***Trishla Chadha** is an Architect and an incoming Master of Architecture student, specializing in Urban Design, at Bartlett School of Architecture, University College London. She believes in design as a discipline to be intersectional and collaborative. Her design explorations are both rigorous and naive where intersections become shared units of spaces, objects, and systems to facilitate a collective window that thrives for social and environmental impact.*

Her personality is appended with professional experience across multiple scales, community-driven approaches, public space planning, and urban systems thinking. She has actively worked on projects of national importance across India including the Conservation and Management Plan for the Parliament House, New Delhi; part of the Central Vista Redevelopment Project and HRIDAY, Swadesh Darshan Scheme for the Govt. of Jammu and Kashmir, with CRCI, New Delhi.

She received her Bachelor of Architecture with the First-class distinction from GGSIP University, New Delhi in 2020. Previously, she has worked with Ar. Gurmeet Sangha Rai and Axiom India in Delhi and Matharoo Associates in Ahmedabad. Her interests also lie in the field of architectural journalism, and she works as a content writer for various international digital platforms. Besides her professional qualifications, she has been volunteering for the International social organization – Lions Club for the past 7 years and worked for the upliftment of women and children while spreading social awareness among the underprivileged.

Email: *trishlaachadha@gmail.com*

Gender Inclusive Development for Public Spaces

Theme: Promoting Gender Inclusive spaces in Urban Development

Abstract

In the wake of economic liberalization, Indian cities have witnessed constant remodelling of spaces to keep pace with unprecedented urbanization. Alongside this wave of development, there is an undercurrent of increased vulnerability and isolation of marginalized sections of society that have been at a disadvantage because of their gender, class, age, and sexual orientation. The present situation is such that, the cities offer extensive possibilities, all while urban advancements have resulted in the increased exclusion of people, particularly from the marginalized sections. It has reinforced the existing structure of gender-based discrimination. Among the many layers of discrimination and exclusion, gender occupies a primary position.

Taking constructs from this consequence, this paper formulates an interesting proposition, one that is a common conception that people's behaviour and, accordingly, the use of spaces is changing – and that this leads to the emergence of Gender-sensitive urban development. It identifies the importance of creating spaces that evoke-affect-inspire people through physical and digital interventions. While gender-sensitive development for public spaces can induce psycho-socio, behavioral and cultural changes that can impede their use, appropriation, and safety for its users; local-to-local dialogues can be a powerful medium to enhance local governance and participation of grassroots by stimulating conversation with local stakeholders.

Aimed at integrating technology and urban development, the paper proposes a digital app based on an algorithm identifying the parameters contributing towards the direct impact and the perception of safety. The algorithm can feed into identifying the safest route for a person, based on the identified factors. The output will not only contribute significantly to citizen safety, but will also aid in the improvement and monitoring of infrastructural elements, as well as having a direct impact on making places safe and secure.

With a scheme implementable in phases over the years, this idea envisages equality for all leading to fair-shared, safe, and sustainable cities.

Keywords: *Gender Inclusive Architecture, Women empowerment, Urban Development*

1. Introduction

Cities have been envisioned as spaces of liberation, collaboration, and ideas. The present situation is such that on one hand, the cities offer extensive possibilities for both women and men, while on the other hand, the nature of urban advancement has resulted in the increased exclusion of people, particularly from the marginalized sections; it has reinforced the existing structure of gender-based discrimination. This vulnerability is evident in the way these marginalized groups are denied or are unable to access what the city has to offer by compelling them to negotiate their movements across the city, thereby influencing their quality of life.

Among the many layers of discrimination and exclusion, gender occupies a primary position. Many factors play a major role in determining women's access to the city. Gender-based intolerance

and safety are now being dissolved within a framework that stretches beyond the immediate and the most discernible forms of violence, taking into its fold issues related to infrastructure, urban planning, and governance.

Today, the women in India representing a better half of the society are becoming the most vulnerable section in terms of their safety and security. As we go through the newspaper, we come across several headlines reporting cases of molestation, sexual harassment, rapes, trafficking, and violence against women in public spaces. According to the National Crime Records Bureau, 228,650 crimes against women including murder, rape, kidnapping, and sexual harassment were reported in 2011. India was

HOW SAFE IS OUR CAPITAL?

