BREAKING THE VICIOUS CYCLE – RECOVERING A CITIZEN'S DEILHI FROM ITS PRESENT WILDERNESS.

I write as a citizen of Delhi, from my experience of its growth and development. But the trends of change that I observe here are indicators of what attends the fate of many cities in the country as the juggernaut of urbanization reaches across its length and breadth.

We know that cities are not static. They are growing and changing rapidly. We like to think that as we "develop" they should improve and change for the better. But recently, our overwhelming feeling has been that with each phase of 'development', the promise of change for the better seems to be overridden by some vicious cycle at work. I often despair, and this is not an exaggerated reaction of mine - I despair as I see the city becoming an inhospitable and hazardous wilderness, albeit with occasional havens – some fortified and others somewhat secluded – like my home, my place of work, the nice restaurant or the fenced park…… I can also see that these havens are preserves of different groups of people, each group seeking an extension of its control over the surrounding wilderness. Each group wishes to exert the dominance of its own ideal over the rest. Some groups are outcasts, relegated to the wilderness where they seek sustenance and hope to establish their own haven, sometime, somewhere. This wilderness is a contested space. When and how will it turn into that friendly forest or a garden of communion of my dreams?

My immediate encounter with the wilderness of the city is the sheer physicality of it: dust, noise, fumes, fear of being hit, knocked down, run over, of picking my way through rubble and refuse and urine stinking in the blistering heat, of getting into fights with frustrated men for no fault of any of us… I grow more fearful as I see that increasing numbers of us are forced into this wilderness by the compulsions of living in the city – as we go to work and study or to shop or to meet our friends. The perpetuation of this wilderness is like an inevitable vicious cycle. There is no respite from it – except, of course, for those few who put on their blinkers and have the luxury of flying their bubble from one feathered nest to the next. For the rest there is little respite from the encircling wilderness.

Yet cities are projected to be the leading edge of the nation's economic growth, as the economy shifts toward manufacture of goods and city based services. It would be a reasonable assumption that as the city produces wealth its citizens get wealthier, and that it would progressively improve the quality of life experienced by its citizens. Instead, in addition to the encircling wilderness, ironically, these engines of wealth are creating shortages. There is shortage of land – land prices keep rising. There is not enough water to go round – it is rationed or bought at an exorbitant price. Power cuts are routine and worse during the height of summer with city temperatures soaring well above those in the surrounding countryside. There is shortage of space on roads. Traffic grinds to a halt even as roads get wider and wider and flyovers multiply. And , more recently, the price of vegetables – seasonal vegetables – also rose sharply! Each of these shortages exacerbates the existing disparities of income and wealth. Those at the top of the pyramid, who have the wherewithal, manage to claim the lions' share and zealously protect their havens. The stress of living in the city increases progressively as you descend the socio-economic pyramid. The large numbers at the bottom, being stressed the most, must cling on to

what they have, and assiduously build a secure perch. The bigger the city the worse it gets – or, to put it another way – the costs of overcoming environmental stress get higher and higher, and the possibility of relieving social stress gets more and more distant, as the juggernaut of the growing city rolls on.

These are all symptoms of the city's DNA. There are three strands of its DNA that interact to determine its evolution. The first strand is the city's political economy - who rules the roost, who determines its purposes, and whose imagination constructs its vision for the future. The second strand is that of the public institutions of city planning and management – their ideological moorings, their capabilities and their competences, the design of their functional arms. The third strand, important to recognize because it is insidious, is the aspirational culture of urban life – popular notions of the 'good life', their environmental impact and their physical manifestations. My hypothesis, here, is that, in the present context of large scale and rapid urbanization, these strands exhibit persistent pathologies whose combined operation propels the growth of the city into a vicious cycle of rising social and environmental stress and the perpetuation of its wilderness. In their present modes of growth our cities are destined to unsustainable futures. The task here is to uncover the operational pattern of this vicious cycle and, hopefully, find a way to turn it into a virtuous one!

Political Economy

Traditionally, cities were established in the service of the powerful and the wealthy. They continue to be so today. The formal, legitimized city, that is. It has made space, first, for the needs of business and government; next, for their masters and their white collar employees; and finally for the employed worker and the 'ClassIV' employee. This is the order of priority in the conceptualization of its physical order. The occupation of land, the layout of avenues and streets, parks and monuments, the construction of buildings, symbolizes and reinforces this hierarchy. As we look to the past – Jaipur, Tajganj, Shahjahanabad, for example - the hierarchical principle holds. The city has been a top-down construct, ruled by power and wealth. Therein lies its continuing raison d'etre, its present purpose.

