

The Role of Urban Spaces in Creating Socially Cohesive Neighborhoods: The Case of Walled City of Jaipur, India

Manjari Rai

PhD Scholar, Amity School of Architecture and Planning,
Amity University Rajasthan, Jaipur, India
Professor and Dean, Faculty of Architecture and Planning,
Poornima university,
Jaipur, India
Email: ar.manjari.ra@gmail.com

| Received | Reviewed | Revised | Published |
|------------|------------|------------|------------|
| 14.07.2023 | 18.07.2023 | 26.07.2023 | 31.07.2023 |

Abstract

The world has grown through a series of rapid transformations at the social, economic, cultural, and urban levels and towards a socially cohesive society. Nevertheless, contemporary urban neighbourhoods are witnessing a decline in the social interactions among people from diverse cultures, social classes, and ethnic backgrounds, despite the inherent potential for these neighbourhoods to foster such interactions. Many types of research have been conducted in various cities based on urban morphologies. However, a detailed characterization of urban form and social relations is still far from being achieved.

In this context, this study examines the influences of urban spaces and forms on social relations in a socially cohesive society in the walled city of Jaipur.

It employs literature, and visual and questionnaire surveys as research methodologies. By combining descriptive analysis and logical reasoning, the research endeavours to shed light on the ways in which the spatial organization of Mohallas in Jaipur influences social interactions and community life, providing valuable insights into urban planning and community development.

The findings show that the layering of spaces in a residential neighbourhood has a significant role in creating societal connections. Further, it also reveals that neighbourhood attachment has a significant relationship with neighbourhood interaction.

Keywords: Neighborhood, Social Cohesion, Urban spaces, form, Social Interactions.

Introduction

“Cultures and climate differ all over the world, but people are the same.
They will gather in public if you give them a good place to do it”

Gehl, 2010, cited in Matan & Newman, 2016:40

Urban morphology of a region evolves and gradually takes shape over years following all the temporal and causal changes in the society. The spatial organization and layout of the

residential spaces is thus a strong indicator of a region and its varied social structures (Lambe and Dongre, 2016). At present, particularly after 1990's, borrowed western ideas and rapid urbanization have given birth to typical high rise developments as part of mass housing which lack identity and therefore are unsuccessful in creating unique spatial organizations (Can and Heath, 2016). In this process, it is most likely that people who are the actual end users and the significance of human scale, have been ignored (More, no date). As is known, most modern spaces have replaced vernacular ideas, resulting in developments that lack any connection to their surrounding environments and the inhabitants (Low, 1996). Over time, traditional residential areas characterized by a strong connection to both individuals and their surroundings have been gradually substituted with fragmented and introverted settings (Liu *et al.*, 2017).

Neighbourhoods are often meaningful places to live. Urban spaces within them are spatial organizations which are an outcome of human activities (León and March, 2016; Creutzig *et al.*, 2016). Spaces within them are lively, multi-dimensional and provide opportunities for residents of all age groups (Singh, 2016). Architects and planners, when they intervene in them should think of a people-centric approach and imagine neighbourhood designs which inspire residents to develop social networks among people from various cultures, and social and ethnic backgrounds (More, no date). Needless to say, it is important to comprehend the social relevance of the built forms in their spatial qualities.

This study thus maps the links between urban morphology and human interface and its significance towards achieving a cohesive society.

Understanding the Concepts of Cohesive Society and Socio-Spatial relationship

A socially cohesive society can be achieved only when people learn to share their lives with each other; when they start connecting naturally, without any compulsion or hidden intentions. Social cohesion is an idea or a need that philosophers have articulated and planners have aspired to achieve since ages and have constantly been exploring ways to strengthen. However, ways to achieve it is still unclear and contested (Aelbrecht, Stevens and Nisha, 2011).

Cohesion can be understood as an indicator of a connected and well-functioning society (Stevenson and Waite, 2011). Policy makers and researchers have given five parameters to measure and map cohesion. They are: belongingness, participation, recognition, inclusion and legality (Aelbrecht, Stevens and Nisha, 2011; Jenson, 1998). In fact, it is a multi-dimensional concept (Kearns and Forrest, 2000). Although much has been said about cohesion, there is a general consensus that the main dimension of social cohesion is spatial setting (Dehghanmongabadi, 2014). According to the report of UN-Habitat 2014, experiments have proved that settings which are compact have connectivity and integrated spaces that support social cohesion (Aelbrecht, Stevens and Nisha, 2011). They point to social interactions, sense of community, safety and security as the key parameters.

Architecture and planning are tools which lead to expressions of cultural and social settings. In fact, Leon Battista Alberti had described architecture as a social art. He has pointed out that social order gives rise to complex spatial characteristics. It involves the locale with shifted assets and individuals and has positive frames through which one can figure out its presence.

