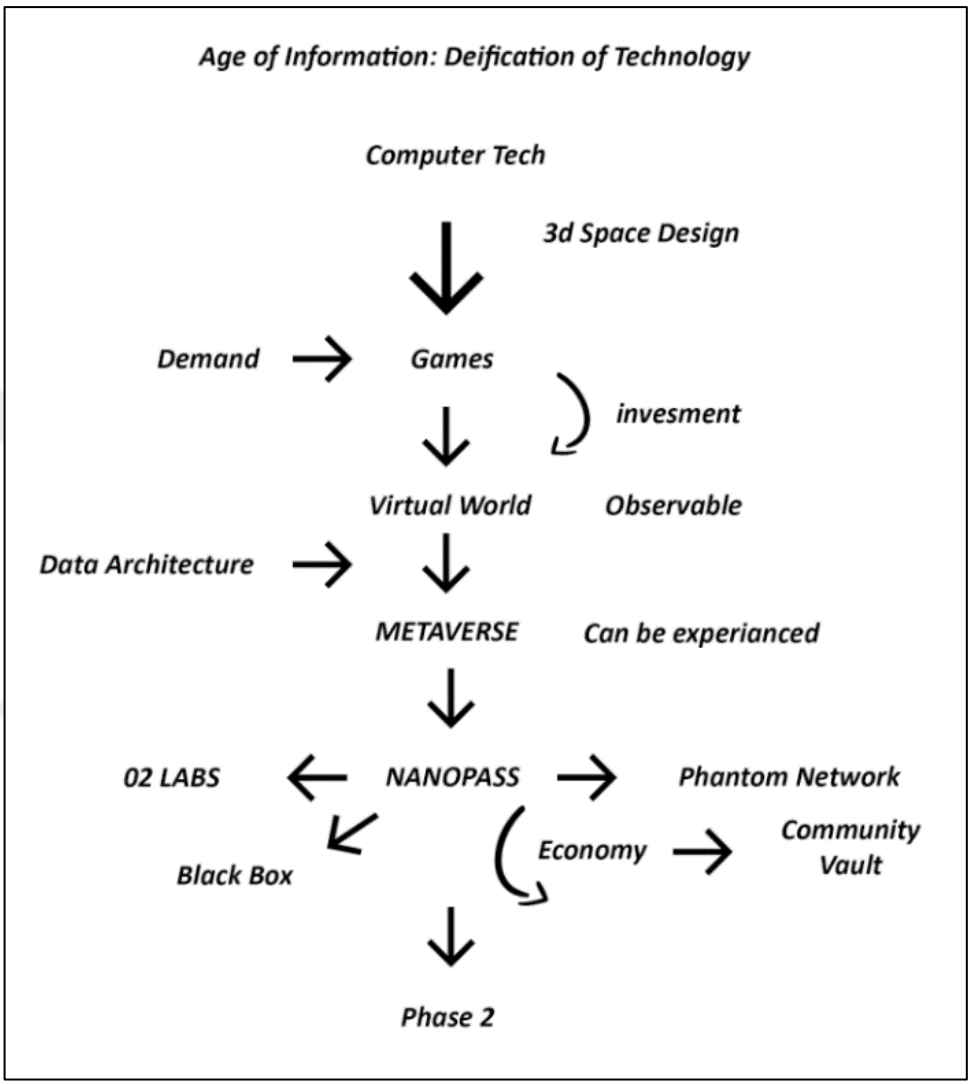

Figure 4.2. Nanopass relation diagram, created by author.

In this context, the right to hold digital property and variations in their value affects the power distribution in the system. It can be thought of as owning a stock share, however, NFTs represent a manifestation of conceptual ideas in a form of image, at least for now. Then again, the Nanopass emerges as an actor where it gives power to the individuals via giving the right to own the environments which other people will be experiencing.

This system also faces the same challenges that were encountered during the mediaeval age and industrial revolution which appeared in a form of need towards sustainability of the

ecosystem. Additionally, because of the fact that NFT transactions are happening within the Ethereum network, this allows projects to gather a fee from every transaction. This fee is transferred to the vault of said project which further encourages the holding of the image itself in the inventory. In such environments, since individuals can earn money via buying or selling, a sustainable habitat is ensured for the growth of the metaverse, at least for the time being.

