

Cultural Dissonance in Contemporary Indian Urban Development: Consequences of Adopting Western Planning and Architectural Models Without Contextual Adaptation

Ar. Rahul Duseja

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Abstract—India's cities have changed rapidly over the past few decades, with many of the newer developments taking inspiration from Europe and North America. Glass curtain-wall buildings, large road networks, private vehicle-based development, zoning systems and international architectural styles are now common signs of a modern city. These ideas were developed under very different climatic, social, economic and historical conditions. When they are brought into India without enough changes, they can create problems because the same planning ideas are being used under very different conditions.

These problems can be seen in buildings, roads, transportation, zoning, public spaces and cultural areas. Large areas of glass can increase solar heat gain and cooling requirements in hot Indian climates. Cities are also trying to provide both private vehicle infrastructure and public transportation, but the two systems are often not planned as one connected system. Traditional mixed-use areas are replaced by separated zones, while markets, religious spaces and informal gathering areas are often not considered in the same way as formal public spaces. At the same time, climate-responsive architecture that developed in India over many years is being replaced by more standardized international building forms.

This paper studies these issues through a comparison of Frankfurt, Dallas and Gurugram, while also looking at the historical influence of British and American culture on Indian cities. The paper does not suggest that European or American planning systems should be rejected. Instead, it argues that their useful parts should be adapted to Indian conditions. Possible solutions include climate-based façade regulations, city-specific façade codes, contextual zoning, mixed mobility planning, third-place planning and better protection of cultural areas. These solutions are not presented as proven methods. They should first be tested at a small scale through real projects, GIS and urban simulation before being considered for larger implementation.

Index Terms—Indian Urban Planning; Climate-Responsive Architecture; Contextual Design; Cultural Identity; Sustainable Urbanism; Transportation Planning; Built Environment

I. INTRODUCTION

Urban development has always been affected by the conditions of the place where it develops. Architecture, transportation, public spaces and planning rules are usually created around the climate, available land, population, economy and way of life of a particular place. As cities develop, these systems change with them. However, a system that works in one city does not always work in another city in the same way. This becomes more important when planning ideas are transferred between countries.

Globalization has made this transfer much easier. Buildings, roads, public spaces and planning systems from successful cities can now be studied and copied almost anywhere. This has helped Indian cities gain access to better technology and planning knowledge. At the same time, it has also created a tendency to associate certain visual forms with progress. Glass towers, large highways, large parking areas and separated commercial districts can all be seen as signs of a developed city even when the conditions around them are very different from the cities where these systems first became common.

Since the economic liberalization of the early 1990s, India has seen major urban growth. Cities such as Delhi, Bengaluru, Gurugram, Hyderabad and Pune have developed large commercial districts with international architectural styles. Glass curtain-wall buildings and large corporate developments are common, while road networks and private vehicles

have become an important part of urban movement. These developments have helped India become more connected to the global economy, but they have also created a new question about whether the physical models being adopted are suitable for Indian conditions.

The issue can be seen clearly in building design. A glass façade can provide daylight and a modern appearance, but in a hot climate it can also allow large amounts of solar heat into a building. This can increase the need for mechanical cooling if the façade is not designed correctly. The problem is therefore not simply that glass is unsuitable for India. High-performance glass, shading and proper orientation can make glazed buildings work in hot climates. The issue is the use of the same visual language without always considering the environmental conditions around it.

Transportation creates another problem. India is developing metro systems and other forms of public transportation while also continuing to expand roads for private vehicles. Both systems are useful, but they often do not work together properly. A metro station may exist without enough last-mile connectivity, while roads may continue to be widened without solving the larger movement pattern. The result is a city where cars, two-wheelers, buses, metro systems, pedestrians and informal transport all depend on the same limited urban space.

Zoning creates a similar issue. Many traditional Indian neighbourhoods developed with housing, shops, small workplaces, religious buildings and community spaces located close to one another. Modern planning has often separated these functions into different areas. Separation can be useful where activities are incompatible, but applying it too strictly can increase travel distances and make people more dependent on motorized transport.

The social structure of Indian cities also needs to be considered. Indian cities contain religious spaces, markets, festivals, informal commerce and community activities that do not always fit into the usual categories of parks, plazas and formal civic spaces. A temple, gurdwara, mosque, market street or local gathering point may act as an important public space even when it is not officially planned as one. If these spaces are removed or ignored during redevelopment, people do not necessarily stop using them. Their activities may simply move onto roads, parking areas or commercial spaces.

