

Vernacular Architecture

First Semester

Lecture No. 7

22/10/2023

- I. **Factors affecting the spatial configuration of the house layout in vernacular architecture;**

- II. **Change and evolution of house layouts over time**

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Factors Affecting the Spatial Configuration of the House Layout

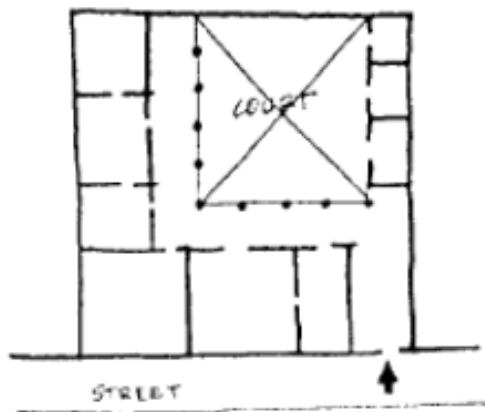
Rapoport (1969), in his study "**House, Form and Culture**", addressed the impact of sociocultural aspects specifically on the spatial patterns of the house.

The study included different environments of the world for the eastern and western countries including the Islamic world (Figure 1).

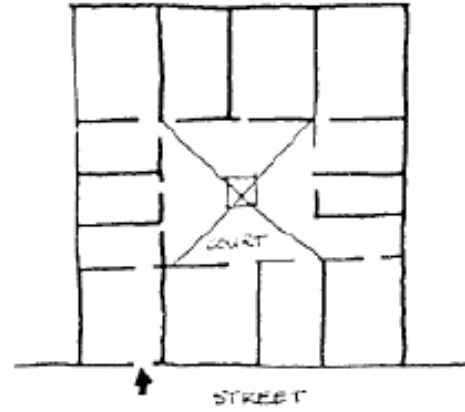
Factors Affecting the Spatial Configuration of the House Layout

The starting point of the idea is that human beings possess views and thoughts, which respond to different physical environments.

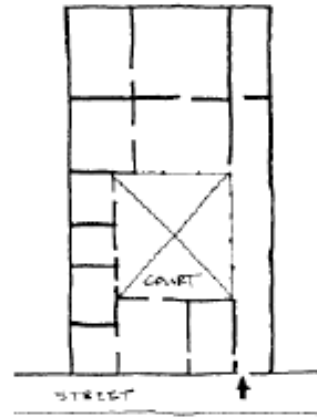
These responses differ from one place to another because of changes and differences in social interaction.



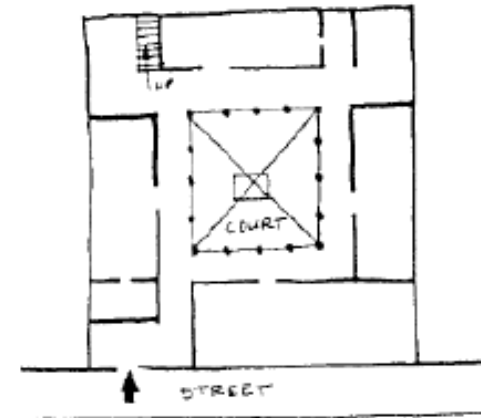
COLONIAL LATIN AMERICA
(VENEZUELA)



