

History of Architecture and Culture – I

Lecture 5

Welcome to UGC lecture series architecture, I will now be taking through AR6101, History of Architecture and Culture I, In this particular lecture you will be going through the

UNIT IV

CLASSICAL PERIOD: GREECE

This lecture covers the first part of this chapter which will be taken in three parts, so the content of these chapters includes

CONTENTS

1. Greek Architecture – Influence and Growth
2. The Hellenic Period and how it affected the architecture of Greece that era
3. The Greek Orders are the most famous classical orders of Greece
4. Doric Order and how the Doric order is different from other orders, why we learning Doric order first
5. The Heraion temple Olympia is a classic example of a Doric order temple

Moving on before we understand Greek architecture let me brief you about Greece. Greece is like Rome is another most important you know architectural country which extremely produced amazing architecture and wonder is architecture that period. Greek architecture is unanimously considered across the globe as one important chapter to be studied as an architecture student or a person who admires architecture. Because Greek architecture at that point of time provided something that the world has never seen before. So that kind of architecture was prominent only in that particular part of the world and that was later on taken as one of the most historic or one of the most accomplished architectural forms of all times. For example Greeks gave us the classical orders which later yes Romans did add up around two more classical orders but the Greek orders the Greek columns were considered yet considered even now considered as most important columns or orders of all time. It is considered as a classical order, the Greek system of proportion of golden proportion considered to be one of the most or the most best ideas of proportion, the Greek buildings and considered to be the landmark of proportions or the systems which exhibited extremely different kinds of ideas of proportion which is to date followed and you know being used in the present day architecture.

INFLUENCES

Moving on what are the influences that made Greek architecture? What is it today?

What are those things that created that form of architecture which is been considered as the wonder as architecture of Greece.

- So Greece basically was countries surrounded on three sides by the sea, it was possessed of many natural harbours and it is convenient for the development of trade.
- So the influence of the sea as you seen fostering national activity cannot be forgotten because that was very much seen as an influence in Greece and Greek architecture because that is one major factor of the Geography of Greece
- In Greece the marble was the most predominant building material that was existing. So marble this particular building material was hence used throughout Greece in the beginning of the Greek architecture. So the climate of Greece is remarkable for the hot sun, heavy rains so that kind of added up to as factors for the construction of Greek monuments architecture at that time. So the Greece religion as you said mainly a worship of natural phenomena or nature worshipping, it was like they were like they personified the nature into many forms of like an Indian Hindu culture like the Hindu architecture, Greece also had a religion which kind of worshipped in nature and nature different different factors of nature like given different different names they had different multiple gods in goddesses which were worshipped in the Greek temple and everything was some over the other attached or related to the nature so there are however numerous tracers of ancestral worship, fetishism and other primitive forms of religion available in Greece like, so that kind of provided base for all the temple and different different types of temple were in Greece, as you can see every temple of Greece which you will learn as different different different values attached to it, so each and every temple is separate school of architecture by itself. So that is why Greek architecture is considered to be so monumental, so vast than any other form of architecture
- Moving on the early inhabitants of Greece where known to the ancients under the name of Pelasgi. So their Pelasgi civilization belonged to the bronze age as is evident from the remains of it
- There is supposedly there is a war against the Troy there are certain studies and archeology say that was mythical war and that never happen and as of now we believe that the war against the Troy happen and that of efforts of proof of a early connection to the inhabitants of Greece +with Asia. So Greece had a connection with Asia back then also, so this particular war is what is considered to be the primitive major you know consideration for the connection with Asia. So the Akians in that turn later as come to fresh in flags of invaders from the north and they were mountainous called the Dorian's and they also established themselves at partial elsewhere in the Peloponnese
- Moving on the classical times the Greece was peopled by Ionians that is the old Pelasgic population like I said before.
- So at that time it was not till some 500 years after the fall of troy as I said that the new Hellenic civilization was evinced in the construction of the temple of Corinth. So temple of Corinth was one of the earliest temple known so that is why the temple of Corinth was considered to be a milestone in the Greek architecture. So it regards the people themselves clear that the national games or religious festival or kind of united them and

they had a lot of love for music the drama the fine art this kind of festivals that temple festivals or rituals kind of brought them together and that created the celebration of this art music everything games. Greece was known for known to be place where the public wellbeing the public together was celebrated and they had festivities together and hence architecture kind of created open spaces or open spaces which provided the venue in accommodate this festivals this kind of public festivals together

