

## Analysis of the Transformation of Residential Open Spaces from Center of Activities to Empty Enclosures

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*This research paper looks at four factors resulting in transformation of residential open space specifically the courtyard, from centre of activities to empty enclosures. These factors are historical, cultural, society and gender. Predominantly this research looks at residential space in Lahore from a feminist perspective; tracing and analysing it from a gender based socio-cultural aspect of connectivity to individuality. Rapid social and demographic changes are resulting in a new future of residential architecture in our part of the world, leading to cultural changes where globalization is one of the major factors. The structure has evolved overtime from a traditional joint family unit to a nuclear family unit which is a major shift resulting from this phenomenon. A qualitative research approach using purposive sampling method was employed. The findings highlight the importance of these open and semi covered spaces towards a healthy and connected social life fostering activities of relaxation.*

## 1. Introduction

Globalization based cultural changes shifted the concept of residential open spaces particularly in the urban centres of the Subcontinent. Open spaces in the vernacular architecture of Lahore such as the courtyard and other semi covered spaces contributed as an integral part of space design of small, medium and large size residences. In contemporary residential design in Lahore these spaces have transformed from enclosed open spaces either to covered indoor space or empty enclosures, hence impacting and changing the patterns of activities.

German sociologist Ferdinand Toennies used the term “*Gemeinschaft*” and “*Gesellschaft*” meaning community and society respectively. The former is associated with relationships between family, friends and kin and the latter meaning “association” is focused on the self rather than the community. According to Toennies the focus in the cities is on the self and separation from the community (Tönnies, 2012; López, 2020). The change in the family unit from “*Gemeinschaft*” to “*Gesellschaft*” has impacted the role of women from simple homemakers to that of professional working women and has also contributed towards a shift in power dynamics in almost all societies. The change in residential demographics has brought about factors like globalization play a role in transforming the traditional family unit from a unit of connectivity to individuality and isolation. Globalization and technologies will keep on transforming the societies and cultures in different ways (Stolley, 2005; Küçükergin, et al., 2024).

The courtyard space used to be the core of household activities and centrality, traditionally part of the “zenana”, the female domain (Husain, 2024). The patterns of activities within this space also changed from collective to individual (Malmberg, 2021). Connecting spaces such as the courtyards and verandas where the entire household activities converged were the nucleus of the home (Ayafei, 2020). These spaces transformed into isolated spaces devoid of activity (Marek et al., 2021). These spaces have resulted in disconnect from communal activities and brought in global cultural trends (Fast, 2021). Individuals inhabiting these physical spaces are virtually part of a “global culture” through the tools and platforms of global connectivity (Wagner, 2023).

The idea of open spaces is not a new one and is present since humans started building their houses (Bridson, 2012; Massoud, 2020). These spaces exist in the architecture of ancient civilizations like the Egyptian, Greek, Roman, Persian, Indus Valley, Mauryan, Gupta and Vijayanagara empires (Jankiraman, 2020). These civilizations used courtyards in residential as well as their religious architecture where core religious and social activities and events took place. These courtyards were often surrounded by columns, colonnades, verandas and porticos. Various activities were planned around them such as ceremonial religious gatherings, rituals, as well as everyday family social and activities. These spaces allowed for a transition between the indoor and outdoor spaces. These were spaces that had a permeable spatial function

allowing light, ventilation, and circulation of people. They were built using natural materials which enhanced the quality of experience.

These spaces appear in various forms depending upon the climate of that particular region. In tropical climates with plenty of rainfall, these spaces are used for the purpose of ventilation and to maximise daylight. In temperate climates of Pakistan's mountainous northern areas like Skardu, Gilgit and Baltistan, courtyards are used to retain heat as well as a means for protection against cold winds. Features like fireplaces were introduced to keep the spaces warm. In temperate climates, these semi covered and open to sky spaces provide sun, shade, warmth and ventilation.

**Table No 1: Open and Semi-covered space typologies in residential architecture of Lahore and their operational definitions:**

(Marriam Webster Dictionary)

Open and Semi-covered spaces	Operational Definitions
Courtyard	Void enclosed by a volume court or enclosure adjacent to a building such as a house or palace
Terrace	Raised platform can be located on the roof top as well ground floor, a flat roof or open platform
Balconies	A small platform jutting out of a building enclosed by a railing
Jharokas	A window projecting from a wall or face of the building overlooking an open space
Barsattis	Semi covered space a feature of walled city of Lahore architecture, located on the roof top with windows
Mughhs	Rectangular or square openings in the ceiling at times covered with latticed wood work for ventilation and light.
verandas,	Semi covered space with one or more parts facing a courtyard or garden
Pavilions	volume enclosed in a void

## 2. Literature Review

Previous research on the residential open space is mostly focused on courtyards in the context of climate as environmental modifiers, historical and cultural significance and evolution but there is a noticeable gap in addressing this space from the point of view of gender particularly in reference to the role of women and the transformation of open space. Writers like M. Latif, Ian Talbot and Chisthi discuss architecture of Lahore but Residential architecture and specific from the perspective of female gender is not a focus of these researches.

