A COMPARATIVE STUDY OF MODERN HOUSES WITH AND WITHOUT OPEN SPACES

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Abstract

In recent years, the design and construction of modern houses have evolved significantly, with a particular focus on the incorporation of open spaces. This comparative study aims to explore the differences between modern houses with and without open spaces, highlighting the advantages and disadvantages of each design approach. Modern houses with open spaces are known for their seamless integration of indoor and outdoor living areas. These homes often feature large windows, sliding glass doors, and spacious balconies or patios that blur the boundaries between the inside and outside. This design strategy creates a sense of openness and connectivity with nature, allowing residents to enjoy natural light, fresh air, and scenic views throughout the day. In conclusion, this comparative study highlights the significant impact that open spaces can have on the design and livability of modern houses. While both design approaches have their own unique advantages and disadvantages, it is clear that modern houses with open spaces offer a more dynamic, flexible, and enjoyable living experience for residents. By prioritizing the integration of open spaces into their designs, architects and homeowners can create modern houses that are not only beautiful and functional but also enriching and sustainable for years to come.

Keywords: Open spaces, Modern houses, sustainability, housing

1. Introduction

Housing is a need that every human being must meet so that the government has issued its own rules and regulations in the purchase of houses. The very existence of facilities is no less important than the human needs of the home. A professional evaluation (POE) by respectable organizations is becoming increasingly important in scientific literature, industrial press, and so forth. Learning from previous projects is critical to methodically improve building performance and creating an environment that best meets the needs of customers, end-users, the larger community, and the environment. The importance of architects in pushing this goal has been recognized; nevertheless, data shows that POE adoption is uncommon within the industry.

On the other hand, modern houses without open spaces may have a more enclosed and structured layout. These homes typically have smaller windows, limited outdoor access, and less emphasis on creating a connection with the surrounding environment. While this design approach can provide a greater sense of privacy and security, it may also result in a more confined and restrictive living experience.

One of the key benefits of modern houses with open spaces is the enhanced quality of life they offer to residents. Research has shown that access to natural light and greenery can improve mood, reduce stress, and promote overall well-being. By incorporating open spaces into their design, modern houses can create a more inviting and livable environment that fosters a healthy

and balanced lifestyle. In contrast, modern houses without open spaces may lack the same level of comfort and functionality. Residents living in these homes may feel disconnected from nature and limited in their ability to enjoy outdoor activities. Additionally, the lack of open spaces can restrict the flow of natural light and ventilation, leading to a darker and less energy-efficient living environment.

From a design perspective, modern houses with open spaces often feature a more contemporary and minimalist aesthetic. These homes may showcase sleek lines, clean finishes, and an emphasis on simplicity and sustainability. By contrast, modern houses without open spaces may have a more traditional or conventional design style, with a focus on compartmentalized rooms and ornate detailing.

2. Open spaces within the house

The courtyard house is one of the oldest living types, dating back at least 5,000 years, and is found in specific forms in many parts of the world across climates and cultures. The courtyard system is mainly and primarily seen in six cultures: Chinese, Indian, Islamic, Greco-Roman, Spanish, and Hispanic American focusing on four areas: the cosmic axis and the architectural Symbol, favorable trend of buildings, social organization, and cultural activities in the courtyard houses. On the contrary modern courtyard housing around the world is usually provided with courtyards and shared facilities to fulfill the desire for human social connectivity and the pursuit of sustainable architecture and fame. The shape of the courtyard is a shared heritage of humanity that has a past as well as a future because it meets human physical and psychological needs. (Forte and Russo 2017)

2.1. Light wall

In architecture, a light wall is an uncovered space that allows light and air to reach the volume of a large building; otherwise, it is a dark or unchanged area. Light whales can be erected with shiny bricks to enhance the reflection of sunlight inside the space.

Light Wells Reduces the need for artificial lights, adds a central space inside the building, and provides indoor open space for windows to be viewed from the outside.

2.2. Patio

A patio is different from a courtyard in that it does not have to be enclosed by walls. It is very comparable to a courtyard in that it's an open space that can be positioned directly on the floor.

A patio can be attached to a house or separated. They are often designed and based on landscapes. Patios are versatile: they can take any shape and be made of a variety of materials, including concrete, pewter, stone, tile, brick, gravel, rock, or pea gravel. Most pivots are set on concrete slabs or sand and gravel bases. Because the pits are built on or around the ground, they do not require protective railings. In the past, householders did not observe artisans. Most of them thought that their yard was a small part of their residence. However, homeowners at this time are very fond of their yard area. Turning any part of your yard, whether back or front, into a courtyard, will create the ultimate outdoor storage space that can be used for fun and relaxation.

2.3. Financial benefits of patio

While you are living there, you and your future residents will benefit from adding a peach to your home, increasing the time it takes to sell your property. Patios offer not only functional benefits but also artistic benefits, both of which can be used to calculate the value of your home. Those who are willing to buy will find the home yard an attractive bonus to visit. The patio

provides a smooth path between outdoor and outdoor activities that is irreparable to most buyers.

2.4. Plantation in patio

Some many plants and flowers cannot withstand sunlight and leave the option of growing such plants in the shade. By adding a patio to your home, you can place your flowers and plants close to your home and give them partial sun or no sun at all. The ring transforms a slow outdoor space into a hub full of dynamic and noisy activities or leisure activities.

2.5. Entertainment for Guests

Entertainment is probably the best benefit that homeowners can get from building a patio in their home. At any time of the year, you can barbecue.

In addition to being unaffected by the weather, the extra space provided with the patio allows you to accommodate a large number of guests. This also works well if you have a swimming pool.

2.6. Patio and shading device

In addition to covering the patio, you can also control the amount of sun shade your yard receives by adjusting the distances of the fake tube. This allows you to create the ideal climate for the plants you are growing in the yard.