The population scale of India makes these issues more difficult. India has more than 1.4 billion people within roughly 3.3 million square kilometres, while the United States has a much larger land area and a much smaller population. This creates a major difference in the amount of pressure placed on roads, transport systems, utilities and public spaces. India is also already heavily settled, meaning that large existing cities cannot simply be demolished and rebuilt according to a new model.

The purpose of this study is not to reject European or American planning ideas. Many of these systems work well in their original contexts and contain useful ideas that India can learn from. The problem is when the physical appearance of these systems is copied without adapting the conditions around them. This paper therefore looks at how these models developed, how they have influenced India and what problems can occur when different parts of these models are combined without enough contextual changes.

The paper uses Frankfurt, Dallas and Gurugram as case studies. Frankfurt represents a European city with strong public transportation and historic preservation. Dallas represents an American city that developed strongly around roads, cars and lower-density expansion. Gurugram represents a newer Indian corporate city where parts of both approaches can be seen together. The paper then proposes possible ways of adapting these ideas to Indian conditions.

II. METHODOLOGY

This research uses a qualitative comparative methodology to study the problems that can occur when Western architectural and urban planning models are applied in India. The study looks at planning principles that have worked in Europe and North America and compares the conditions under which they developed with the conditions found in Indian cities.

The study is based around six main areas. These are the use of glass curtain-wall façades in Indian buildings, transportation planning, public behaviour and public gathering spaces, cultural and religious spaces, zoning, and the replacement of climate-responsive architecture with international building forms. Parking and the infrastructure needed to

support these systems are also considered as part of the wider planning problem.

The case-study method compares Frankfurt, Dallas and Gurugram. Frankfurt was selected as an example of a European financial centre where public transport, historic areas and contemporary development exist together. Dallas was selected as an American financial and corporate centre where roads, private vehicles and lower-density development have played a major role. Gurugram was selected because it is one of India's major corporate centres and contains a mixture of high-rise commercial buildings, large roads, metro systems, private vehicles, planned sectors and privately developed districts.

The comparison looks at climate, density, transportation, zoning, parking, public spaces, cultural identity and infrastructure. These factors are considered together because they affect one another. For example, parking is not only a question of where cars are stored. It also affects land use, road demand and the amount of space available for public activity. The study also looks at the history of Western influence on Indian urban development. British influence is considered through colonial infrastructure and planning, while American influence is considered through post-independence planning cooperation and popular culture. This helps explain why modern Indian cities contain several different planning influences at the same time.

GIS platforms such as ArcGIS and urban simulation software such as Cities: Skylines are considered as possible tools for future testing. ArcGIS can be used to study population density, land use, roads, transportation, public spaces and infrastructure. Cities: Skylines can be used to test possible changes to roads, zoning, transportation and development patterns before they are physically implemented. These tools are not treated as proof that a planning solution will work. They are proposed as a way to test different options before real-world trials.

The final part of the research therefore focuses on a contextual planning framework. The proposed solutions are not presented as final answers. They are possible methods that should be tested at a building, street or neighbourhood scale before being considered for larger areas.

III. LITERATURE REVIEW

3.1. Case Studies

3.1.1. Frankfurt am Main, Hesse, Germany

Frankfurt am Main is one of Europe's major financial centres and is an important banking and business city in Germany. It is home to institutions such as the European Central Bank, Deutsche Bundesbank and Frankfurt Stock Exchange. The city is useful as a case study because its modern financial district exists alongside a historic urban centre. High-rise development has been concentrated in particular areas, while places such as Römerberg and the reconstructed Altstadt retain a different character.

Frankfurt also has a climate that is different from northern India. Summers are generally moderate while winters are considerably colder. This changes how buildings respond to sunlight and heat. Glazed buildings can make use of sunlight during colder periods, but they also need to deal with heat loss during winter and overheating during summer. German building regulations place strong requirements on energy performance and the thermal performance of buildings. This means that the use of glass is supported by building standards and technical systems rather than only by its appearance.