ANCIENT EGYPT

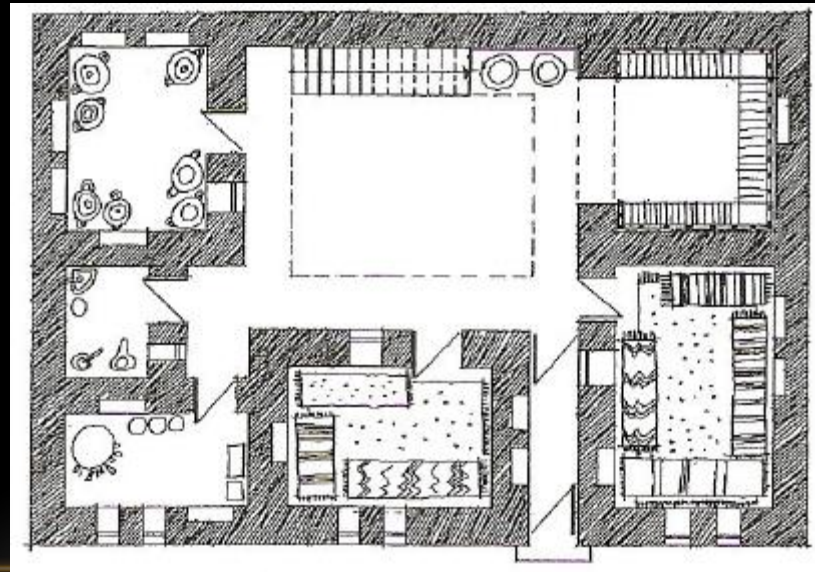


ANCIENT GREECE (PIRENE)



GD FLOOR - MOROCCAN HOUSE

Fig. 1. Courtyard house layouts in different cultures (using one principle in different areas)



Typical house layout in the citadel of Erbil

Factors Affecting the Spatial Configuration of the House Layout

- ❑ Cultural and social factors are the basic factors affecting the form of the house whereas the organization of space, the location, climate, construction materials and others are regarded as secondary factors.

Factors Affecting the Spatial Configuration of the House Layout

- ❑ Rapoport here stresses that the factors of cultural environment and social relations between individuals are the reason for different solutions, much more than the **biological requirements and climatic conditions.**

Factors Affecting the Spatial Configuration of the House Layout

- ❑ He explains that cultural and social forces become of a fundamental importance in **linking the style of human life with its own environment.**
- ❑ It is the essential reason in the forms of spatial relationships within any house layout.

Role of the cultural aspects in organizing the internal spaces of the house layouts

Rapoport has identified five affecting cultural aspects in the organization of internal spaces of the house layouts, namely:

- 1. Basic needs** with emphasizing the importance of the functioning of activities (to meet basic needs) not the activity itself, such as eating habits, sleeping, sitting and others, and the extent of their impact in the organization of space for the house layout.

Role of the cultural aspects in organizing the internal spaces of the house layouts

2. Installation of small or extended family.
3. The status of women in the family, and the degree of privacy required by the separation between them and men.
4. The process of social interaction.
5. The type of orientation and the necessary degree of privacy.

House Layout in Mesopotamia Architecture

House layout is a center of all events and all the phenomena of life in different stages of history. **It became the principal unit in architecture in all its forms such as temples, mosques, palaces, hospitals, schools and so on.** All these and others belong to the original basic unit, namely the house.

House Layout in Mesopotamia Architecture

Human societies in different parts of the world learnt how to deal with their surroundings, **according to a trial and error**, as well as the rhythm of life and the way of accommodation has been adapted accordingly.

Therefore, the solutions of those societies reflect the experiences of generations of builders through practical and proven ways.

House Layout in Mesopotamia Architecture

Mesopotamia civilization is a unique architectural experience; it contains different stages of growth and evolution for various types of buildings, especially residential buildings.

Archaeological discoveries in the Sumerian city of UR in Mesopotamia reveal that the history of the emergence and development of traditional patterns of house layouts goes back to more than 3000 BC (Figure 2). Therefore, Mesopotamia is considered the birthplace of architecture.