You can also design a patio that controls the amount of ultraviolet sunlight, or get rid of an insulated patio altogether. This will allow you to stay cool in the summer and dry well on rainy days and have a more pleasant outdoor experience. Some patios come with electrical conductors that allow you to install fan lights and light fixtures that add comfort.

2.7. Courtyard as a system

A courtyard is a separate space that is frequently bounded by a structure or fence that is open to the sky. Courtyards are a ubiquitous element in both west and east architecture designs and have been worn as a component of the general and conventional building by both ancient and current architects. Such spaces in homes and public buildings were frequently the primary gathering places for a reason, giving rise to various interpretations of the courtyard. Courtyard and court are both derived from the same root, which means a confined place. The relationship of this collection of terms may be found in Yard and Garden. Courtyards are sometimes referred to as public squares at colleges

There is no special setup plan for a courtyard; the prime manner of the courtyard home is normally rectangular, square, and circular. These forms are dynamical to fulfill environmental aspects like site boundaries, topography, architecture, and therefore the performance of developing new shapes [U shape, L shape, T shape, V shape, H shape, or Y shape] a. Displays completely different attainable shapes for a single-family court of 1 or 2 stories. The range and size of the yard are greatly adjusted from the spacious space. Supported a survey of the literature, the courtyard's design can be complete or semi-attached or can be set down with only 2 walls.

A courtyard is an architectural characteristic that has been worn for thousands of years in several parts of the world, particularly in homes. Farming, food preparation, working, playing, sleeping, or perhaps in some cases as an area to linger animals, courtyards were the most meeting places. As an open area inside a cluster or metropolitan fabric, the courtyard caters to a spread of activities, social, recreational, and microclimate. The importance of such a place was thanks to its central location within the center of the metropolitan structure or building.

Enclosed by arcades and colonies, smooth, aquatic corpses, numerous plants, landscapes with shade and light, all played a very important role in our social-economic life.

In addition, the yard will provide visual or audio protection still because of the climate as a place. As good as yard geometry is, its material make-up should be considered to provide the ultimate level of thermal comfort, even within the styling section. In addition, the courtyard was designed for climate response. In addition, the courtyard is used as an appropriate place to market a natural, healing environment. Architects can place nature's healing components in courtyards inside the building's layout and permit natural light to be filtered publicly and private areas with windows at the top of corridors. Shade, water, trees and flowers, air, floor, and color will affect the 5 senses of the human body.

3. Benefits of courtyard

The courtyard plays an important role in the ecological environment, physical and psychological development of the courtyard house. These benefits include psychological community benefits, cultural benefits, religious benefits, economic benefits, climate benefits, and construction benefits.

4. Psychological and Social Benefit

The yard's profit base is its search interior, which gives the farm and home residents a sense of privacy and wall. However, many of the views expressed by the court are as follows:

- The courtyard serves conservatism in the kitchen in the morning and stays in a room to entertain guests in the evening.
- Family A place to talk for everyone in the house, and encourage the family to work as a group.
- Visual privacy, when visually separated from court screenings or wall entrances.
- The sleeping area at night when the climate is suitable for outdoor activities.
- Voice privacy, integrated elements work in the way of noise between the courtroom and the outdoor area.

the courtyard can play a role in the recovery process, the architect can make the courtyard features an example of these features such as building design, sheds, water, trees and flower map, wind Towers, floors, and all these colors can have a positive effect on the five senses of the human body.
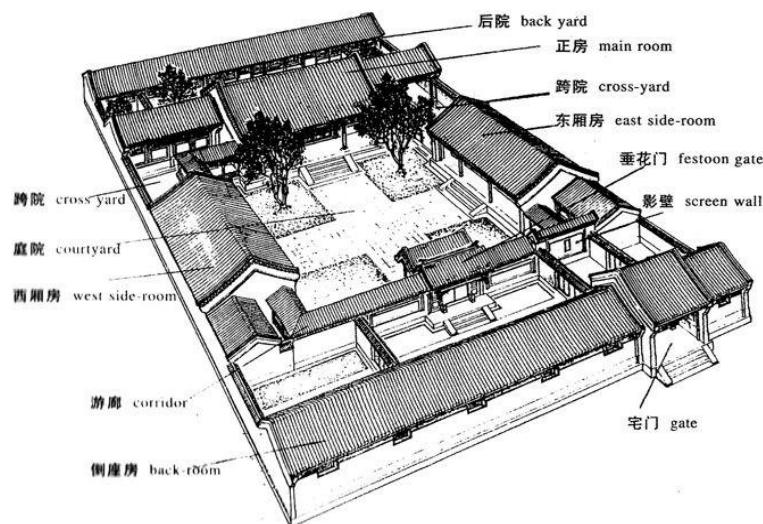
Through the Hong Kong University Campus, a study of the healing effects on the university. The campus noticed that the courtyard garden, located near the campus library, is usually at the entrance, and the meditation gardens have specific purposes and should have a different pattern and landscape design. The meditation garden is ideal for the study surroundings, even as the garden in the courtyard supports public social communication. The study examined the effect of healing gardens on reducing stress at a children's medical center in Austin and found that stress levels are lower when the patient is sitting in a healing garden than in the inner area.

5. Chinese traditional a courtyard

The traditional foam of houses in China was a courtyard. Although the courtyard house was not the only housing style available in China. During the evolution of local residential houses, the shape of the courtyard house was not chosen by chance to improve the efforts of generations. From the point of view of traditional local residential houses, the courtyard house shape is more suitable than other local language-related housing types to adapt to the natural environment and meet the living needs in most parts of China(Gulzar 2017). It can be assumed that physical forces such as climate and natural ecological conditions and social and cultural

forces are the main determinants that determine the development of the shape and style of the courtyard house. (Ayesha Mehmood Malik and Rashid 2018)

Figure 1: Chinese traditional courtyard

6. The courtyard house System of Cordoba (Spain)

In the historic quarter of the city of Rutba (Spain), there are several houses with gardens as well as courtyards. Instead of being merely an architectural formation, these courtyards provide a living space for social associations and cultural appearance that is unique to these vibrant urban surroundings and in which private and public boundaries between sectors are poor.

