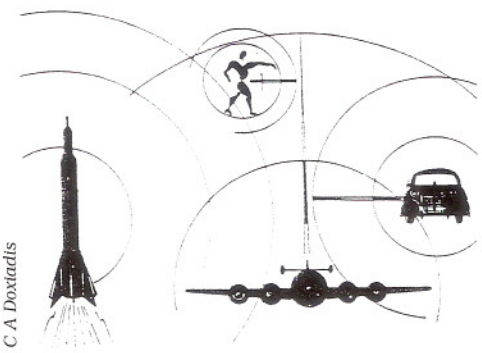
Experiencing Space, Mass and Surface

Suptendu P Biswas

Image plays a crucial role in shaping the morphology of Indian cities. The transportation system exposes one to the structure of the city, its 'legibility' and 'transparency' as an immediate layer. But behind this layer or the mask lie other pertinent issues, such as accessibility, zoning, policy decision, land use and land values. With technology and transportation providing the link between the work place and the residence, the relationship between production, value and the movement from point A to point B undergoes change. Production that becomes indices of flow, evokes the importance of traversing through various experiential layers and signifies the role of transportation in city building and design. Communication also extends its role from being the methodology of exchanging information from source A to source B to the question of 'quantification', speed and visual code, which has emerged as a 'moving image' and perception (Princeton University).

The idea here, is to explore the shape of the urban fabric as the synthesis of three-dimensional spaces of static and dynamic qualities, interwoven into the fabric. The simultaneity of progression and repose, as the body moves, is encountered to get a visual image due to the composition of space, surface and mass. Time gives a fourth dimension to it, by relating the body with the changing perception of the environment. Again, it contributes to the speed of the body to become an essential determinant of the scale of the three-dimensional path. So the image is responsive to,

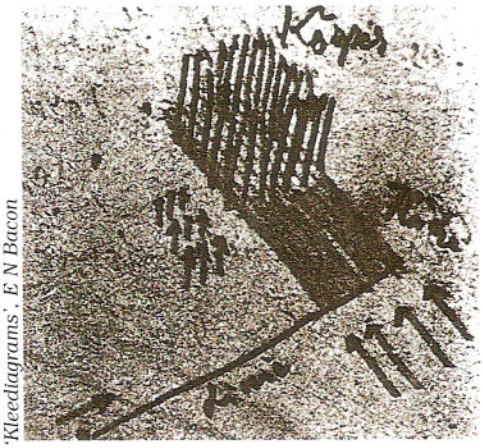
POINT LINE
SPACE MASS SURFACE
SPEED-TIME SCALE



C A Doxtadis

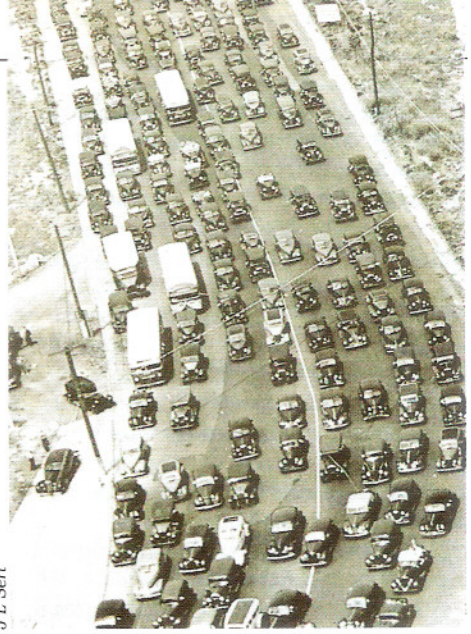
Diversified range of scale

City building in the origin — river, temple and totalitarian economy Cities grew around the river. The first means of mass transport and its growth was synonymous with the improvement in navigation facilities. The inner city structure focussed around religious centres, and the strategic positioning of the power centre. Movement was slow, and the city was conceptualized and built according to the space-mass-surface composition. Consequently, through the influence of political motives and



'Kleediagrams', E N Bacon

Composition of space-mass-surface



J L Sert

Urban landscape — an apprehensive future

aspirations (colonization, independence and democracy, etc), Indian cities have undergone change and transformation where the transportation network was used as a tool for shaping the city form and its imagery.