Spatial arrangement therefore is one of the foremost striking elements through which the presence of the social contrasts between one social formation and another can be recognized. They contrast within the ways in which individuals of those social orders live out and duplicate their social presence (Lambe and Dongre, 2016). These Socio-cultural differences are however visible through the typologies of residential quarters and annexed spaces of diverse orders. This is the reason why the house layouts in traditional architecture have evolved as a response to the social frameworks and related user behavior. Hence, any change in the urban form and spatial order of a residential setting may cause huge changes in the social environment as well (Fallis, 2013).

This study focuses on human behavior with regard to the spaces designed for them. It is based on the premise that the behavior of a person is governed by spatial organizations and *vice-versa*. The design ideology and spatial matrix of residential blocks and units may differ

from place to place as well as climate and culture. Still, the indicators of social cohesion remain the same in a broader arena. It is therefore an important aspect to study social relevance of the built/unbuilt form.

Need for the Study

This is a time of globalization and hyper-urbanization. Cities are quickly rising up as driven by social and financial forces. Often, they produce the values of urbanism without any space for human relations and intimacy. The concept of community and society in urban living is steadily vanishing (More, no date). All these eventually lead towards an unequal, materialistic world full of false competition among the people, which will erode all social ties and mutual support (Delhey *et al.*, 2018).

In this context, studies of these types are essential to induce and regulate a flow of positive life experiences and emotions. They would eventually contribute towards a high level of mental and physical well-being of the communities. It will also be valuable in the process of design to safeguard the social fabric of the community.

Objectives of the Study

The primary objective of the study is to identify the various parameters that contribute to social cohesion within a specific context, and then explore how these parameters are related to the activities and spatial organizations within that context with the help of literature study. By understanding the factors that foster social cohesion and how they are interconnected with the activities and spatial layout of the area under investigation, the research aims to provide insights into how the built environment can influence and support social interactions and community bonding.

Literature Review

Chitrakar (2016) analyses the sense of community and public space among neighbourhood residents in the urban context of the Kathmandu Valley in Nepal. From 23 residents of Budhhanager Tole-1 and Gongabu residential areas, data has been gathered. The data was collected and analysed utilizing snowball sampling. The outcome revealed that most of the fresh neighbourhoods had a significant understanding of public space in community life. In addition, it also concluded that on the neighbourhood social life's quality, the study had negative consequences. But, in this work, the gathered samples were limited. Alipour & Galal Ahmed (2021) present the effect of urban form on social cohesion. By examining the urban neighbourhoods in Dubai, this work presents the Integrated Measuring Tools Method (IMTM). The findings show that the cohesion in the chosen regions was undermined by the built environment's safety and aesthetic qualities, mobility options, streets layouts, density, mobility networks, and land use. However, a higher degree of generalizability would be permitted due to a greater number of neighbourhoods.

Zumelzu & Barrientos-Trinanes (2019) analyses the effect of urban form on neighbourhood vitality. The data was gathered from 5 neighbourhoods in the city of Valdivia, Chile utilizing qualitative and quantitative approaches. According to the outcome, for generating a diversity of uses, certain neighbourhoods had a greater degree of morphological adaptability. In addition, the outcome elevated human interaction among the neighbourhoods. Hemani *et al.* (2017) has established the influence of urban forms on neighbourhood cohesion in Guwahati, Assam. From 128 respondents, data has been collected. Data has been gathered and examined utilizing primary-depth interviews. The outcome has revealed that the neighbourhood forms connected and integrated with a higher mix of uses, accessible recreation places, and higher levels of SS among its residents after controlling intervening variables. However, the study sample was small in size, and no generalizations can be made. In contrast, Liu *et al.* (2017) has examined the impact of urban redevelopment in changing neighbourhood cohesion, in Guangzhou, China. From 21 urban villages, questionnaire data has been gathered. It concludes that, after the re-development, residential satisfaction has influenced the

neighbourhood attachment more, while neighbourly contacts influenced it less. However, the outcome was centered on a specific country, thus it might not be generalizable to other regions or countries. Gulati (2020) has investigated the neighbourhood spaces in residential environments. In 3 areas of Asian games village, Vadodra, and Belapur incremental housing in Mumbai, a comparative study has been performed. The findings show that the study attained neighbourhood comfort and an overall belongingness sense among residents. However, the outcome was analogized with specific areas; hence, the same outcomes might not be generalizable to all other areas.

Research Methodology

The research focused on investigating the social relevance of spatial organization within a selected Mohalla of the walled city of Jaipur. A descriptive and analytical approach with logical reasoning was employed to understand the factors influencing social cohesion in the area. To achieve this, three different types of surveys were conducted.

- a. A comprehensive literature study was conducted to document and gain a deep understanding of all the relevant research carried out on the role of urban spaces in fostering a cohesive society. This study involved an extensive review of existing academic work, research papers, articles, books, and other scholarly publications that explore the connections between urban environments and social cohesion.
- b. A visual survey was carried out on the chosen site, specifically the Mohalla of Chowkdi Modi Khana, Thatheron ki Gali in walled city Jaipur. The purpose of this survey was to document and observe the daily activities of the residents within this area. These activities hold a direct relationship with the urban layout and structure of the Mohalla.