Figure 2: The courtyard house, Cordoba

7. Greco-Roman courtyard houses

Roman courtyard houses are usually found in the ruined city of Pompeii, which is found late at the beginning of the fourth or third century BC. Its surviving structures represent a significant transition from Greek to Roman Architectural style. In the Roman house, the central orgy area is called the atrium. Nowadays, we often use this term to indicate a place covered by a glass roof. Hundreds of recovered Pompeian homes show that the courtyard was an important element of its urban layout, and an integral part of the house. More or less every house had a courtyard, while some houses had three or four courtyards(Abass, Ismail, and Solla 2016). These houses are usually of two types: the colonial peristalsis having a central courtyard or a

small central atrium. Large courtyards can also have a garden. The House of Polybios is one of the oldest and most interesting sites, with a peristaltic courtyard attached to a portico in a north, east and south orientation. To the east, under the portico, was a large atrium with an underground cistern, which drew rainwater from the roof, and supplied water for home use.

Figure 3: Greco-Roman courtyard

Source: (https://www.metropolismag.com)

8.   The courtyard house in India

The courtyard house is also of local architectural scenery in India, the design of which was guided by Square Mandala as a representation of the universe. The map is divided into a square grid running a network of lines from north-south and east-west, with the name of the place of one idol in each quarter, along with the central square left empty, the heart is a symbol of the energy of evil, in which the soul/atman resides. For health and well-being, the human body, habitat, and settlement must be properly based within this cosmic square. There are numerous regional variations in the design and construction of Indian courtyard houses: haveli, Wada, nalukettu, rajbari, and deori. The courtyard varies from a narrow open space near the gate or backyard to a large store in the middle of the house. (S. Malik and Hassan 2019)

There are also differences between Hindu and Muslim courtyard home designs. The mansion (Haveli) along the Ganges was more for meditation and religious purposes. Home windows often open in the scope shaft for ventilation, although at different heights to maintain privacy. In Kerala, Nalaktiu is a South Indian variety with a smaller courtyard than the typical Holi. The courtyards are enough to admit

A moderate amount of sunlight, but often a rainwater reservoir in the center is comparable to the Suzhou Light Wells.
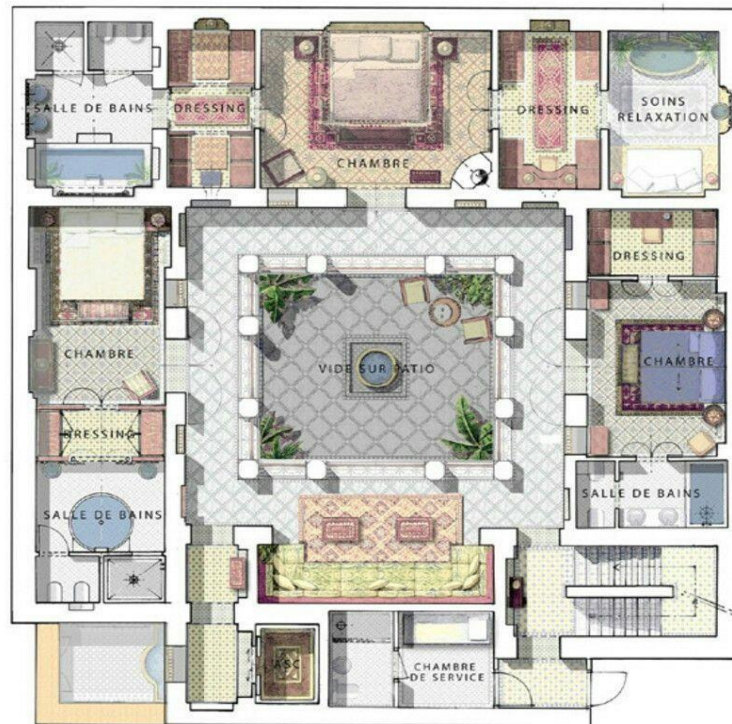
Figure 4: The courtyard house in India

Source: (https://in.pinterest.com/pin/763430574317183517/)

9. Islamic courtyard System

An Islamic courtyard is the "garden of paradise" or the beginning of paradise. In cosmological theories, the courtyard is not open to the sky, but has a roof over the sky, and stars at night. The Arabs have applied architectural metaphors in their Scientology so that the sky was considered to be a dome supported by four domes, which gave a symbolic significance to the house in its courtyard, which was considered to represent the universe(Gulzar 2017). The courtyards represent the four pillars around the house that lead to the dome of heaven. The sky itself forms the roof of the courtyard and is reflected in the traditional fountain in the middle of the courtyard because water is the most important vital element of nature which symbolize the universal essence of the essence, and the reservoir of all possible existence because the Islamic The fountain in the middle of the courtyard usually consists of four corners in which an octagon is formed, which symbolizes the dome of the sky. The eight sides represent the eight angels who support God's throne. For the Arabs, the sky was once the holiest and most peaceful aspect of nature and was ideal for bringing into one's home(Shafique 2016). The way to do this is through the courtyard, a hollow square, in which all the rooms are visible, from which one can only see the sky. This attached private domain allows residents to have a deep connection to the sky so that the house can be filled with the constant energy of the universe, which is unmatched by any other architectural feature(Qureshi, Akhtar, and Shah 2019). The rooms are grouped into three levels, which produce streets that are shaded by windows and ceilings that reduce heat in the summer and protect from rain in the winter. (Gillani 2014)

Figure 5: Showing a typical Haveli plan

Pakistan has quite wealthy chronological and cultural architecture. Housing intend transcends social, financial, personal, and scholarly concentration in such a way that it can be seen as a constructed structure. This commitment to home design encourages stakeholders to apply modern and traditional dynamics, resulting in a complex schema of home design(S. Malik and Hassan 2019). One cannot think of one's existence without a home. In the well-liked mind, a house is a building with a kitchen, a bathroom, a bedroom, and a lounge that provides shelter and protection. Also, it reflects a family's social norms and aesthetic etiquette in two ways: from the interior, through the adjustment of spaces, and from the outside, through the facade architectural features. The tradition of building modern houses has become excessive in Lahore, Pakistan's second-largest city(A M Malik et al. 2017).