Taleghani et al. (2012) have examined the environmental impact of courtyards as energy reducing contributors. Malik and Rashid (2016) have studied the role of courtyards as climatic and psychological moderators. Bulus et al. (2017) investigate courtyard as a passive design strategy focusing on architectural and environmental issues.

Shehan & Duncan, 2016) emphasize that globalization, technological advancements and changing role of the women has resulted in the breakup of joint family units most commonly referred as multi-generational family into nuclear families. This has also brought about change in levels of familial attachments. Quershi et al. (2019) have added to this debate by drawing a comparison between traditional courtyard houses and modern houses taking a socio spatial and cultural paradigm shift while addressing the energy crisis in Pakistan. Sthapak & Bandyopadhyay (2014) discuss various aspects of the courtyard house especially its bioclimatic significance.

Gulzar (2017) takes a holistic view to understand the cultural, social and spatial aspects of open spaces by studying traditional walled city houses using an interdisciplinary approach initiated through architectural anthropological method. Ali (2015) studied the spatial configuration of a Pakistani courtyard houses using syntactical analysis. This approach studies the structural organization of open spaces in an architectural context but gender experience within these open spaces is missing. Abass et al. (2016) provides a historical lens for a holistic understanding and take a historical approach to study the courtyard houses across different civilizations.

William Glover in his book “Making Lahore Modern” talks briefly about the “women’s domain” and discusses the idea of women in a space, cut-off from the life by *purdah*. Glover highlights that at the base of literature focusing on such ideas was the setting up of new ideals and values for the formation of a new social setup that would essentially transform the residential space.

The customary segregation of women in the domain of “*zenana*” as a symbol of respectability and *purdah* began to be questioned. Ali, 2015 writes about the “*zenana*” or female court as an example of territorial control of one group over the other and it was used to separate the male and female genders.

The idea of the female space is explored more in the field of literature rather than architecture. Written in 1874, *Majalis un Nissa* by Khawaja Altaf Hussain, there is a dialogue between women (*pardanasheen*) who observe *Purdah* in a quintessential Delhi household as part of women’s role and duties. *Mirat ul Aroos* written in 1869 by Deputy Nazir Ahmad discussed the obligations of thrifty and competent women in a household, managing the inner core of domesticity with family and servants. The *begums* of the *zenana* could bring prosperity as in the case of Asghari or be the cause of downfall of the entire sanctum due to Akbari who were central characters of Deputy Nazir Ahmad’s novel. Both these writings were viewing women in an enclosed space *the zenana* as women’s domain far from the outside world. The competence criteria initially discussed a woman running her home like a machine with everything in order. The younger sister Asghari organized her home on the parameters of orderliness with everything in its rightful place.

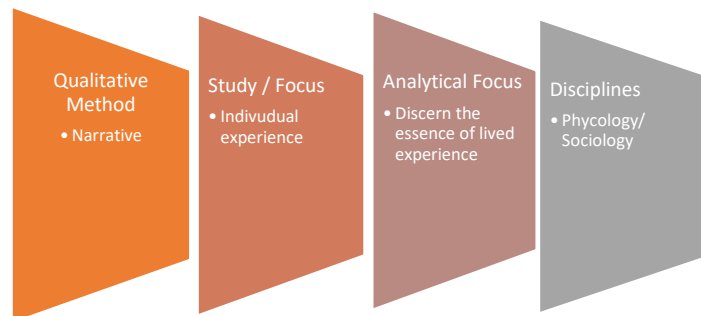
In the western Literature Virginia Woolf in “A room of one’s own” talks about a personal space, “A woman must have money and a room of her own if she is to write

fiction.” The open space from female gender lens is found in the literary narratives rather than architectural research

### 3. Methodology

A qualitative research approach was employed in this study to inquire how these open spaces are perceived and understood by the respondents. Through a purposive sampling technique thirty empowered professional women were selected as the focus group. Various factors were considered for the sample selection such as age group, gender, socio economic status and educational background. Setting for data collection was participant driven. The data collection was performed through in-depth interviews with these women and a properties table was created through it. Interviews were conducted based on three types of questions; Leading, Ideal and Interpretive on the role of open spaces in hypothetical setting of a 10 Marla residence.