Excluded from this conception of the city are all those who do not belong to the recognized formal categories of an ordered society, such as itinerant or informal workers, or migrants with meager means seeking a livelihood in the city. No formal or deliberate provision is required to be made for this category of persons. Their status as citizens is, at best, ambiguous – tolerated, but not acknowledged; accepted, but relegated to the interstices or the peripheries of the formally acknowledged city.

Divisive stratification occurred across another dimension – of cultural time. The old city was stigmatised during the period of colonial rule: witness the institution of Civil Lines and the Cantonment which would be developed in the idealized image of the villa surrounded by its garden, on the other side of the railway line from the 'congested native settlement'. The juxtaposition of Shahjanabad and Lutyen's New Delhi, a colonial legacy, has clearly created a symbolism of space, imbibed by the political leadership, the bureaucrat and the technocrat alike, in which the old city could not be included in the envisioning of the new and the progressive city. This gets encoded in the language of the city Master Plans that usher a modernity of technocratic order. They become the symbolic instruments of "orderly and planned" growth.

Fast forward to the present: Cities have been growing. The last census shows a clear trend toward urbanization. While the rate of population increase in the metropolises is slowing down, the second tier cities are growing faster. The slowing down in the metropolises indicates, not their economic stagnation, but the increasing stress and cost of living in big cities. Relatively, the more compact and smaller cities are more affordable. The key element of affordability is the price of land. As the State retracts progressively from its responsibility of managing land as a social asset and embraces the free marketto use land as an economic asset – the perpetuation of social and economic inequity in the growth and development of the city becomes structural.

Typically, the price of land constitutes 50% to 80% of the value of built space – be it homes, or offices and shops. The policy of using the price of land and real estate determined by market forces as a lever for urban development leads to an artificial price spiral and land being held by speculators looking to maximize the potential for profit. The value of land is raised further artificially by increasing the permissible FSI. The State becomes complicit in this process, enjoying the revenue on property transactions and property tax. It rides the wave of rising land values in auctioning its prime land for commercial development. The rationale is that land can be traded as an economic asset of the State, to enhance its revenue for developing the urban infrastructure, which, at present, is woefully inadequate. Economic strategy consultants of global reach and influence are strong proponents of this approach. They disguise their outdated belief, which equates social well being with the throughput of money – wealth generation through investment in real estate and large scale urban infrastructure, with slogans of "inclusive urban development". These authoritative consultants say little of what constitutes quality of life for the majority of citizens and even less about the socio-economic dimensions of urban development.

This mechanism of monetizing land indiscriminately has two consequences. Homes close to the places of economic activity or centres of employment, and close to the social infrastructure of the city – its schools, hospitals, parks and transport, become unaffordable for the majority. They are pushed to the more affordable peripheries of the city. The time and money spent in travel takes its toll on our bodies and minds on the one hand, and, on the other hand, imposes an added burden of transportation on the city. At the other end, the high value of land produces high-rise-high-density developments of multi-storey apartments, not only in the heart of cities but also in its outlying areas; densities that are unsupportable by the available infrastructure of water supply, electricity, sewerage and roads. Apartment blocks proliferate, with as much construction to house cars below the ground as for people above. Secure, 'gated', enclaves with their assured diesel generated power, tube wells, with little accountability for their social and environmental impacts beyond their own compounds become the new fortresses. This is the developers' dream for piling on the profit!

We come to the second, though unintended, consequence. The mechanism of promoting the market value of land as an engine of urban development creates in a geographic stratification of populations according to income – wherein the poorer you are, the greater the hardship and disadvantage your location in the city imposes on you. The unauthorized colony and the urban slum on occupied state land are an inevitable result of the harsh stratification of the formal economy of land. Economic compulsions of those citizens who are at the bottom of the urban economy compels habitation in illegal 'slums' outside the formal and legal frameworks for the provision of land.

The modern planners' city will be a city primarily for the middle and upper classes, living in high-density-high-rise buildings – a form that is determined by the concentration of capital in the hands of large corporations, and is dependant on high levels of energy consumption for their basic operation. With very high densities of population for which provision of water, handling of waste and the traffic congestion due to the concentration of motor vehicles, become unsustainable. We lose the potential of an urbane life where one would linger and stroll in the streets, meet neighbours and play in the courtyards and gardens, cycle to school and the market…. If an evolved urbanity once stood for a tapestry of grace and richness of varied social and cultural intercourse, it would now be reduced to disparate knots held together by strings of economic necessity. The street beyond the protected confines of the enclave will become either a mere space of transit, or a place of congestion and conflict, rather than a place of communion.