Shahjahanabad — an image of an indigenous city The image of Chandni Chowk, the processional path in Shahjahanabad, was created by placing mass at two pivotal points in the form of the Red Fort and the Fatehpuri mosque. Here, the point or the body, while moving in a line in the movement path, encounters the space at Fountain Chowk and Chandni Chowk in front of the Town Hall, where forces from other directions merge with the primary force to form the space. The path, flanked by two parallel surfaces on either side in the form of a diminishing skyline, necessitates a slow movement pattern, responsive to the fine grain and texture of the fabric. Yet, when one enters a *mohalla*, the sudden change in the scale of the street and its irregularity impart a residential quality. Thus, the image governed by time and scale depicts the land use behind its mask.

Industrialization and the laws of economics The transportation network during the colonial period in the form of railways had a tremendous impact on the transition from a pre-industrial economy to an economy of capitalist industrialization. This led to the destruction of village industries, the concept of land holdings and the equilibrium of the urban-rural relationship. Moreover, in city building, the Britishers used the transportation network

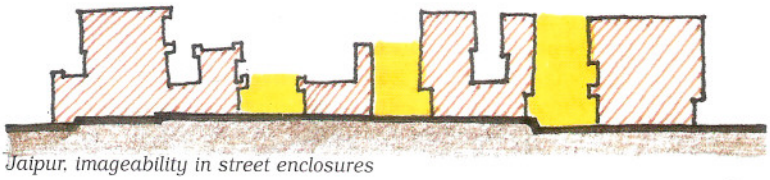
as a tool for zoning within the city — a separation to accommodate two different classes. Owing to colonization, the indigenous city coexists with the colonial one to form stratified layers, exchanging an uneasy tension, which evokes a dualistic image in its space, surface and mass (like Delhi, Jaipur, etc).

New Delhi — a grand set for the body to accelerate Designed as the capital of the British Raj, it has adopted an alien city design, underlined with well-calculated gestures of political motives. Colonial equation of built and open ratio of the imported topology, increased its land value owing to drastic change in the land possession, thereby negating the scope for the average indigenous community to find a place in this city for the elite.

In view of the transportation network, the new city was connected to New Delhi railway station. Thus, the chance of encountering the old city was further reduced.

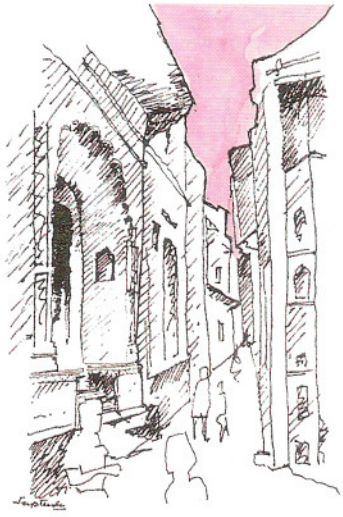
Lutyens visualized a city of the twentieth century with automobiles screeching through its wider roads. Views and vistas were established through articulated positioning of the built forms on the India Gate *chowk*. Topology was created by involving buildings, freely positioned in spatial volume, through "the interplay of concavity and convexity" of surfaces (E N Bacon). While the concave surface relieves the space at which the movement line meets, the convex dome adds the mass to the built form. The image of Lutyens' New Delhi, therefore, gives a clue to how the interplay of space-mass-surface in relation to the point, line and time (speed) can possibly link the isolated forms in space.