CRIME IN NUMBERS

	2012	2013	2014	2015	2016	2017*
Rape	706	1,636	2,166	2,199	2,155	1,968
Molestation	727	3,515	4,322	5,367	4,165	3,146
Outraging modesty	214	916	1,361	1,492	918	593
Kidnapping	2,048	3,286	3,604	3,738	3,445	3,250
Abduction	162	323	423	556	444	305
Dowry death	134	144	153	122	162	118
Cruelty by husband & in-laws	2,046	3,045	3,194	3,536	3,877	2,607
Under Dowry Prohibition Act	15	15	13	20	18	11

*till Nov 20

Figure 1: Data representing the crime situation in Delhi, 2017. Source © The Hindustan Times

ranked as the world's fourth most dangerous country for women, behind only Afghanistan, the Democratic Republic of the Congo, and Pakistan by an international survey in the same year.

Women face violence both in public and private spheres that are often influenced by urban design choices and the organization of

public amenities. They experience a higher degree of insecurity that restricts their "access" and "use of the city". During times of conflict or social unrest, factors such as inadequate street lighting, unsafe public areas, ineffective community policing, and unreliable public transport can further exacerbate the risk of gender-based violence.

Government and police initiatives have not been too successful in addressing the concerns related to violence against women and safety in a concerted manner. The scope of technology such as panic buttons and GPS tracking to enhance public safety in certain ways is limited. While these initiatives are to be lauded, the principal drawback is that they exclude women without access to such technology. In the larger context even, urban planners take into consideration the user groups of various ages, community disabled, etc. but there are rare instances of collecting information and consideration for designing women-friendly urban spaces. The only solution for this situation is to develop and initiate a new paradigm of the home, the neighbourhood, and the city to begin to describe the physical, social and economic design of spaces that would support and promote, rather than limit the activities of women.
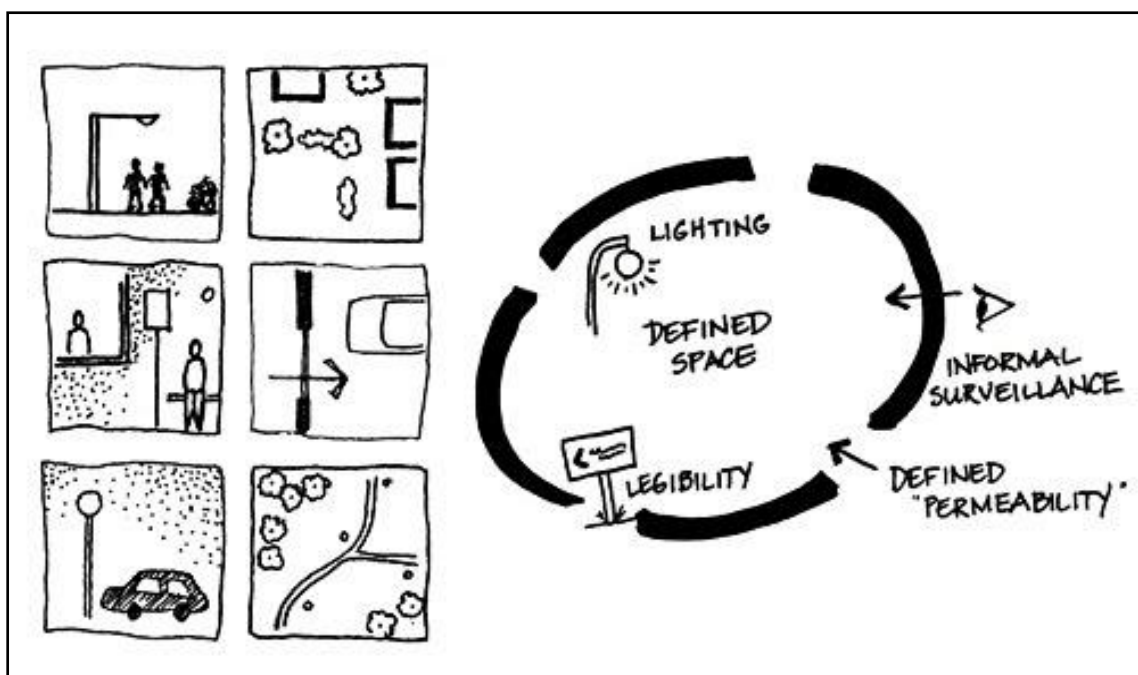
1.2 Idea: Project Aanandita

