

Enactment of Percepts of New Urbanism and Architecture in Indian Context

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Abstract:

In the phase of rapid global growth, the essence of New Urbanism appears to have diminished, giving way to a disjointed development pattern all around. It has become imperative to revive the principles of neighbourhood planning, transit-oriented development, and the incorporation of traditional and cultural elements in lives of people living in India. These aspects, crucial for holistic urban living, have dwindled due to uneven growth. This paper explores the means of reintroducing the concept of New Urbanism in India, acknowledging back to its initial ideals. The exploration is achieved through contextual analysis and drawing architectural insights from various case studies and a comprehensive review of the existing literature.

Key words: Urban Space Design, Connectivity, Mixed Use Development, New Urbanism, Transit Oriented Development, Technology, Smart Design Solutions

Introduction:

Communities are shaped by the movement and flow of ideas, The New Urbanism is a design movement toward complete, compact, connected communities—but it is also a generator of ideas that transform the landscape. It is an urban design and planning movement that emerged in the United States during the late 20th century. It advocates for the creation of walkable, mixed-use neighbourhoods that are designed to be more sustainable, socially inclusive, and aesthetically pleasing compared to traditional suburban development patterns.

Many cities are currently exploring opportunities to optimize their existing urban fabric and infrastructure, with the goal of elevating local quality of life and advancing urban sustainability. Cities worldwide are increasingly investigating the potential of smart solutions, conducting experiments in living labs, and deploying smart technologies in ambitious integrated projects, exemplified by initiatives like the Horizon2020 lighthouse project, Digital Innovation Hub, Green Energy Pilot Project, etc. The objective is to foster the development of highly liveable cities and offer solutions and conveniences that enhance the quality of life of people living in and around.

This research seeks to improve neighbouring patterns, facilitating gradual growth and a revival of the fundamental principles of new urbanism within cities. The influence of new urbanism is poised to elevate the standards of urban design, incorporating principles such as mixed housing, heightened density, seamless connectivity, enhanced

sustainability, and various other elements of mixed use and diversity. In the face of rapid population growth, both new urbanism and conventional community design have become imperative. Given the current staggered and unsustainable growth patterns, new urbanism emerges as a crucial alternative community design method, offering solutions to address the associated challenges.

Principles and challenges to New Urbanism:

In recent years, a popular planning movement has emerged, commonly known as New Urbanism, also referred to by alternative names such as smart growth, neo-traditional planning, and traditional neighbourhood development (TND). This movement has arisen in response to the conventional divisions in the design and implementation of single-use zoning practices, which are often associated with sprawling communities marked by limited income diversification, a lack of distinctive charm, social isolation, overreliance on automobiles, and increased land and resource consumption.

Key principles of New Urbanism include:

1. **Walkability:** Emphasis on creating neighbourhoods where people can easily walk to shops, schools, parks, and other amenities, reducing dependence on cars.
2. **Mixed Land Uses:** Encouraging a mix of residential, commercial, and recreational land uses within a neighbourhood to promote diversity and accessibility.
3. **Connectivity:** Designing well-connected street networks with a hierarchy of roads that facilitates easy movement for pedestrians, cyclists, and vehicles.
4. **Traditional Neighbourhood Structure:** Promoting the development of neighbourhoods with a mix of housing types and sizes, often arranged in a more traditional grid pattern.
5. **Smart Transportation:** Integrating various transportation options, including public transit, cycling, and walking, to reduce reliance on private automobiles.
6. **Sustainability:** Focusing on environmentally sustainable practices, such as energy-efficient buildings, green spaces, and conservation of natural resources.
7. **Community Engagement:** Involving residents in the planning and design process to ensure that developments meet the needs and desires of the community.

New Urbanism aims to address these challenges by fundamentally reshaping the constructed environment. Among its various solutions, traditional New Urbanist communities incorporate mixed-use cores, emphasize the design of streets and public spaces, including parks, promote a variety of housing types, and focus on transit-oriented development (TOD). However, as is common with innovative approaches, implementing New Urbanism can pose challenges. It represents a widespread and evolving development movement that collaborates with both old and

new accumulation strategies in an effort to cultivate enduring, valuable societies. Yet, given its departure from conventional proceedings, navigating the implementation of New Urbanism can be a complex task.

