

Evolution of Human Settlements- AR6004
Unit 1
Importance of Evolution of Human Settlements
Lecture 1

Origin of Civilization

We can broadly classify this into five major phases; Primitive non-organised human settlements which basically started with the evolution of man. When man came onto Earth, how was it what it was? Primitive organized settlements, this stretches between the periods of villages Eopolis, and this lasted about 10,000 years. Next, we have Static urban settlements or cities, also referred to as Polis, this lasted for more than 5 - 6,000 years. Dynamic Urban settlements, Dynapolis which lasted only 200 - 400 years and finally the current situation, we are in, The Universal City, Ecumenopolis, which is just now, considered the beginning.

We will be discussing primitive non-organized human settlements. From the time in memorial, when man came into being, he has always been a social animal, setting up into communities. Taking up smaller areas where one can begin doing agriculture and by the coast, it was later fishing and as professions developed and as man developed, even the kind of housing required and settlement patterns changed and developed. So initially it was as simple as; agriculture, hunting, and cattle-breeding communities. On a macro scale, they actually consisted of a nucleus, which is built up part of a human settlement and several other smaller parts which lead on from this and gradually thin out as they disappear. This is how it would be; you would actually have the cattle breeders and farmers. You would have the main nucleus and these are the surrounding areas branching out, as in thinning out, as the population decreases. But there is no physical line like this, demarcating or connecting the primitive settlements. It is just for our understanding that these lines have been drawn. It was a very gradual decrease and finally you would find no human being. Again, you would have another nucleus, another large group of settlements. So, as such, there was no network at that point of time, connecting the different nuclei. Now, we will move on to Primitive organized settlements.

This was era of organized agriculture. So even settlements became organized because agriculture was defined and destined between people and what work was done by them. So in the initial run, humans had only one room dwelling units which was basically a circular form and this would be in relationship towards communities, they would have a lot of these hut like structures and they would be side by side. These would expand as the number of people in the community increased. So, due to the loss of space between them, more regular shapes started developing. If you see any circular form, it is never a very regular form; the process is not possible because it is more organic. Then, as the number of people increased, they realize that a gridiron pattern is more suitable and the rectilinear pattern developed from the irregular shaped circular pattern. Now, static urban settlements. As settlements grew in size, man came to realize that the principle of the single nucleus was not always valid in the internal organization. So, the total number of shells needn't always remain the same. So, at this single nodal point, it was very important that the village and the cities which as such at that point of time were there, it was no longer sufficient. So, the first thing to happen was, the expansion of the nucleus in one or more directions and this was no longer centre of gravity for that particular settlement. So, one nucleus was never more sufficient it had to delve into multiple nuclei. For example; we look at the small settlement in Priene in Ancient Greece, where the central nucleus expanded in two ways. First, it was in a linear form, along a main street to facilitate the market area where it contained the shops which would actually be clustered in the central agora. Secondly, it was the decentralized form of some functions; such as temples and other institutional buildings at that point of time. Early Dinopolis. This is the phase when small independent human settlements with independent administrative units began to grow beyond the initial boundaries. From the economic point of view, this development is related to industrialization and from a technological point of view to a railroad era. When first railroads came into being, it became possible for two nuclei to be connected, for two settlements to be connected. As the railroads were connected, a new form of settlement pattern emerged. Where, distances could be covered, trade was possible and new settlements were discovered on the way. Metropolis, this fate of historical metropolises has brought dynamic growth, then you have the static phase where there was no development and then finally came, the death of that particular metropolis. The static phase is actually the beginning of

the decline. Dynamic metropolis, after losing its momentum for growth, becomes negatively dynamic. So, when you say dynamic, it means moving forward. Similarly, negatively dynamic means, when instead of progressing, the city begins to regressively go backwards, towards its culmination or end of the city as we know it.

Megalopolis: Megalopolis has the same external characteristics as the metropolis. The only difference is, we are discussing this, in a much larger scale. It is characteristic that all phenomenon of the development of human settlements up to the metropolis known as 100 sq.km. The Megalopolis would be 1000 sq.km. So, what we discussed the three stages with respect to static and finally death, would apply even to a Megalopolis development. The Ecumenopolis which is considered to be the current situation of the beginning of what we see it as, regardless of whether dynamic settlements are simple or composite, they have been growing continuously in the last few centuries and this is obvious wherever we look. The whole Earth is not covered by one human settlement, it is multiple human settlements and it is multiple gatherings like these which are getting connected via technological advancements.

