JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

INTERVENTIONS IN URBAN VOIDS THROUGH SOMATIC REGENERATION

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Abstract: A city is the result of historical and natural evolution of human communities. Following the rapid developments of modern times, entering transition step, and changing living styles from traditional to modern that result in new form of social and economic relations in society and changing cities totally; there were parts of urban context, specially historical and central core of cities context, that failed to match with the ongoing changes and because of physical- operational mismatch with new conditions their inhabitant became unkind to them and so consequently and following the lack of necessary infrastructures forecast for joining to the dynamic and integrated urban body they made current worn-out urban parts known as urban voids. One of the most important challenges now a days is about the historical context is dealing with their physical depletion and adopting intervention methods that this part has experienced different methods according to space and time from past to now. For increasing historical context coordination with modern times, one of the protective restoration intervention methods that attracted the attention of many urban planners is urban regeneration. Urban regeneration has different aspects and has changed and evolved over the time. One of the most important aspects is regeneration based on somatic regeneration, which emphasizes the importance of sensory experiences and bodily engagement in the design and activation of urban spaces.

Urban Voids have huge capability of improving the place and creating a stronger urban fabric of the city. Reclaiming the dead spaces by intervening could solve the perception of these spaces and thereby create better public spaces by increasing the imageability and comfort. These spaces can be seen as great potential in this expensive world and can be utilized as urban public spaces such as public gathering spaces, pocket parks or plazas or just place for activities which make people get engaged and enhance the public domain.

The research tries to explain the protective and restoration intervention methods, documents and resolutions related to them, urban regeneration procedure, principles and general strategies of regeneration, and finally emphasis on somatic regeneration as an effective approach, and present overall solution and analyze examples of this intervention recipients.

Index Terms **- Urban void, somatic regeneration, revitalization, potential resource.**

I. INTRODUCTION

City is a living organism that parts of it gradually experience exhaustion and destruction because of natural causes. Time passage and changes that occur in requirements and consequently on needs and method of meeting that needs by city residences, changes urban fabric. These changes affect different aspects of the city (whether physical and non-physical or their inter-relations) and time foot print remains on the city's appearance. In fact, the city is the product of various historical periods and special relationships of social, cultural, geographic and economic aspects. However, the most important criteria which affects urban body and changes its identity is the boundary between past and present of the city and the separation of the two eras. Appearance of the cities has always continuously changed, however, at some periods, the differentiation between past and present has been more significant.

In the sense of the built environment, urban voids are a critical value that must be used. Accordingly, urban void has the power to become a key element of the future city. Urban voids become neglected spaces, and most of them turned into spaces for crimes and illegal activities. After regeneration, the new image of urban voids becomes a vital space where many users like to go and meet together. So, it became a good source of attraction for people from different places passing by these spaces, maximizing the use of these spaces, increases the concern of the environment and its preservation through the use of new technological applications—all of that aid to re image cities and increase their income, especially in developing countries.

The concept of intervention in urban voids through somatic regeneration represents a transformative paradigm in urban planning and design. Unlike traditional approaches that prioritize physical infrastructure or economic development, somatic regeneration places human experience and well-being at the forefront. It acknowledges the profound impact of sensory experiences on our perception of urban spaces and seeks to create environments that engage the senses, evoke emotional responses, and foster connections among inhabitants.

1.1. OBJECTIVES

- To understand what is urban void and its types
- To identify problems in these voids
- To find out how these voids affects the surroundings
- Develop the strategies to reuse these voids in a new way

1.2. URBAN REGENERATION

Over the last decades, various discipline trends have set many studies dealings with urban public spaces, most of them concentrated on common urban space structures, such as nodes, squares, and gardens, without focusing intensely on urban voids, especially urban buffer zones and did not look for the impact of users' needs on the urban void spaces, leaving many void spaces neglected.

Urban regeneration seeks to find solutions for urban decay through improvement of deprived and deteriorating regions. This approach not only looks for regeneration of abandoned regions but also deals with broad topics such as competitive economy and quality of life especially for the people living in poor neighborhoods. "Regeneration" is forming the verb "regenerate" means revitalization, revival and it also means natural reproduction of a part of a living mechanism that is subject to degradation.

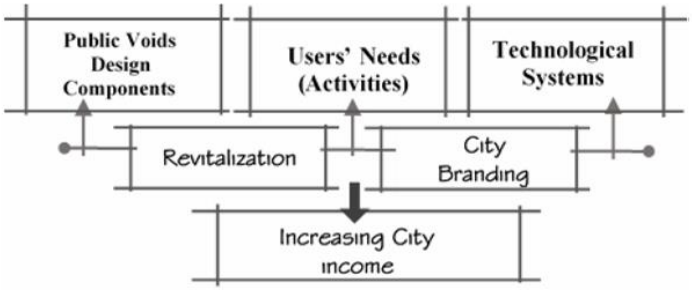
In general, it can be said that urban regeneration is a process of creating urban spaces while preserving its main spatial characteristics (physical and functionally). Urban regeneration includes exhaustive and integrated view and a set of measures that help to resolve urban issues, so that a sustainable improvement is obtained in economic, physical, social and environmental situation of the region that has undergone the change.