Transportation is one of the strongest differences between Frankfurt and cities that developed around private cars. The city uses several forms of public transport including U-Bahn, S-Bahn, trams and buses. Walking and cycling also form part of the transport system. This allows a large number of people to travel through the financial centre without every person requiring a private car. Frankfurt's mobility planning continues to focus on public transport, walking, cycling and the use of public space.

Public spaces are also an important part of the city. Areas such as Römerberg, the Main River promenade and pedestrian areas provide places for people to spend time outside their homes and workplaces. These spaces are different from private commercial areas because they are not dependent on buying something to use them. They also connect with the city's walking and transportation systems.

Frankfurt's approach to historic preservation is another important part of the case study. The city was heavily damaged during the Second World War, but parts of its historic centre were rebuilt and preserved. At the same time, modern high-rise development continued in

selected areas. This allows the city to have a modern financial skyline without removing its older urban identity.

For India, Frankfurt is useful because it shows how different systems can work together when they are planned as one system. Its glass buildings, public transportation, historic areas and public spaces are supported by regulations and infrastructure that developed around the city's own conditions. These systems cannot simply be copied into India, but the relationship between them can be studied.

3.1.2. Dallas, Texas, United States

Dallas is one of the major financial and corporate centres of the United States. It has developed around large companies, financial institutions, technology firms and other businesses. Unlike Frankfurt, its growth has been strongly influenced by the automobile. Much of the metropolitan area expanded during the period when private vehicle ownership and suburban development became common in the United States.

The city's-built form reflects this history. Dallas has large highways, business parks, lower-density development and extensive parking areas. Its central business districts also contain large glass and steel office buildings. The road system allows people to travel long distances, which was important for the development of the wider metropolitan area.

Dallas also has a hot climate, with long summers and temperatures that can regularly go above 35°C. Despite this, glass curtain-wall buildings are common in Downtown Dallas, Uptown and other business areas. This is important to the study because it shows that glass can be used in a hot climate.

High-performance glazing, insulation, shading, building controls and mechanical cooling allow these buildings to operate. The lesson is therefore not that glass cannot work in India, but that the building must be designed around the climate and energy requirements of the location.

Transportation is still strongly based around private vehicles. The Dallas area has a large highway network and the Dallas Area Rapid Transit system also provides rail and bus services. However, the existence of public transportation does not mean that the city has stopped being car dependent. Recent planning is beginning to change this. ForwardDallas 2.0 encourages mixed-use development, better walking

conditions and more development around transit stations. It also looks at changing parking requirements around areas with better public transport. Parking has historically taken up a large amount of land in Dallas. Surface parking lots and parking structures support the city's car-based development, but they also use land that could otherwise be used for buildings, public spaces or landscaping. Parking areas can also increase heat and create large gaps between buildings. Current planning policies are beginning to look at shared parking and more context-based parking requirements.

Dallas has also been developing more public spaces. Klyde Warren Park is one example where a large public space was created over a major road and helped connect parts of the city that had previously been separated. This shows that even a city built strongly around roads can change its approach to public space. For India, Dallas is useful because it shows both the strengths and limits of a car-based city. Large roads and private vehicles can provide flexibility over long distances, but they also require large amounts of land and infrastructure. Dallas is now trying to balance this system with better public transport, mixed-use development and walking. This makes it important not only as an example of American urbanism but also as an example of a city changing its own model.

3.1.3. Gurugram, Haryana, India

Gurugram has become one of India's major financial and corporate centres since the economic liberalization of the 1990s. It is part of the National Capital Region and contains offices of multinational companies, technology companies, financial institutions and business process companies. Much of its growth has been driven by private development, leading to large commercial towers, gated residential areas and business parks.

The city's architecture is strongly influenced by international corporate design. Areas such as DLF Cyber City, Golf Course Road and Udyog Vihar contain many glass and steel commercial buildings. These buildings look similar to business districts in cities such as Frankfurt and Dallas, but they operate in a very different climate. Gurugram has long hot summers and high solar exposure. Extensive glazing can therefore increase solar heat entering the building and increase the amount of cooling needed if proper shading and glazing systems are not used.

This does not mean that all glass buildings in Gurugram are poorly designed. India's Energy Conservation Building Code already provides requirements related to building envelopes and glazing. The issue is that the visual form of a fully glazed building can sometimes be copied without giving the same attention to passive design. Features such as shaded windows, recessed openings, verandahs and external shading can reduce solar exposure and can be adapted into modern buildings.

