LU 1B: Understanding the Built Environment

Why Do We Build in the First Place?

· To fulfil our functions as humans, we create out of our natural environment to meet our needs, to improve our material conditions, to suit our essentials because we have no other choice.

· Our ancestors created shelters that were able to protect them from threats and discomforts while meeting their basic needs. As basic and untouched as caves, for example.

· As the needs for survival became less urgent, people turned their attention from survival, to making their lives more comfortable.

· Our shelters have continued to improve through human effort and understanding to be more beautiful, cosy, and stronger.

· Times have changed and global populations have exploded, but the basic need for a liveable and comfortable environment remains.

· The population of the Earth is estimated to have reached 7.8 billion now and that is a lot. What does this have to do with the built environment?

· Well, everything.

· The more people there are on earth, the more necessities and desires to build. The scale and scope of the built environment has continued to grow and expand to the point where the natural environment itself is under tremendous pressure, and global environmental changes caused by human activities threaten us all.

· Bu we also cannot ignore the fact that the human species will continue to exist and will always continue to alter the planet, for better or worse.

· We must control it, administer it, design it, calculate it, and even envision it.

· The ‘Built Environment’ is a field of study that is looking into all of these – to harmonize the coexistence of both natural and man-made environment.

· So, what do we mean by the ‘Built Environment’?

‘What is the Built Environment?’

· Perhaps you have heard of ‘Architecture’

· Or ‘Quantity Surveying’ Interior design. Land Surveying. Landscape Architecture. Town Planning.

These fields of study, as large and diverse as they are, all have something in common.

· They are terms for the many disciplines dealing with the shaping of our ‘Built Environment’.

· The term ‘Built Environment’, or ‘*Alam Bina’* in Bahasa Malaysia, is typically used to describe an interdisciplinary field of study that addresses design, construction and management of our man-made environment.

· ‘Built Environment’ is a relatively new term and an inclusive concept. It emerged in the 1980s, but in reality, the concept is as old as the beginning of time, dating back to when humans first fashioned stone tools, created clothes and formed cooperative communities. Of course, at that time, we didn’t have a word for it.

· The term embodies all human creations of the past, present, and future.

· It may also be directly interpreted as **environments which are built’ in contrast with the natural environment**. This explains why it is spelled with a ‘T’, not a ‘D’.

· ‘Alam Bina’ is in fact ‘Alam yang Terbina’. Something we carve out of our natural environments with our hands.

· It is the setting for human activities, ranging from buildings, parks, to cities, in which people use to live, work, and recreate on a day-to-day basis.

· The built environment ma by be just a single room. It can also mean every humanly made or arranged object—from products, interiors, structures, cities, regions, and beyond. That’s a huge scope!

· So let’s look into the scope of the Built Environment a little deeper.

The Scope of the Built Environment

· In the beginning of the video, I mentioned that the Built Environment consists of pretty much every man-made object on earth. It started with a small object, and combinations of those objects would eventually define the Built Environment.

· Try to imagine a brick. The brick itself may just be an object to you. But if we collect enough of them, create a wall and construct a house by stacking, say, thousands of them, we have just created a built environment.

· A cluster of these houses eventually define towns, which grow into cities, become regions and lastly, shaping our planet. That is how vast the scope of the Built Environment is.

· Let's start from the smallest unit of built environment.

- No. 1: **Products**, which involves goods and resources produced to improve human capacity to perform specific tasks. Basically, every man-made product under the sun. Like I said just now, the brick.

- No. 2: **Interiors**, which are characterized by an organized grouping of products and enclosed within a structure to facilitate activities, such as your living room, classrooms, bedrooms and so on.

- No. 3: **Structures**, which are planned groupings of spaces constructed of products, combined with integrated structures such as houses, schools, bridges, roads and etc. Structures have both an internal space and an external form.

- No. 4: **Landscapes**, which are exterior settings for planned groupings of spaces and structures such as courtyards, parks, gardens and so on. They can be a combination of both natural and built structures.

- No. 5: **Cities**, which are groupings of structures and landscapes of varying sizes and complexities, typically clustered together to define a community for economic, social, cultural, and environmental reasons.