II. UNDERSTANDING URBAN VOIDS

Urban voids are areas that disrupt the city's urban fabric. These spaces are often overlooked or ignored spaces in people's minds. These spaces are the result of designing away from the community needs. Void means "nothing contained," "vacant space," "not used," "not occupied." "The quality or state of stand without anything."

The difference between "open space," as defined in regulations for urban city spaces, and "public space" has discovered new declensions connected to group or individual public life, currently happening in centralized contexts as well as in peripheral areas or leftover spaces up to edge cities, capable of giving values and functions to neglected or abandoned places.

The word urban voids refer to the lack of functions, lack of people, and lack of aesthetic values in terms of the urban concept. The voids of the city are also the spaces that divide the urban fabric and leave it incomplete, which are either public or private at the boundary. This also signifies vacancies in urban areas, which are then vacated and neglected. Urban voids were identified as negative, empty, and no hu man interaction. This is commonly the case along railway lines, residential areas edges, underdeveloped roads, deserted military courts, and deserted or abandoned industrial areas.



2.1. CHARACTERISTICS OF URBAN VOIDS

a. **Underutilization**: One of the primary characteristics of urban voids is their underutilization. These areas are not being used to their full potential, often due to factors such as economic decline, social issues, or environmental problems.

b. **Physical Neglect**: Urban voids typically show signs of physical neglect and deterioration. This can include overgrown vegetation, accumulation of waste, and structures in disrepair. The lack of maintenance and care is a visible indicator of an urban void.

c. **Lack of Identity and Place**: Unlike active urban areas that have a defined character or function, urban voids often lack a sense of place or identity. They do not contribute to the city's cultural, social, or economic life, making them feel disconnected from their surroundings.

d. **Barriers to Accessibility**: Many urban voids are physically inaccessible or unwelcoming to the public. Obstacles such as fences, barriers, and a lack of pathways prevent these spaces from being integrated into the daily life of the city.

e. **Social Disconnection**: Urban voids can contribute to social disconnection within cities. By creating physical gaps in the urban fabric, they can hinder community interaction and cohesion, leading to isolated neighbourhoods.

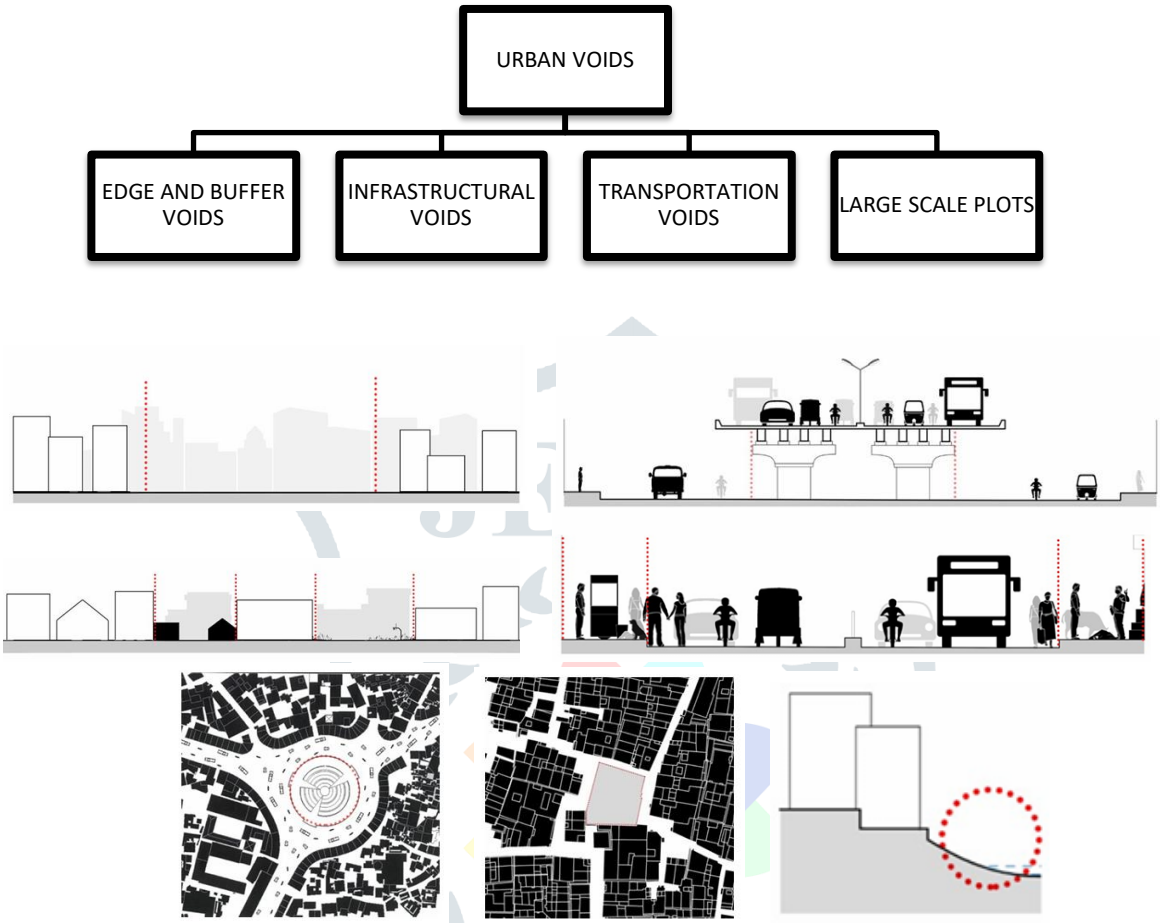
f. **Economic Stagnation**: These areas often represent economic stagnation. They do not generate revenue or contribute economically to their communities, and their neglected state can depress nearby property values.