Transportation shows another difference. Gurugram has the Delhi Metro Yellow Line, Rapid Metro, major roads and expressways. At the same time, private vehicles, taxis and two-wheelers remain heavily used. The city has major roads such as NH-48 and the Dwarka Expressway, but the large number of people travelling to concentrated employment areas creates heavy demand on the road network. Pedestrian and last-mile connections are also inconsistent in several areas.

Gurugram's land use is also a mixture of planned sectors and private developments. Residential areas, office districts and commercial areas are often separated. This means that many people have to travel between different parts of the city for work and daily activities. Traditional Indian neighbourhoods often had more mixed uses, where shops, services and homes were closer together. The difference in these patterns affects how much people need to travel.

Public space in Gurugram is also different from Frankfurt. A large amount of social activity takes place in private or commercial spaces such as Cyber Hub, malls, commercial plazas and gated communities.

These places can be very active, but many are connected to commercial use or private ownership. Parks such as Leisure Valley provide public recreation, but there are fewer civic squares, pedestrian streets and open gathering areas that form part of everyday urban life.

The city also has a limited regional architectural identity in many of its newer commercial districts. The use of glass and steel creates a corporate appearance that could be found in many cities around the world. The architectural traditions of Haryana and the wider North Indian region contain courtyards, shaded streets, sandstone and other climate-responsive elements, but these are not often translated into modern corporate buildings.

Gurugram therefore represents the main Indian example in this study. It has benefited greatly from modern development, investment and international business, but it also shows the problems that can happen when several planning models are combined without enough adjustment. Its roads, metro, high-rise buildings, parking, zoning and public spaces all need to work together under Indian conditions rather than being treated as separate parts.

3.2. Influence of Western Culture on South Asian countries

The influence of Western culture on Indian cities started well before independence. British rule changed the infrastructure, administration, sanitation, transportation and land use of many Indian cities. These changes were usually placed on top of existing settlements rather than being built from an empty site. Cities such as Bombay, Calcutta, Madras and Delhi therefore developed with both older Indian systems and newer British systems existing together.

Delhi is one of the clearest examples. New Delhi was developed after the decision to move the British capital from Calcutta in 1911. A planned administrative city was created beside the older settlement of Shahjahanabad and other existing areas. New Delhi introduced wide avenues, large plots, landscaped areas and monumental government buildings. It also used the existing landscape and remains of older Indian settlements. The result was not one city replacing another. Instead, different layers of Indian, Mughal, British and later post-independence development became part of the same metropolitan area.

Independence did not immediately remove the British influence. Roads, railway networks, government buildings, administrative areas and planning systems continued to be used. At the same time, India began to develop its own architectural identity. Delhi expanded through new housing, government development and settlements created after Partition. This created cities that were a mixture of inherited colonial systems, older neighbourhoods and new Indian developments.

American influence became more visible after independence. It was not limited to architecture. American planning ideas, funding and expertise also entered Indian planning institutions. One example is the Ford Foundation's work with the Calcutta

Metropolitan Planning Organization between 1960 and 1973.

American and Indian planning experts worked together on the city's development planning. This shows that the influence entered planning methods as well as the appearance of buildings.

American soft power also had a major cultural effect. Hollywood films, television, music and books presented American cities and lifestyles to audiences around the world. The United States became strongly associated with wealth, technology, business success and a modern lifestyle. This created an image of what a successful modern city should look like. The influence was not only architectural, but also cultural. This does not mean that Indian culture simply became Western. Indian cities continued to retain their own traditions, religious spaces, markets and social systems. Indian culture has also influenced Western culture in return. However, the constant exposure to Western cities and lifestyles created a strong reference point for what modernity and success could look like. Contemporary Indian cities are therefore made from several influences. British planning left behind infrastructure and institutional systems. American culture and planning added another layer. European ideas about public transport and urban design also became important. At the same time, India retained its own cultural and architectural systems. The problem comes when these different influences are treated as a universal blueprint rather than as systems created for different conditions.

3.3. Western Planning Models and Their Contexts

3.3.1. European Urbanism

European cities have developed over long periods, with many of them growing around existing settlements rather than being planned completely from the beginning. This has produced relatively compact urban areas where housing, shops, workplaces, public institutions and cultural spaces can be found close to each other.