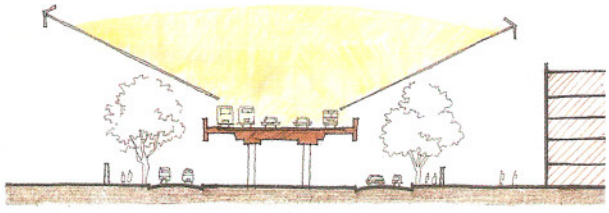
Change of scale Earlier, a railway connection created two static nodes at point A and point B, whereas the intra-city movement, enhanced by the arrival of automobiles, formed a number of nodes with a much more dynamic relationship between them. With this came another dimension of movement pattern in the urban fabric. So the new topology — density relationship, coupled with increased speed of movement, delivered a new scale to the city.

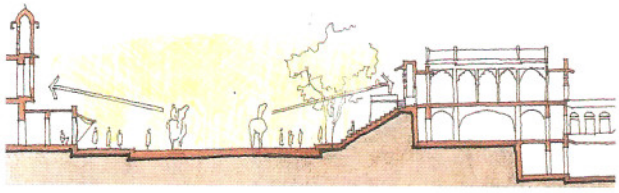


Jaipur, imageability in street enclosures

Entries and exits from the movement path







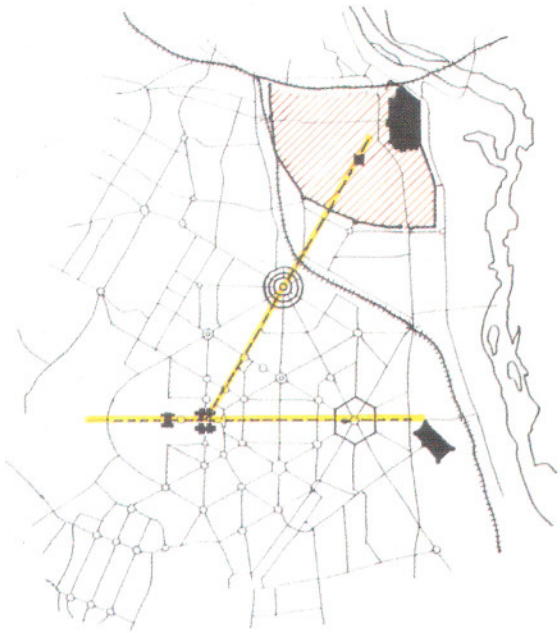
Today's Delhi — an outcome of the prodigious planning! The basic concept of the Master Plan 1962 made in the mould of modernist urban planning, was that, the traffic movement within the city should be kept to the minimum and a work-to-home relationship was conceived and the city started growing radially. Owing to the master plan zoning principle, the 'legibility' of the city has undergone a change on the basis of the projected land use pattern. However, one feature, which somewhat lends 'legibility' to the urban fabric, is the emergence of district centres mainly on the ring and radial junctions. This concentration of economic activity started exerting pressure on the population density, land value, land use and land holdings of the surrounding areas, and demanded suitable accessibility to its influence zone.

In the Master Plan 2001, there are some attempts at providing mixed uses, and increasing densities in residential areas in prime locations. Proposals are made for Mass Rapid Transit System (MRTS) to connect the ring to the periphery and also to improve intra-city network along the ring. As a result, about 30 grade-separators are proposed on the inner Ring Road.

Today, one Moolchand Flyover becomes a legible urban structure for its surrounding 'district' but tomorrow, with 8-9 flyovers within 10 km, what kind of an image of this city would we perceive?