This multi-layered project has tried to create a sustainable economy via creating its own currency, namely Fragz. Consequently, they have created their own market, also their own supply and demand cycles. As it has always been appretiated by the authorities, the continuity and conditional change can be analyzed in the context of evolution of Web 3.0 in which Nanopass is a quintessential.

Negroponte (1998) suggests that the "digital revolution is over" meaning that we are living in a post-digital era that is so integrated in social life which causes humans to be unable to distinguish the digital and non-digital eras. In this context, post-digital era means that the acceptance, or bowing down, to the hegamony of computers which deeply effect daily life of society. Implications of this in architecture can be found with the examination of Generative Design (GD) idea that developed around employment of an artificial intelligence to assist future architects. Therefore, it can be argued that the future of architecture is more incined towards a free-from human constraints and values. As in this case, architects will not be designing the forms, but they will be designing the "process" that guide the whole construction from beginning to an end.

4.3. AS DISCUSSED IN AFTER

Although the metaverse is virtual, it does not necessarily mean it is not real. Its real life consequences can be measured via both economically and socially. Therefore, the power relation is also a real mechanism and, then again, measurable in the context of projects that an individual holds. As indicated in the previously discussed model, power is cemented to the public via utilisation of architecture. Methods such as manipulation, oppression and persuasion were employed to convey images of power. However, as the model of the metaverse is analysed in conjunction with the technologies it comes with, it can be seen that virtual architecture will be in charge of designing environments that are appealing to the

users without any constraints besides the value that is determined by the users themselves. This will allow user oriented design choices to flourish in the architectural movements which will be more surreal, fantastic, and science-fiction based images according to the ever expanding human imagination and creativity. Although it is discussed that the creativity crisis was apparent, it was related to the supply side of realisation of ideas; not lack of original concepts overall.

As a consequence, this model is analysed in conjunction with the model that has been presented in the previous chapter. The findings indicate that the formation of metaverse resembles the formation of human civilizations and will be more apparent in the near future. Therefore, it can be said that the metaverse will feature even more complex power relations. However, due to the breaking of the physical barrier, this power relations will be experienced in between the users, which can be drawn parallel to the public, compared to the elites of the society as it has happened in the past. Therefore, as users (public) defers to the power, architecture also follows this, figuratively, rebellion. Free from all constraints, and further liberalisation, individuals began to demand more control over what they want to see all around the environment. Then again, this visual experience should not be physical, or even real, it can be perceived through usage of technological devices that may stimulate sounds, smells, temperature, feeling, and even pain and pleasure at some point. In that case, design of these environments will require thorough planning and visionary implementation since it will directly affect the whole body of the individual. Therefore, it can be argued that the future of architecture will be drawn on not only visual perspective but also aforementioned perceptions. Subsequently, it may be discussed that the ultimate power in determining the reality of the individual experiences will be at the hands of architects in a macro perspective.

5. CONCLUSION

The main aim of this study is to determine the expression of invisible power mechanisms through the element of architecture. Based on these determinations, it is to determine the effects of architecture or its location from a new virtual phase that will enter daily life in the near future.

To begin with, the formation of human societies were based on the hunter-gatherer living style which immensely required humans to be strong, agile and on their watch in order to survive. Therefore, the manifestation of the concept of power emerged around that time where people began to attribute it to abstract concepts. For example, animal bone, an abstract concept on its own, has become the symbol for representation of one's hunting ability of taking the life of its prey against its will. Therefore, it can be said that power, in the beginning, is perceived as physical aptitude of individuals, mainly measured by the strength, agility, and shape of the body. On that stage, architectural evidence of this situation can be accepted as Molodovas where design factors began to incorporate with power when people used animal remains to project their status in the society.

However, as humanity discovered irrigation and cultivation, all the paradigms regarding survival, in which power played an immense role, have been subjected to a drastic change. Agricultural revolution, or settlement, caused humanity to grow more food than necessary which, subsequently, resulted in rapid increase in population. As a consequence, growth in sheer numbers of the public is required for an organised society in which some rights and responsibilities are distributed accordingly. In this era, the first roots of the religion can be found which coincide with the settled lifestyle. All in all, the concept of power has experienced a shift from individualistic determinants to a more social and cooperative approach.

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common narrative via prolonged transmission of myths; meanwhile glorified by exposing the public to the sight of colossal projects such as Pyramids.