Women are looking for self-esteem and opportunities to grow and fully participate in their built environment as a whole part of their community. This can be achieved by developing an inclusive, convenient, and safe city that allows women to fulfil their dreams and goals. Women empowerment occurs when individuals and organized groups can imagine their world differently and realize that vision by changing the relations of power that have kept

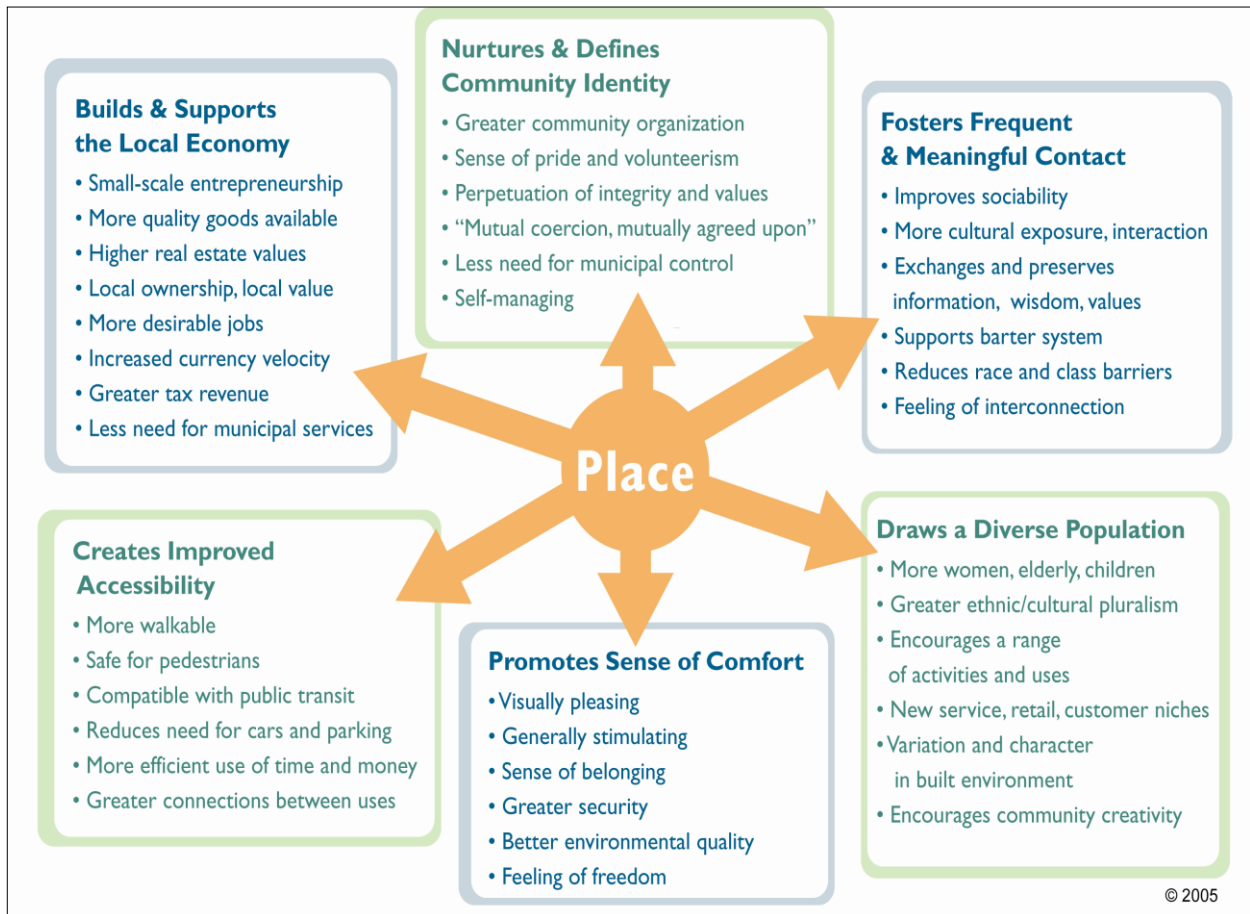them in seclusion, restrained their voice, and denied them of their autonomy.