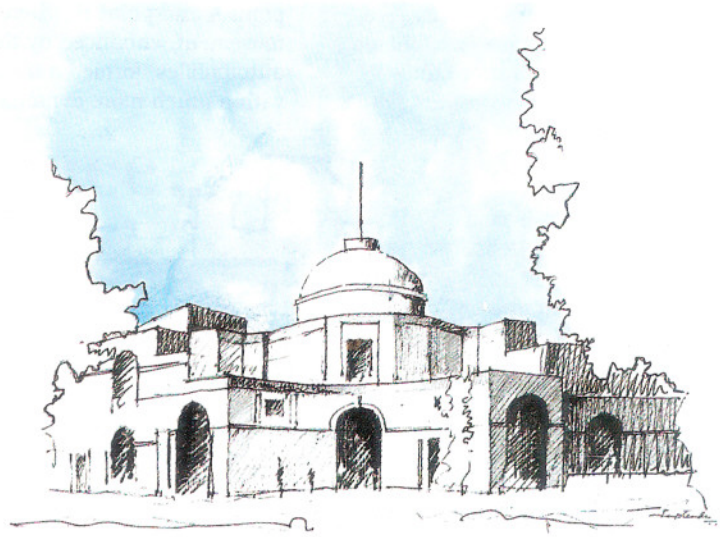
The forerunners of the planning process in India so far solved the problem of city building and design by oiling different parts of the 'machine' to make their 'city of tomorrow'. This is the time to realize that the Indian cities are not 'machines', because by solving the parts, we are still not attending to the whole. The gestalt qualities of Indian cities cannot be ignored any longer, from which emerge several real issues.

Concern for an image structure With the advent of high-technology, the future mode of transport is going to be even faster. Corbusier's dictum of "no pedestrian