Effects of civilization

If we actually go into the origin and evolution of human settlements, we have various stages. The first stage is; Man as basically a nomad and a cave dweller. This was upto 10000 B.C on the timeline. Earth was estimated to be formed about 4 billion years ago. We have homosapiens, evidence of Homo sapiens dated from 500,000 B.C. Obviously the earliest man did not get a chance to settle anywhere because he wandered around for food. So till a time could happen where man could settle down with agriculture or hunting or with fishing, he was a nomad with only temporary shelter requirements and this was usually sufficed by caves under trees and such elements. So, they basically did not know how to construct a building or any structure to cover themselves. They occasionally took shelter on top of trees or under trees to protect themselves from wild animals. Then you have, the continuation of what actually happened. As man stayed on Earth for a longer time, he began to live in caves by the sides of rivers. Sites were protected by rivers, swamps, or elevated terrains like mountains were sometimes preferred. But caves, again were not a fixed residence. When food gathering in the vicinity became difficult, they would move to another location. Gradually, he moved towards a

settled habitation. On a timeline, it was around 10,000 B.C - 5,000 B.C. So, clearly man learnt to practice cultivation, this happened because of discovery of metals, weapons and tools required for farming and agriculture. They could have actually stayed one place and produced food. He began to settle down by the fields cultivated by them, they got to choose the fertile lands which was invariably near rivers and river beds where water was available in plenty. Gradually they learnt to build huts and mud houses. So, what was the next stage? Some of these earlier settlements, gradually began to take shape. Like we have already mentioned that man has always coexisted only as a community, never an isolation. So, as a number of these houses, got together, a settlement pattern gradually emerged. Settlements then consisted of groups of houses built either by side of agricultural lands or shrines, a burial ground. So these were other typologies of buildings that emerged at that point of time. Some inhabitants continued to live in caves and wander around, hunting animals, more or less like a pastime which you have even currently. In today's world also there are people who are basically hunters. This is basically done as pass time rather than a way of life or a necessity. The common habitat, how it emerged and how civilization as such began. Inhabitants became an organized community, they had a recognized leader. They initially had lessons of civilized living. They started learning to provide for themselves. Basic necessities were food, clothing and shelter. Now, how did the cultivation shift? Obviously, even if it was fixed agriculture, the land would lose fertility at a point of time. So, then you shift to a new location after you experience a decrease in fertility and then you would continue agriculture in the new place. Later, they learnt that the land had actually regained its fertility and that you didn't have to move, you just had to cyclically change the crops or leave that particular land uncultivated for a while. So, they began to cultivate fields by rotation. So, the shift in cultivation stopped and finally, man settled down in one place for at least during his lifetime. What happened to the next stage of development in man? He was making more food than what he needed. Everything wasn't getting consumed. So, he learnt to make manure out of night soil and animal droppings, this greatly increased food production. Once food became abundant, the health of the people improved. The population increased, the death rate decreased and birth rates also increased. So, multiple human settlements and human patterns emerged through this natural process. Now, beginning of a permanent settlement till now nothing was as such permanent till agriculture actually took its deep roots. Assured food supply meant

that generations together, a family could exist in that land and that land could sustain them. Agriculture encouraged man to permanently settle down by the side of these fields, usually by the side of perennial rivers or fertile river banks. Compact settlements since agriculture could support up to 35 people per sq km as compared to the 15 people per sq km which is applicable to hunting and food gathering societies. The main reason this happens for food gathering societies is, the animals they are dependent on also keep moving as they are basically predators themselves. So it was not fixed by the people who lived by the hunting logic in those forests or woods. It was only once man cultivated and started to live by the fields, he realized it was in his control and he could decide till what period of time could food come from the fields and until what period of time can the families and the community settle down around those fields. Now, what were the favorable locations for settlements?

If you look at the favorable environment for human existence; Climate should not be very harsh, Epidemics should not be very frequent, Land and water must be fertile and in surplus, Good quality of water i.e. running water like a perennial river. River valleys were very popular because the climate was good, the rainfall was good in abundance, rivers would obviously be there and it was a suitable place for settled habitation as even agriculture was possible as it was plains. River Valleys again, you had fishes also happened, a supplementary food process was also available, soft clay was good for the construction of huts, rivers also meant transportation. So, once food became in surplus, a sense of barter system happened and when transportation emerged, a sense of exploration also increased where man could go and see if there were other such human settlements around. So, first settlements in these river valleys that we know of is; India, China, Egypt and also known as the fertile crescent you have; the current areas of Iraq, Syria, Jordan and Israel.