Taking into consideration the aforementioned problems and aligning with the smart cities' vision, this proposal aims at creating spaces that evoke-affect-inspire women through physical and digital interventions and propose the following:

1.2.1   Gender Integrated Design Approach

The key element of a gender-sensitive approach in the planning dimension, whereby the safety of women in the public spaces is addressed as a component of urban planning and management of public spaces. The call for this consequence formulates an interesting proposition, one that is a common conception – that people's behaviour and, accordingly, the use of spaces is changing – and that this leads to the emergence of Gender-sensitive urban development.

Figure 2: Characteristics of the community-oriented city by Jane Jacob, Eyes of the Street. Source © The Death and Life of Great American Cities, Jane Jacob, 1989

Builds & Supports the Local Economy
• Small-scale entrepreneurship
• More quality goods available
• Higher real estate values
• Local ownership, local value
• More desirable jobs
• Increased currency velocity
• Greater tax revenue
• Less need for municipal services

Nurtures & Defines Community Identity
• Greater community organization
• Sense of pride and volunteerism
• Perpetuation of integrity and values
• "Mutual coercion, mutually agreed upon"
• Less need for municipal control
• Self-managing

Fosters Frequent & Meaningful Contact
• Improves sociability
• More cultural exposure, interaction
• Exchanges and preserves information, wisdom, values
• Supports barter system
• Reduces race and class barriers
• Feeling of interconnection

Place

Creates Improved Accessibility
• More walkable
• Safe for pedestrians
• Compatible with public transit
• Reduces need for cars and parking
• More efficient use of time and money
• Greater connections between uses

Promotes Sense of Comfort
• Visually pleasing
• Generally stimulating
• Sense of belonging
• Greater security
• Better environmental quality
• Feeling of freedom

Draws a Diverse Population
• More women, elderly, children
• Greater ethnic/cultural pluralism
• Encourages a range of activities and uses
• New service, retail, customer niches
• Variation and character in built environment
• Encourages community creativity

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Figure 3: Characteristics of a public place which includes comfort, belonging and commitment. Source © Lehmanandlehman, Place-making

Gender-sensitive development for public spaces can induce psycho-socio, behavioural and cultural changes that can impede their use, appropriation, and safety for its users. Gender analysis is vital to the ability of the built environment to respond to the needs of all who utilize planned spaces. Recognizing the role of gender can be effective in the process of developing gender-sensitive planning strategies. The built environment has a significant influence on the three concepts of safety: comfort, belonging, and commitment.