Navin Kulshrestha

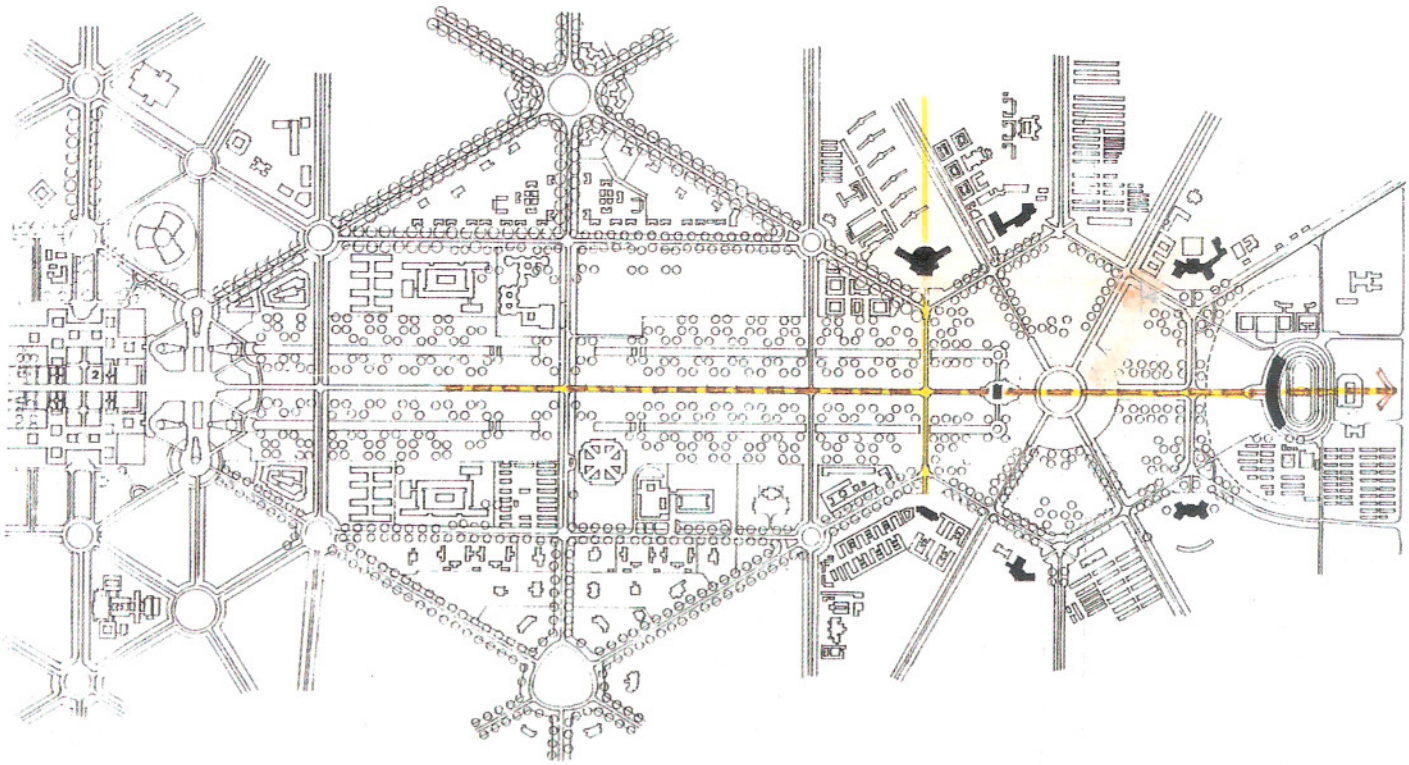
New Delhi, dualities



will ever, under any circumstances, meet a car!", followed by the idea of elevated vehicular carriageways, might not be the only solution. Because, by doing so, in most of the cases, our master planners simply managed to transfer the congestion from one point to the other, rather than dealing in a larger context.

Triumph of software—enter the computer The arrival of the high-technology communication system has redefined the meaning of work place, and the distance has got reduced. Communication through the visual medium has infiltrated into the private as well as into the public domain. With the emergence of moving image, the reduction of scale, the usual perception has become a symbol of the complex relationship between the body and the space around it. While transportation, through its 'unfoldingness', exposes us to the surroundings, the communication system reduces the 'transparency' in between, like reading the street through the rear-view mirror of the car.

In the clutches of indiscriminate electronic mediation, the notion of territoriality transcends the individual identity to give rise to a collective homogeneous image of the city in an ironical manner. Concept of time-tag being reduced to negligibility, leisure versus work phenomenon has moulded its shape. Social relationship, therefore, has changed



A+D Archives

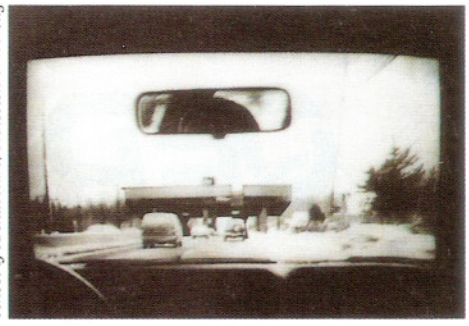
PLAN, CENTRAL DELHI

its dimension, and gradually withdrawn itself from outside to inside.

If people don't go out for work, recreation or any other social meetings, will the city be without people? Is decongestion a panacea? Decongestion, by itself, is a good phenomenon, but by decongesting the core of the city what will we achieve? Today in Shahjahanabad, we are finding problems of 'gentrification' — residential uses are becoming less, thereby allowing the city core to degenerate. Owing to the polycentred growth, the expansion of the city is on the verge of going out of control. The transportation network is costlier and cumbersome. In this context, should we not use the huge underutilized land available in the prime locations? By reviving the mixed-use growth to its optimum potential in central areas of Indian cities, in case of Delhi within the inner Ring Road area, a simultaneous movement system can be overlaid. A 'centrifugality' can balance the 'centripetality' of the existing movement network.

A paradigm of the future Over time, Indian cities attained a certain poise in establishing the equilibrium of chaotic urban order. What should be the responses to the interpretation of space when the ever-changing relationship between time and space attributes a new meaning to spatial relationship in Indian cities. The process of change is a destiny. Presently, when the position of man in his society finds a new socio-cultural contour along which parameters of dependency between man and his city are deviating from time to time, one universal dictum cannot encompass its prevailing dialectics. Rather, reading cities in case to case basis, will give us certain clues to work within its own assets and liabilities. The context should dictate the flexibilities of the concept.