The implementation of New Urbanism in India faces several challenges, rooted in the country's unique socio-economic, cultural, and developmental context. Some prevailing challenges include:

1. Existing Infrastructure and Urban Sprawl
2. Rapid Urbanization
3. Regulatory Framework
4. Cultural Context
5. Affordability and Inclusivity
6. Public Awareness and Participation
7. Transportation Infrastructure
8. Land Ownership and Fragmentation
9. Neighbourhoods character and communities

New Urbanism is seen as a response to the sprawling, car-dependent suburban development that became prevalent in many Western countries after World War II. Researchers believe that well-designed, compact, and pedestrian-friendly communities can enhance quality of life, foster a sense of community, and address environmental concerns associated with urban sprawl. It has influenced urban planning and development policies in various places around the world. Addressing these challenges requires a holistic and adaptive approach that considers local nuances, involves stakeholders, and incorporates innovative solutions to create sustainable, liveable urban spaces in India.

Literature Review:

New Urbanism is a planning and development approach based on the principles of how cities and towns had been built for the last several centuries: walkable blocks and streets, housing and shopping in close proximity, and accessible public spaces. In other words: New Urbanism focuses on human-scaled urban design. New Urbanism explores a multidisciplinary field that encompasses urban planning, architecture, sociology, and environmental studies.

The evolution and emerging perspective in urban planning represent a prominent endeavour aimed at addressing the challenges of deterioration in urban centers and the unsustainable nature of exurban areas surrounding metropolises and cities. New Urbanism strives to establish a conducive environment characterized by a humanistic balance, taking responsibility for the transformation and revitalization of urban spaces. This approach aligns with contemporary development strategies, emphasizing sustainable growth objectives throughout the process of urban alteration and renovation.

This transformation is achieved by blending the principles and features of Transit Oriented Development (TOD) and Traditional Neighborhood Development (TND). By incorporating the ideas from both TOD and TND, New Urbanism seeks to create a harmonious balance between human needs, environmental considerations, and urban functionality. This holistic approach aims to address the shortcomings of a purely mechanical outlook and promote a more people-centric and sustainable urban fabric.

Three stages in the process of urbanization:

1. Initial stage: is defined by rural traditional society with prevalence in agriculture and isolated pattern of settlements.
2. Refers to Hastening stage where basic rearrangement of the economy and investments in communal overhead capitals that includes transportation, communication and other activities.
3. Terminal stage: where urban population exceeds 70% or more.

The pattern of urbanization in India is characterized by a persistent concentration of population and activities in cities. This phenomenon has led to dysfunctional urbanization and urban growth, resulting in the concentration of population in a few large cities without a proportionate increase in their economic foundation. India's urbanization faces several fundamental challenges, including issues related to housing, the prevalence of slums, transportation, water supply, sanitation, and insufficient provisions for essential social infrastructure such as schools and hospitals. Additionally, concerns about pollution further compound the complexities of urban development.

Urbanization in India has brought about several negative effects, contributing to a range of social, economic, and environmental challenges. Some of the prominent negative impacts of urbanization in India include:

1. Slums and Informal Settlements
2. Overcrowding and Congestion
3. Infrastructure Strain
4. Environmental Degradation and Resource Depletion
5. Unemployment and Underemployment
6. Social Inequality and Cultural Erosion
7. Health Challenges

Paradoxically, our heightened exposure to global ideas, combined with a lack of awareness about our local knowledge systems, has led to a greater assimilation of global concepts. This underscores the importance of disseminating knowledge about our indigenous systems, emphasizing their existence and relevance. Unfortunately, cities are witnessing a decline in livability due to a convergence of factors such as population growth, deteriorating infrastructure, reliance on automobiles, outward urban sprawl, and the challenge of providing sufficient housing.

History and The Ideologies:

The organized approach to urban development, rooted in the principles of what we now term "New Urbanism," is evident even in ancient times, notably during the Mohenjo-Daro and Harappa civilizations. These early urban centers are regarded as perfectly planned cities of antiquity. Over time, the characteristics of New Urbanism evolved across different historical periods, including the Prehistoric, Early Historic, and Medieval eras, adapting to the changing needs and demographics of the population.

The 25 ideas explored here highlight the ongoing impact of New Urbanism on communities and the built environment. Not all of these ideas were invented by new urbanists, but new urbanists have contributed significantly to them all. These ideas have mostly been developed during the last three decades, and new ones are emerging now.