9.1. Courtyard house in the walled city, Lahore

The courtyard housing typology of the Walled City of Lahore was mostly drawn in an open-to-sky square that was bordered by inner spaces with openings to permit contact between the outside and the inside. It has many socio-cultural and passive cooling benefits(Ayesha Mehmood Malik and Rashid 2018).

▪ **Social Setup**

The courtyard of the house is a social center that promotes greater interaction between people and nature. She set up the natural setting, some fixtures for the kids to sleep on, or some fixtures for the kids to play in, and for relations discussions on the isolation and protection of the home (Gulzar, 2017). It was also a position where vital intellectual and sacred events took happens. As the floor level enlarged, so did the level of privacy, allowing occupants to see under-balcony and screens (Qureshi, Akhtar, and Shah, 2019)
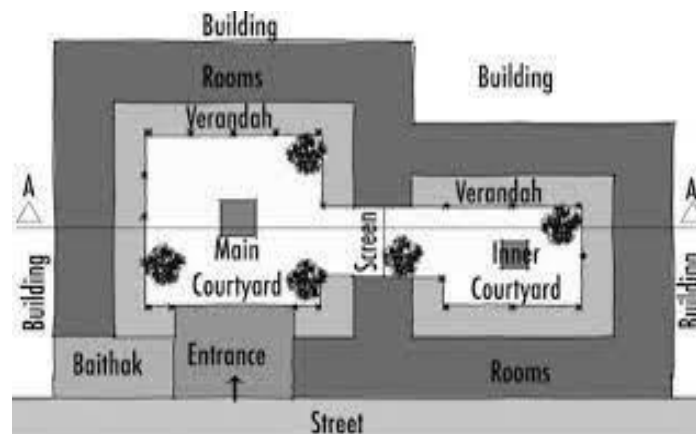
▪ **Comfort**

Traditional buildings retain thermal relief, although there are architectural fundamentals such as screens, veranda, balconies, water bodies, plants, overhangs, courtyards, and basements. The window openings were not glazed, but were covered with screens and opened in Jharkas (balconies), allowing for air circulation while avoiding direct glare. The courtyard is shaded by chajja (overhangs), which keep the monsoon rains at bay. A courtyard ran through the center of the structure, shielding the internal sections from direct sunlight. In various parts of the subcontinent, the courtyard is where rainwater is collected. Air scoops were also utilized in dwellings for ventilation. The rooms' high ceilings supplied exposure to air and kept the rooms cool

▪ **Family Structure**

The culture of the region promotes a blended family arrangement in which three or more generations reside in the same home. Following the wedding ceremony, the son returned home with his companion, and the two of them shared a home with their parents. This led to the formation of a large domestic organization consisting of all members of the household and servants who helped with the household chores(Gulzar 2017).

Figure 6: Courtyard house

Source: (Shahzad 2011)

In this context, various architectural styles can be seen in house planning and fax design. This kind of design has confused the local architecture of houses. A simple inspection shows that some homeowners may go for unique designs to decorate overhead water tanks(Qureshi, Akhtar, and Shah 2019). Traditional designs are disappearing from the face of residential patterns in Lahore and are being replaced by modern designs. There is an urgent need to test the compatibility of traditional home design with modern home design. (Qureshi, Akhtar, and Shah 2019)

9.1.1. Traditional balconies

Walled City Lahore owns a host of high-rise buildings in the form of astonishing past architectural masterpieces windows, doors, and wooden balconies that are a usual attribute of many structures so this treasure is only one of its kind and precious The study was conducted in an attempt to find and investigate this treasure of wooden balconies at walled city. (Abass, Ismail, and Solla 2016)

Walled city's visually appealing attractions reflect the taste of makers and homeowners. These balconies embrace the unique ornamental features of traditional structural elements, either with a balcony complicated design details or with effortless geometric shapes and designs. The mindful effort of design and balance is common in every construction.

Historically, the gallery was an extension or forecast space outside the room where homeowners could sometimes find individual changes to their structures. These are outside residences and an area for meeting and chat with neighbors and greet guests from above. Their overhangs shield the windows and doors below from direct sun and rain, permitting them to remain open throughout the rain. Over time, the wooden balconies of the Walled City have disappeared and we find no traces of them, and many houses have been converted to modern concrete construction. Not only are these balconies a valuable addition to the interior, but they are also an attractive part of the street cape.