Thus, in a political economy dominated by the captains of real estate, we see increasing disparities of wealth and the geographic stratification of society, one feeding upon the other, forming a viscous cycle driven by the market economy of land.

Ideological Moorings

Why is it that thirty to fifty percent of the population of our large cities lives in 'unplanned' slums and 'unauthorised' settlements? Ironically, unplanned space and unauthorized land are affordable, whereas planned and authorised developments are not. Or, to put it another way, the planners and the bureaucracy have been unable to provide solution that is affordable for about a third of urban populations through the processes that are considered legitimate. The greater irony is that as much as slums and unauthorised settlements continue to mushroom despite the protestations of planners and bureaucracy, their populations become legitimate vote banks in democratic politics. The cycles of post facto regularization of unauthorized settlements, negotiated resettlement or in-situ up-gradation of slums, decades after their birth, are results of political compulsions, not of the foresightedness of the planner.

The planner and the bureaucrat are constrained by their ideological moorings. The concept 'Plan' for the professional planner represents the upholding, maintaining and enforcing normative standards that define their modern city. Housing, commerce, institutions, industry and recreation are seen as discreet aspects of the activities of the city for which lands are allocated based on standards that define the relative measure of demand for each activity. Then the Plan specifies the intensity or density to which parcels of land may be developed. The alighnment of transportation routes and roads are also defined, based on normative standards. By and large, these standards are drawn from standards that were adopted by Post-War Western Europe of the 1950s for its new towns. The neighbourhood was taken as the unit of planning - with its school, a hierarchy of shops and markets, a hierarchy of gardens and parks, minimum road widths for motorized traffic and access to fire engines…. 'Planning' of old parts of the city and for the existing villages that came in the ambit of urban extensions, and which, inevitably, would not meet the normative standards of the 'modern' city, consisted in proposals for widening of roads and, either redevelopment (of slums) to conform to planning norms, or an enforced status quo! This idealized creed of the planner becomes Law as the Master Plan for the city. The bureaucrat, who is also a progressive, modern man, often with similar ideological moorings, now administers

this Law. And so, any part of the city that develops irrespective of the Master Plan will be "unauthorized" and settlements that do not meet the standards and norms will be called "slums".

It is over the last decade that a realization has been growing that planning must be an instrument that is engaged creatively with reality 'on the ground', as against being an administration of idealized norms and standards. The impetus toward this shift has come largely from politics. Hence the post facto actions that were cited above to include the unauthorized and the slum settlements into the planning process. The 73rd and 74th amendments to the Constitution of India, empowering Local Bodies to plan for their own villages and wards, the Urban Renewal Mission to upgrade the urban infrastructure and low-cost housing, and the Awas Yojna to make cities 'slum-free' allocate finances toward this end. But the new drive toward monetizing land, under the pressure of real estate speculators, works at cross purposes to all these policies. It is the definitive roadblock to of 'inclusive' urban development.

By and large, city planning theory and practice in India continues to be tethered to the ideologies of the 1950s, now bending willingly in favour of free market forces, and remain unable to address the needs of the bottom of the pyramid, as well as the growing imperatives of environmental sustainability.