Public transportation became important because these cities had high concentrations of people and activities. Rail, metro, tram and bus systems connect different parts of the city while walking and cycling remain important for shorter trips. Streets therefore have to support several types of movement rather than being designed mainly for private cars.

European cities also have a strong relationship with

historic buildings and public spaces. Historic buildings, religious structures, markets and streets are often part of the modern city instead of being removed for new development. Public squares, pedestrian streets, parks and other shared spaces give people places to spend time outside their homes and workplaces.

This system works because of the conditions in which it developed. Many European cities have long-established urban structures, relatively compact development and strong public transport systems. Their planning regulations have also developed over long periods. This does not mean that European cities have no traffic, housing or infrastructure problems. It means that their systems cannot be separated from the conditions that allowed them to develop.

3.3.2. American Urbanism

American urbanism developed differently. During the twentieth century, widespread car ownership, suburbanization and highway construction changed how American cities grew. Large roads allowed cities to spread over much larger areas. Residential, commercial and industrial uses were often separated, and parking became an important part of commercial development.

This system made it easier for people to travel long distances by car and allowed businesses and homes to spread away from older city centres. However, it also made cities more dependent on cars. Walking and public transportation became less practical in many areas because the distances between different uses became larger.

American cities also developed a strong corporate architectural identity. Large office towers, shopping centres, business parks and commercial developments became symbols of economic growth. Glass and steel became common materials in corporate architecture, while mechanical cooling allowed buildings to maintain controlled indoor temperatures even in hot areas.

Public spaces exist in American cities, but their location and use are often connected to roads and private development. Parks, plazas, civic buildings and commercial spaces all contribute to public life, but they can be spread across large areas.

The American model is therefore not simply a model based on cars. Roads, parking, zoning, low-density expansion, private development and commercial

architecture all support one another. This is one reason why copying only one part of the system into a much denser city can create problems.

3.4. Problems created by the Improper Implementation of Hybrid Urban Models in India

India is increasingly combining parts of European and American urbanism. European influence can be seen through metro systems, compact development and public transport, while American influence can be seen through private vehicles, large roads, parking, corporate buildings and international architectural styles. In theory, combining these systems could give India the benefits of both. The problem is that the physical parts are sometimes combined without considering the conditions that made them work in their original locations.

A metro system cannot be separated from the roads and pedestrian routes that connect people to it. A large road network cannot be separated from the number of people using it. A glass office building cannot be separated from the climate and electricity required to cool it. Zoning cannot be separated from the distances people need to travel. These systems are connected, but they are often planned separately.

Population is one of the biggest differences. India has more than 1.4 billion people and a land area of around 3.3 million square kilometres. The United States has roughly three times India's land area but a much smaller population. India therefore has much greater population pressure at the national level. More importantly, a large amount of India's population is already concentrated within established settlements and cities. Infrastructure in these areas is used by very large numbers of people every day.

This affects roads, public transportation, utilities and public spaces. A road that may be sufficient for a lower-density city can become heavily congested when large numbers of people are travelling through the same area. The same applies to parking, electricity, water supply and public spaces.

The glass office tower is another example. Glass has become a global symbol of corporate success and modernity. In a hot Indian city, however, extensive glazing can increase solar heat gain and cooling demand unless it is combined with proper shading, glazing and building-envelope design. The problem is not that glass cannot work. Dallas itself shows that glass can be used in a hot climate. The problem is

copying the appearance without considering the technical conditions needed to make it perform well.

The increased cooling demand also affects the larger electricity system. A city with many large air-conditioned commercial buildings have a different electricity requirement from a city where buildings use more passive cooling. The façade of one building therefore does not only affect the building. When the same design is repeated across a large business district, it can add to the wider energy demand.

Cultural and social differences also make direct copying difficult. Indian cities contain many religious and community spaces that do not always fit into standard planning categories. Temples, mosques, gurudwaras, shrines, markets, festival routes and informal gathering areas can become important urban nodes. If formal planning only looks at parks and civic plazas, these spaces can easily be missed.

People also need places outside their homes and workplaces. When enough third places are not provided, people will use whatever spaces are available. This can include roads, parking areas, commercial entrances and other spaces that were not designed for long periods of social activity. The result can be conflict between pedestrians, vehicles and people using the space for social purposes. This is not only a problem of individual behaviour. It can also be a result of not providing enough suitable places for people to gather.