Given the fact that timber structures in outside use are subject to elevated levels of weather and humidity, this is another factor in the damage. And due to the neglect of the owners or tenants living in the existing structures, defective changes and alterations in the original design are now inevitable. It is vital to raise awareness of the historical value and preservation of the rich cultural heritage of the Walled City. (Abass, Ismail, and Solla 2016)

The large construction of the balcony is usually divided into holes, but the balance of these parts is diverse from the balcony described earlier. The holes in the middle seven mihrabs are the same size, but the two holes at both split ends of the front elevation are smaller than the middle. Due to this difference in the size of the central and side arches, the further distribution of calcareous at both ends represents a different geometric distribution. Surprisingly, the bias is that 2 open passages on the left are closed by building a brick wall and wood planks on the right, which create no sense. Ancient bushy arches are supported by ornamental bases and multi-storied columns with capitals. At the bottom of those columns could be a double lotus bud form and also the same lotus bud is organized the other way up within the capital. The floral part of the base ends in an exceedingly sq. that's embellished with the applied shape of the star. So the column incorporates each geometric and floral pattern in the ornament and shape and comfort that adds selection to the look and makes it a lot of attractive. a similar star pattern is employed within the carving of the wood strips that adorn this simply Beam. It seems at regular intervals in the variety of a running strip below the railing which is created on the dividing lines to interrupt the continuity of the stimulus. When this embellished painting strip, another parallel strip has been made which includes a drop-like compass pattern. This double ornamental strip on the projection edge may be a distinctive feature of beauty. Each of the running strips is dead painted and shows master craftsmanship. The 2 ornamental strip items will not work along properly and over time a vacuum is formed that doesn't improve. As a result of the balcony is neither painted nor polished, the buildup of wet within the joints weakens the grip of the structural components. This is often the apparent reason why the grip

of assorted parts was lost and structural injury occurred. Several pieces of lower drop foil. The dotted strip is missing and also the bottom of the balcony floor is damaged. The wood planks below the balcony are hanging below their original position, which is one way or another extraordinarily hazardous. The sole proof of hanging vertically hanging wood bars beside the remainder is that the projection could have an everyday fringe ornament that has fully disappeared. (Ayesha Mehmood Malik and Rashid 2018)

9.1.2. Verandah

Various definitions have been used to describe how these building elements are unique to housing design as well as sustainable environments. "The word was originally introduced from India, where it is found in several local languages as Baranda in Bengali besides Hindi, but it is only an adaptation of Portuguese and Old Spanish Brenda (Baranda) which is Railing, Ballastrid Or a balcony. This is the first definition for a veranda, and it has a lot to do with the second definition. "Is it is often erected as a protection or shelter from the sun or rain?"

Verandah is suitable for the local climate and provides an efficient state of thermal comfort High temperatures; solar radiation, humidity, and glare are the main causes of climate stress in Malaysia. To get a comfortable home climate in Malaysia, rain, floods and occasional strong winds must be controlled. People feel warm, comfortable, or especially cool in the morning, late afternoon, and evening where certain elements like plants, wind as well as shaded areas combine to create thermal comfort is helpful. Compared to indoor spaces, wind and solar radiation are important factors that affect thermal comfort. "The effect of heat from solar radiation, therefore, has a greater effect on thermal comfort than the cooling effect of air in the semi-space." This suggests that solar radiation has a greater effect on thermal comfort than wind speed, as most people think. Shading elements or shading devices can reduce the level of solar radiation and it depends on the amount of export.

9.2. Residential Satisfaction Theories

Residential satisfaction, which is defined as a sense of satisfaction when someone needs or desires or achieves in the home, is an important indicator and is recommended by planners, architects, developers, and policymakers. Used in many ways. - In fact, the concept of resident satisfaction attracts the idea that residential satisfaction bridges the gap between the actual and desired (or desired) residence of the home and the conditions of the neighborhood. Three main theories are mostly based on experimental studies. These are the theory of housing needs, the theory of housing deficit, and the theory of psychological construction.(Ghazizadeh and Rückert 2013)

Housings characteristics were more important than mentioning demographic features in the study. This suggests that the characteristics of the building, such as the number of bedrooms, the size and location of the kitchens, and the quality of the housing units, are strongly related to residential satisfaction. The structural indicator of housing is an important factor that affects housing satisfaction, as found in previous research. Included indicators include physical characteristics of the housing such as laundry and washing area, kitchen space, size and dining area of the living area, number and level of sockets, number of bedrooms and bathrooms, other aspects of housing such as Housing quality, privacy, and housing services provided by developers such as home safety and ventilation. The highest level of housing satisfaction is measured by the physical characteristics of the home such as comfort, building quality, housing plan, and house size. This was supported by another study which summarized that the

characteristics of housing such as the number of bedrooms and toilets, size and location of kitchens, living room, quality of housing unit affect residential satisfaction differently at different cultural levels.

10. Housing Deficit Theory

Morris and Winter (1978) proposed a housing deficit to illustrate housing satisfaction/dissatisfaction. In their Residential Adjustment Model of Residential Movement, they propose that individuals decide their living conditions according to the two standardized values, including both cultural norms, which are based on social norms or living conditions. Rules, and are determined by family / personal rules, which are money for household members Your standards for housing thus, a conflict between the actual housing situation and cultural and/or family housing principles results in a housing deficit, resulting in residential dissatisfaction. Households with housing deficits are therefore satisfied that they will consider some form of housing adjustment. (Mohit and Raja 2014)

11. Psychological Construct Theory

Galster (1985) introduced the concept of scientific constructs of residential satisfaction and theorized that individuals can be viewed scientifically as constructing a reference condition for each particular aspect of the housing situation. The quantity or quality of the aspect provided by the reference point will depend on the needs and desires of the individual self-assessment. If the current situation is to be understood in terms of the reference situation (or better), then the psychological state of 'satisfaction' should be apparent. If, on the other hand, the current situation falls far short of the reference situation, two alternatives are possible. One can try to reconcile through adaptation, by re-introducing one's needs, reducing aspirations, and/or altering the assessment of the current situation, and thus creating a source of satisfaction. The second alternative is that no one can adjust the current residential context, in which case dissatisfaction should be apparent. Such individuals will, over time, try to reduce their dissatisfaction by modifying existing housing unit conditions or moving on to another housing situation. (Mohit and Raja 2014)

11.1. User Satisfaction measurement

Surveys of IS success were undertaken in the 1970s and early 1980s, and the first research assesses user happiness. During this time, a link was discovered between user pleasures, utilization, and IS success. It was also stated that no criteria for comparing the numerous research completed during this period had been created. This necessity has piqued the curiosity of many scholars.