Figure 3: Characteristics of a public place which includes comfort, belonging and commitment. Source © Lehmanandlehman, Place-making
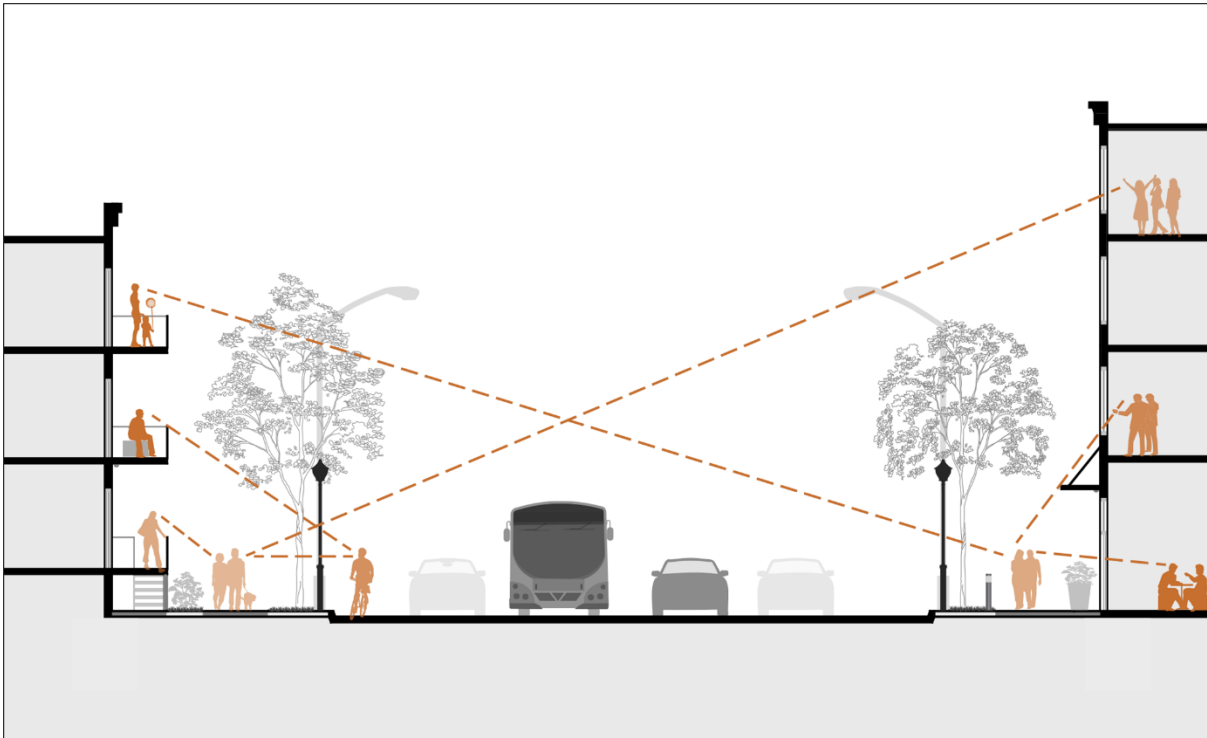
If your goal is to create a socially engaging space, a design will not be enough. To make an underperforming space into a vital 'place' for all, a physical element must be introduced that would make people, especially women more welcome and comfortable such as sufficient open spaces with landscaping details, through 'management' changes in the pedestrian circulation pattern, clustered development promoting a close-knit society, and by developing more effective relationships between the surrounding retail and the other activities in the public spaces. The goal is to create a place having a strong sense of community and a comfortable image without discriminating against any part of the society.

1.2.2 Promoting Social Dialogues

Local-to-Local dialogues are a powerful medium to enhance local governance and participation of grassroots women in local decision-making by stimulating conversation with local authorities, government departments, NGOs, development partners, the private sector, and the media.

The prevailing lack of awareness, communication, and sharing between systems results in organizations 'reinventing the wheel', duplication of less successful approaches, little guidance for organizations interested in doing effective programming, wastage of precious resources, and ultimately, insignificant change in the lives of women. It is important to strengthen links and connections among organizations working on the concerns related to women's safety and well-being across the world.

Figure 4: Jane Jacobs Theory, Eyes on the Street. Source © Minneapolis, policies, public-safety-through-environmental-design

Evidence-based research should be used as the foundation for the initiatives, and this should be complemented by the voices of the eventual beneficiaries who should be allowed to identify the problems and challenges they encounter, and for proposing solutions.

Dedicated women-led organizations can be developed at a local level, with the responsibility of consolidating data on women's urban experiences of violence, fear, and exclusion and determining the specific needs of the marginalized group; thereafter providing consulting services to the planning committees regarding gender equality concerns and their vision for the built environment.

1.2.3 Digital Intervention – Nishtha App

Rather than asking women to regulate their movements out of fear of the city, the effort of these gendered movements is to

increase the movement of women, to challenge the hegemony of men over public spaces, and make it more comfortable for women to be present in spaces, which were otherwise uncomfortable in accessing.