- So many of the important buildings of Greek architecture, especially in the iconic style, are in their colonies of Asia Minor as I said the war against Troy kind of created the connection with the Asia so all the architecture were in the colonies of Asia Minor and this connection with the East has lot of influence in the architecture if you can see,
- So much as the Greek culture over to the proceeding oriental civilization, this change you know eastern influence affected the Greeks has so profoundly that the influenced architecture to the great extent. So there was a more as much of rope influence the architecture of Greece there were also in turn influence in the Greek architecture not only architecture in literature or in art this influence are very well seen
- So the Greek architecture stands alone in as I said as being two of the most accepted beyond criticism subject which obligatory to be taught in almost all the architecture schools are what almost as an all the architecture schools across different principles. Usually architecture courses taken selects its own study material based on the principles were they are following Greek architecture followed unanimously across the globes one of the most as the most landmark features of architecture and which is obligatory for the students to understand in an
- The Greek developed so called the orders or architecture as I said the Doric, Ionic and Corinthian and they used them as the principle mode of construction, it was aesthetic, it was functional everywhere you see in Greek architecture this particular orders were used very much
- Later in the later coming years, Romans added the Tuscan and the Composite order to this and that made the five orders of architecture. The Tuscan and Composite order will be taught in the next chapter that is the Roman classical architecture; in this particular unit we will see the Doric, Ionic and Corinthian order only.
- So an order the Greek and Roman architecture consist of the column or the support which include base as well as the entablature or the part supported.
- So the base of the column is in which it is standing and the entablature is the capital of the column and part of the column which is above the column part shaft part.

Moving on the first thing that will be seeing other than in this lecture that is the Hellenic Period

THE HELLENIC PERIOD: So what is the Hellenic Period? Why is the Hellenic Period is important in the Greek history? How the Hellenic Period is directly influencing the architecture of the Greek History and that is what will be seeing in the particular part of the lecture.

The Hellenic Period contains all of the principle temples in monuments which we erected between the years of BC 700 and roman occupation of BC 146. So any temples or architecture was constructed between the BC 700 and BC 146 considered as a Hellenic Period architecture. The masterpieces of architecture however were all erected short span of 150 years that is between 480 and the death of Alexander that is BC 323. So all the classic architecture of Greece which we learn today are all erected in those 150 years of time.

So many of Greek cities were upon immediate vicinity was known as Acropolis, so that happened during the Hellenic Period. So you can see this is the Acropolis at the Athens, this is the Parthenon. Parthenon is the unarguably the most celebrated building of the Greek architecture of all times

Moving on to temples formed the most important class of buildings erected during this period. So as was the churches in Rome so was the temples in Greece, so temples in Greece actually was the most important building complexes or building that were built in that period of time in that Greek architecture time

They were built with special regard to external effect, and were ornamented with sculpture of the highest class in order to form fitting shrines for the deities in whose honour they were erected. As I said the nature was worshipped they were multiple of gods and temples made for the many gods, so the made the temples with such detail and such extreme effect of sculpture that you know that still regarded as one of the most highly ornamented sculpture of all time that is ever made in the world architecture.

They were generally placed in a “temenos” or scared enclosure and consisted of a “naos” or cell usually oblong in plain you can see in this picture this is remains of an ancient Greek temple and you can see the columns and how beautifully they made you the temples were placed on a temenos or there was a sacred enclosure within which they were made and they consisted the cell, the cell was called the nervous in the Greek architecture and they were usually oblong in part and was place on a statue of God or Goddess. So every time in a Greek architecture as I said highly ornamental statue of Greek god or Goddess and there was a treasury or chamber beyond the front and the rare portico you know exhibited highly crafted amount of Doric, Ionic or Corinthian order and that depends on the period of construction as its started with the Doric and ended in the Corinthian and an as the architecture became more and more complex that much complex the columns of the order became. So the larger temples were internal coordinates of columns placed over each other to support the roof. So basically the Greek temple was nothing but the rose of columns placed and then over the roof was supported. See of the two end of the facades above the columns a triangular shaped pediment usually but not always fitted with sculpture terminated the simple span roof, you can see there was always a column above that there was you know the roof kept

The method of lighting inside Greek building was always a part of a debate, how was the lighting done within the building was always considered and questioned and again researched upon