g. **Environmental Issues**: Urban voids can present environmental challenges, including contamination, pollution, and the creation of heat islands. In some cases, these areas were previously industrial sites or dumping grounds, leading to long-term environmental degradation.

h. **Opportunity for Reclamation and Regeneration**: Despite the challenges they present, urban voids are also characterized by their potential for transformation. These spaces offer unique opportunities for innovative urban regeneration projects that can introduce new uses, green spaces, community resources, or cultural attractions.

i. **Diversity in Scale and Origin**: Urban voids vary widely in scale, from small parcels of unused land to large industrial zones. Their origins are equally diverse, resulting from economic shifts, planning policies, natural disasters, or social changes.

2.2. TYPES OF URBAN VOIDS



2.3. IMPACT OF URBAN VOID ON URBAN FABRIC

Urban voids, as spaces within the urban landscape that are underutilized, abandoned, or neglected, can have significant impacts on the overall urban fabric. These impacts can manifest in various ways, influencing the physical, social, economic, and environmental dynamics of cities. Some key impacts of urban voids on the urban fabric are:

a. **Visual Blight**: Urban voids, especially when characterized by abandoned buildings, vacant lots, or neglected infrastructure, can create visual blight within the urban fabric. These spaces often detract from the aesthetic appeal of surrounding areas, contributing to a sense of decay and neglect.

b. **Fragmentation**: Urban voids can disrupt the continuity and coherence of the urban fabric, creating physical and visual barriers that fragment neighborhoods and communities. This fragmentation can impede pedestrian and vehicular movement, reducing accessibility and connectivity within the city.

c. **Decreased Property Values**: The presence of urban voids, particularly those characterized by blight and neglect, can negatively impact property values in surrounding areas. This can have ripple effects on the local economy, discouraging investment and economic development.

d. **Social Isolation**: Urban voids can create pockets of social isolation within cities, particularly if they are perceived as unsafe or unwelcoming. These spaces may become magnets for illicit activities, further exacerbating social isolation and alienation among residents.

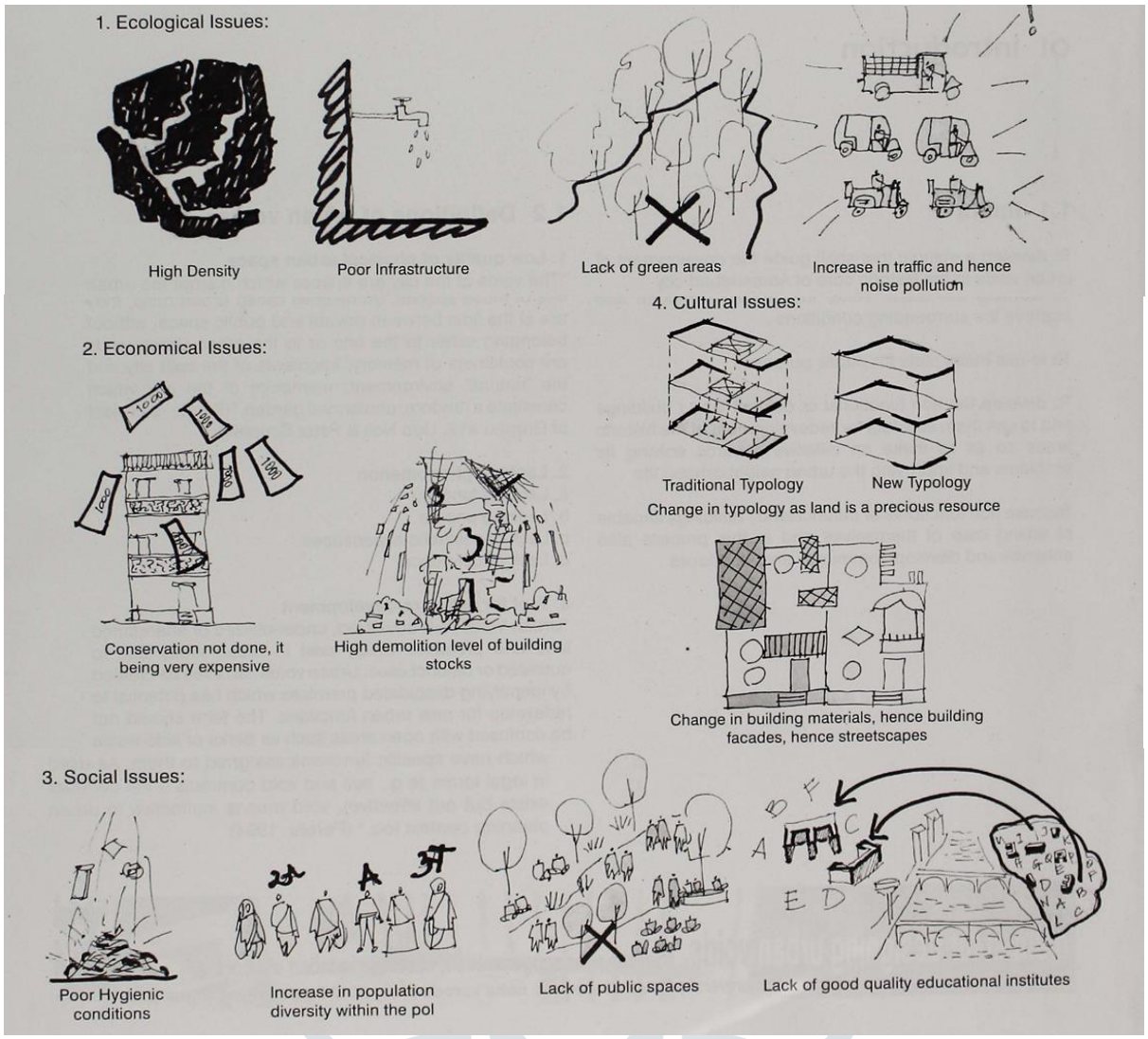
e. **Safety Concerns**: Neglected urban voids can pose safety hazards to residents and visitors, serving as breeding grounds for crime, vandalism, and other illicit activities. The perception of urban voids as unsafe can deter people from using public spaces and engaging with their communities.