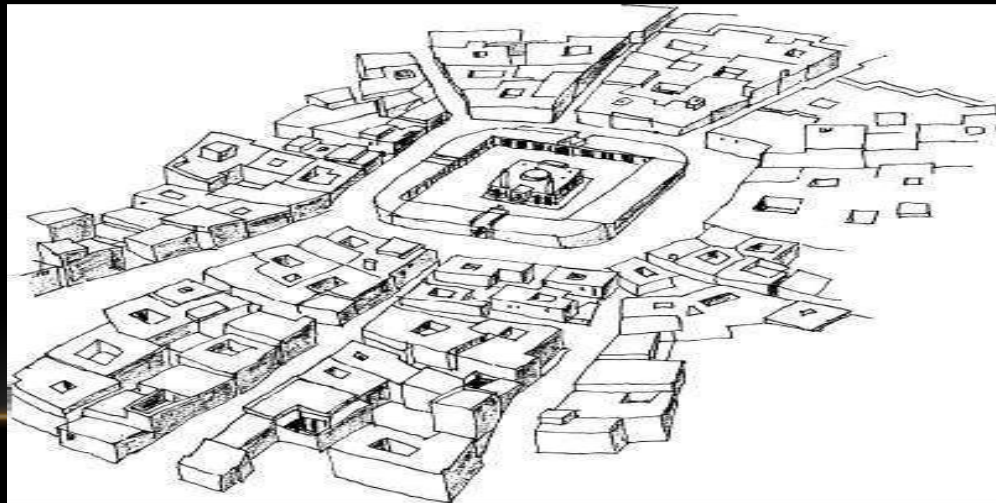


Fig. 2: Traditional courtyard house layouts in the Sumerian city of Ur, up to 3000 BC