Other Factors for Siting Settlements

Other major factors for permanent settlements are; you actually need to locate on higher grounds. So, your drainage is automatic, protection from floods and reasons of security not from fellow dwellers but from wild animals and spacing between settlements meant, you actually gave space for future expansion.

How did the whole concept of community emerge? Division of labor was a whole concept that emerged beautifully like we stated, food has become abundant, and all the inhabitants didn't have to work on the fields at all points of time. So, other occupations also came into being, someone would make the tools for agriculture, someone would sharpen the tools that got blunt, someone would be responsible for harvesting, someone would be responsible for making the pots or the huts, someone would be responsible for fishing. So, all these are how the auxiliary occupations emerged. Some engaged in taming and domestication of animals, so they would help in the ploughing of fields, carrying loads and main source milk, meat and wool, depending on the place we are talking about. The Barter system, the most ancient form of trading, as grains became in abundance, they realized that, they could change, go and get it changed to another kind of grain by exchanging what they have with another community living nearby, this was made possible by transportation and the river bodies. So, those who were not farmers, they actually got supplied food for the services they rendered, shepherds got grains in exchange for milk, weavers for cloth, potters for utensils and craftsmen for tools and implements. First this was practiced within a community and later as the river roots, land roots developed, this happened between communities as well.

Trading as such got a lot of levy at this point of time with transportation, reputation of some of the goods being produced by craftsmen of certain villages began to travel far and wide. Demand of such goods also increased, so trading also began. Traders emerged as a new occupation, as a new class of people and trading began, at a marketplace emerged as a new typology of physical components of settlements.

Social Stratification; Now that traders have emerged, hunters were there, a sense of stratification based on occupation happened. So, early traders were obviously from the hunting tribe, because they were already used to travelling. They were also recognized as leaders as they provided protection to the community against wild animals. After they began trading activity, they accumulated goods and became wealthy. They also accumulated knowledge as they travelled long distances and met many people. They hold in the community increase and these people finally became very powerful and as this community became powerful, one of them decided and becomes the Chieftain or the leader for that particular community.

This is how a structuring or a hierarchy arises within a particular community. So, what happens to the physical structuring as such? So, what does a chieftain do, or a leader do? He builds himself a better house, a bigger house at a higher level, so that he can actually look down on all his subjects. The rich traders and wealthy farmers built their houses near the castle because they were the next component. Then, the new distinguishing features became a status symbol of these particular residences and then you have the artisans and the ordinary farmers who got this poor quarters near the fields and around the periphery. So, the community gradually got divided between the rich and the poor and the first time, the two social classes emerged occupying different parts or sections of the settlements. The rich and poor gradually grew antagonistic to each other, they became concerned, the rich people were only concerned about the life and property, they built a wall around their castle and created a fortified castle to protect themselves. Man had originally learnt to ward off danger only from animals and wild animals and beast, but now the first time, the fear of getting attacked by fellow beings also happened. So, this was a new physical structuring as well that happened.

The walled settlements, the strife between the people of the same settlement later supplemented by that between different settlements. Then you have the rich settlements which were exposed to the danger of being raided by outsiders, the wall around the settlement was built in addition to the one that existed around the castle. This effectively curbed physical spread of settlements. So, people living outside moved in and the density of population began to rise. Like we initially mentioned that there was this entire space left around settlements for future expansion, that was curtailed because of the fear of invasion and protecting the settlement, a kind of fortification was built around each settlement, which actually increased the density of population of every settlement.

Subjugation of Peasants, this was the beginning of the futile system. The external threat brought forth the necessity of internal unity, need for mutually defending themselves but the new organization of the community was such that, it resulted in the subjugation and exploitation of a large majority of peasants by a small minority of the rich- the so called nobles, Chieftains, the rich traders. The chieftain claimed a share in the agricultural surplus which was basically like a land tax, in return for the protection he offered, in terms of the fortification around the settlement.