The construction industry is often inefficient, of poor quality, and cannot be improved over time. The key to solving this problem as an industry is the ability to learn from past projects and improve them. In this context, the benefits of post-occupancy assessment (POE) are being carefully practice. There is a need to fulfill the gaps in the desired and actual performance of buildings.

Residential satisfaction is a complex construction for three reasons. There are two conditions in the term accommodation and satisfaction. Second, it involves three different processes, cognitive, efficient, and behavioral, leading to a third cause. This requires different measurements based on these processes, such as objective characteristics, personal characteristics, and personal characteristics. In addition, there are even three main theories of residential satisfaction, such as housing needs, housing deficit, physical construction, residential satisfaction/dissatisfaction, most experimental studies use one or a combination of

theories from which It appears that further studies are needed until a general theory of residential satisfaction/dissatisfaction emerges. The experimental studies under discussion show that several variables from the housing and its environment, including the demographic characteristics of the residents, have a significant effect on the level of residential satisfaction/dissatisfaction Further studies can be done in a specific context to guide public housing policies. (Mohit and Raja 2014)

11.2. Globalization in Architecture

Culture and tradition are the two basic elements of every society that are directly related to the history and philosophy that make up that society. The reality is that culture has always supplied the foundation for all human material and religious activities, and it has never been conte(Anggiani and Jamila 2019)ntious, allowing for individual and societal growth through arbitrating between one's self-knowledge and the understanding of others. The origin of the term tradition directs the process of transfer, transmission, and preservation of values, traits, practices, and principles, forms, reflecting the cultural identity of people, groups, nations, and mankind.

In a word, "the particle system of traditional social experience is an important and powerful center". "Tradition is a belief, concept, or way of life that has long been followed by members of a specific culture or group," according to the Cambridge Dictionaries. Tradition is essential in comprehending the past and present and providing a perspective for the future as a constructive part of every culture, as a human spiritual legacy, and as a "cultural distinctiveness" of every nation. As a result, the traditional way of life is portrayed in the shape of this society's dwelling. A traditional house is like a house built in a given area. This type of house is easy to build, clean, and easy to understand because everyone knows the rules. (Kenna 2008)

Aesthetic excellence is not developed specifically for each residence; it is customary and passed down through generations. The adherence of a law by the collective consent of everyone is referred to as tradition. As a result, it is accepted and followed because respect for tradition provides collective control, which functions as a discipline. This method works because there is a shared vision of living, an acceptable model of structures, a restricted number of building types, and, eventually, an approved Classification and settlement pattern. This common and approved image will exist as long as the tradition exists. The image evolves as the tradition develops.

The new millennium is countering tensions between the forces of globalization, which has been widely discussed as a discriminatory trend of the present moment, and its impact on local identity and distinction through local architecture and design. To ensure that globalization is seen as a multi-faceted trend, architects often find themselves at the center of two conflicting forces that exist as a result of conflicting cultures and architectures of the past or Introduce them as well as their service values and ways of expressing themselves. (Kenna 2008)Changed productive forms, consumption-driven lifestyles, and growing service industry have also affected societies and created changes and imbalances in income distribution. This imbalance leads to different lifestyles in cities. Eventually, in the cities, all sorts of houses are built, from houses attached to apartments, from houses to adjoining premises, to dwellings, even their unique "concepts" and designs. They are also distinguished from the point of view of various images of world culture that have been created and disseminated through media, fashion, etc. Such images are presented to us as "lifestyles" or identifying elements, etc., and affect our preferences in architecture and urban life. Different sections emerge within cities representing different lifestyles.

Large differences in income levels within cities increase crime rates and fears in cities. In response to the perceived threat, some community groups move from the public square to the premises and residences attached to their security personnel, surrounded by high walls and camera systems. For luxury housing plans, "lifestyle" is the keyword. Each luxury housing plan represents a specific lifestyle and identity during which it is particularly emphasized.

There are other methods of planning that have no historical or local value and have nothing to do with location or environment. An excellent example of such a project is the emphasis on self-sufficiency in services, infrastructure, security, entertainment, etc., regardless of the historical or cultural architecture. On the other hand, the world prevents the outside world from entering. New housing projects sometimes use foreign construction styles. Sometimes they recreate a "neighborhood" with old memories of neighborhood lifestyles and neighborhood relations that have been lost in the process of metro politics, and sometimes they revolve around a theme like water. (Boonchuen 2002)

"Nature" and "rural life" are important themes in urban and architectural design in new housing projects. Although nature is an illusion in these plans, it is also in high demand among buyers who can dream of a "home in nature." The illusion of nature and rural life is sometimes felt through artificial lakes in fruit trees and fences and also by using some flowers or trees as symbols. New housing projects not only serve as an identity representation and lifestyle show but also as an investment strategy that is important in supporting identified identities. Transportation is very important in this context. Due to its proximity to the metro and the airport, it can be considered important. Some projects are entirely focused on transportation. (Kenna 2008)

Every new invention that accelerates transportation and communication reinforces the claim that it is about to change social relations. Technology enables one to live without the need for physical contact. This change has a direct impact on the city and city life. The question arises, "Is there a need to maintain face-to-face relationships between people in global cities, or will this relationship survive in cyber life?" When all these changes and developments are taken into account, their impact on citizens and civic life become clear. Social and economic stability and differences in style affect the relationship between city and city dwellers to the physical and social environment. The dynamics of this relationship are deeply influenced by global finance, culture, information, and technology.