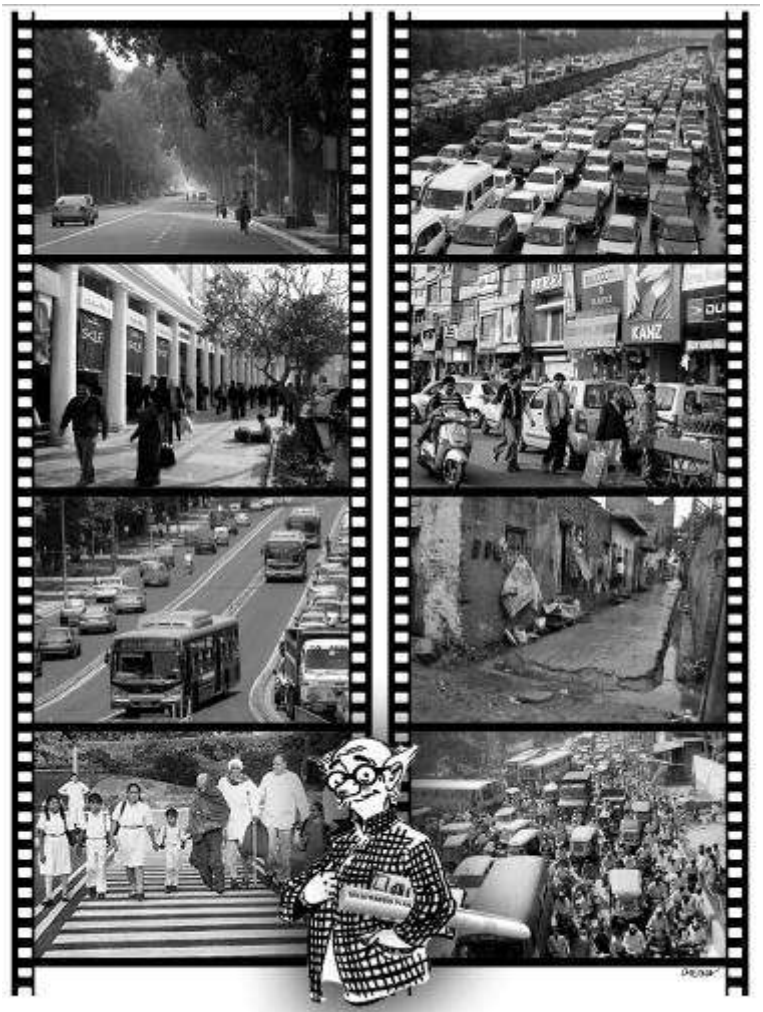
Institutions of City Management

The public space of the city – its streets, roads, squares, parks, all places that lie outside and between the properties held by individuals or institutions - is what constitutes our experience of the city. The development and care of this important space is the responsibility of the City Municipality or its Public Works Department. With the laudable exception of some prestigious locations and ceremonial avenues and roundabouts, the common run of the public spaces of the city exist by default. They are under the jurisdiction, in parallel and simultaneously, of the several engineering arms of the Municipality and the PWD, for each to provide its special service. The order of priorities places the motorized vehicle at the top, followed by the traffic signal, the light pole, the electric transformer, the rubbish dump, the signboard and advertising hoarding……..in the end leaving the pedestrian and cyclist to fend for themselves, for there is no organized provision for their need and convenience. The engineering view of the city, and its order of priorities, is a sub-set of the ideology of the planner of the modern city, built around the motor car transport. It is not surprising that road fatalities on Indian city roads are amongst the highest in the world. Civic space - the space to be shared and inhabited by the citizen has been progressively surrendered to the motor car. For the modern planner and the modern engineer the pedestrian, the cyclist, the bullock cart are the intruders, the culprits in the wilderness of the city, not the motor car. It is only a logical step to recognize that as our middle class citizens graduate to a dependence on the motor car for their day to day travel about town, they too to align with this ideology. This 'modern' citizen has no compunction in occupying the pedestrian pavement with cars.

Yes, a shift is being seen, in some quarters of the city planning and management establishment in favour of disciplining the motor car and improving public transport. But the resistance of the urban middle class is stiff and arrogant. Ironically, it is international action to mitigate Climate

Change by curtailing carbon dioxide emissions in transportation that has brought home the truth about negative impact of urban transportation based on the motor car.

The default condition of the wild street is perpetuated by another factor – the absence of a central institution for the Muncipality that holds the safety and comfort of the citizen as its first priority and also has the skills of spatial and physical design to resolve the complex and conflicting demands on public space to ensure their functional resolution. At present, the advertising hoarding installed by the revenue wing may obscure the traffic signal from view, the open rubbish dump may stretch and spill across the road, the Corporator's announcement board would straddle the pavement too low to walk under and the pedestrian crossing would run into a road-divider fence. Each provider of public facility in the public space has little concern or awareness of the other providers and, most certainly, none of them has the users' safety and convenience at heart. This institutional lacuna compounds the disfunctionality of public space. We have seen, recently, some instances of coordinated design at prestigious locations in the city. They are one-off instances of special care being taken for special places. But what we lack is the institutional arrangement that makes such care the order of the day for all parts of the city.