In addition to Egyptian culture, the northern societies, namely Babelyonian, Greek, and Roman, invented new administrative technologies that would allow them to codify the relationship and responsibility between the power (authority) and the public. This phenomenon can be seen in Babylon as the laws of Hammurabi where "eye for an eye, tooth for a tooth" principle is preferred to maintain social order and justice. This, then again, manifests itself from top to bottom where these laws have been legislated by the king himself in the name of the god. However, on the western side, Greek culture, primarily the city-state of Athens, instituted what it seems to be the first constitution ever written by men: the Draconian constitution. At this point, the power, in a way, is subjected to a set of rules, checks and balances in a convention of people at forums. Even though power is dedicated to polytheistic deities; these "gods" were made out of human's own image. This culture directly affected the Roman system of government and subsequent projection of power. Moreover, the cultural exchange resulted in a community where its members, i.e. citizens of the Roman Republic, shared greater freedoms, rights, and constitutional guarantees in which the upcoming era, namely the Mediaeval Age, would not likely provide its members. Therefore, it can be an indication that the laws of humans suppressed the laws of gods, and subsequently, the laws of monarchs who (as can be seen in ancient Egypt and Babylon) use religion to cement their power. Then again, being the monopoly in the legislative process, the senate can be seen as the primary figure of power by the public. In conjunction with the previous argument, it can be put forward that the Colosseum, in which both senators make public appearances, and sometimes make decisions on who lives or dies. Then again, as the Colosseum is designed in order to convey the power of the Roman state, and provide entertainment by, often, resulting in death of gladiators, criminals, and animals. In addition, the first signs of planned urbanization, along with the other hellenistic cultures, began during the Roman Era. It was, yet another, sign of power's influence over architeture and its works that are used to create a thousand years lasting structures. In consequence, this era has contributed to humanity with the formation of institutions so solid that they would last for centuries. This development would shape the next couple of centuries via institutionalised religion and even more complex power relations amongst the system.

Mediaeval era began with the dissolution of the Roman Empire during the 4th Century A.D. and sparked an age of oppression. First of all, the power vacuum created by the fall of the empire is filled with local lords who were able to obtain control over the territory and the people along with it. These lords were able to hold their power due to the improvements conducted in the fortification technology. Therefore, it can be seen that the power balance between kings and feudal lords was flatter rather than steeper. This might be the answer for why the concept of private property has started to find foundations in political philosophy. Then again, in this era, the religion has become structurelized in a hierarchy which can be inferred as a wave of institutionalisation affecting the one of the most revered authorities of that time. This allowed the church to control means of propaganda in which the church uses in accordance with the goals that clergy class put loyalty it has dedicated to. Furthermore, from an architectural point of view, Gothic structures have been employed by the christian sect can be explained as the usage of fear-inspiring buildings in order to ensure the loyalty and piety of the public. In addition to the church, kings hold great importance in the context of power. Various different kings have utilised monuments to affect the direction in which the power is perceived. For example, the Tower of London has always been a figure of tyranny imposed by kings, and expanded as the power gets more and more centralised. All in all, this era can be summed up as the disposition of monumental structures (Cathedrals, prisons, castles, churches etc.) to convey ideas that would shape the public opinion to an extent where the public is forced to submit in face of either crown or cross in a way. On one hand, there is fear of imprisonment in this world imposed by political figures; on the other hand, there is religion which presents a dogmatic projection where an individual is threatened by an eternal suffering in case of deviancy from the words of the church. Both actors in the domain of power had utilised architecture to press and validate their claims. However, because of the fact that they were dominant powers, they, naturally, had to cause the emergence of opposing figures of power. Soon, the era was disrupted by these opposing forces which resulted with the occurrence of Renaissance.

The Renaissance is the rebirth period of Europe, and return of Greek culture to the scene of history. In this period, the importance of religion began to be questioned because of the scientific discoveries and liberalisation of art. Moreover, due to some developments in financial sectors, primarily in banking, sailing, and trading, allowed individuals to amass considerable amounts of wealth. This has further contributed to the increased scientific

discoveries in that period. Because individuals started to obtain much more influence compared to any past point in time, it allowed them to twist the architecture to their bidding to sanction their own power to the society. One of the best examples in this case can be the Medici Cathedral and Medici Plaza in Florence. This alone can be a valid indicator for the fact that the balance of power within the political system between individuals and other authorities was already starting to flattening. This period eventually resulted with the emergence of the industrial revolution.