- When the groupings of cities and landscapes of various sizes and complexities occur, they create Component No 6, which is **Regions**. Regions are generally defined by common political, social, economic and environmental characteristics, which can be referred to districts, states, countries, continents and so on.

- Lastly, these regions are shaping and occupying our entire planet, which is our last Component, our planet **Earth**.

- It can be summarized that every single man-made structure or object are considered to be part of our Built Environment, therefore the concern of designing and planning of our Built Environment can be as simple as rearranging your furniture in your bedroom, to planning huge infrastructural systems connecting one continent to another.

- Okay, so if it is that huge, there must be a single discipline taking care of this, right? Well, technically, no.
- You see, Built Environment is not a single academic domain of its own. Remember, it is an **interdisciplinary** field. That means, we do not refer to a person who works in the Built Environment sector as a **'Built Environmentalist'** because technically – that profession, or term, simply does not exist. At least in most parts of the world.

- Instead, the players in the Built Environment field can be recognized by various professions, which include architects, quantity surveyors, interior designers, town planners and landscape architects to name a few.

‘Brief History of the Built Environment’

· The action of ‘designing and planning’ our desired environment has long started as a vernacular tradition, which means, we used our best knowledge in building our environment through our local experience, skills and materials passed on through generations.

· This is not to say, that everything is started from the West. Here in Asia, we have long perfected our Built Environment with our distinct approaches, technics, and styles, based on our local issues and histories.

· But the history of the modern Built Environment we want to discuss in this course is the history of the concept itself, which has indeed started in the West.

· Western urbanism has an almost 10,000 year history and pretty much focused on urbanism - which is referring to the study of how inhabitants of urban areas, such as towns and cities, interact with the Built Environment.

· The early concept of ‘Built Environment’ in this regard can be traced back to the Classical Antiquity era in the 5th century, when the ‘father of urban planning’ - Hippodamus of Miletos planned Greek cities by using grid plans that mapped the city in order.

· The real starting point of the Built Environment concept came about was just within the last two centuries.

Pre-Industrial Era

· Cities before 1800 in the West particularly in Europe and North America after the Revolutionary War had very primitive sanitation and infrastructure.

· This was the **Pre-Industrial Era.**

· For the most part, human waste was discarded in the streets or surrounding open areas; animals were widespread, including pigs, cattle, and horses, adding their manure to the streets; and there was also an abundance of garbage created by daily activities.

The Era of Industrialization and Urbanization

· Between 1825 to 1930, the Industrial Revolution era had a tremendous effect on cities, transforming how they were designed and increasing their size dramatically.

· Part of this led to cities expanding and overflowing their pre-existing infrastructure; ultimately, a series of changes and developments would contribute to the health and environmental issues of this period.

· Industrialization, immigration, and urbanisation were three factors that contributed to this, dramatically remodelling cities and causing them to expand to sizes never before seen by mankind. The result of industrialization and immigration was that cities grew in size.

· A major legacy of this era is that cities were seen to be unsafe and unhealthy. This was a time when no environmental regulations to regulate what factories discharged into the air, water, or surrounding land.

Reform Movements, New Technologies, and Changes in Urban Planning and Architecture

· Opposers or reformers of the built environment used these sanitary issues to motivate the public and help pass new laws that gradually resulted in cleaner cities and better health. This was the beginning of **Reform Movements, New Technologies, and Changes in Urban Planning and Architecture,** existed concurrently with the Industrial Revolution era.

· Early city plans gave way to the City Beautiful movement, which marks the modern era of the Built Environment disciplines. It is an architecture and urban planning reform ideology with the goal of implementing city beautification and monumental grandeur.

· It was part of the radical social change movement in North America under the leadership of the upper-middle class concerned with inadequate living conditions in all major cities due to industrialization.

· These efforts also led to the development of the professions of public health and urban planning. For instance in Paris, numerous monuments and focal points of that city were linked by beautiful boulevards.

· "*Très magnifique*"

Later Reforms and New Initiatives

· Accompanying these waves of reform were dramatic changes in architectural styles, materials, and designs for decades until the early 1980s. This were the **Later Reforms and New Initiatives.**

· For instance, one of the most influential architects of this era was Frank Lloyd Wright. His designs for houses changed houses architecture by emphasizing volumes rather than walls, conceptualizing buildings as an integration, and using modern materials like concrete and glass to make houses look radically different from those designed before his period.