India also has a long tradition of mixed-use urban areas. Shops, homes, religious spaces and small businesses often developed close together. Strict separation of these uses can increase the distance between everyday activities. This increases the need for vehicles and puts more pressure on roads.

Parking adds another layer. American-style development often provides large amounts of parking because it developed around private vehicles. In India, applying similar requirements can consume large amounts of valuable urban land. Parking is needed, but the amount and location of parking should depend on the surrounding transport system and density.

Another problem is the loss of climate-responsive architecture. Indian buildings historically used courtyards, shaded streets, verandahs, recessed openings, jaalis and other methods to control heat and sunlight. Modern buildings do not need to copy these forms exactly, but the ideas behind them can still be

useful. Replacing them completely with standardized glass-and-steel buildings can remove both regional identity and useful climate responses.

India also cannot simply start again. Most major cities already have roads, buildings, property ownership, businesses, communities and cultural spaces. Large new planned cities cannot replace this existing network. Even new satellite cities depend on older cities for jobs, education, trade and transport.

This makes retrofitting more important. Roads may need to be reorganized instead of just widened. Public transport may need better last-mile connections. Mixed-use areas can be tested where zoning has created long journeys. Parking can be changed where too much land is being used for vehicles. Buildings can be controlled through climate-based façade requirements instead of simply banning modern architecture.

The main issue is therefore not that India should choose Europe or America. The issue is that India has tried to combine parts of both without always adapting them to its own population, climate, culture and existing cities. A better approach would be to take the useful principles from these models and test how they perform under Indian conditions.

3.5. Possible Solutions and Framework for Contextual Urban Adaptation

The solutions in this section are proposed as possible solutions and not as methods that are already proven to work. The fact that a method works in Frankfurt, Dallas or another city does not mean it will work in the same way in India. Each proposal should first be tested at a small scale. Its results should then be measured and compared with the existing situation. Only after this should it be considered for a larger area.

3.5.1.Climate-Based Façade Regulations

One possible solution is to create façade regulations based on the climate and size of the building. Instead of banning glass, the rules could consider building height, floor area, façade width, glazing percentage, orientation, climatic zone and solar exposure.

Buildings with a larger percentage of glass could be required to meet stronger performance requirements. These could include better solar control, external shading, lower solar heat gain and better thermal performance. Another possibility is to test whether buildings with very high glazing ratios should have

additional performance requirements or changes to allowable development intensity.

The purpose would not be to stop modern architecture. It would be to make sure that the appearance of a building does not become more important than how the building performs.

These rules should first be tested on selected buildings or small development clusters. Energy consumption, cooling requirements, thermal comfort, daylight, maintenance and construction cost could be recorded. The results could then be used to decide which rules are actually useful.

3.5.2.City-Specific Façade Codes

India is too geographically and culturally diverse for every city to have the same architectural language. A city in the Himalayas has different requirements from a city in Rajasthan or a coastal city.

Dehradun could have façade guidelines that respond to its valley climate and regional identity. Jaipur could respond to the hot and dry climate of Rajasthan. Kochi could respond to heat, humidity and heavy rainfall. Delhi could use its Indo-Islamic, Mughal, colonial and contemporary history as a basis for a modern architectural identity.

This does not mean that buildings should copy old architecture. Instead, useful elements such as courtyards, chajjas, jaalis, verandahs, shaded openings, local materials and street proportions can be studied and adapted into modern buildings.

These ideas should first be tested in selected areas. The results can be measured through thermal performance, public response, construction cost, maintenance and the overall identity of the area.

3.5.3.Contextual Zoning

Indian cities could also test alternatives to strict separation between residential, commercial and institutional uses. Small shops, services, workplaces and community facilities could be allowed closer to housing where they do not create major problems with noise, pollution or traffic.

The purpose is not to remove zoning. Some uses should remain separated. The purpose is to see whether every everyday activity needs to be separated into a different zone.

A neighbourhood could be used as a test area. Changes in land-use rules could then be measured through walking activity, vehicle trips, parking demand, local

business activity, noise and resident feedback. If mixed-use development reduces unnecessary travel without creating new problems, the model could be tested in other similar areas.