**Figure No 1: Methodology and Framework for the Study**



### 4. Results and Discussions

A qualitative research approach using purposive sampling method was employed. In depth interviews and questionnaires were conducted in a participant driven setting.

The study documents the change in residential demographics led by a change in the role of the female. It studies the impact of shifting family structures from joint to single-family units and technology on the transformation of residential spaces in Lahore. The earlier spatial patterns including certain space typologies like courtyards and semi covered spaces were about connectivity but now these spaces have either disappeared or lost their original essence.

This study employed participant’s interview method to analyse their need for in-cooperation of open and semi-open spaces in residential space design. The participant’s responses and data analysis indicated that the participants emphasized upon open spaces in their personal residences for various reasons. The study also highlighted factors contributing to transformation of open space from centre of activities to empty enclosures. Following main themes emerged:

Activities facilitating women	Psychological Impact	Sustainable living
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The study's findings are detailed below in tabular form

**Table No 2: Results of the Purposive Sampling from Women**

Sr. no	Theme	Properties
1	Activities facilitating women	Household chores, Enjoyment, relaxing, making activities fun eg Kids doing homework, playing, having breakfast, extension of kitchen,
2	Psychological Behaviour/impact	Keeping pets, kitchen gardening, hobbies, childhood space, memories, enjoying weather, hobbies, decorating it
3	Relaxation	Relieving Stress, thinking, gossiping apart from a social group
4	Sustainable living	Cool, airy, ventilated, plantation,
5	Connecting spaces	Upper balconies overlooking the yard, extension of kitchen
6	Entertaining	Barbeque, sunroom, reclining area, kids play area
7	Private core Space	Secure, Fun,

Four major themes emerged based upon the study's findings that lead to establishing the significance of these open spaces.

#### **4.1 Domestic Activities and Leisure Space**

The open space within the volume is a space of "centrality" and the nucleus of the house (Glover. 2007). It is women's domain where women carry on with their daily household routines managing the inner core of domesticity with family and servants (Ahmad, N. 1869). Amid all the humdrum of household chores, fun activities with children, relaxation, formal and informal social entertaining is also part of this space.

#### **4.2 Private Space contributing to Psychological Well-being**

The participant's responses in this study placed high value on privacy and security. They showed preference for living spaces that provided a sense of enclosure while retaining connection with the outdoors and natural environment. Culturally, access to these spaces was granted only to trusted and close friends and family members, as it was considered a rite of passage. Traditionally, these were the spaces where women would hold court and go about their lives away from the men's world.

The need for privacy and a sense of enclosure is still of great importance. This resulted in the open and semi-open spaces that gave a feeling of being outside yet maintaining ones privacy (Tillotson, 1998). These open and semi-open spaces constitute the central core of the residence, serving as private yet connecting, transitional, and shared spaces. The importance of privacy in these spaces cannot be overstated, as it allows for contemplation, reflection, relaxation, and a retreat from the chaotic world - qualities that are highly desirable in a residence (Chermayeff & Alexander, 1963).

These spaces have a cathartic quality and serve as a sanctuary for stress relief, relaxation, mental and physical well-being through closeness with nature and by providing an open space for stress relieving hobbies, exercise, and meditation. They provide a hideaway for activities such as smoking or private conversations away from a formal or informal social gathering.

### **4.3 Health and Sustainability**

Lahore is becoming a highly populated city. In dense urban environments, having contact with nature is very important (Hartig, 2008) encounter with nature even on a small scale is as significant as having approach to large open space (Townsend and Weerasuriya 2010).

The open space can become an extension of the kitchen and dining area, serving as a space for food preparation. It can also serve as a hobby garden serving the aesthetic and health purposes by providing fresh vegetables thus enhancing the overall experience of culinary activities with a health-conscious life style and integrating it with an outdoor, close to nature experience.

For promoting good mental health, group connections and promotion of physical activity presence of nature in its green and natural form is important (Kent & Thompson, 2014).

The open space in essence is a space for creative pursuits contributing towards sustainable, healthy, and harmonious living.

### **4.4 Connectivity and Social Spaces**

Globalization has brought the world closer but connectivity as a family unit has gone awry. The focus on connecting as a family has been lost.