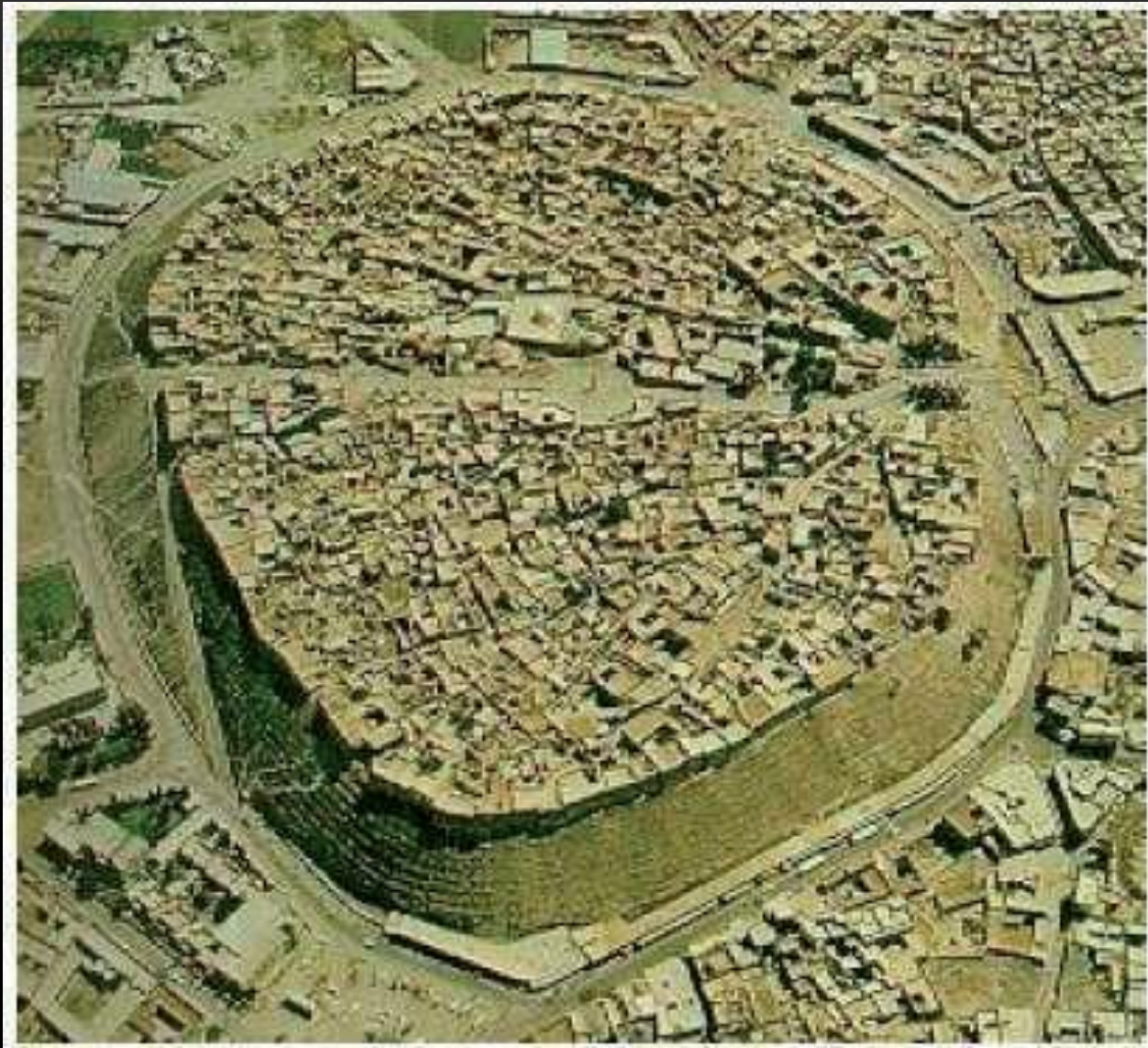


Figure 3. Traditional courtyard house layouts in Erbil citadel

House Layout in Mesopotamia Architecture

House layouts in Mesopotamia architecture are characterized by **an orientation towards the inside, to an open space (courtyard)**, which has become a prevailing feature in this type of house.

Thus, the courtyard house layout has remained a basic and dominant pattern for many centuries, particularly in Iraqi cities.

House Layout Design: Evolution and Change

Evolution is a gradual transition from a situation to a better one. It occurs continuously and repeatedly with the survival of the indigenous identity of the unit, **creating a new cultural or social component without obscuring the identity of the old component.**

While **change** is a process of transition to a different situation as a result of any act, that requires the transfer **or removal of an existing element (one or more) within a composition.**

House Layout Design: Evolution and Change....cont.

Or, it is an addition of a new element or more, that leads to the creation of new relationships between the existing elements, between them and those elements that caused the process of transformation, whether these elements are of a physical or moral nature.

The new situation, like the old one, can be characterized by stability or on the contrary.

House Layout Design: Evolution and Change....cont.