f. **Loss of Public Space**: Urban voids often represent underutilized or abandoned public spaces that could otherwise be valuable community assets. The loss of these spaces deprives residents of opportunities for recreation, social interaction, and cultural expression.

g. **Environmental Degradation**: Abandoned or neglected urban voids can contribute to environmental degradation, including the proliferation of invasive plant species, soil erosion, and habitat loss. This can have detrimental effects on biodiversity and ecological resilience within cities.

h. **Negative Psychological Impact**: The presence of urban voids can have a negative psychological impact on residents, fostering feelings of insecurity, anxiety, and disconnection from their surroundings. This can erode community cohesion and overall quality of life.

i. **Underutilization of Resources**: Urban voids represent underutilized resources within the city, including land, infrastructure, and buildings. Failure to regenerate these spaces effectively results in a waste of valuable urban assets and missed opportunities for sustainable development.



2.4. FACTORS AFFECTING ON FORMING URBAN VOIDS

a. **Geographical factors**: Geographical forces affect the development of urban voids; they may be physical obstacles like the land that generate unshaped, unfamiliar spaces which are not used. There might be natural events that have led to the relocation of citizens of some spaces and turned into unused spaces or buildings without the use. Some cities have their geo logical characteristics. Voids created when city planners and developers do not react to these geographical characteristics, leaving the space chaotic.

b. **Planning and design factors:** Voids are generated mainly through ineffective and inadequate planning procedures. These are actually built without knowing the fabric of the city due to designing in isolation. These can also be viewed using figure-ground theory in our cities that are most noticeable. Moreover, the new revolution in urban design is not appropriate for planning all of these cities. This is the explanation for having separate buildings between parking lots and highways.

c. **Functional factors:** The function of the space or its surrounding area is one of the most common factors that generate urban voids. Post-industrial resources include closed industrial sites, void spaces created under bridges, on the edges of highways, and abandoned railway lines. When a specific space is not used efficiently, the space becomes defunct.

d. **Political factors:** Wars negatively affect the region's-built environment, which influences generated void spaces. Another political aspect is faulty decisions, ineffective land management, and effective collaboration between decision-makers and stakeholders.

e. **Economic factors:** Urban gaps are the outcome of ages of interlinking between economic transitions and urban developments. Land value in the communities is decreasing, and its value is declining. Rental properties do not have enough profit for investors to pay taxes to manage their facilities and meet their expenses, contributing to the abandonment of owners of these no longer viable facilities. In addition, economic disinvestment and increased taxes significantly affect urban spaces, commercial, and tourism operations.

f. **Cultural factors:** Technological advancement and economic growth and the population moved to the country contributed to dominance and increasing use of cars. This condition has limited the usage of the downtown area that has become an infamous area, making it an ideal place for urban empty spaces to appear.

III. OVERVIEW OF SOMATIC REGENERATION

In the context of urban regeneration, somatic regeneration refers to an innovative approach that prioritizes the sensory experiences, human interactions, and well-being of residents in the revitalization of urban spaces. Derived from the concept of "soma," which refers to the body and its sensory perceptions, somatic regeneration recognizes the profound influence of the built environment on people's physical, emotional, and social well-being.

Somatic regeneration goes beyond traditional urban renewal strategies that focus solely on economic development or physical infrastructure. Instead, it emphasizes creating environments that engage the senses, foster social connections, and promote holistic well-being. This approach views urban spaces as living organisms, with the potential to heal, adapt, and thrive when designed and managed with careful consideration of human needs and experiences.