THE HON'BLE **TOWN PLANNER** WITH HIS IDEALISED CONCEPTION OF THE CITY IS UNABLE TO PLAN FOR THE REAL NEEDS OF THE CITY AND IT'S CITIZENS

Aspirations of the Urban Middle Class

So we come to the last, but not the least, of the three strands of the DNA of the city that contribute to the vicious cycle. This is the aspirational culture of the urban middle classes. Two technological offerings of the the latter part of the twentieth century– the motor car and air conditioning of buidings, have today become aspirational norms for the urban middle class. These two offerings, which are now being perceived as essential conveniences for a comfortable and productive life, if allowed to run away without any check, have detrimental environmental impacts of which we are not fully aware.

The Motor Car

Let us first take the case of the motor car. The fundamental need is for safe, convenient and comfortable mobility. The motor car satiates this need admirably for every individual. Seen in isolation of other factors, which we will discuss shortly, the motor car is, undoubtedly, the most convenient and comfortable mode of mobility. That has been the American ideal - the ideal made accessible by Ford when he mass produced the T3. A motor car, or two, for every home will become financially affordable for the middle class.

Being oblivious of the consequences of the pursuit of this ideal we, in India, have been merrily careering down the American highway. Building byelaws now require that all buildings must provide parking space within the bounds of their property according to the trends of car ownership. In Delhi, for instance, for every 100 square meters of residential built space you must provide for two cars to be parked. This will take about 60 square meters of area. And for every 100 square meters of commercial space or an institution such as a school or college you must provide 3 car parking spaces. In other words, as much space will be needed to accommodate the motor car, while it is standing still, parked in its parking lot, as would be built for the primary use of the building! Personalized motor vehicles, as against, taxis and buses, are used for travelling for an average of one and a half hours in a day, unless, of course, you are always caught in the rush hour traffic jam, when you may end up using the vehicle for up to four hours a day. Four unproductive hours! And so the demand for wider and wider roads and flyovers grows. There is respite for a while, but soon the car population grows to fill and clog the increased road space. The resources claimed by the motor car, in buildings and on open land, for parking and for roads, costs us, collectively, as citizens, many times the cost of purchasing it. The lesson has been learnt in every city of the world. Citizens are burdened with the cost of the infrastructure of their city. No wonder that the formal ‘modern’ city, that squanders land in the service of the motor car, is not affordable for the poorer one-third of the population.

This insidious process of the motor car claiming more and more of the built and open space of the city has other consequences too. It reduces the land available for soft ground to allow rainwater to percolate into the ground to recharge the ground water table. It reduces the land available for plantation and greenery- to cool outdoor temperatures, give shade and provide comfort in the enjoyment of outdoor space. It constricts the space needed for gardens and parks for children and family to relax in safety.

The greater the density of motor vehicle movement around our homes and places of work, the greater the intensity of pollution surrounding us – fumes, noise and dust raised by the turning of wheels. Motor vehicles are the primary source of air pollution in the city. And do not forget the heat that is released by motor vehicles. All the energy released in the combustion of fuel is heat added to the ambient air. So, the greater the density of motor car movement the hotter the air in city streets. So, to escape the heat and the pollution on the road we resort to the other technological offering – we now air condition the car! More fuel is spent for airconditioning the car and released as heat into the street. As you cool the interior of your car the air outside the cars gets hotter. So, in a car jammed street, you need more powerful air conditioning to obtain comfort. A vicious cycle of hotter ambient air, more fuel consumption and increasing air pollution is set up. Before we move on to air conditioning of buildings, especially homes, we should recall that the fundamental need that the personal motor vehicle is intended to satisfy is safe, comfortable and convenient mobility. When you come to large cities, the motor car becomes more of a problem than a convenience.

Air Conditioning

Air conditioning is no-doubt a great boon. The fundamental need that this technology serves is the need for thermal comfort. Conventional air conditioning based on compressors running a refrigerant cycle meets this need effectively, but at a high cost. The electricity consumed by the conventional air conditioner for delivering one tonne of refrigeration, for keeping a bedroom cool, is approximately eight times the energy required by an evaporative cooler to do the same job in the dry season. And the ceiling fan uses half the electricity compared to a cooler. So as we aspire to air conditioned comfort, we immediately incur a ten-fold increase in the demand for electricity for our comfort. In New Delhi the grid breaks down during peak summer when all air conditioners are switched on. The galloping increase in the demand for electricity for air conditioning will continue to outstrip the increase in supply. But we cannot give up our new-found comfort. We will run the diesel generator to keep the air conditioner on.