3.5.4.Contextual Mobility

India should not have to choose between a European transit model and an American car model. Indian cities already have a mixture of cars, buses, metro systems, two-wheelers, walking, cycling, autorickshaws and other forms of transport.

The aim should be to understand how these modes can work together in different areas. One neighbourhood may need stronger metro connections, while another may need better roads. A third may need pedestrian improvements or better bus services.

Possible interventions could include better first- and last-mile connections to metro stations, pedestrian-priority streets, organized two-wheeler parking, better bus connections and context-specific parking rules.

These should first be tested on individual streets or neighbourhoods. Traffic volume, travel time, pedestrian movement, public transport use, parking demand and road accidents can be compared before and after the intervention. This would show how people actually respond instead of assuming how they should respond.

3.5.5.Third-Place Planning

Third places should be treated as part of the urban infrastructure rather than something that happens only when a commercial area is built. Parks, public plazas, shaded streets, markets, community areas and religious gathering spaces can all provide places for people to spend time outside their homes and workplaces.

This can be especially important in India because social activity often happens in markets, religious spaces, streets, festivals and informal areas.

A possible approach would be to first find places where people already gather even though the space was not designed for it. Seating, shade, lighting, landscaping, drinking water, sanitation and designated vending areas could then be added.

The results could be measured through pedestrian numbers, how long people stay, user feedback, accessibility and maintenance requirements. This

would allow the city to understand what types of spaces people actually use instead of simply copying a public-space model from another country.

3.5.6.Cultural and Heritage Integration

Cultural preservation should not only focus on officially protected monuments. Religious areas, traditional markets, historic streets, cultural landscapes and community gathering spaces can also have major importance to a city.

Before redevelopment, these areas could be mapped and studied. New buildings around them could then be checked for their effect on views, access, pedestrian movement, religious activities, traditional businesses and community use.

The purpose is not to stop development around cultural areas. Instead, the aim is to allow new development without removing the relationships that make the existing area important.

This would also allow modern architecture to exist alongside local culture without requiring new buildings to directly copy historical buildings.

3.5.7.Digital Simulation and Micro-Scale Testing

Digital tools can be used before a planning intervention is physically implemented. ArcGIS can be used to map population density, land use, roads, public transportation, parking, public spaces, cultural sites and areas where infrastructure is under pressure.

Cities: Skylines and similar urban simulation platforms can then be used to test different planning scenarios. These could include more road capacity, more public transportation, mixed-use zoning, less parking, pedestrian improvements or combinations of these.

The simulation should not be treated as a prediction of exactly what will happen in the real city. Human behaviour is too complicated for that. Instead, it can be used to see possible relationships and problems before spending money on physical construction.

For example, an existing neighbourhood could be modelled first. Several alternative versions could then be created and compared. Traffic, travel distance, public transport access, parking demand, land consumption and access to public spaces could be measured between the different scenarios.

This would make simulation a preliminary planning tool. The final decision would still have to be based on real-world testing.

3.5.8. Proposed Testing Framework

All the proposed interventions should follow a similar process of test, measure, modify and expand.

The existing condition should first be recorded. This can include energy use, traffic, pedestrian movement, public transport use, parking, public-space use or other factors depending on the project.

The intervention can then be introduced at a manageable scale. This could be one building, street, block or neighbourhood. The results should be measured and compared with the original condition.

If the intervention creates unexpected problems, it can be changed and tested again. If it shows useful results without creating major problems elsewhere, it can be tested in a slightly larger area.

Only after repeated testing should the intervention be considered for larger planning regulations or city-wide use. This prevents a planning idea from being applied to a whole city before it is known whether it actually works.

3.5.9. Limitations and Scope of the Proposed Framework

The proposed framework does not claim that these solutions will automatically solve the problems discussed in this paper. Their success will depend on the city, climate, population, infrastructure, governance and existing development.

A solution that works in one city may not work in another. Even within the same city, different neighbourhoods may require different approaches.

Digital simulations also cannot replace real-world testing. They can help identify possible outcomes, but they cannot fully reproduce informal activity, human behaviour, enforcement, economic changes or cultural practices.

The main purpose of this framework is therefore to suggest possible directions rather than final solutions. European and American planning models should not be rejected simply because they are foreign, but they should also not be adopted simply because they are associated with modernity. The more practical approach for India is to take useful principles, adapt them, test them at a small scale and expand them only if they work. This is especially important because existing Indian cities cannot realistically be replaced with completely new cities. The more immediate opportunity is to identify where existing systems are failing and test better ways of changing them.