Applying this concept to urban regeneration involves seeing the city as a living organism, where each part contributes to the health and functionality of the whole. Urban spaces, like cells in a body, need to be nurtured and maintained to ensure the overall system's vitality and resilience.

In the context of urban regeneration, somatic regeneration suggests a holistic and integrated approach to revitalizing neglected or underused urban areas (urban voids) by focusing on healing and regenerating these spaces in a way that considers the well-being of the entire urban "organism."

3.1. BENEFITS OF SOMATIC REGENERATION

a. **Enhanced Urban Vitality:** Somatic regeneration revitalizes neglected or underutilized urban spaces, infusing them with new life, activity, and purpose. By activating these spaces, cities become more vibrant, dynamic, and attractive to residents, visitors, and investors.

b. **Improved Quality of Life:** Regenerated urban spaces create opportunities for recreation, social interaction, and cultural enrichment, enhancing the overall well-being and happiness of city dwellers. Access to green spaces, community amenities, and cultural venues promotes physical and mental health, fostering a sense of belonging and connectedness.

c. E**nvironmental Sustainability:** Somatic regeneration prioritizes sustainable urban design principles, such as green infrastructure, energy efficiency, and biodiversity conservation. By incorporating natural elements into the urban environment, such as green roofs, parks, and urban forests, cities become more resilient to climate change, mitigate heat island effects, and improve air and water quality.

d. **Social Inclusion and Equity:** Regenerating urban voids fosters inclusive development that benefits all segments of society. Community engagement and participatory planning ensure that the needs and aspirations of diverse populations are considered, reducing social inequalities and enhancing social cohesion.

e. **Economic Growth and Development:** Revitalized neglected urban spaces stimulate economic activity, generating employment opportunities, attracting investment, and fostering entrepreneurship. Regenerated areas become hubs for innovation, creativity, and commerce, contributing to local prosperity and competitiveness.

f. **Cultural Enrichment:** Somatic regeneration preserves and celebrates the cultural heritage and identity of urban communities. Adaptive reuse of historic buildings, public art installations, and cultural programming celebrate the city's diversity, heritage, and creativity, enriching the urban experience for residents and visitors alike.

g. **Resilience to Change:** By adopting flexible and adaptive approaches to regeneration, cities become more resilient to future challenges and uncertainties. Regenerated urban spaces are designed to accommodate evolving needs and functions, ensuring their long-term relevance and viability in the face of social, economic, and environmental changes.

3.2. CHALLENGES AND LIMITATION OF SOMATIC REGENERATION

While somatic regeneration holds promise for revitalizing urban spaces and fostering sustainable development, it also faces several challenges and limitations that can hinder its implementation and effectiveness. These challenges stem from various factors, including economic, social, political, and environmental considerations. Some of the key challenges and limitations of somatic regeneration are:

a. **Financial Constraints:** Somatic regeneration often requires significant financial investment for land acquisition, infrastructure upgrades, environmental remediation, and community engagement initiatives. Limited public funding, competing priorities, and private sector reluctance to invest in uncertain or risky projects can constrain regeneration efforts.

b. **Complex Stakeholder Dynamics:** Regeneration projects involve multiple stakeholders, including government agencies, property owners, developers, community groups, and residents. Balancing competing interests, negotiating agreements, and ensuring meaningful participation from all stakeholders can be challenging and time-consuming.

c. **Regulatory and Legal Barriers:** Regulatory frameworks, zoning laws, land use regulations, and bureaucratic red tape can pose obstacles to somatic regeneration projects. Complex permitting processes, legal uncertainties, and property rights issues may hinder the timely implementation of regeneration initiatives.

d. **Community Opposition and Resistance:** Not all residents may support regeneration projects, particularly if they perceive them as gentrification or displacement threats. Overcoming community opposition, addressing concerns about affordability, and ensuring equitable benefits for all residents are essential for successful regeneration outcomes.

e. **Technical and Environmental Challenges**: Brownfield sites and contaminated land pose technical and environmental challenges that may require extensive remediation efforts and specialized expertise. Addressing soil and groundwater contamination, mitigating environmental risks, and ensuring compliance with environmental regulations can significantly increase project costs and timelines.

f. **Long-Term Sustainability and Maintenance:** Ensuring the long-term sustainability and maintenance of regenerated urban spaces requires ongoing investment, management, and community engagement. Securing funding for maintenance and programming, establishing governance structures, and building community capacity are critical for sustaining regeneration benefits over time.

g. **Risk of Displacement and Gentrification:** Somatic regeneration projects have the potential to inflame socio-economic disparities, leading to displacement of vulnerable communities and cultural homogenization. Safeguarding affordable housing,

implementing inclusive planning processes, and providing social support mechanisms are essential for mitigating the risk of displacement and gentrification.