· Ok let me pause it here for a while. You see, today, it may seem normal to notice this kind of architecture around us. But back in those days, this is revolutionary! No one has ever done that before!

· His ideas were to contribute to development of the most influential architectural movement of the twentieth century - Modern architecture, which rejects architectural ideas of prioritizing decorations, identity and luxury and focusing more on functionality, universality and minimalism especially after the World War I.

· In Germany, a new course of study was developed by the famous Bauhaus school of design and architecture that emphasised craftsmanship, utility, and health. Later, when the Nazis shut down the Bauhaus, many of its architects moved to the United States and helped Modern architecture triumph in the country.

· The legacy of modern architecture is apparent to this day, even here in Malaysia. Some residues of modern architectural characters are there in our buildings today.

· This era saw tremendous growth of new movements as a direct reaction to architectural and urban planning doctrines, which influenced the approach towards the Built Environment.

The Current Era and Beyond

· To this day, the act of designing our desired built environment has been an accepted professional process to optimize our usage of resources including our natural and financial wealth.

· In recent years, public health research has expanded this domain to include sustainable development aimed at smart growth, with reasons include healthy food access, community gardens, “walkability", and even “bikability”.

· Perhaps in the future, the built environment may also have to include designing of an alternative earth such as human life on Mars, or the Built Environment after a global pandemic. In the meantime, let’s just stick to our earth and current time.

LU 1C: Characteristics and Traditions of Built Environment

Characteristics of Built Environment:

· The built environment is defined by four interrelated characteristics.
    - o First, Built Environment is extensive. It provides the context for all human endeavours to produce, change, install, craft, arrange and maintain.
    - o Second, it is the creation of human minds intended to serve human needs, wants, and values.
    - o Third, much of it is created to help us deal with, and to protect us from, the overall environment. Built Environment is to mediate or change this environment for our comfort and well-being.
    - o Lastly, Built Environment is defined and shaped by context or in simpler term, the surroundings – whether tangible or intangible. Each and all of the individual elements contribute to the overall quality of environments both built and natural and to human-environment relationships.

· Alright, we have talked about the characteristics, the history, even the scopes of Built Environment. What we learned so far, the Built Environment is unique from place to place; and from a period to another period. Even the motivations, priorities and principles behind the shaping of our Built Environment may be different from a place to another.

Traditions of Built Environment:

· Human endeavours in the built environment have been governed by two distinct traditions that have existed side by side since the beginnings of civilization. Each tradition can be identified by its own priorities and design principles.

· The first is known as the vernacular tradition, which served ordinary people in their daily lives; the second, the high-style tradition, which belonged to the elite, to governments, religious cults, and institutions. Its purpose is often ceremonial rather than practical.

· In more recent times, two other traditions have developed—the speculative tradition, which is concerned with building for profit, and the democratic tradition of public participation in the process of design, also known as the participatory tradition.

Vernacular Tradition

o Vernacular traditions respond to the lives of the people.

o Similarly, throughout the world, building types have emerged that solve the housing problems of different culturesin a wide range of climatic zones. The longhouses of the Northwest Coast, the tipis of the Central Plains, loghouses of forested regions, and adobe houses in the Southwest of the United States all belong to strong vernacular traditions in domestic building, which lasted into the twentieth century.

o The availability of materials has also governed the making of common artifacts. A container fashioned by its owner for daily use may be made in the Arctic of whalebone and sealskin; in Europe of hardwood; in Southeast Asia of woven palm leaves. In Africa, a calabash will serve the same purpose, and elsewhere it may be made of pottery or wrought iron.

o Vernacular traditions tend to conform to certain general rules that distinguish them from the high-style tradition:

  o Vernacular building and crafts belong to ordinary people. They are built or made by the owners or by specialists within their community.

- Materials are found close at hand, and designs have strong local or regional character.
- Designs are utilitarian. They are made for their purpose, fitting proven functional patterns.
- Building and village design is well adapted to climate, solving problems by the use of natural systems.
- Changes in design develop slowly. Craftspeople are conservative, preferring to use the experience of previous generations. The quality of work is sound and capable but often rough and unrefined.
- Cultural symbolism, ceremony, and ritual also play a part as influences in design. Sometimes practical needs are overruled by the desire for symbolic elements.