11.3. Importance of user satisfaction in architecture

Advancing the field of architecture, urban development, ecological design requires the creation of a multifaceted conceptual framework of environmental characteristics and quality of life. There is limited information about the physical environment that Influences the satisfaction of the user. It is complicated by the fact that it is influenced by various factors linked to economic, cultural, and social perspectives and variables in the domestic background. Attention should be paid to the relationship between residential premises and place satisfaction(Hay et al. 2018).

In general, residential satisfaction is considered one of the standards of housing quality; neighbor satisfaction is an important component of life satisfaction. The main purpose of this research is to determine which standards enhance customer satisfaction in the residential environment. Satisfaction based on this approach has been the subject of much research at various levels. Considered the living environment to be connected to three components: the neighborhood, the home, and the neighborhood identified three levels consisting of bedroom, floor, and hall, which assessed students' satisfaction with their hostel(Meir et al. 2009).

The home is one of the most fundamental human needs. Housing is still a requirement that cannot be eradicated over time, even though the design of the home can be made in a variety of ways (horizontally and vertically). There was also a huge increase in housing growth. Many additional pieces of land for residential development have become available, ranging from moderate to upper-class housing to middle and lower-middle-class housing. Residential development flowers, in addition to developers' sharp eyes, recognize the potential of the region's property market at high occupancy rates.

11.4. Contemporary architecture and Pakistan

Pakistan is still constrained by the nature of its existence as a secular or religious state, and therefore by its identity, fifty years after independence. Surprisingly, no one can agree on the provenance of this identity or how to verify it. Environmental issues, as well as architecture, are pervasive in urban living.

In October 1993, after a seminar on modern architecture in Pakistan, an architecture student articulated a widespread feeling among the student delegation present, stating that she felt bewildered at the end of the day's events. And so on. The kid of a divisive parent - "I'm not sure where to turn or what action to take..."

The comment was about another fact: the proclivity to "adopt" a cause or to seek a solution based on imposed ideas in general. Three years later, architect Kamil Khan Mumtaz stated that he had developed a "Pakistani" identity in architecture.

It is more a subject of intellectual irritation and worries in commercial and popular design. Pakistan is experiencing the typical challenges of a developing country. These are the densities of urban centers at the urban and construction levels as a result of rising economic stresses and population explosions, which lead to a shortage of infrastructure and socio-political issues. These development concerns run counter to the goal to enhance political and cultural identity.

Housing and sustainable architecture from a global and environmental viewpoint, as well as an architectural identity at the national and regional levels, have been on the state's agenda, not only in political speeches but also at international building seminars and Conferences. These concerns are not mutually exclusive, although they are frequently mentioned, particularly in large-scale government initiatives. (Gillani 2014)

In Pakistan, modern buildings are constructed using two sorts of materials. One is well-known for opposing popular desires. Second, an intellectual institution led by Janus, a Western-educated elite, rejects popular opinion Janus because of the legitimate inspiration that is provided to him. The west is seen as a source of heavenly inspiration and instruction. Simultaneously, a broad collection of academics is advocating a return to the roots.

However, she agrees with the rejection of post-colonial architecture, such as the modern movement and its motifs, which a young nation has chosen to symbolize the emblem of "progress" in Islamabad's new capital. Some rely on arbitrarily chosen periods in the history of architecture, or romance from the vernacular, to transplant the paste of precise maps at height. A handful trying to gain more knowledge of theoretical discourse in architecture, after trying to study typos, which can be called "critical regionalism", on the spaces of historic structures, etc., it is once again debatable what defines "traditional."(Shafique 2016)

11.5. The architectural importance of Lahore

Lahore is Pakistan's second-largest city and is significant for its rich cultural, political, and architectural heritage. The city's design has undergone significant changes in three major

periods of history, the Mughals, the British colonialists, and post-independence. Before the colonial era, the British considered Lahore to be a very fragmented place, which was divided into different institutional, public, professional, and sectarian categories(Shafique 2016). Like all early cities, Lahore has two faces, old and new. The old city is evocative of Lahore's past grandeur and the novel city is modernized (Mubin, Hasan, and Monitoring 2013)The traditional house design in Lahore is a famous feature of the confined architectural approach which makes there is a long association Historical context. The housing unit is further divided into different categories according to the income of the homeowners and the family size. Traditional houses consist of attached and separate houses.
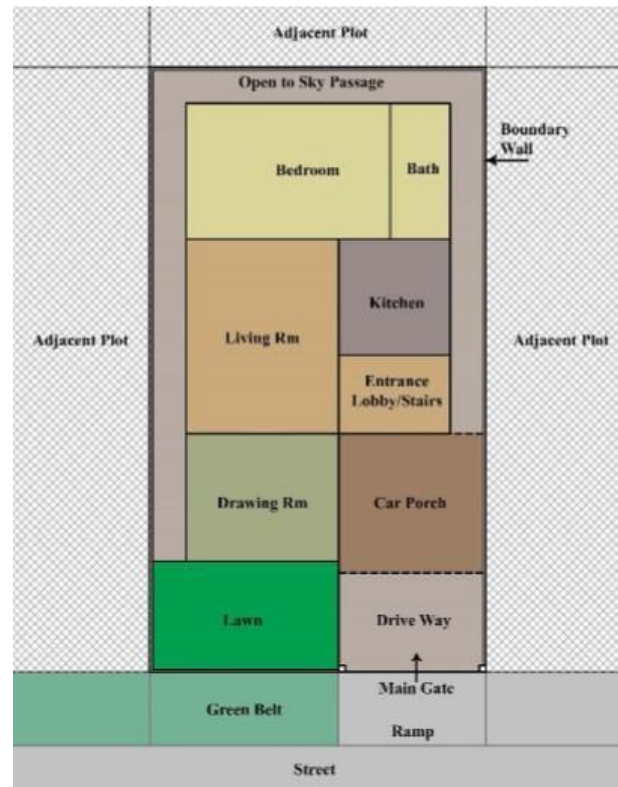
11.6. Modern residential architecture of Lahore

Recent studies have shown that the development and expansion of affluent neighborhoods have become part of the new housing scheme. There are about 40 40-door neighborhoods in Lahore that are inhabited, and some more are under construction.