3.3. INFLUENCE OF SOMATIC REGENERATION IN URBAN DESIGN

The influence of somatic regeneration in urban design is profound, as it brings a holistic and organic perspective to the planning and development of cities. Somatic regeneration, inspired by the principles of natural regeneration and renewal found in biological systems, emphasizes the interconnectedness of urban spaces and the importance of fostering resilience, adaptability, and sustainability. Here are several ways in which somatic regeneration influences urban design:

a. **Integrated Design Approach:** Somatic regeneration encourages an integrated approach to urban design that considers the interrelationship between built environments, natural systems, and human communities. Design solutions are holistic, addressing social, economic, and environmental dimensions simultaneously to create cohesive and harmonious urban environments.

b. **Regenerative Design Principles:** Drawing inspiration from nature, somatic regeneration promotes regenerative design principles that aim to restore and enhance the health and vitality of urban ecosystems. Design interventions prioritize strategies such as green infrastructure, biodiversity conservation, and natural resource management to improve environmental quality and support ecological functions within urban areas.

c. **Adaptive Reuse and Flexibility**: Somatic regeneration advocates for adaptive reuse and flexibility in urban design, encouraging the repurposing of existing structures and spaces to accommodate changing needs and conditions. Design strategies focus on creating adaptable, multifunctional environments that can evolve over time, minimizing waste and maximizing resource efficiency.

d. **Place-Based Design Solutions:** Somatic regeneration emphasizes the importance of context-sensitive and place-based design solutions that respond to the unique cultural, social, and environmental characteristics of each urban area. Design interventions are tailored to local contexts, incorporating elements of community identity, heritage, and sense of place to create meaningful and inclusive urban spaces.

e. **Human-Centered Design:** Somatic regeneration prioritizes human-centered design approaches that prioritize the needs, preferences, and experiences of urban residents and users. Design solutions are user-friendly, accessible, and inclusive, promoting social interaction, well-being, and quality of life for all members of the community.

f. **Resilient Design Strategies:** Recognizing the increasing vulnerability of cities to climate change and other environmental risks, somatic regeneration advocates for resilient design strategies that enhance the capacity of urban areas to withstand and recover from shocks and stressors. Design interventions focus on enhancing urban resilience through strategies such as green infrastructure, flood mitigation, and disaster preparedness.

g. **Community Engagement and Participation:** Somatic regeneration places a strong emphasis on community engagement and participation in the urban design process, recognizing the importance of involving local residents, stakeholders, and organizations in shaping the future of their neighborhoods. Design decisions are collaborative, transparent, and inclusive, empowering communities to take ownership of their urban environment and contribute to its regeneration.

h. **Sustainable Development Practices:** Somatic regeneration promotes sustainable development practices that minimize environmental impact and promote long-term viability and prosperity. Design interventions prioritize principles such as compact urban form, energy efficiency, and resource conservation to create environmentally sustainable and socially equitable urban environments.

IV. EARLY APPROACHES TO URBAN VOID INTERVENTION

Early approaches to urban void intervention reflect evolving urban planning and design philosophies, responding to changing social, economic, and environmental contexts. These approaches aimed to address the challenges posed by neglected or underutilized urban spaces while promoting the revitalization and regeneration of urban areas. Some key early approaches to urban void intervention are:

a. **Clearance and Redevelopment:** Early 20th-century urban renewal focused on demolishing dilapidated structures and replacing them with modern developments, often leading to community displacement and loss of historic character.

b. **Comprehensive Planning:** Mid-20th-century approaches emphasized coordinated planning to guide land use and infrastructure investments, aiming to revitalize neighborhoods and address urban voids through public investments and zoning regulations.

c. **Urban Design and Revitalization:** Later in the century, cities prioritized improving visual appeal and livability through streetscape enhancements and creative interventions in neglected areas, such as adaptive reuse projects and community-driven improvements.

d. **Community Development and Participation:** Urban void interventions increasingly emphasized community involvement, with participatory planning processes and grassroots initiatives empowering local stakeholders to shape regeneration efforts.

e. **Adaptive Reuse and Mixed-Use Development:** Early approaches promoted repurposing existing buildings and integrating diverse uses within compact, walkable neighborhoods to preserve historic fabric and stimulate economic revitalization.

f. **Brownfield Remediation and Environmental Sustainability:** Environmental concerns led to efforts to clean up contaminated sites and integrate sustainability principles into regeneration projects, enhancing resilience to climate change.

g. **Public-Private Partnerships and Financing Mechanisms:** Collaboration between public agencies, private developers, and community groups, along with innovative financing tools, facilitated regeneration projects and stimulated economic growth in blighted areas.

V. URBAN VOIDS DESIGN COMPONENTS

a. Form and vitality

In revitalizing urban voids, the shape, size, and design play a crucial role in user comfort. Incorporating diverse activities and extending operating hours are essential for creating vibrant public spaces. Elements like cafes, play areas, and community apps enhance these areas, while design features such as shade trees, sculptures, and water elements add to their appeal. Strategic seating arrangements offering compelling views and clear sightlines further enhance visitor experience.

b. Accessibility

When revitalizing urban voids, guaranteeing safe and accessible entry for all individuals is crucial. Achieving this involves integrating the rejuvenated space seamlessly into the surrounding pedestrian network. Entrances should be visibly positioned to offer clear lines of sight. It's important to design continuous and logical pedestrian pathways through the public area, ensuring straightforward navigation. Additionally, strategic placement of lighting is key to delineate pathways and highlight areas for evening use, while service facilities should be thoughtfully situated in a specific area, distanced from main pedestrian routes and leisure amenities.