Planning

1. Pedestrian shed and the 5-minute walk
2. Building better suburbs through retrofit
3. The rural-to-urban Transect
4. Sustainable urbanism
5. The polycentric region

Transportation

6. Rethinking parking
7. Context-based street design
8. Interconnected street networks
9. Freeways Without Futures

Implementation

10. Tactical Urbanism
11. Doing the math for cities and towns
12. Form-based codes
13. Lean Urbanism

14. Multidisciplinary design charrette

Architecture

15. Architecture that puts the city first
16. The public realm
17. The Charter of the New Urbanism

Housing

18. Missing middle housing
19. Katrina cottages
20. Public housing that engages the city

Development

21. Incremental development
22. Mixed-use urban centers
23. Traditional neighborhood development
24. Transit-oriented development
25. Light Imprint for green infrastructure

Further Implications:

New Urbanism explores a multidisciplinary field that encompasses urban planning, architecture, sociology, and environmental studies. Scholars have delved into various aspects of New Urbanism, considering its historical development, theoretical foundations, and practical applications.

1. Theoretical Frameworks:

Scholars have explored the theoretical foundations of New Urbanism, investigating how principles such as mixed land use, walkability, and community design contribute to sustainable and vibrant urban environments.

2. Impact on Urban Form and Design:

Numerous studies have assessed the impact of New Urbanism on the physical layout and design of urban spaces. This includes the examination of mixed-use developments, pedestrian-friendly infrastructure, and the incorporation of public spaces to enhance community interaction.

3. Social and Cultural Implications:

Social scientists have explored the social dynamics within New Urbanist communities, investigating issues related to social cohesion, diversity, and the creation of inclusive spaces. Cultural aspects, such as the influence of architectural styles and the preservation of historical elements, are also common themes.

4. Economic Considerations:

Economic analyses have been conducted to evaluate the economic viability and implications of New Urbanist developments. Researchers assess factors such as property values, local businesses, and the long-term economic sustainability of these urban forms.

5. Environmental Sustainability:

A significant portion of the literature reviews the environmental impact of New Urbanism. This includes discussions on reduced reliance on automobiles, increased green spaces, and the overall contribution to sustainable urban living.

6. Policy Implications:

Some reviews focus on the policy implications of incorporating New Urbanist principles into urban planning and development regulations. This includes discussions on zoning codes, transportation policies, and the role of local governments in promoting New Urbanism.

In synthesizing these diverse strands of literature, a comprehensive understanding of New Urbanism and its multifaceted impact on urban environments emerges

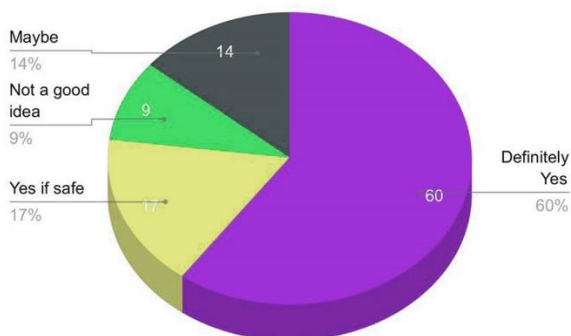
Understanding Opinions and Needs:

A survey was undertaken to assess the requirement for New Urbanism within the current Indian context. Utilizing Google Forms, the study aimed to explore societal perspectives, enabling more informed conclusions to be drawn. Participants were queried about deficiencies in their society and their anticipations for the future. Responses were diverse and insightful, emphasizing the need for improvements such as enhancing the use of public bicycles and bikes for transportation, increasing reliance on public transport, and promoting vehicle pooling to alleviate traffic and resource wastage.

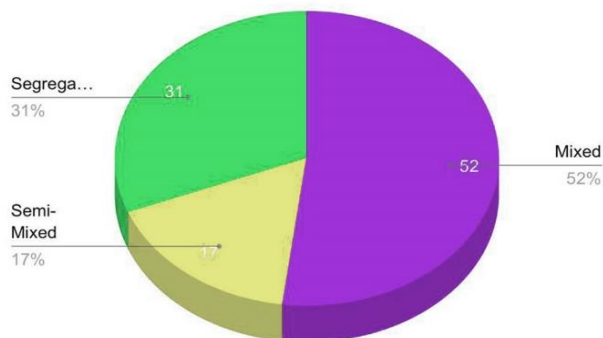
Efforts to enhance traffic control and management were highlighted for improved accessibility and efficient time management. The escalating population growth posed challenges, particularly in parking availability. Recommendations included designing more public parking spaces in compliance with norms, planning broader roads to prevent traffic congestion, and implementing pedestrian-friendly features like walkover bridges and zebra crossings.