Initially it was described as the beginning of a taxation system that was perhaps willingly done, initially for the fear of invasions, people could have actually started giving the Chieftain their produce as a symbol of love and affection and as a symbol of thankfulness and gratefulness which later became a subjugating theory forced upon them by the chieftains and rich peasants. Placing more resources at the disposal of the Chieftain meant better equipped army and better protection for the community. Soon the beneficent role of the Chieftain was corrupted by his lust for power and his resources increased, he became more powerful, he began to demand a larger and larger share of the surplus agriculture produce. Ultimately a very bare minimum was left for the survival of the peasant and his family. The Chieftain was supported in his exploit of pursuits by a large number of military, army officers, governors, tax gatherers and even soldiers that were high up in the army.

New role of people that emerged is; Priests. When the use of physical power was not enough to ensure complete obedience. The same was achieved by exploiting the religious sensibilities of the people. The shrine was moved within the precincts of the Citadel or the castle. Priests began to be identified with the Chieftain or the aid of the Chieftain. Often the Chieftain even assumed the role of a priest, the Chieftain became all powerful and people willingly obeyed because he wielded the power of religion as well, as a protective authority over them. He elevated himself to the role of a King, one who commanded a territory and recognized his as a kingdom. The castle grew into a fort and the shrine gradually grew into a temple.

Next, happened the labour. How is labour actually specialized? Under the centralized command of the King, many large scale constructions such as protective walls, moats, forts, temples, network of irrigation channels, cisterns and reservoirs were completed. Mines were found for quarrying building materials, Timber began to be used in buildings in combination with other materials, Labour Specialization was carried a step further. New occupations emerged such as; engineers, construction labourers, carpenters, miners and transporters who included boatmen, sailors, loaders, cart, horse riders, all of them, merchants not only included traders but also money lenders and bankers and finally soldiers and priests were also added. Now, comes the same differentiation based on community and caste. So, members assumed or signed specific functions by the ruler, persons assign jobs such as scavenging and cobbling, were assigned low status in the

society, paid very little wages and they were continued to be treated badly and remained poor vs people performing religious, administrative and intellectual functions got higher status and were paid higher salaries and they finally became rich. They were considered to be belonging to a high caste categories. Community was not only divided into rich and poor but also, caste managed, as well based on jobs that they did. Man developed new skills in art, to create carvings, engravings and paintings, developed a kind of common language, learn the use of metals and acquire an array of new implements. They used these houses to make bigger houses, temples and tombs. Labour specialization happened, new occupations developed like teachers, advocates, judges, government servants, a new class of people emerged, you have the philosophers, scientists, administrators, political leaders, dramatists, sculpture, artists, architects and town planners and based on all these professions emerged, distinct social classes or a caste system. Non-agricultural occupants expanded at a faster rate. Invention of a new means of transportation meant community structure, people could travel and learn more about the neighbouring human settlements, expansion of trade, merchants organized themselves in the form of guilds from the products they dealt with. One person, a guild would deal with spices, one guild would deal with cloth; silk, cotton, etc. Development of art and literature. Acquisition of wealth and knowledge, a general sense of appreciation for civic concerns, structural transformations continue over subsequent civilizations and cultural phases. So, when the community gradually grew, merchants grew, the kind of merchandise they dealt with also developed, acquisition of wealth and knowledge happened because of newer means of transportation like roadways, waterways and a general sense of appreciation also increased because people could learn from their neighbouring urban settlements as well. So, the village evolved into its first urban counterpart, it is actually very difficult to state when exactly an urban settlement happened. According to many historians, the first settled habitation happened as early as 13,000 B.C. First known settlements that was as claimed by archeologists are Jericho and modern Israel and this was developed in 7,800 B.C. The first indisputable permanent settlement was Jarmo and Kurdistan area of Iraq which is around 7000 to 6500 B.C. The first identifiable urban settlements are believed to have existed by 3,500 B.C. So, the physical settlement was very important. You have the market place or the Public Square, tombs, statues, rock sculptures, colonnades, protective inner and outer walls with moats and monumental gates. As

the physical form of the urban settlement emerged, you had dwellings for common people you had separate dwelling units for the richer class, the upper class; theatre, government offices, gymnasiums, judicial courts, institutions, all of these developed which happened during the Greek period. Then, you have the networks of water supply, sewerage, drainage; the church became the centre of focus in medieval towns. Monasteries developed, Guild halls for the tradespeople, Town halls for the public developed and warehouses as such, developed. So, as the urban settlement emerged, lots of new typologies of buildings emerged, transportation changed, people changed and the caste system also emerged, along with the system of a class of people as well.