By allowing the simultaneity of the movement network, layered one after another over a time frame, we will get complexity in movement systems, which in turn, impart "the image through a series of impressions produced by all these systems" (E N Bacon). This will help us to establish the semantic quality of the 'genius' of the place. The network of movement might get a different imagery, depending upon its hierarchy. The punctuation in the fabric and the distance between each of them will have to be organized in relation to time (speed), keeping in mind the structure of the city and surrounding conditions. As an Indian city, starts unfolding itself to its discoverer, one can sense its 'plasticity'... and the inherent power to accommodate change and transformation. Its topology is like water, which allows it to take the shape of its container. Our cities have the room for growth. Though one can see through its container, the glimpse of the light ...one must know in which container water should be kept. Nevertheless, we are on the earth and the sky is the limit....



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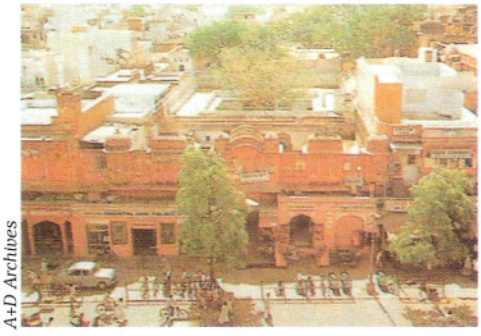

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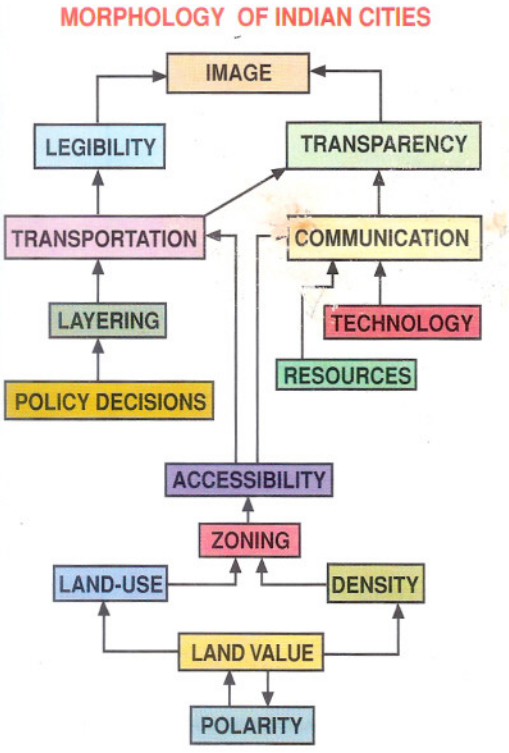
Jaipur, a view



Notes

E N Bacon, *Design of Cities*, Thames and Hudson, London, 1967.

C A Doxiadis, *Architecture in Transition*, Huchinson, London, 1963.

A Einstein, *Ideas and Opinions*, Crown, 1954. Republished Rupa (Indian Edition), New Delhi , 1979.

L Mumford, *The City in History, Seeker and Warburg*, London, 1961. Republished Penguin, Harmondsworth, 1966.

R Mehrotra,"Making Legible City Form", *A+D, Vol VII No 5, Sept-Oct, 1990.*

C Norberg-Scultz, *Intentions in Architecture*, Universitetforlaget, Oslo, Allen and Unwin, London, 1963.

A Shaw,"Urban Policy in Post-Independent India — An Appraisal", *Economic and Political Weekly, January 27, 1996.*

"Works — School of Architecture", *Princetown University, Vol 1, Fall 1994, Princetown, New Jersey.*

Suptendu P Biswas graduated from B E College, Sibpur (University of Calcutta) in 1991 and is currently practising in Delhi.