This on-site observation provided valuable insights into how the residents interact with their surroundings, utilize the available spaces, and engage in various day-to-day routines. This data collection method offered a real-time understanding of the activities that shape the urban fabric of the Mohalla.

- c. Samples from a Mohalla from Chowkdi Modi Khana, thatheron ki gali in Jaipur was examined, and data was collected using a stratified sampling approach. Jaipur is known for its well-planned and structured square grid layout, designed with a forward-looking vision, which has enabled it to effectively handle the challenges posed by modern vehicular traffic. To gather information from the respondents, a well-structured questionnaire was prepared. The selection of interview participants aimed to represent diverse age groups, genders, occupations, and ethnic backgrounds, ensuring a comprehensive understanding of the social dynamics within the study area. By combining descriptive analysis and logical reasoning, the research endeavours to shed light on the ways in which the spatial organization of Mohallas in Jaipur influences social interactions and community life, providing valuable insights into urban planning and community development.

Documentation and Data Collection

Indicators or parameters of social cohesion in a residential neighborhood.

A sustainable community is not only one in which people are able to live successfully, but they also have a strong sense of belongingness towards the place. Few researchers have elaborated on this issue and have formulated parameters to map them. They are multidimensional. Aspects of cohesion directly linked to spatial layouts and the indicators of social cohesion are listed below.

Table 1: Components of urban form that corresponds to social cohesion
Source: More, no date; Kearns and Forrest, 2000

| S.No | Parameters of social cohesion | Corresponding urban Form and spatial layout |
|------|-------------------------------|--|
| 1. | Social interactions | Spatial arrangement of built and un-built spaces: The network of open spaces, comprising areas designated for outdoor activities, recreation, as well as everyday communal spaces like streets, community squares, and open markets hold immense significance in fostering social interactions and community engagement. Density - the number of people living in a particular area (number of people per hectare) |
| 2. | Sense of community | The smallest area defined by a spatial network based on the community setting (both social and economic), small and large pockets of open spaces responsible for civic engagement and associational activities of celebration and mourning. Strategically placed temples and other community gathering spaces, layering of built blocks both inside and outside a residential block. |
| 3. | Safety and security | Feeling of safety and security because of the human scale in the layouts and overall weaving of the urban fabric. Layering of spaces to assist informal interactions. |

The Case Study: Residential Mohalla inside Chowkri Modi Khana, Jaipur

Jaipur, a city well planned under nine square grids has been built with a vision, which was highly futuristic. It is probably the only city of that era that can still cater to the present day pressures of vehicular traffic on the roads (Jawaid, Pipralia and Kumar, 2016). It is an exemplary city, which has been a mixture of both heritage and human scale. It is a city having a good network of open spaces, built blocks, and connecting spines. Their spatial organization form an environment that support the socio-economic conditions and lifestyles of the inhabitants and the nature of activities performed therein.

The house form, the grouping of houses within the clusters and rows, and its hierarchy of spaces are the most crucial and well-planned elements of the geometry that gives homogeneity and cohesion to these neighbourhoods. With the intention of developing a major trading centre, traders from all over the state have been invited to settle in the newly formed Jaipur walled city and have been given land in the Chowkris with concessions in tax. These Chowkris have been planned to articulate segregation based on social class, ranks and professions. Chowkri Modikhana is one such area, which has been reserved for the rich Hindu traders and businessmen.

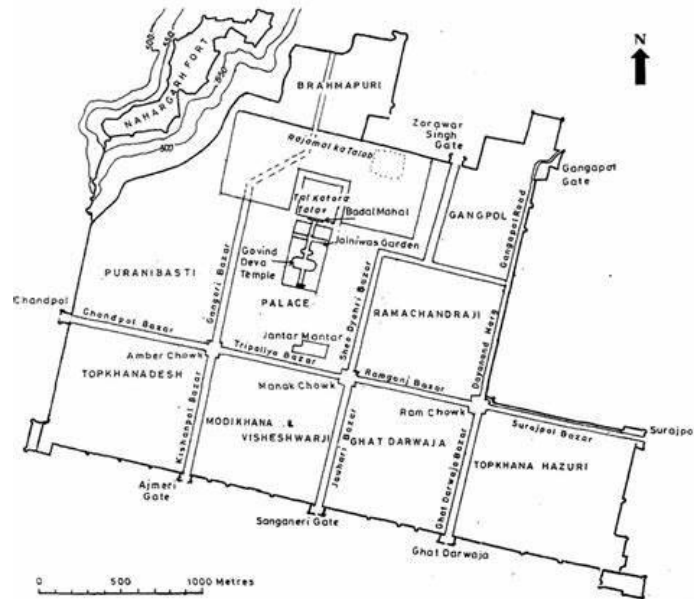


Fig. 1: The location of Chowkris, Chupars and other major elements of the Walled City of Jaipur
Source: Jaipurworldheritage.com