Lahore's Social Structure has evolved over time and there has been a shift from “community” to “self”. The needs of an individual take precedence over that of a community. The joint family module has been replaced by single family unit due to socio-economic and capitalistic concerns (Ali & Iftikhar, 2015). These open spaces contribute towards connectivity without gadgets and online social platforms through activities, hobbies and social gatherings.

### **4.5 Factors contributing to transformation of open space from centre of activities to empty enclosures**

- Change from the joint family structure into a nuclear family unit.
- Change in the power structure due to women education, contributing to empowerment that led to a change in spatial configuration. Empowered women are able to participate in the planning and decision-making task and contribute to the development programmes and activities individually (Yogendrarajah & Rathirane, 2013).
- The status of women changed from a traditional purdah observing homemaker into economically independent professional women who do not observe purdah. The male



socializing space “*the Baithak*” and the inner private courtyard the “*Zenana*” transformed into a formal drawing room that is shared by both genders.

- Residential open space changed from the inner core and shifted to the outer periphery of the residence because of building regulations and design bylaws. In most of the residential societies it is mandatory to leave certain open space around the built form. This becomes contradictory to keeping open space in the centre. This transformation altered the importance of open space and rendered it insignificant.

These regulations are important yet they impose restrictions on the design. Innovative new approaches in design need to be explored in residential design. Spaces in the traditional vernacular architecture of the region which existed in the form of courtyards and other semi covered spaces served as an integral part of the planning of small, medium and large size residences. These spaces were traditionally part of the “zenana”, the female domain where women carried on with their lives and other domestic activities in a free and relaxed manner. These spaces also became part of the literary narrative from 1874 onwards. Writers started to address the need for a space of one’s own in relation to making Lahore a modern city. For the first time they started to talk about the female domain.

In contemporary residential design of Lahore these spaces have lost their significance and from core spaces of “*centrality*” they have transformed into irrelevant and unutilized peripheral spaces. They are not exclusively a part of the female domain anymore. Since the nineteenth century, literature in India started discussing women as the main characters and essence of the “home”, indicating the “centrality of the physical space of the home” (Glover, 2007). From the perspective of various religious points of views i.e. Muslim, Sikh and Hindu, reformists started to question the competence of women in the emerging colonial world.

Transformations in the family structure and the socio cultural aspects have brought about a societal shift in the residential spaces and the community has moved from “community” to the individual and the society has shifted towards a nuclear family. The feminine domain in the traditional vernacular architecture of the region was the central courtyard along with adjoining semi covered spaces. This spatial arrangement was found in almost all the residential typologies, from relatively large havelis to medium size houses and even the smallest of houses belonging to Muslims, Hindus and Sikhs alike. These spaces, often called the “zenana” were a respite for women to relax and carry out their routine domestic activities. These residential spaces have transformed over time with the social, cultural and economic evolution and transformation in the society. With these changes, the role of women has also evolved from a homemaker to career oriented women pursuing a professional life. This has led to a shift in family dynamics that require a different spatial setting in which certain key spaces have lost their relevance.



## 5. Conclusions

This paper studied the residential open spaces that have transformed by the change in social dynamics. These open spaces were studied from a historical perspective of spaces for females like the “Zenana”. In the case of Lahore, the central open space started to disappear from the residential architecture after partition due to various factors and it has resulted in decreased family interactions and disconnect, leading to family members being socially distanced. This study has employed qualitative research methodology with purposive sampling and the analysis of the results indicate towards a need for open and semi-covered spaces that are therapeutic, sustainable, energy efficient with relevance to the climate, private yet free for self-expression and bonding.

The study has also identified several planning and building bylaws that limit the use of space to its full potential. This paper proposes the adoption of traditional building principles to come up with better solutions for sustainable and psychologically healthy living. The study highlights the need for privacy and a sense of enclosure, which can be achieved through open and semi-open spaces that provide a feeling of being in the open while maintaining privacy. The limitations of the research included planning regulations and bylaws that limit the use of space, which needs to be addressed to maximize the potential of open and semi-open spaces in residential architecture. Overall, this study provides insights into open and semi-open spaces in contemporary residential architecture. The creation of a balanced mix of these spaces is a challenge for future residential design with space constraints. However, it is an exercise in planning for a balanced, open yet private space connecting with nature and having a positive impact on the wellbeing of the residents. This requires careful planning and re-evaluation of the policy guidelines to adopt sustainable and healthy building practices for future.

The findings pointed towards the importance of open and semi covered spaces towards a healthy, sustainable and safe life style. These spaces contribute to a healthier, stress free mindfulness fostering activities of relaxation, meditation, become nurturing social spaces that encourage hobbies and diverse activities.

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