Through this proposal, I aim to design a digital app – Nishtha, for women, tourists, and people who are new to an area, and which tells them the safest route instead of the shortest one possible to their destination. The app can also have an option for rating a place based on the user experience. Users can also add their reviews and comments along with pictures, which will assess the environment and contribute to building a safer community. Like google maps can locate the traffic congestion on roads at any given time during the day, this app can depict the footfall in any region and ensure safety and surveillance during the odd hours. The app aims to effectively link diverse stakeholders like Police, NGOs, and organizations working towards women's safety. Through this, women can register complaints and seek help without disclosure of their identity. In case of emergency, instead of a panic button that requires the user to unlock the phone, there can be a speech recognizer which will detect the voice of the user on saying 'Help' and start recording the details of the person in distress automatically. This message will automatically generate a prompt notification on the police systems and a trusted person's phone saved by the user.

To achieve the desired mechanism, identifying the parameters contributing towards the direct impact and the perception of safety is the first step. With the data consolidated for different regions, an algorithm can be developed that provides a scoring based on the available data in a specific region. The algorithm can feed into identifying the safest route for a person, based on the identified factors. The output will not only contribute majorly

towards citizen safety, but it will also help in monitoring the urban nature of a region like lighting and transit routes that can be used by the municipalities, urban designers, architects, and planners for various uses. It can help in improving and monitoring the infrastructural elements along with the direct impact of making places safe.

1.3 Methodology

To ensure gender equality and design women-friendly cities, municipalities must conduct a gender-based analysis to understand the needs of their residents, specifically, women to improve the quality of life.

The analysis is dependent on four steps: Assessment of the situation, Development of the action plan, Evaluation of the plan, and Review of the plan periodically to evaluate its effectiveness.

Assessment of the situation: Phase one is envisioned to recognize the demands of women by developing data collection systems based on gender segregation. These developed data collection methods will include surveys and community participation to consolidate the maximum of details specific to men and women and how each uses the urban space. Once sufficient data is available, it is to ascertain difficulties that men and women encounter in the built environment daily and how these factors result in inequalities.

Development of the Action Plan: In Phase two, after the decision-makers have understood the problems and their root causes, comprehensive objectives are formulated to set the long-term goals for the city. Thereafter, the expected outcomes of each step are expressed, and result measuring guides are developed to evaluate the project outcomes. Human and financial resources

along with the implementation schedule must be predetermined for each procedure. The implementation schedule is meant to allocate responsibilities, set a timeframe for its completion, and ensure communication amongst different stakeholders. It is the blueprint for success with measurable outcomes.

Evaluation of the Plan: Phase three includes the evaluation of the project outcomes and their efficacy. To analyze the project's development and the application of guidelines, it is vital to understand the factors contributing to the obstacles in meeting the objectives. As the project progresses, changes may need to be identified for flexible implementation.

Review of the Plan: Phase four includes data being reviewed periodically to assess any changes over time and understand the implications of the project on citizens' lives. This will also include the review of project guidelines and their long-term objectives with the stakeholders to ensure the efficacy of the project.

1.4 Conclusion

The importance of developing a concept for any gendered public space is to identify the talents and assets within the community. Based on the research done so far, the first step in creating a Gender-Sensitive City is to know the women and girls living there and analyze their needs, problems, and opportunities accurately. Collection of gender-sensitive data to address local inequalities and the political intention to rectify those inequalities will help achieve a gender transformative change.

Inputs from the community and potential partners, understanding how the space works, experimentation and overcoming obstacles provide the concept of space.Although the design is important, the

other elements show you what 'form' is needed to accomplish the future vision for space.

While the scheme is comprehensive, it is not exhaustive nor complete. Therefore, the scheme should be continuously updated and be the foundation for a global platform promoting women's safety within the Smart cities' agenda of promoting inclusive development. These approaches should not be considered as alternatives but should be complementary and parallel.

With a scheme implementable in phases over the years, this idea envisages equality for both men and women, leading to fair-shared, safe, and sustainable cities.