The Morphology of Spaces of an Old Mohalla of the Walled City of Jaipur

Any neighborhood, commonly, has a large number of images based on individual's perception or impression of surroundings depending upon the planning and layout of the various elements of the built forms. The visual form of Chowkdi Modi Khana showcases a dense mixed land-use pattern, where commercial, industrial units, and home-based economic activities coexist in close proximity. The areas physical appearance illustrates the harmonious blend of various functions, creating a vibrant and dynamic urban environment that accommodates diverse activities within a compact space (Fig 2). Entire image of the mohalla has narrow streets and buildings like havelies, temples, shops, streets and narrow galleys and hierarchal open areas (Funo, Yamamoto and Pant, 2002).



Fig 2: Urban Form of Chowkdi Modi Khana, Walled city Jaipur
Source: edscarabtravelandmedia.wordpress.com/tag/Modikhana-walk/

This paper thus analyses the elements of urban form from 'Thatheron ki Gali', a mohallas of Chowkdi Modi Khana of the walled city of Jaipur, which results in the formation of images and leads to making a socially cohesive society. Variables of the study relevant for social connections in the neighborhood include proximity, layout and orientation of dwelling units with respect to one another, their weaving patterns and the arrangement with respect to the site, and their transition to streets, open spaces and overall community gathering lots (Gulati, 2019).

Spatial Arrangements (built and unbuilt) and their Impact on Human Behavior and Social Connections: The Street System

The replacement of traditional urban morphologies with modernist spaces has frequently led to a disconnect between buildings and the streets, resulting in reduced street connectivity. Hanson (2000) defines this as the 'ruptured interfaces' between the dwelling and the street where the physical disconnection of dwellings from urban layouts has changed the urban environment from 'all neighbours' to 'no neighbours' as the streets have been transformed into housing estates (Can and Heath, 2016).

The built fabric of the walled city was rich and dense with streets that are narrow, bounded by residences on each side within a well-defined Chowkri. It clearly resembles a compact maze with narrow lanes or galleys, forming a series of small neighborhoods, which are mostly community-based clusters. All the squares (chowkis) are arranged in a manner that not a single inch of space is wasted. It is this compactness of the space that gives birth to arrangements and spaces that are mutually connected. It automatically created niches and courts for people to meet and connect during their day-to-day course (Corporation, 2013).

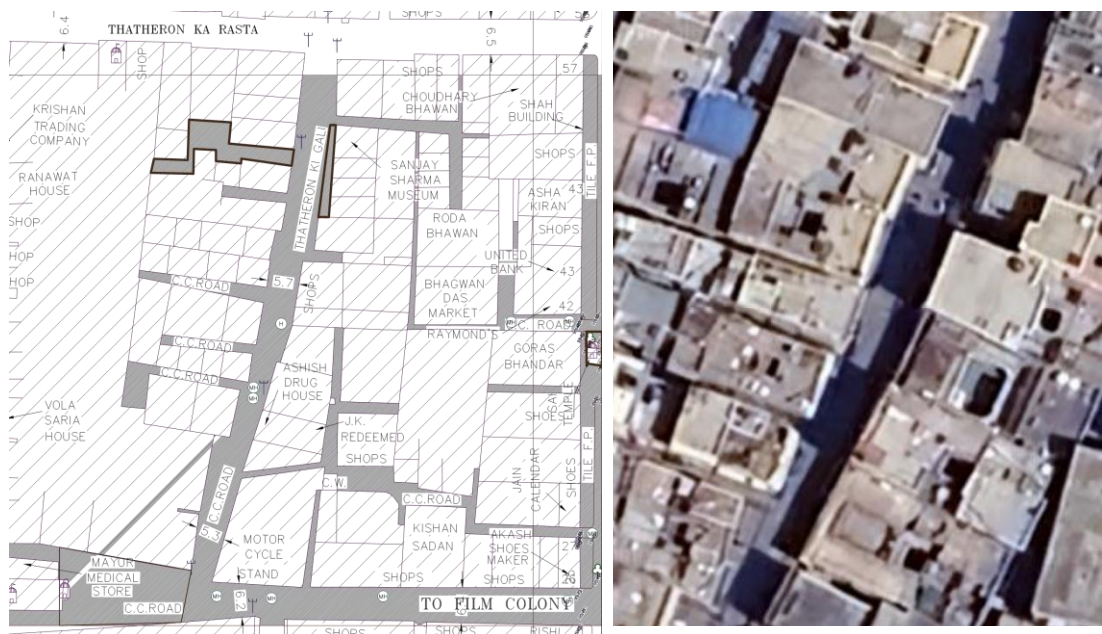


Fig 3: Spatial arrangement of built and unbuilt spaces inside Thatheron ki Gali of Chowkri Modi Khana

Source: Jaipur Nagar Nigam

The street system of the walled city follows a specific hierarchy. 'Bazaar' 'Rasta' and 'gali' (commonly known as sakri gali) which is followed everywhere. The width of these galleys are narrower than the width of the marga and then the bazaars or the chaupads.