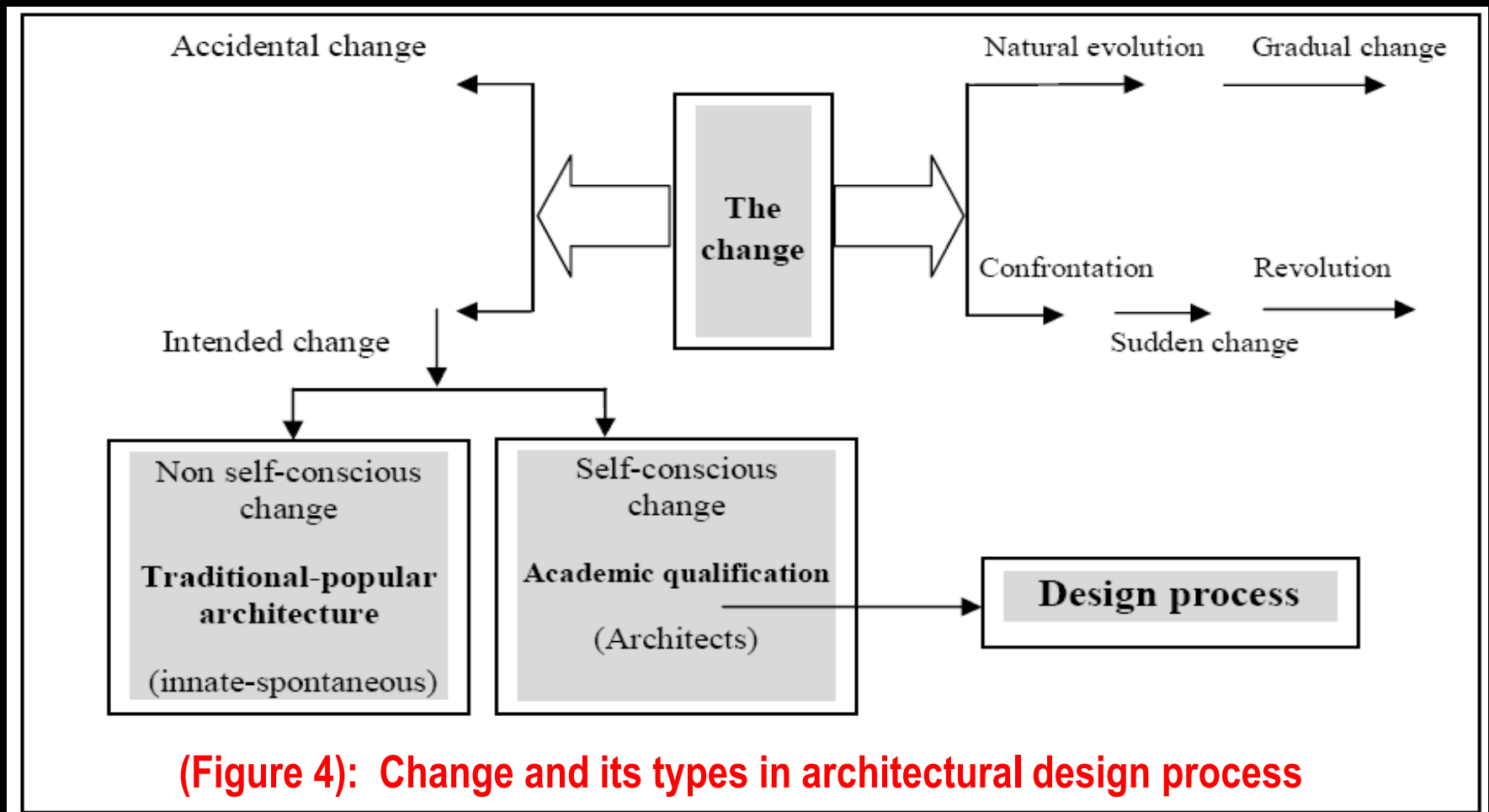
A change can be gradual as a part of the natural evolution of the existing situation or can be a surprise (sudden), taking the nature of the **violent confrontation**, which may be difficult to accept at least initially.

Sudden changes could be radical (revolution), which may face various reactions. On the other hand, **change can be intended deliberately (self-conscious or non-self-conscious).**

Thus, any deliberate process of changing the physical environment can be considered a design process (Figure 4).

House Layout Design: Evolution and Change....cont.