Industrialization of human societies brought new challenges for architects especially when vertical expansion of buildings were required because of the concentration of population near factories in order to save time. In this context, when power was in discussion, cities were main actors of the topic due to the fact that, now, with the increased economic capabilities provided both the national manpower and production output via machinization. Here, it can be seen that architects have, either willingly or via employment of the power, created those economic juggernauts. Cities such as London and Paris are the first ones that have been affected by this technological change and consequently first of the cities that encountered the problem of "proliferation" of its extent. This convention of the population in a limited space caused the emergence of nationalism which demanded because of the need of an upper-identity that was crucial to glue the society together. Eventually, cities enabled humanity to develop unpreceding capabilities such as electricity, computer, atomic energy, and soon full automation, metaverse, and many other futuristic developments that we are unable to utilize right now. Here, metaverse can be understood as the digital projection of post-modernism because it entitled to challenge some core aspects of modernism such as conferring with authorities. In this context, especially the youth is able to construct socities that would otherwise require amass amount of wealth (the capital which mainly held by elder members of the society). That further enables individuals, in the case of this study architects, to design and create entities, projects, and socities without requiring assistance from outside which tends to demand something in return which is profitable for the investors. This has potential to negatively affect the outcome of referred activities.

As explored in the chapter concerning the case study, Nanopass, as one of the early NFT projects where symbolism and influence of architecture can be observed, is a clear indicator for the fact that architects, perhaps for the first time in history, are breaking their bonds from authority. This phenomenon can be evaluated by two standpoints: (a) physical possibilities,

(b) oppression of power. In the first case, metaverse architects will be able to design environments that are physically impossible in the real world which appeal to the next generation of demand in the variety. Secondly, because of the anonymity of the Web 3.0, authorities will become unable to detect users easily, thus discredding the enforcement of power. This being said, the future of environmental design will take place in a more free habitat that will be possible to provide the variations that users demand ever increasingly.

REFERENCES

1. Dahl RA. The concept of power. *Behavioral Science*. 1957;2(3):201-215.
2. Weber M. *Economy and society: An outline of interpretive sociology*. Berkeley, California: University of California Press; 1978.
3. Carvalho J, Bandeira P, Carvalho R. *Power Architecture*. Zurich: Lars Müller Publishers 2017.
4. Göbeklitepe arkeoloji alanı, Şanlıurfa; [cited 2020 19 April] Avaliable from: https://kvmgm.ktb.gov.tr/TR-44420/gobeklitepe-arkeolojik-alani-sanliurfa.html.
5. Klaus S. Animals in the symbolic world of Pre-Pottery Neolithic Göbekli Tepe, South-eastern Turkey: A preliminary assessment. *Anthropozoologica Journal.* 2004;39(1):179-218.
6. Schmidt K. Göbekli Tepe – the Stone Age Sanctuaries. New results of ongoing excavations with a special focus on sculptures and high reliefs. *Documental Prehistorica.* 2010;37(1):239-256.
7. Curry A. Seeking the roots of ritual. *Science*. 2008;319(5861):278-280.
8. Haughton B. 2011; [cited 2021 15 May] Available from: https://www.world history.org/article/234/gobekli-tepe---the-worlds-first-temple/.
9. Animal figure, Göbeklitepe; [cited 2020 14 May] Available from: https://anettein selberg.com/2019/02/12.
10. Oxford Dictionary; [cited 2021 12 July] Avaliable from: **Hata! Köprü başvurusu geçerli değil.**.
11. Haklay G, Gopher A. Geometry and architectural planning at Göbekli Tepe, Turkey. *Cambridge Archaeological Journal.* 2020;30(2):343–357.
12. Scham S. The world's first temple: Turkey's 12,000-year-old stone circles were the spiritual center of a nomadic people. *Archaeology*. 2008;61(6):22–27.
13. Maynes MJ, Waltner A. The family: A world history. New York: Oxford University Press; 2012.

14. Çatalhöyük excavation area; [cited 2020 22 May] Available from: https://www.aa.com.tr/tr/turkiye/catalhoyukte-kazdikca-tarih-fiskiriyor/1569612.