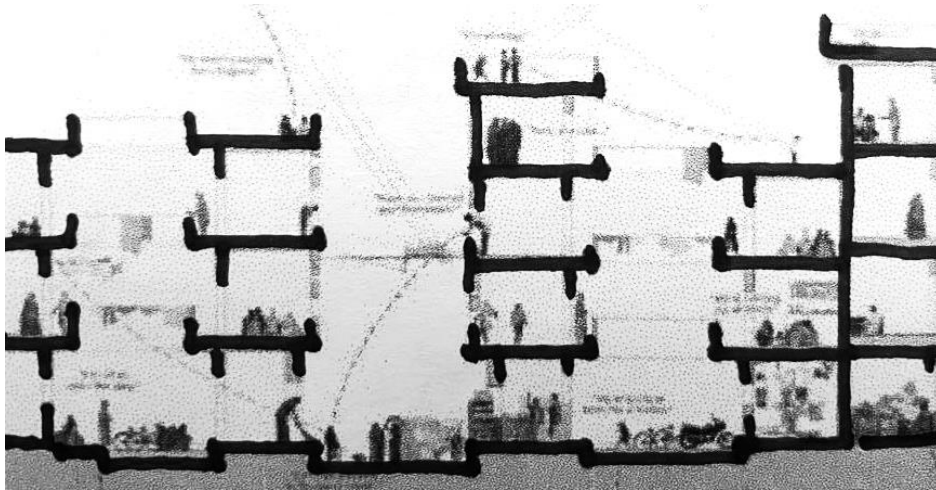


Fig 4: Street and dwelling unit relationship at Chowkdi Modi Khana
Source: author

For centuries, streets have been a zone of social interaction, space for multiple activities, collective gatherings, area for protests and resistances and many such hustle and bustle of everyday life. They come to life through these activities. Through this, streets or any other connecting spines get life throughout the day. They are never left idle or alone for negative activities to crop up. This is an idea well elaborated in Jane Jacob's "Eyes on the Street". It is because of this that such layouts were implemented in the walled city design and was made mandatory under strategic city planning and street design regulations to ensure security, control and surveillance. A principle, which is quite evident when we move through internal streets of a residential Mohalla of walled city. It is because of these narrow lanes that make this setup a very vigilant and safe neighbourhood. The primary survey done through the structured questionnaire records very clearly in support to this statement as indicated below. Even though 60% of the houses do not have any surveillance system installed for safety, more than half of them feel secured in their neighborhoods.

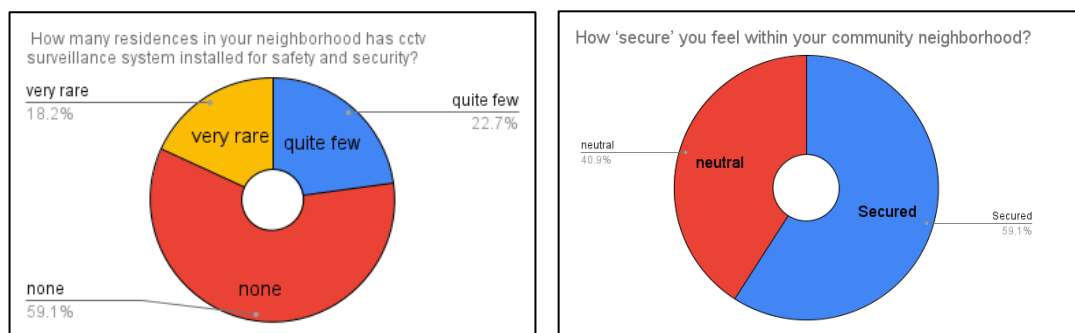


Fig 4: Survey data related to safety and security of the residents of a Thatheron ki gali at walled city.
Source: findings of primary survey conducted by the author

The narrow lanes and interconnected streets in the Walled City bring people in close proximity to one another. Residents live in close-knit neighborhoods, where they often know their neighbors and share a sense of companionship. The compact nature of the city enables easy access to community spaces, markets, and gathering areas, encouraging spontaneous interactions and socializing.

At Thatheron ki Gali, all the residential units are organized along a narrow gali, grouped in a linear order (Fig. 3). These gallies are actually the tertiary streets, which were narrower than primary and secondary streets and were measured around a quarter in width (Corporation, 2013). The houses around these streets are tightly placed one after the other and

the cluster creates some very interesting informal spaces in between. These niches give birth to some very interesting early morning discussions and chitchats throughout the day as observed via visual survey of the area, making it a very vocal street throughout the day. It is this compact spatial arrangement that gives a binding glue to the entire urban fabric. Because of this geometry, people are forced to share many interlocked spaces that are directly related to their habitations or workplaces: a key attribute responsible for cohesion amongst neighbours' and forming a social connect. According to the primary survey (Fig. 6), most residents of these mohallas like to or rather get a chance to interact with their neighbours' and friends in these galleys.