IV. CONCLUSION

The development of Indian cities has been shaped by several different influences. British rule changed the infrastructure and planning of many existing Indian cities, while post-independence India continued to use some of these systems while developing its own architectural and planning identity. Later, American planning ideas and popular culture added another layer of influence. These influences did not completely replace Indian urbanism. Instead, they became mixed with older neighbourhoods, religious spaces, informal markets and existing infrastructure.

The main issue discussed in this paper is therefore not the use of Western ideas. There are many useful things that India can learn from European and American cities. The problem is when these ideas are copied without considering the conditions under which they developed. European and American cities have different histories, densities, transport systems, climates and patterns of urban growth. India has its own set of conditions, including a very large population, high pressure on existing infrastructure, mixed-use development, informal activity and a large number of cultural and religious spaces.

The comparison between Frankfurt, Dallas and Gurugram shows this difference clearly. Frankfurt demonstrates the relationship between public transport, public space, historic areas and modern development. Dallas shows the strengths of large road networks and private vehicle mobility, but also the problems that can come with car dependence and large amounts of parking. Gurugram has adopted parts of both approaches, but under a much more crowded and complicated Indian condition. The result is a mixture of high-rise development, roads, metro systems, private vehicles, parking, separated land uses and international architecture that does not always work together as one system.

The answer is therefore not to choose between European and American planning. India can take useful ideas from both and develop something suited to its own cities. Glass buildings can still be used, but their performance should be considered according to the climate. Roads and public transportation can both exist, but they need to be planned together. Zoning can still control incompatible uses while allowing suitable mixed-use development. Modern buildings can use

international technology while also taking ideas from regional architecture.

The solutions proposed in this paper should not be considered proven solutions. Climate-based façade rules, city-specific façade codes, contextual zoning, mixed mobility, third places and cultural protection are all proposals that need to be tested. A solution that appears correct on paper may create another problem when implemented.

This is where GIS, ArcGIS and urban simulation can be useful. Different options can be tested before physical construction. However, simulations should only be the first stage. Real streets, buildings and neighbourhoods need to be tested afterwards. A process of test, measure, modify and expand can help reduce the risk of applying a large planning change before its actual effects are understood.

This approach is also important because India cannot simply build new cities and leave the existing ones behind. Most major cities already have established buildings, roads, communities, property ownership, businesses and cultural spaces. These cannot be removed and rebuilt without enormous social and economic consequences. Existing cities therefore need to be gradually changed and improved.

The goal should not be to create an Indian version of Frankfurt or Dallas. India can use the technology and planning knowledge developed in other countries while deciding how those ideas should work here.

The result should be a contextual hybrid model that takes useful principles from different planning systems but changes them according to Indian climate, population, culture, infrastructure and existing urban form.

Modern Indian cities do not need to look like Western cities to be modern. The more important question is whether the city works for the people living in it. Any new planning model should therefore be tested against the actual conditions of the city before it is expanded.

REFERENCES

[1] S. Jaiswal, "Between tradition and towers: Navigating Westernization, architectural transformation, cultural resilience and the social fabric of Indian cities," *Human Settlements and Sustainability*, vol. 2, no. 2, pp. 144–156, 2026, doi: 10.1016/j.hssust.2026.04.001.

[2] A. Rumbach, "Between the devil and the Bay of

Bengal': The Ford Foundation and the politics of planning in post-Independence Calcutta," *Planning Perspectives*, vol. 36, no. 5, pp. 1025–1051, 2021, doi: 10.1080/02665433.2021.1897032.

[3] R. Kishore, "Planning, traffic and the city: Railway development in colonial Delhi, c. 1899–1905," *Urban History*, 2016.

[4] Delhi Development Authority, *Master Plan for Delhi, 1962*. New Delhi, India: Government of India, 1962.

[5] Bureau of Energy Efficiency, *Energy Conservation Building Code (ECBC) 2017*. New Delhi, India: Government of India, 2017.

[6] J. Matusitz and P. Payano, "Globalisation of popular culture: From Hollywood to Bollywood," *Global Media and Communication*, vol. 8, no. 3, pp. 283–296, 2012.