Basically there was no particularly clear storey windows there was no windows within the temples that kind of created this confusion has to how the lighting was done inside the temple

The method of lighting with a clear storey which is concealed within the roof is one such example and one such theory that is been formulated which actually is very evident certain temples been constructed as in the clear storey was not evident was kept inside the roof and created the passage for light within the temple

The temple was occasionally “hypoethral” this is to say this was an opening in the roof which admitted air and light to the central portion of the naos or the cell. So the word that used for such construction is called “hypoethral” and the temple was the house of the local god so it was basically a highly glorified dwelling or a house or dwelling of the god. Basically the temple of Greece was considered as a dwelling or the houses were the god lives and was basically a glorified residents of the particular god which was made

THE GREEK ORDERS

- The Greece as we know three main orders that is the Doric, Ionic and Corinthian. In this picture you can see how it evolve from the Doric when to the Ionic and then to the Corinthian, how the capital move from this simplest capital to the highly decorative capital called the Corinthian
- So these three were adapted by the Romans later, who modified their capitals and they add two more columns and that form the five major classical orders of all times.
- So each style has a distinctive capital, the capital is the reason why one order is different from the other order and the horizontal entablatures which it supports and the rest of the building does not in itself vary between the orders.
- So basically the height of the orders are little different, the proportion of the order live different, the capital of the order different, so the reason why the one building different from other building is because of the entablatures of the column or the capitals of the column that is the reason why one building differs from the other building other than any other factors that form the building because as I said the Greek architecture, the Greek temple is directly related to the column that as been put across in the building facades as well as in the interiors

So moving on this is the Doric Column, the Doric style is rather as study style and its top is plain and there is the capital is plain. The Ionic style is thinner and more elegant style and its decorated with the scroll like design, so the Doric had the Plain capital and Ionic had a scroll like capital and the Corinthian style is seldom used in the Greek world, but often seen in the roman temple, it Corinthian style was an invasion or creation of the Greek architecture but it was

much more used in Roman architecture rather than Greek architecture even though it was creation of the Greek style. So the capital is very elaborate with decorated acanthus leaves. In Rome when you can see, in saint peter basilica you can see high use of Corinthian column use of rather than other columns. So moving on first and foremost sees

THE DORIC ORDER

What is Doric order and what was the principle of Doric order and how the Doric order was made this is an example of Doric order in a building and as you can see it has very plain capital

- The Doric order is considered to be the oldest and the plainest and the most sturdy order traced back to Egyptian prototype as exemplified at Beni-Hasan. So the Doric order is said to be the primitive form of Greek architecture because the capital was plain and that is from where the slowly slowly the ornamentation of column started.
- So the Perrot and Chipiez in their monumental work on art in the primitive Greece discuss the question of wooden origin of the Greek Doric column and the entablatures. So basically what certain his story in debut about is Doric column had a primitive wooden counterpart or began itself as a stone treatment or stone column. So the collages like Perrot and Chipiez said it that you know it had a wooden origin and that it were started and later it became stone and it developed into the stone column because wooden column you started Persian. So they said they show the derivation they trace back the derivation the wooden built porch of the Mycenaean Palace
- The later Viollet-le-Duc however held decided opinion, he never even argue they he said directly that know, he cannot happen the orders of the Greek architecture always made of stone and there was no wooden origin to it
- So the original stone uprights fluted to express their function of the vertical support and therefore treated in this respect in the same manner as the columns which were certainly fluted when in the position.
- In Greek columns if you see there are circular ornamental treatment is called the fluting of the column. So the column which is no base but stands directly on the ground usually in three steps including a gap from 4-6.5 times the diameter at the base in height.
- The circular shaft which diminishing to the top $\frac{3}{2}$ or $\frac{2}{3}$ of the diameter is divided as a rule to 20 shallow flutes separated by the spaces. So what happened as the number of flutes goes up that is what calculated the height or proportion of the particular column. So there were 20 shallow flutes in a basic Doric order and above that the capital stood. Moving on this is the example of basic Doric column and you can see the temple of cella or temple of Neptune or the temple of Cyrus, all this temple provided the preliminary examples of the Doric column in a temple. So you see the Doric is nothing but a temple where the Doric columns are standing all across on four sides of the building. Any Greek building as I said the column stands on all four sides that is what defines the architectural

character of the building. So the Doric order temple is those temples where the columns are all Doric in nature or the Primitive columns are used