c. Design and visual preferences

To preserve local character in the face of modern urbanization, integrating contemporary design features and attracting renowned architects is essential. Carefully selecting landscape elements and incorporating locally relevant urban art can enrich the environment. Urban voids should have delineated boundaries without imposing high walls, ensuring visual continuity. Comfortable environments are achieved through strategic design, including road layout and seating placement for optimal sunlight exposure and shade provision.

d. Economic financial benefit/payback

Revitalizing urban voids can drive city investment, generate diverse tax revenue, and create jobs. Making these spaces accessible to a wide range of users fosters effective site marketing and connections between different uses. Redevelopment benefits high-unemployment areas and regions where fair market value exceeds redevelopment costs. However, proper utilization and maintenance of public spaces are essential for sustained attractiveness. Coordination among multiple organizations can be complex, necessitating the establishment of management committees to ensure effective governance.

VI. LITERATURE CASE STUDIES

6.1. JAMALPUR FLYOVER, AHEMDABAD

Constructed in 2009, the Jamalpur flyover spans between Paldi and Geeta Mandir, encompassing several significant junctions and landmarks such as the A.P.M.C. market. This bustling market attracts a diverse array of vendors, predominantly vegetable sellers. Collaborating with SEWA, these vendors established vending platforms beneath the flyover, resulting in overcrowding on one side, while the other half accommodates public amenities like restrooms, night shelters, and a police chowki, with the remaining space left unused or utilized for parking. This configuration poses significant challenges for vehicular traffic flow.

a. space next to the traffic junction got occupied by the vendors.

b. Public toilet under the flyover

c. vending platforms are getting used as storage space or to collect the waste

6.2. MALEK SABAN LAKE, BAPUNAGAR

Located in Bapunagar, Ahmedabad, Malek Saban Lake was formerly known as Lal Bahadur Shastri (LBS) Stadium until 2012. Due to persistent waterlogging and drainage issues in the area, the Ahmedabad Municipal Corporation (AMC) was compelled to repurpose the stadium into a water reservoir. Unfortunately, the lake now serves as a breeding ground for mosquitoes, and the public areas surrounding it have become dumping grounds for debris and waste. Illegal squatters and slum dwellers have encroached upon the lake's edges, creating an unpleasant environment for the neighbourhood.

a. Panoramic view of Malek Saban lake

b. The slum along the edges of lake

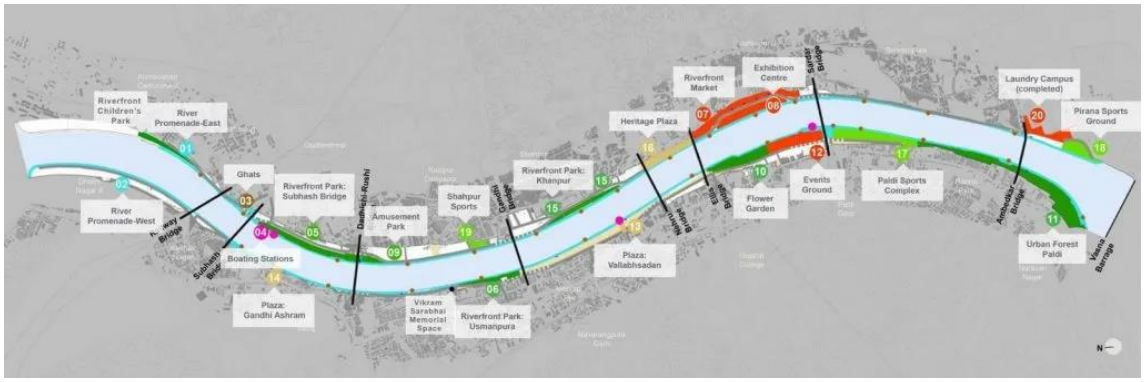
c. Debris and other waste on the public activities area.

6.3. SABARMATI RIVERFRONT DEVELOPMENT PROJECT

The Sabarmati Riverfront Development Project in Ahmedabad was initiated in 2004 with the aim of converting the 11.25 km stretch of the Sabarmati riverfront into a recreational and commercial hub. The project involved the construction of 42 parks, a promenade, and a 28.5 km cycle track. The riverfront was also developed for various activities like boating, sports, and cultural events.

The project has successfully transformed the riverfront into a vibrant public space, attracting many visitors. The project has also generated employment opportunities, boosted the local economy, and improved the overall standard of living in the area. The riverfront development has become a landmark project for Ahmedabad and has won several international awards.

However, the project has also faced criticism for being elitist and ignoring the needs of the urban poor. The project has displaced several informal settlements, and the cost of the project has been a burden on the city's finances. The project's success also depends on maintaining the facilities and preventing encroachments on the riverfront.