15. Hodder I. Theories and their data: interdisciplinary interactions at Çatalhöyük. In: *Religion at Work in a Neolithic Society: Vital matters*. Cambridge: Cambridge University Press. 2014:337-356.

16. Balter M. *The goddes and the bull*. New York: Left Coast Press; 2016.

17. Picture of seated woman; [cited 2021 2 December]. Available from: https://ozhanozturk.com/2019/01/17/ana-tanrica-mitoloji/.

18. Day C. *Places of the soul: Architecture and environmental design as a healing art.* Oxfordshire: Routledge; 2014.

19. Hodder I, Cessford C. Daily practice and social memory at Çatalhöyük. *American Antiquity*. 2004;69(1):17-40.

20. Teeter E. *Religion and ritual in Ancient Egypt*. New York: Cambridge University Press; 2011.

21. Maslow's hierarchy of needs; [cited 2020 21 May]. Available from: https://www.simplypsychology.org/maslow.html.

22. Drawing of Mastaba; [cited 2020 12 December] Available from: https://blog.stephens.edu/arh101glossary/?glossary=mastaba.

23. Smith M. Democratization of the afterlife. *UCLA Encyclopedia of Egyptology*. 2009;1(1):1-16.

24. Michalowski P. Chapter 1: Early Mesopotamia. In: *The Oxford history of historical writing: Volume 1: Beginnings to AD 600.* Oxford: Oxford University Press; 2011:5-28.

25. Çığ İM. *Uygarlığın kökeni Sümerliler-1.* Istanbul: Analiz Basim Yayin Evi; 2007.

26. Sculpture of Hammurabi while taking laws from God; [cited 2020 17 August] Available from: https://www.dreamstime.com/royalty-free-stock-photography-sunburst-over-acropolis-image2413617https://stringfixer.com/tr/Burney_Relief .

27. Pollard J. The materialization of religious structures in the time of Stonehenge. *The Journal of Objects, Art and Belief*. 2015;5(3):332-353.

28. Parthenon Acropolis, Athen; [cited 2020 17 May] Available from : https://www.dreamstime.com/royalty-free-stock-photography-sunburst-over-acropolis-image2413617.

29. Vitruvius P. *Vitruvius: The ten books on architecture*. Cambridge: Harvard University Press. 1914.

30. Drawing of Doric, ionic and corinthian order; [Cited 2021 24 May] Available from: https://www2.oberlin.edu/images/609D.JPG.

31. Hamilton E. *Mythology: Timeless tales of Gods and heroes, 75th anniversary illustrated edition.* New York: Black Dog & Leventhal Publishers; 2017.

32. Millar F. The political character of the Classical Roman Republic, 200–151 B.C. *The Journal of Roman Studies*. 1984;74(1):1-19.

33. Steel C. Introduction: The Legacy of the Republican Roman Senate. *Classical Receptions Journal.* 2015;7(1):1-10.

34. Byrd RC. *The Senate of the Roman Republic: addresses on the history of Roman constitutionalism.* Washington: U.S. Government Printing Office; 1995.

35. Hanson JW, Ortman SG, Lobo J. Urbanization and the division of labor in the Roman Empire. *Journal of the Royal Society Interface.* 2017;14(136):1-12.

36. Coarelli F, Lombardi L. *The Colosseum.* Los Angeles: J. Paul Getty Museum; 2001.

37. Robinson OF. *Ancient Rome: City planning and administration*. Oxfordshire: Routledge; 1994.

38. Hopkins K, Beard M. *The Colosseum.* Cambridge: Harvard University Press; 2011.

39. Wong A. *The Roman Colosseum: History's great structure series.* San Diego, CA: Reference Pint Press; 2014.

40. Definition of Feudal system; [cited 2021 9 June] Avaliable from: https:// www.oxfordlearnersdictionaries.com/definition/english/feudalism?q=feudalism.

41. Stephenson C. *Mediaeval feudalism*. New York: Cornell University Press; 1942.

42. Mark JJ. 2009; [cited 2021 4 May] Avaliable from : **Hata! Köprü başvurusu geçerli değil.**.

43. Franzensburg Castle. 1801-1836. Laxenburg, Austria; [cited 2020 9 May] Available from: https://www.yana.kiev.ua/news-1842-Zamok-dlya-svadby.-Chast-vtoraya.-Avstriya-Velikobritaniya-Germaniya.html.