Maintaining a high quality of life was underscored, with suggestions for designing garden areas as interactive spaces to foster community connections. The advent of smart technology, particularly IoT, was deemed essential for monitoring security. Consequently, Wi-Fi access was considered a necessity for effective implementation of New Urbanism. A well-managed city, encompassing aspects such as sanitation and hygiene, was deemed crucial, advocating for the installation of public toilets and dustbins.

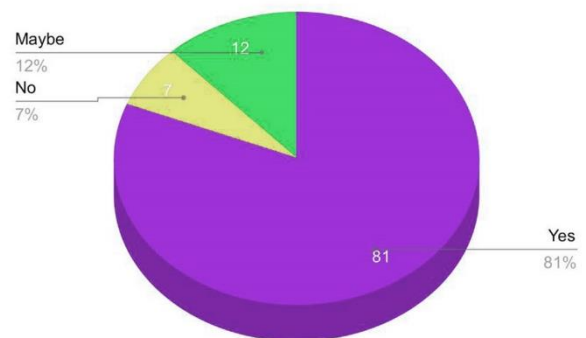
How does the idea of vehicle pooling sound to you and would you prefer using it as option if it serves well



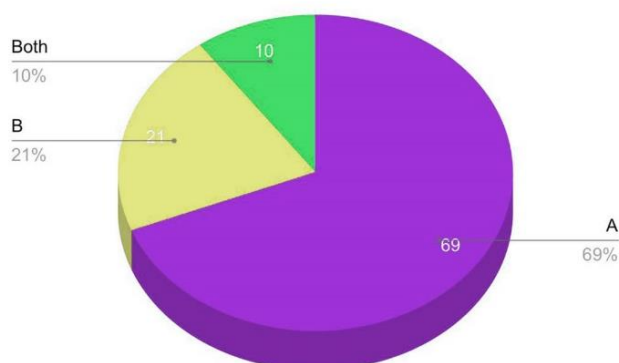
Would you prefer segregated areas as per purpose and need or a mixed area that will include combination of residential and commercial areas



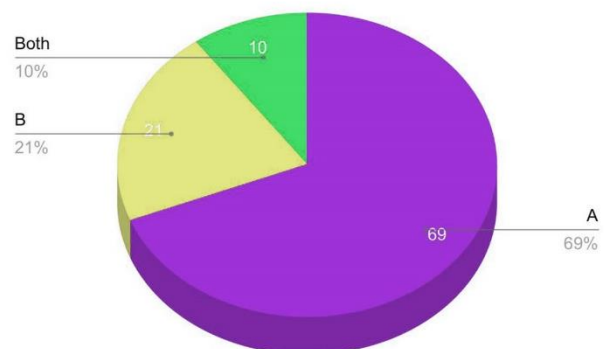
Would you prefer walking to destinations if they are provided with a proper walkable environment and at a distance of 10-15 minutes walk



Would you prefer public transportation which meets the high end of needs



Would you prefer public transportation which meets the high end of needs



Revival and Implementation:

There are several approaches that can be explored to address issues and showcase the potential of residential community planning in India. While many cases and evidence illustrate improvements and changes in community development and construction methods globally, India has the opportunity to draw from its traditional practices while incorporating technology to meet contemporary user needs. As a rapidly growing country with a focus on sustainable urban development and environmental concerns, the trend towards reform needs to be embraced in the field of urban creation.

Applying New Urbanism involves adopting a set of principles and techniques to create or enhance urban spaces that are more sustainable, livable, and community-oriented. Here are some techniques for implementing New Urbanism to improvise current urban statistics in India:

1. Mixed-Use Zoning:

Integrate residential, commercial, and recreational spaces within the same neighborhood, reducing the need for long commutes and fostering a sense of community.

2. Walkability:

Design streets and public spaces to be pedestrian-friendly. This includes wide sidewalks, crosswalks, and well-connected pathways to encourage walking and reduce dependence on automobiles.

3. Transit-Oriented Development (TOD):

Plan and design neighborhoods around public transportation hubs, encouraging the use of public transit and reducing reliance on private vehicles.

4. Compact Design:

Encourage higher density development to make efficient use of land and resources. This often involves designing buildings and neighborhoods with a mix of housing types and sizes.

5. Smart Growth:

Promote development that considers environmental impact, economic viability, and community well-being. This includes using existing infrastructure, preserving green spaces, and minimizing sprawl.

6. Traditional Neighborhood Design:

Embrace traditional design principles that prioritize human scale, with buildings facing the street, front porches, and a mix of housing types to create a sense of place and identity.