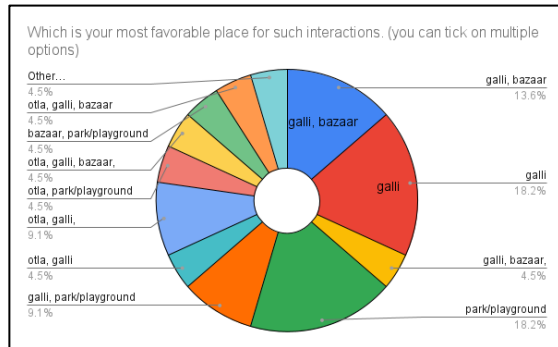


Fig 5: Informal spaces between tightly packed residential units at *Thatheron ki Gali*

Fig 6: Survey data related to interactive spaces
Source: author

Havelies and Cluster Houses

Residential mohallas of the walled city over the years are characterized by their compact plan form, organically placed clusters of built blocks, each of them very strategically juxtaposed with the other, balconies and windows overlooking the streets and courtyards providing public space within the house, and joint terraces permitting and leading to another set of activities. Housing types and sizes differ depending upon the economic and social structure of the residents. They can be classified depending upon the number of courts present inside one block (residential) which eventually make it easier to understand the order of the house plans.

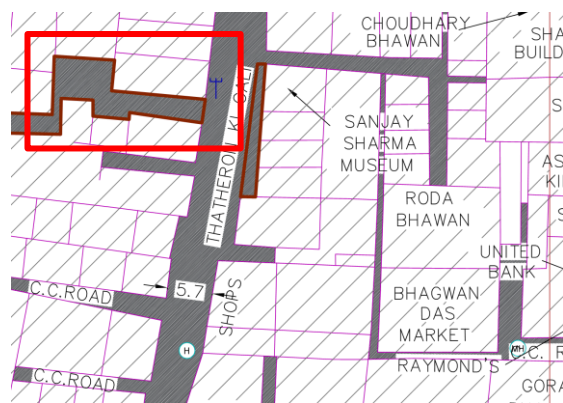


Fig. 7: Thathers at work at the Thatheron ka Gali
Source: author and Jaipur Development Authority

The spatial organization of the domestic spaces within each residential block is through the manifestation of regional and occupational context, but the permeable spaces formed are an outcome of the overall urban form. Surprisingly, all the houses having their entrance in the

same galli were of one residential Mohalla. This eventually has laid the foundation of feeling of belongingness and community identity.

These residential havelies (generally of rich merchants) has had typical entrances which opened directly on the streets having niches on both the sides called 'chabutra' (mokha) where the elder male members of the family used to sit and spend their afternoons interacting with people from the neighbourhoods. Survey data (Fig -8) shows that majority of the people in these neighbourhoods prefer galli and ota for the daily interactions. Over the years of living, these spaces have attained certain intrinsic qualities that are highly desirable for communities to thrive, live and grow together.

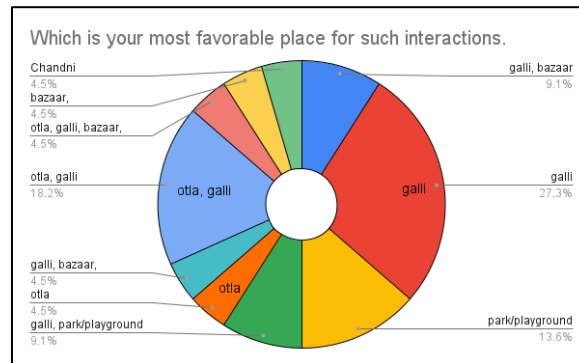
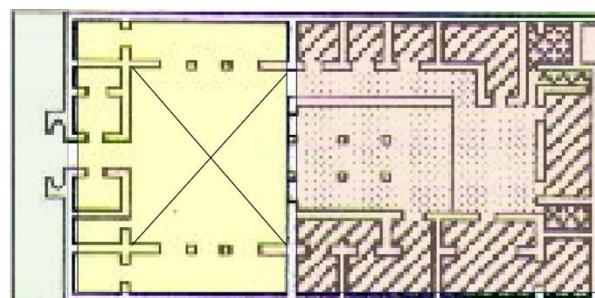


Fig 8: Survey data showing use of ota and galli for daily interaction.
Source: findings of the primary survey



- Entrance with Mokha and chabutra
- Public space
- Private space

Fig 9: Entrance of a haveli with mokhas on both the sides and plan of a typical haveli showing the hierarchy of spaces.
Source: Author

The housing units were interestingly woven around a fabric, which eventually leads to formation of niches and platforms at the entrance for the residents to sit, interact and sometimes would act as places to work (especially for local craftsmen of the area like thateras (metal works), lac bangles and brass metal utensils). Terraces were connected because of the compact development and was frequently used by the females of the household for many day to day activities. Idea behind such type was to create a society that was more connected within communities and families by creating spaces that foster casual, informal and social interactions.