44. The story of the Tower of London. Historic Royal Palaces; [cited 3 April 2022]]. Available from: https://www.hrp.org.uk/tower-of-london/history-and-stories/the-story-of-the-tower-of-london/ .

45. Colish M. *Medieval foundations of the Western intellectual tradition*. New Haven: Yale University Press; 1997.

46. Cathédrale Notre-Dame de Paris; [cited 2020 22 August] Available from: https://tr.m.wikipedia.org/wiki/Dosya:Cath%C3%A9drale_Notre-Dame_de_Paris,_3_June_2010.jpg.

47. Picture of interior of Cathédrale Notre-Dame de Paris; [cited 2020 19 June] Available from: https://www.neoldu.com/notre-dame-katedrali-ozellikleri-ve-hikayesi-hakkinda-bilgi-33352h.htm.

48. Lorenzo de Medici 1449-92 surrounded by artists, by Giovanni Giovanni Da San (Mannozzi); [cited 2021 12 August] https://islamiktisadi.net/2021/08/02/de-roover-medici-bank-ve-orta-cagda-bankacilik-baglaminda-faiz-yasagi/ .

49. The Cathedral of Santa Maria del Fiore; [cited 2020 14 April] available from: https://www.gzt.com/arkitekt/dunyadan-ornekleriyle-kubbenin-tarihsel-sureci-3578687.

50. Dome of Cathedral of Santa Maria de Fiore from interior; [cited 2020 03 November] Available from: https://tr.wikipedia.org/wiki/Medici_%C5%9Eapeli.

51. 'Una delle fontane dei Putti'. Boboli gardens; [cited 2021 3 January] Available from : https://www.wikiwand.com/it/Giardino_di_Boboli.

52. Picture of Medici chapel; [cited 2020 18 August] Available from : https://tr.wikipedia.org/wiki/Medici_%C5%9Eapeli.

53. Frescoes in the Palazzo Medici Riccardi, Florence (1683-85); [cited 2020 1 November] Available from : https://www.wga.hu/html_m/g/giordano/3/index.html .

54. Childers J, Hentzi G. *The Columbia Dictionary of Modern Literary and Cultural Criticism*. New York: Columbia University Press; 1995.

55. Speer A. *Inside the third Reich*. New York: The Macmillan Company; 1970.

56. Jaskot PB. *The architecture of oppression: The SS, forced labour and the Nazi monumental building economy*. London: Routledge; 2000.

57. Prisoners transporting stones on the "stairs of death", SS photo, between 1942 and 1944 (photo credits: NIOD, Amsterdam); [cited 2020 12 December] Available from : https://www.mauthausen-memorial.org/en/History/The-Mauthausen-Concentration-Camp-19381945.

58. A Zeppelin Field postcard; [cited 2021 October 12] Available from: https://museums.nuernberg.de/index.php?id=3111.

59. Cathedral of light; [cited 2020 12 July] Available from: https://seyler.eksisozluk.com/ii-dunya-savasinin-boyutunu-gozler-onune-seren-fotograflar.

60. Model of the Große Halle, Volkshalle, Albert Speer; [cited 2020 22 August] Available from: https://en.wikipedia.org/wiki/Volkshalle.

61. Row 1, column 1: Eastern Gem. Column 2: Cyberpunk. Row 2, column 1: Spacestation. Column 2: Underworld. Row 3, column 1: Fantasy. Column 2: Price of the ‘Space Station’, approx. 1M $; [cited 2021 12 February] Available from : https://opensea.io/collection/projectnanopass.

62. Moneta A. Architecture, heritage and metaverse: new approaches and methods for the digital built environment. *Traditional Dwellings and Settlements Review*. 2020;32(2):1-31.

63. Diaz A. 'world of warcraft's' virtual gold is seven times more valuable than Venezuela's real money CNN. Cable News Network; 2018 [cited 2022 2 January] Available from: https://edition.cnn.com/2018/05/08/wo.

64. Mystakidis S. Metaverse. *Encyclopedia*. 2022;2(1):486-497.

65. Østergaard EH. Welcome to industry 5.0.; [cited 2021 12 October] Available from: https://info.universal-robots.com/hubfs/Enablers/White%20papers/Welcome%20to%20Industry%205.0_Esben%20%C3%98stergaard.pdf?submissionGuid=00c4d11f-80f2-4683-a12a-e821221793e3.