It has been stated that the housing typology initiated through government housing schemes in Lahore, such as officers 'houses in the military cantonment area, officers' houses for the railways, and others, have ideologically linked the living ideologies to different houses. Changed The Ultimate Two-story Bungalow (Colonial Prototype) announces a socially accepted model of living in the current scenario across the country. This parable has played an important role in creating social inequality among the people of Lahore. The current house model lacks the concerns of the common man and does not fit into Lahore's neighborhood. Modernity and modern trends in lifestyle are changing the old tradition of building and construction process. As a result, local planning and construction forms have changed. The design shift proved to be an economical alternative to building multiple houses with a lower design profile than traditional homes with exaggerated ornaments. He emphasized that at the moment, although the architecture, layout, and family setup of the houses are similar, there are several front facades throughout the city. (Benyoucef 2019)

However, the low percentage of houses reflects a balanced style of home design as a combination of traditional and modern designs, in return for which the design of the house combines modern and traditional features in a harmonious combination. Give Modern design features include a rectangular project with a simple concrete slab, a square display with nominal decoration, low ceiling height, large windows, and a controlled rotation by compacting the space plan while the focus is on the fact that our modern gypsy lifestyle is increasingly in need of community houses, group houses or apartment houses. Therefore, shortly, it may signal the return of the concept of attached houses.

Figure 7: Basic layout of the modern house, Lahore

Source: (Qureshi, Akhtar, and Shah 2019)

11.7.   Factors that influenced residential architecture

Different factors affect residential spaces. In recent times, however, housing trends have become more subjective to globalization, regulatory frameworks, and other cultural aspects. The following factors from current market trends are derived from personal observation.

- Globalization
- Exposure
- Social tendency
- Customization
- Building regulations

11.7.1. Globalization

The concept of "globalization", as we have seen in many recent studies, is an interdisciplinary concept that has no specific definition due to differences in views and interpretations. For some, it is seen as creating a shared global culture and harmonizing identities and lifestyles, while for others it can be seen as highlighting differences and supporting the local. Is. Globalization has been described as a uniform process, made possible by the difference in time from space. Thus, modernity forms the basis of global relations between distant and distant communities.

The globalization of capital, the change in product types and profits from production to consumption, and the increase in international investment have changed the economic order and the associated social and cultural pattern. Nowadays, many concepts have become marketing and consumer goods. As a result, many usable objects have begun to play a role in shaping and defining identity.

The global mainstream of countries and cities in the form of societies and therefore finance, media, information, races, and technology, cities are organized in terms of economy and economic system. In this way, they become a global aggregate sector. The global position of cities also affects their economic, social and cultural infrastructure. Although "global cities" are central to the world, they also represent the global activities and destinations of their countries. In addition, they are involved in relationships with other cities around the world. Globally, capitals are cities with high technical facilities, which are evolving through international capital, high investment values, modern communication-transportation technology, and communication. Contains - Interact with others. However, the city's integrated integration into the global economy could also lead to increased segregation of citizens, urban crime, poverty, and fear. The effects of globalization conflicts change the lifestyles and expectations of citizens and stimulate efforts to create safe havens in cities.

Technological progress in the economic and social process forms a profound factor in changing the construction trends of a region. International brands of food, fashion, building construction industry, electronics, and furniture, etc., when they hit the local markets, show an extraordinary presence in the eyes of the common people. All of these brands demand their place in an architectural layout and play an important role in integrating everyday life.

11.7.2. Exposure

International style exhibits have a significant impact on residential design. The bulk of the general populace has been exposed to different Western styles of in-home space design thanks to the Internet and telecommunications industries. Furthermore, travel leaves an indelible imprint on people's thoughts. This continuing experience creatively alters the impression. This type of approach encourages stakeholders to be more creative with their house design ideas and to reject the standard home design form.

11.7.3. Social tendency

People living in Lahore tend to influence each other about the design and construction of houses. This social habit of inclination among the people of Lahore plays a decisive role, sometimes when they intend to build the house of their dreams. Such attributes sometimes make the entire layout and design of the house look like a carbon copy of another house on the same street or a copy of a family member's house.

11.7.4. Customization

The client has a higher level of involvement in the design of houses than the architect. Such action is greatly affecting the image of Lahore's residential architecture. Eventually, a customized design proposal will be dominated by the client rather than the architect's draft. It is now common for clients to format home design elements such as the need for formatting, color combinations, parasitic style, and bedroom size and kitchen detail. In some ways, this exercise eliminates the pure role played by architects in the design process. (Forte and Russo 2017)

12. Conclusion

After conducting a comparative study of modern houses with and without open spaces, it can be noted that open spaces play a vital role in enhancing the overall living experience. The presence of open spaces in a house not only increases natural light and ventilation but also provides a sense of tranquility and solace to the occupants. Additionally, open spaces promote better air quality and improve mental well-being. Moreover, houses with open spaces tend to have a more aesthetic appeal and create a seamless connection between indoor and outdoor

living. This seamless transition allows for a harmonious flow of energy throughout the house, creating a sense of unity and balance.

On the other hand, houses without open spaces may feel more cramped and claustrophobic, leading to a sense of confinement and restriction. Lack of open spaces can also hinder the flow of natural light and ventilation, leading to a less comfortable living environment. In conclusion, it is evident that open spaces play a crucial role in modern house design and significantly impact the overall quality of living. Therefore, it is essential for architects and homeowners to consider integrating open spaces into their designs to create a more sustainable, healthy, and enjoyable living environment for all occupants.

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