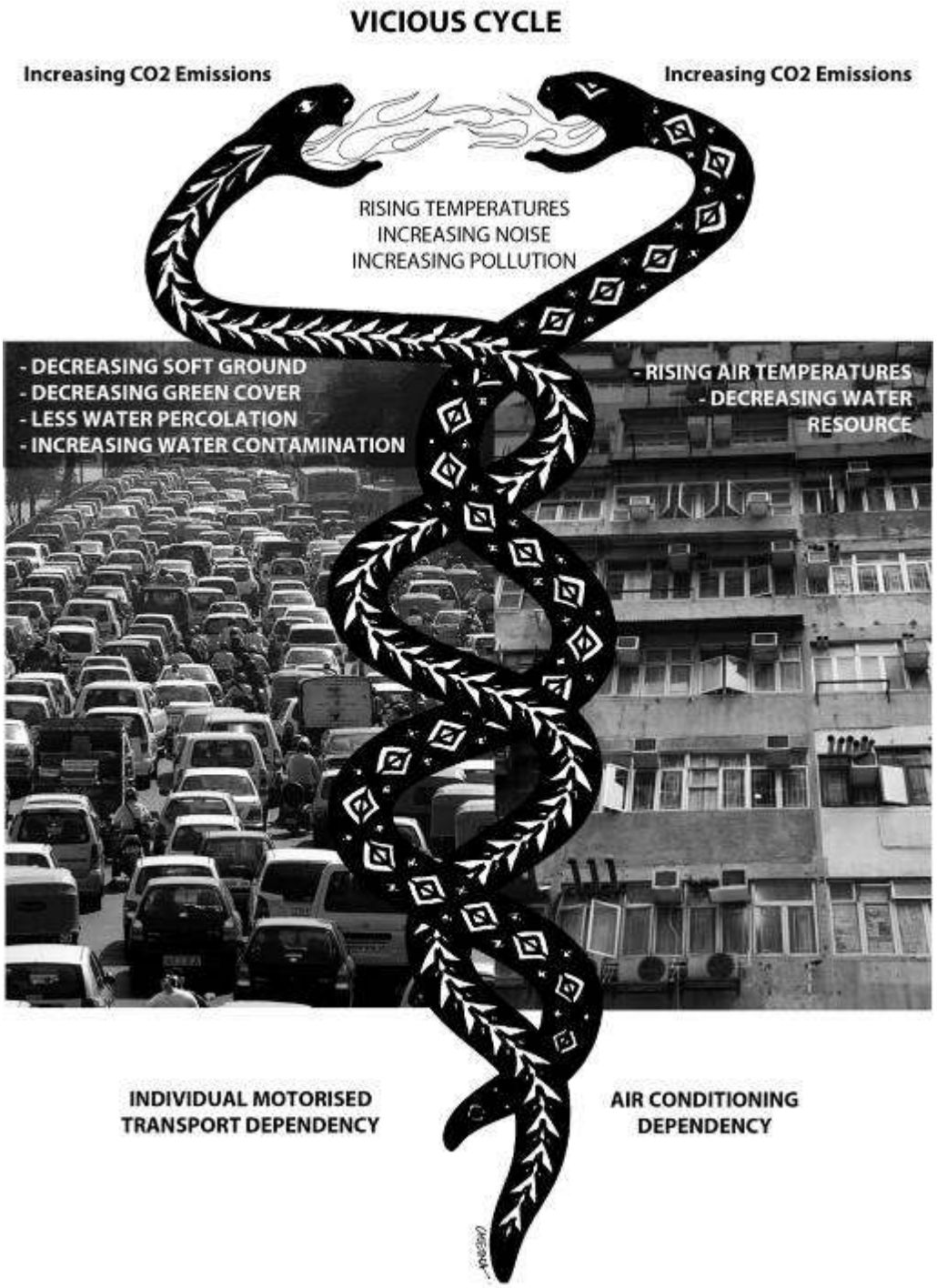
The carbon footprint of air conditioning will be as much as that of the motor car. The same vicious cycle develops around air conditioned buildings as around air conditioned cars. The electricity consumed by the machinery to pump the heat out from inside the building to its surroundings turns into heat and raises ambient temperatures. This, in turn, requires more energy for air conditioning to be effective…….

When the phenomenon of the ubiquitous motor car surrounding buildings combines with the ubiquitous air conditioner clambering up the building walls in high density high rise buildings the vicious cycle gets further intensified. The day's heat absorbed by the hard road surfaces and the enormous mass of buildings combined with the anthropogenic heat released by the use of air conditioners, cars and lifts etc., can cause the ambient temperature of the city to rise 8 to 10deg. Centigrade above the natural temperature of the neighbouring countryside. This is called the urban heat island effect, which causes an increase of ten to fifteen percent in the energy consumption for air conditioning.