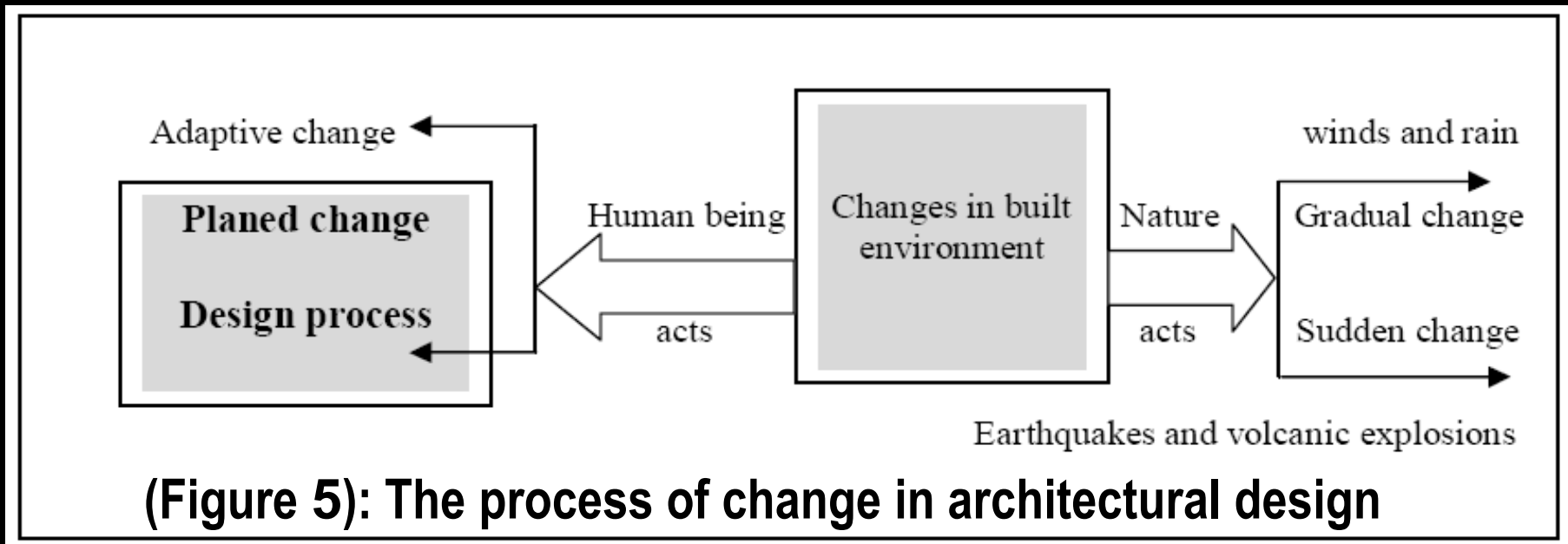
This conscious process may be driven by knowledge and clear intent, as in the architecture produced by architects (academic qualification), or non-conscious process (innate - spontaneous), as in traditional - popular architecture.



(Figure 4): Change and its types in architectural design process

House Layout Design: Evolution and Change....cont.

- In the same context, there are changes in the built environment due to acts of nature such as wind and rain or acts more violent such as earthquakes and volcanic eruptions.
- **With respect to changes in the physical environment which result from the actions of human beings;** it is usually a result of one of two processes, or both: adaptive change (non-conscious), and planned change consciously and deliberately (Figure 5).



The process of changing a house layout

The process of changing a house layout in architecture is influenced by several factors; each of these factors has the ability to **influence the architectural configuration of interior spaces within a house layout in various degrees**. These factors can be summarized as follows:

1. Geographical factor.
2. Climate factor.
3. Traditions and customs.
4. Creativity and innovation.
5. Incoming influences.
6. Social and religious factors.

How the changes in the structure of house layouts happened over time?

Changes in the structure of house layouts, as noted, can be linked with internal aspects stems from the architecture itself, and other aspects outside the field of architecture, such as:

- a. Intellectual changes.**
- b. Social changes.**
- c. Scientific and technological development.**
- d. The influencing by other fields of knowledge.**
- e. The ongoing human need for change and renewal.**
- f. Testing (experimentation) and criticizing the previous patterns to show their negatives, and to provide distinct alternative solutions. These negative aspects required a significant change as a reflection of cultural shifts related to humans and their environment.**

The duality of change and evolution in house layout design

- Because architecture is based on a duality of science and art, the process of change and evolution in house layout design will accordingly be ongoing.
- Therefore, the solutions and alternatives related to the human life will be diverse and numerous.
- **Thus, it can be said that the process of change in architectural design in general and house layout design specifically is altering, removing or adding an element to an entity leading to the creation of new relationships within that entity;**
- **Consequently, it is a transition to a different situation due to an influential action. The process of transformation may be gradual over time or can be comprehensive and radical.**