7. Public Spaces:

Create and enhance public spaces such as parks, plazas, and squares to serve as focal points for community interaction and recreation.

8. Affordable Housing:

Incorporate a range of housing options to accommodate people of different income levels, promoting economic diversity within neighborhoods.

9. Form-Based Codes:

Implement zoning regulations based on the physical form and characteristics of a place rather than just land use, ensuring that the built environment aligns with the community's vision.

10. Community Engagement:

Involve the community in the planning and design process, seeking input from residents to ensure that the development meets their needs and reflects their values.

11. Green Building Practices:

Encourage sustainable building practices, including energy-efficient design, use of renewable resources, and green infrastructure to promote environmental sustainability.

12. Complete Streets:

Design streets to accommodate all users, including pedestrians, cyclists, and public transportation, promoting safety and accessibility.

13. Adaptive Reuse:

Repurpose existing buildings for new uses, preserving the character of older neighborhoods and reducing the need for new construction.

14. Forming Design Guidelines:

Establish clear design guidelines to maintain consistency and coherence in architectural styles, ensuring that new developments align with the overall character of the community.

Implementing these techniques requires collaboration between urban planners, architects, developers, and the community to create vibrant, sustainable, and inclusive urban spaces in line with New Urbanism principles.

Conclusion:

New Urbanism, as observed through studies and analyses, revolves around the creation of a distinct sense of place while defining specific dimensions for the constructed environment. The principles extend beyond providing guidelines; they also shape the community's relational dynamics, aiming to strengthen interpersonal connections by establishing a system of guidelines associated with the place, fostering a comfortable environment.

Various studies conducted by urban designers have reached a common conclusion: the places where people genuinely desire to live are not being constructed anymore. The appeal of these places is attributed to the intricate relationship between buildings and streets rather than a sense of nostalgia. It is this relationship that imbued old towns and neighborhoods with vibrancy and enduring significance. Research even suggests that these environments, attuned to human needs, have not been replicated in construction practices over the past forty years. The liveliness and prevalence of such places harken back to the historical development of cities, originating with the earliest known civilizations.

Building upon the study, additional conclusions can be drawn to shape the idea of an ideal neighboring unit. These conclusions encompass various aspects of urban planning and community design:

A. Center-Edge Connectivity:

An ideal neighboring unit should incorporate both a central hub and distinct edges to facilitate connection and isolation as needed. This balance ensures a cohesive yet diverse environment.

B. Optimized Sizes and Proximity:

The sizes of components within the neighboring unit should be optimized, ideally within a one-quarter-mile distance from the center. This proximity enhances accessibility and fosters a sense of compact, integrated community living.

C. Balanced Mix of Activities:

Achieving a harmonious community involves a balanced combination of life, activities, work, shopping, education, recreation, and worship. The coexistence of these elements contributes to a dynamic and multifaceted living experience.

D. Integrated Network:

The neighboring unit should feature an integrated network that connects streets, organizes the placement of buildings, and manages traffic flow. This integrated approach ensures efficient connectivity and movement within the community.

E. Emphasis on Public Spaces and Urban Building Placement:

Prioritizing the design of public spaces is crucial for fostering community interaction. Additionally, the strategic positioning of urban buildings contributes to the overall aesthetics and functionality of the neighborhood.

These conclusions underscore the importance of thoughtful planning and design in creating an ideal neighboring unit. By integrating these principles, urban environments can be crafted to promote connectivity, diversity, and a high quality of life for residents.

Other ideas included - Promotion of general to portion urbanization and its usage. Also creating a direct public relation with transportation pattern and land use and apart from immediately visible needs of people, latent needs should be taken care of like:

- A. Comfort and Livability
- B. Interfaces between Public and Private Domains
- C. Technological Needs
- D. Affordability and Sustainability
- E. Environmental issues.

To address the myriad challenges posed by current urban development, a traditional yet convergent approach is recommended. This approach considers all-dimensional data, emphasizing user-centric solutions while upholding quality standards and fostering a healthy living atmosphere without compromising environmental factors.

By adopting a convergent method, various dimensions can be incorporated, enhancing the overall quality of development and consequently improving the residents' quality of life. Rather than dismissing traditional urban spaces and architecture, there's value in conserving them as valuable lessons for informing future developments. This inclusive perspective not only ensures a holistic consideration of diverse factors but also respects the historical and cultural significance embedded in existing urban structures. It promotes a sustainable and balanced approach to urban development that takes into account the needs of the present while preserving the wisdom of the past.

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