Combined Effect Fuelling the Vicious Cycle

There we have it. The third strand of our present DNA – the aspirational culture of our urban middle class, represented here by the lure of convenience and an addiction to the motor car and

the air conditioner, especially when combined with high density high rise development, are leading our cities into an environmental trap: higher temperatures, pollution, congestion and an unsustainable carbon footprint. We can also see the Shopping Mall (air conditioned gated streets), the gym (machine dependant exercise) and suchlike gaining a grip on life-styles. Middle India of the future would sit alongside today's chief culprits -USA and Dubai - in its contribution to global warming.



Let us recall where we started from – the first strand of the political economy of the city – and the second strand of the ideological moorings of the planner and the bureaucrat. The economics of land throw low income communities to the peripheries of the city. This creates an added burden on city transportation as there are fewer opportunities of income generation near home and more and more people must commute long distances by bus or train. More personal time and energy are claimed by travel and travel costs eat into meager earnings. The land policy and the consequent economy of land not only accentuates segregation of citizens according to class, it exacerbate the 'wilderness' of the street – we have all experienced the struggle and anxiety of a crowd of commuters as they try to board an overloaded van or bus from a free-for-all road junction.

The modern planner, in the pursuit of his vision of a slum-free modern city, resorts to two strategies. The first is the relocation of slums which are now in the heart of the city to low-income colonies outside the city. The second, 'innovative', strategy gaining favour today is to squeeze slums into multistory tenements subsidized by profitable privately financed commercial development of the land cleared of slums. In both cases, it must be acknowledged, the significant gain is the legitimization of the new homes of the erstwhile slum dweller. But both have their costs. In the former, the new legitimate home is distanced from the economic opportunities available inside the city. In the second, the vertical stacking of tiny homes creates claustrophobia and alienation apart from dependence on lifts and pumps for basic necessities of access and water.

The rationale proffered today for these strategies rests on the commercial exploitation of land value in a free market, incentivizing private investment by permitting environmentally unsustainable densities and Floor Space Index (FSI) going up to 3 and 4. This takes the city into a high density high rise form, with most homes hovering between six and twenty stories above the ground. This will necessarily result in a steep increase of the urban heat island effect, cause a shortage open space close to homes and create congestion on the streets – especially if citizens keep aspiring to owning and using their motor vehicles as the primary form of transport. Compound the pressure on the streets caused by the growing density of personal motor vehicles with an absence of design of the rights of way – where, as at present little attention is paid to the convenience and safety of pedestrians and cyclists - and the 'wilderness' advances relentlessly. The city, which is the connective tissue between fenced and protected properties, will no longer be a place to inhabit, it will become a negative space, a zone of transience prone to crime.

Route to Recovery

Perhaps, the city can be recovered for its citizens, not for the few who are privileged, but for most citizens. One must make a beginning. Let us re-consider the three strands of the city's DNA in reverse order.