High-Style Tradition

· From the beginnings of civilization, certain individuals emerged as leaders with power over others.

· At least five thousand years ago, tribal leaders in many places demanded unique structures that rose above local vernacular dwellings in scale, in strength, and in artistic quality. Their expert builders experimented with new materials and engineering skills to produce unique structures that inspired awe in those who saw them and gave protection and pleasure to their patrons.

· The Egyptian Pharaoh Zoser, who ruled in the third millennium B.C.E., built a great temple tomb for himself to preserve his body and soul for eternity. It was first constructed in the conventional way as a low structure in which material goods were stored over the grave. However, the architect, Imhotep, breaking with tradition, coneived a new design of unprecedented splendor. He enlarged it into a stepped pyramid 200 feet high, perhaps symbolizing a stairway to the heavens. Around this, in a 35-acre enclosure, he built a necropolis, or city of the dead, made up of stone replicas of palaces, shrines, government buildings, and storehouses to serve the dead king to eternity.

· High-style tradition differs from those of the vernacular tradition in the following ways:
  - It is the property of the elite.
  - Designs are conceived and executed by specialists, who are often brought a long way to carry out the work. The designer is usually not the maker or builder, but rather the overseer of the work. The makers or builders are skilled artisans.

- The quality of work is of the highest standard. Materials are of high quality; if necessary, they are imported from far away. Rare and precious materials are frequently used.
- Symbolism, decoration, and refinement are often more important than usefulness.
- Designs do not evolve primarily as a response to climate and site, but they may be adapted to suit local conditions.
- National and regional character is developed, but designs from other cultures are often adopted to satisfy the desire for change or prestige.
- Changes in design style occur regularly. Great importance is attached to originality.

Speculative Tradition

· In the past 300 years, vast numbers of rural people have migrated to the cities. The old-fashioned ways of housing people were no longer feasible, and speculative builders motivated by financial profit filled the gap.

· As long as life was not too complex, vernacular traditions guided the building endeavors of the human race. The high-style tradition has endowed cities and countryside with splendid monuments to wealth, power, and creativity. But the speculative tradition has not very successfully fulfilled the remaining requirements.

· Uncontrolled private enterprise has not demonstrated sufficient thought for the needs of society or care of environmental resources. Housing has sprawled over the countryside, often without proper provision of community services.

· Speculative tradition's general characteristics are as follows:
  - The profit motive is the guiding force, and marketability is the key. Instant appeal to the buyer is more important than durability or environmental issues.
  - Designs are rationalized to be cost effective and mass
  - produced.
  - There is a loss of local and regional character.

Participatory Tradition: The Future of the Built Environment

· But as populations have grown and societies have become more complex, people have lost touch with the planning process. Democracy can provide mechanisms for public participation in planning and design, but most of us play no part in the massive building schemes that do so much to change our lives and the built environment, often abruptly and drastically.

· Elected representatives and public officials have often failed to make the best decisions. In the past four decades, many cities in the United States have been subjected to more construction than ever before.

· A truly participatory tradition in the built environment can only be attained when the following conditions are met:

  - The public is well educated in environmental design and ready to take a part in the decision-making process.
  - Designers are trained to respond to human needs and desires.
  - Designers give a higher priority to concern for the environment and the long-term effects of our design decisions.

· Each era of history has demonstrated its major preoccupations in built works. In ancient Egypt, an obsession with the afterlife drove the building of great pyramids; in medieval Europe, the desire to create an image of heaven on earth inspired the building of the lofty cathedrals illuminated by stained glass windows; in the twentieth century, designers felt compelled to express the desires and opportunities of modern life.

· Today, our transcending goal must be to design and construct in a sustainable manner, and to satisfy real human and environmental needs through the use of renewable resources and appropriate technologies. The sustainability movement may be demonstrating the emergence of a fifth tradition.

Summary

· The Built Environment is a field of study and the human activities of shaping, or ‘building’ the environments, that in return would shape human activities.

· These human activities of constantly altering and changing the natural environment would of course have several impacts on earth, for better or worse. Therefore, the players in the Built Environment field should be among the very qualified people.

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