6.4. KALA GHODA ARTS DISTRICT, MUMBAI

The Kala Ghoda Arts District in Mumbai serves as an exemplary case of urban regeneration, where a blend of art, culture, and community engagement revitalized a fading historical precinct into a vibrant cultural hub. Initiated by the Kala Ghoda Association in the late 1990s, this transformation focused on harnessing the area's rich heritage and artistic potential to foster urban renewal. The annual Kala Ghoda Arts Festival became a cornerstone of this revival, attracting artists, performers, and visitors from across the globe, thus injecting new life and economic vitality into the district. Efforts to conserve historic architecture, alongside the introduction of public art installations and the development of pedestrian-friendly spaces, further enhanced the area's appeal. The district now hosts a variety of cultural venues, including galleries, theaters, and museums, contributing to Mumbai's cultural landscape and serving as a model for urban regeneration through cultural and community engagement. This transformation not only restored Kala Ghoda's historic charm but also established it as a dynamic space for creativity, innovation, and cultural exchange, showcasing the profound impact of integrating arts into urban development strategies.

6.5. SARANGPUR WATER TANK

Sarangpur water tank is a prominent junction featuring a large overhead water tank and a surrounding garden. Positioned at the convergence of six significant roads leading towards Sarangpur Darwaja, Panchkuva, and Kalupur, it is surrounded mainly by commercial areas and key landmarks such as the Sarangpur B.R.T.S. stop, Sarangpur A.M.T.S. bus terminal, and Kalupur

a. Panoramic view of the Sarangpur Water Tank junction

b. Encroachers inside the Sarangpur water tank garden.

c. Litter along the inside edges of the park

railway station. However, heavy traffic renders the park unsafe and inaccessible, isolating the junction and making it susceptible to homelessness and encroachment. The high foot traffic attracts vendors, leading to encroachment in the smaller surrounding junctions, while one edge of the main junction serves as a parking area.

6.6. INFERENCE OF CASE STUDIES

S.NO.	LOCATION	VOID TYPE	PREVIOUS USE	PROBLEMS	PROPOSED USE
1	Jamalpur flyover, ahemdabad	Infrastructural void	Vendors, parking, night shelter	Increases traffic in the area	Vegetable market, play area for kids
2	Malek saban lake, bapunagar	Edge and buffer void	Stadium	Waterlogging, drainage issues, breeding ground for mosquitoes	water reservoir
3	Sabarmati riverfront development project	Edge and buffer void	Informal settlements, inadequate infrastructure	Flooding, encroachments, pollution	Park, cycle track, boating, event space
4	Kala ghoda arts district, mumbai	Transportational void	Art galleries, cafes, shops	Aging architecture, congestion	All pedestrian Art district
5	Sarangpur water tank	Large scale plot	Vendors, parking, encroachment	Heavy traffic, unsafe, inaccessible	Strategic parking, garden, play area

VII. HOW CAN THESE LEFT-OVER SPACES BE PUT TO USE?

Anti-space and border zones are typically disorderly, as they consist of remnants from other uses. However, these areas hold potential for weaving together the urban fabric at crucial border zones. While residual areas, buffer zones, and vacant land may separate buildings, they also serve to connect different regions and offer various opportunities. These interstitial spaces have the potential for urban restructuring and can function as public spaces that play vital roles in the city's physical and social functions. Despite their tendency to separate and isolate, edges can alternatively unify spaces between two areas. Designing these spaces to instill a sense of community ownership can reunite areas of the city that have been divided by urban renewal efforts. Flyovers should not obstruct visual lines that divide communities and should address undesirable residual spaces.

VIII. CONCLUSION

Urban Voids have huge potential of improving the place and creating a stronger urban fabric of the city. Reclaiming the dead spaces by intervening could solve the perception of these spaces and thereby create better shared spaces by increasing the imagination and comfort. These spaces can be seen as great potential in this expensive world and exploited as urban public spaces such as public gathering spaces, pocket parks or plazas or just place for activities which make people get engaged and enhance the public realm.

From the reviewing of literature studies about urban voids the study provides understanding of the meaning of the urban voids and the ways of its formations and also the negative effect of existing urban voids on the city quality of life. The research represents the urban voids as value and explores its values and concludes that the reuse of urban voids can provide environmental value by offering many ecosystem functions such as using urban voids as a green infrastructure, improving quality of air, preserving natural habitat and producing renewable energy. Urban voids can also provide social values by reusing it as a community gardens, pocket gardens, entertainment activates, social services and public spaces for gathering and community interacting. These voids also provide an economic value by reusing it as a small local business which support economic revitalization for example temporary uses, increasing the value of the properties and its surrounding and creating jobs opportunities such as small-scale projects. In addition, reuse urban voids considering the historic and identity of the city provide historical and cultural value by supporting the identity and the character of the city, supporting the culture activities and education process.

The research underscores the significance of prioritizing human experience and well-being in urban planning and design. By emphasizing sensory engagement, emotional connections, and community participation, somatic regeneration offers a transformative approach to revitalizing neglected urban spaces. It demonstrated the potential of somatic regeneration to create vibrant, inclusive, and sustainable urban environments. Integrating somatic regeneration principles into urban development strategies holds promise for creating more resilient, inclusive, and livable cities that truly cater to the needs and aspirations of their inhabitants.

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