This concept is absent in present day planned gated communities where the focus of design is more towards creating well-manicured personal lawns in the front setback and car shades on the sides. Each plot is significantly decorated and then segregated from others through high boundary walls controlling access to spaces. This is the point where social disconnect starts. Meeting amongst neighbours' then becomes a planned affair in a well-organized manner destroying all possibilities of any informal encounters. Needless to say, social interactions, both passive and active modes are very important towards making a fulfilling and wholesome environment (Gulati, 2019).

Discussions and the Conclusion

This research explored and comprehended the social significance of the spatial arrangement within a specific Mohalla, Thatheron ki gali, located within the walled city of Jaipur. The primary objective was to investigate how the layout, design, and organization of urban spaces impact the sense of unity, interaction, and community bonding among the residents of the Mohalla. To achieve this goal, the research utilized a descriptive and analytical approach, supported by logical reasoning, to delve into the factors that contribute to social cohesion within the chosen area.

The study concluded that layering of spaces in a residential neighbourhood plays a significant role towards creating a societal connection. It however also depends upon many related factors. Within an urban context, social equity and inclusion are also critical at the local scale, where it relates to everyday experience of the built environment (Bendell, 2017). In the case of the walled city of Jaipur, many factors can be listed and discussed as an indicator of connection. One such factor is the community or kinship, which was then grouped as one residential cluster. This created a feeling of attachment with the context or the area creating an identity of their own, like Maniharon ka raasta or ghee walon ka raasta etc. This grouping of a certain set of people was further given a spatial network, which fostered casual, informal, and social interactions, or community relationships at a very human scale. The gradual layering of space from the interior to exterior is quite visible in the transition from the chowk (courtyard) to mokha/chabutra (external platform), to the gali (street) and the informal space and then to the raasta. A well-defined geometry, which suits to the need of people of almost all age group and definitely fulfils all the basic and essential parameters of a connected and vibrant society.

This research has thus achieved its objectives in establishing the links between spatial organisation and social interaction that can lead to social cohesion. However, it is a selected case study and its findings cannot be generalised. More research is needed at other settings and places to ascertain the validity of these findings.

References

- Aelbrecht, P., Stevens, Q. & Nisha, B. (2011) 'From Mixing with Strangers to Collective Placemaking: Existing Theories, Policies and Practices around Social Cohesion in Public Space Design', (April 2021), pp. 1–33.
- Alhusban, A. A., Alhusban, S. A. & Al-Betawi, Y. N. (2019) Assessing the impact of urban Syrian refugees on the urban fabric of Al Mafraq city architecturally and socially. *International Journal of Disaster Resilience in the Built Environment*, 10(2–3), 99–129. <https://doi.org/10.1108/IJDRBE-09-2018-0039>
- Alipour, S. M. H., & Galal Ahmed, K. (2021) Assessing the effect of urban form on social sustainability: a proposed 'Integrated Measuring Tools Method' for urban neighborhoods in Dubai. *City, Territory and Architecture*, 8(1), 1–21. <https://doi.org/10.1186/s40410-020-00129-4>
- Bendell, J. (2017) '4Q2007 October-December', *Healing Capitalism: Five Years in the Life of Business, Finance and Corporate Responsibility*, 300(May 2009), pp. 129–138. doi: 10.4324/9781351276481.
- Can, I. & Heath, T. (2016) 'In-between spaces and social interaction: a morphological analysis of Izmir using space syntax', *Journal of Housing and the Built Environment*, 31(1), pp. 31–49. doi: 10.1007/s10901-015-9442-9.