- The division into twenty flutes seems to have been selected in order that a projection might come under each of the angles of the square abacus above, and at the same time a flute in the centre of the column as seen from the front, back or sides
- Moving on to understand the Part of the Doric order, this is the basic Doric Order, this is called the stereo byte or the bass on which the Doric order stands, above that is the Drum and then the sheaf, the sheaf is the nothing but the cylindrical part of the column. Doric order you see is not a linear cylinder it's kind of become conical on the top and kind of reduces in the diameter towards the top, above that the column part in the flutes, the abacus, the echinus, the neking, the drum and the sheaf the whole of this part together forms the column. The cabinet parts consist of the abacus, echinus and the neking, this three parts together consist of the capital of the column and the capital and the drum and the sheaf together form the column. So above that is the entablature and above that is a pediment, the entablature in turn consist of the Freeze, the Triglyph and the architrave. The freeze is nothing but the rectangular you know part with covers the part between the corners and the architrave that is called the freeze that is nothing but it may be decorated it may not be decorated depending on the architectural style that was followed particular point of time and the architrave is nothing but rectangular post or the beam which runs above the capital of the column and the acrotirian is nothing but the decorative part which forms above the portion of the pediment.
- The Doric order originated on the mainland and western Greece. It is the simplest of the orders as I said characterized by short, faceted, heavy columns with plain, round capitals and no base.
- So with a height that is only four to eight times its diameter, the columns are the most squat of all orders. So basically as the orders develop from the Doric to the Corinthian and the height of the slowly started increasing because the proportion started becoming better. So what happened the Doric column is basically only four to eight times that of the diameter. The diameter is X and the height of the column is $4X$ to $8X$ in height. So the column it's actually the most shortest of all orders of Greek and the sheaf of the Doric order is channel with 20 flutes as I said.
- So the capital consist of neking which is of a simple form. The echinus is convex and the abacus is square. So as I said this is the simple neking you can see, the neking is nothing but the end of the sheaf and the beginning of the echinus that is called the neking of the column
- The cornice consists of an upper or crowning part and the soffit is inclined upwards and parallel with the slope of the roof.
- Above the capital is a square abacus connecting the capital to the entablature as I said before

- The Entablature is divided into three horizontal registers, the lower part of which is smooth and divided horizontal line
- Another important part of the Doric order is Triglyph; it's a unit consisting of three vertical bands which are separated by grooves. So you can see this is the flutes of the column that's usually twenty numbers in the Doric order
- Moving on to the first and foremost example of the Doric temple that is the Heraion temple, Olympia. Right now you can see only the remains of this particular temple as we know we can just understand from the remains and how the temple would have looked back at the point of time. It's one of the earliest Doric temples in Greece and the oldest perpetual temple that's site having single row of column on all sides you can see this is how it could have been, there are single row of column on all sides plants you can see single row of column on all four sides and each and every column in that particular temple is Doric in nature as you can see in the picture. It's also called the temple of Hera and its constructed back in BC 700 its believed to be the most ancient of all Greek temple which we know as yet which we discovered as yet so its stands on a style about two steps that is nothing but the plinth. The plinth of Greek temple is called the style about basically the style about this particular temple was just two steps measured 168ft/64ft in height. So this is the complex of the Heraion Olympia, this is the temple of the Hellenic period which we learning right now. This is the simple plan of the temple of Heraion, another thing about the Greek basic primitive Greek architecture that's they kept it very simple and only they decorated the columns and their sculptures as the decoration increase the plain remain simple but they started decorating the column and the sculptures more and more giving it more and more ornamental or decorated look. This might have been the elevation this considered to be the elevation of the temple of Hera and you can see this is the Doric column you can see the elevation also very simple and plain elevation with Doric column which supports the roof above and this is the remains of the Doric column which is present in the site right now,
- The cella is very long and proportion to its width and has an either a range of eight columns. The alternate once been connected to the cella wall by means short transverse walls. So as I said you can see in the cella is like very very linear, the proportion of length with breadth is very much in the particular temple
- It is generally held that the original columns were of wood replaced by stone columns as they decayed as I said before the Doric column considered to be basically wooden before and later it was made into stone columns it is still its consideration it's not yet proven that this would have happen