- Chitrakar, R. M. (2016) Meaning of public space and sense of community: The case of new neighbourhoods in the Kathmandu Valley. *Archnet-IJAR*, 10(1), 213–227. <https://doi.org/10.26687/archnet-ijar.v10i1.807>
- Corporation, J. M. (2013) ‘Detailed Project Report Revitalization of Heritage Walk - Film Colony to Kishanpol Bazaar Chowkri Modikhana, Jaipur Prepared by’.
- Creutzig, F. et al. (2016) ‘Urban infrastructure choices structure climate solutions’, *Nature Climate Change*, 6(12), pp. 1054–1056. doi: 10.1038/nclimate3169.
- Dehghanmongabadi, A. (2014) ‘Introduction to Achieve Sustainable Neighborhoods’, *International Journal of Arts and Commerce*, 3(1929-7106) Dehghanmongabadi, A. (2014). Introduction to Achieve Sustainable Neighborhoods. *International Journal of Arts and Commerce*, 3(1929–7106), 16–26. pp. 16–26.
- Delhey, J. et al. (2018) ‘Social cohesion and its correlates: A comparison of western and asian societies’, *Comparative Sociology*, 17(3–4), pp. 426–455. doi: 10.1163/15691330-12341468.
- Fallis, A. (2013) ‘The art of place and the science of space’, *Journal of Chemical Information and Modeling*, 53(9), pp. 1689–1699.
- Funo, S., Yamamoto, N. & Pant, M. (2002) ‘Space Formation of Jaipur City, Rajasthan, India An Analysis on City Maps (1925-28) made by Survey of India so called grid iron city. Jaipur City, designed by Jai Singh II is thought to have been constructed according to’, (March), pp. 261–269.
- Gehl, J. (2010) *Cities for People*. Washington D.C. Island Press.
- Gulati, R. (2019) ‘Neighborhood spaces in residential environments: Lessons for contemporary Indian context’, *Frontiers of Architectural Research*. doi: 10.1016/j.foar.2019.10.002.
- Gulati, R. (2020) Neighborhood spaces in residential environments: Lessons for contemporary Indian context. *Frontiers of Architectural Research*, 9(1), 20–33. <https://doi.org/10.1016/j.foar.2019.10.002>
- Hemani, S., Das, A. K., & Chowdhury, A. (2017) Influence of urban forms on social sustainability: A case of Guwahati, Assam. *Urban Design International*, 22(2), 168–194. <https://doi.org/10.1057/s41289-016-0012-x>
- Jain, shikha (2011) *Indian Heritage Cities Network*, UNESCO, 51-56. <https://unesdoc.unesco.org/ark:/48223/pf0000192113/PDF/192113eng.pdf.multi>
- Jawaid, M. F., Pipralia, S. & Kumar, A. (2016) ‘Exploring the Imageability of Urban Form in Walled City Jaipur’, (May). doi: 10.5176/2301-394x_ace16.43.
- Jawaid, M.F., Sharma, M., Pipralia, S. & Kumar, A. (2017) City profile: Jaipur. *Cities*, Vol. 68, pp. 63–81.
- Jenson, J. (1998) *Mapping Social Cohesion: The State of Canadian Research*, Canadian Policy Research Networks Inc. Available at: http://cprn.org/documents/15723_en.pdf.
- Kearns, A. & Forrest, R. (2000) ‘Social cohesion and multilevel urban governance’, *Urban Studies*, 37(5–6), pp. 995–1017. doi: 10.1080/00420980050011208.
- Lambe, N. & Dongre, A. (2016) ‘Analysing social relevance of spatial organisation: A case study of traditional Pol houses, Ahmedabad, India’, *Asian Social Science*, 12(9), pp. 35–43. doi: 10.5539/ass.v12n9p35.
- León, J. & March, A. (2016) ‘An urban form response to disaster vulnerability: Improving tsunami evacuation in Iquique, Chile’, *Environment and Planning B: Planning and Design*, 43(5), pp. 826–847. doi: 10.1177/0265813515597229.
- Liu, Yuqi et al. (2017) ‘Changing neighbourhood cohesion under the impact of urban redevelopment: a case study of Guangzhou, China’, *Urban Geography*, 38(2), pp. 266–290. doi: 10.1080/02723638.2016.1152842.
- Low, S. M. (1996) ‘THE ANTHROPOLOGY OF CITIES: Imagining and theorizing the city’, *Annual Review of Anthropology*, 25(1), pp. 383–409. doi: 10.1146/annurev.anthro.25.1.383.
- More, B. (no date) ‘Urban planning, neighbourhoods and social cohesiveness: A socio-cultural study of expatriate residents in Dubai’.

- Moulay, A., Ujang, N. & Said, I. (2017) Legibility of neighborhood parks as a predictor for enhanced social interaction towards social sustainability. *Cities*, 61, 58–64. <https://doi.org/10.1016/j.cities.2016.11.007>
- Mouratidis, K. & Poortinga, W. (2020) Built environment, urban vitality and social cohesion: Do vibrant neighborhoods foster strong communities? *Landscape and Urban Planning*, 204, 1–9. <https://doi.org/10.1016/j.landurbplan.2020.103951>
- Singh, R. (2016) 'Factors Affecting Walkability of Neighborhoods', *Procedia - Social and Behavioral Sciences*, 216(October 2015), pp. 643–654. doi: 10.1016/j.sbspro.2015.12.048.
- Stender, M. & Walter, A. (2018) The role of social sustainability in building assessment. *Building Research and Information*, 47(5), 598–610. <https://doi.org/10.1080/09613218.2018.1468057>
- Zumelzu, A. & Barrientos-Trinanes, M. (2019) Analysis of the effects of urban form on neighborhood vitality: five cases in Valdivia, Southern Chile. *Journal of Housing and the Built Environment*, 34(3), 897–925. <https://doi.org/10.1007/s10901-019-09694-8>