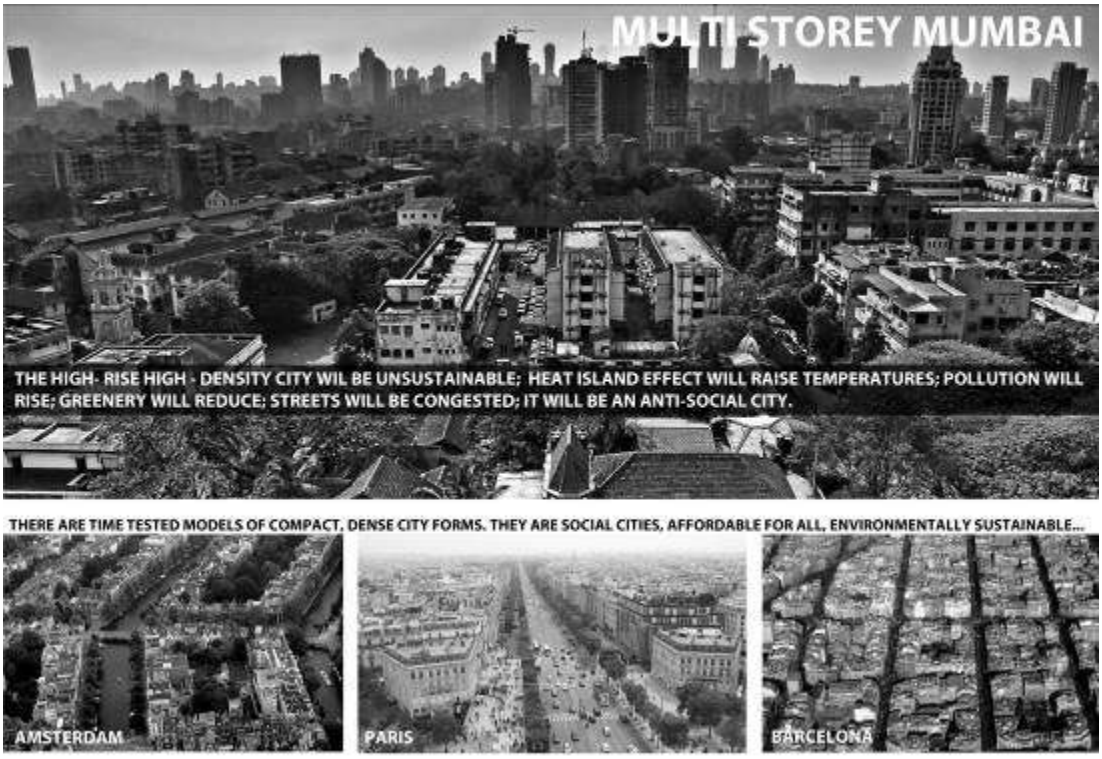
Motor Car De-addiction

This has to be the first step to be taken to halt and reverse the vicious cycle. In our urban culture we must withdraw from our dependence on the motor car. We must reclaim the urban open

spaces that the motorcar has been devouring excessively, to the exclusion of everything that makes for a pleasant and livable city. We must make our streets walk-able and cyclable – safe, shaded, convenient and pleasant. We must expand good quality public transport, make it safe, comfortable and easily accessible. We must provide the little space needed for hired vehicles, be they rickshaws or taxis to bridge the gaps in mobility services. Fewer cars means less road space, more green spaces, more promenades along market streets and gardens, less fumes, less noise, less hazard, especially for children and the elderly. This is eminently doable. Do the numbers. The money you save on expanding roads and building flyovers for the motor car, provides well for the development of public transport, footpaths and cycle tracks. Many cities around the world have shown the way. Careful integrated design is a must. This will be a gradual process, but transformation can be achieved in a single term of government – in five years. For inspiration, look at the transformation that was achieved by Bogota, the capital of Colombia.

Land Policy – Social Housing

The next step is also not complicated. The State must desist from fuelling the speculation of land value. State owned lands are for the public good – for affordable housing at convenient locations close to places of work, and for social infrastructure. The State's land policy should be to acquire and retain land for equitable distribution. It is with this instrument that more people in the lower income groups will be enabled to live closer to their place of work. What matters is the distribution of the benefits of city life, the distribution of opportunities to participate in the generation of wealth. The State cannot retreat from its social responsibility. The economics of land and housing must be driven by the principle of equitable distribution.



Compact City – Low-rise Medium Density

Yes, compact development and densification of low density parts of the city are beneficial. This keeps the geographic distances under check and is suitable for cheap bus transport. Some will argue that high densities and high rise developments with FSI of 3 and above are essential for a compact city form. These are people who are after the profits to be reaped from real estate development. They ignore the negative environmental and social consequences of high rise high density living – especially for low-income families. The lesson has been learnt in postwar Europe where such developments became hives of crime and vandalism and are now being demolished.

We are neither Singapore nor Hongkong, where the high rise high density pattern of living is a result land being highly restricted. Their case is not relevant to our situation and we should not follow their example. The per capita carbon footprint of these city states is untenable globally. Urban economists and planners need to work out the optimal pattern of densities in a holistic framework that does not fall prey to the measurement of the wealth of the city merely in terms of the throughput of money in real estate, while turning a blind eye to the quality of life experienced by the majority of citizens.

The optimal compact city would be four to six stories tall with FSI between 1 and 1.2. This pattern optimizes open space, rainwater harvesting, space for vegetation to create a habitable out-of-doors without the heat island effect and limits vehicular congestion on neighbourhood streets. Children and the elderly are happier living closer to the garden and the street. It is a sociable city form.

This pattern is optimal in terms of energy consumption in buildings as little energy is spent on lifts and pumps, and due to a cooler microclimate the need for air conditioning is reduced.

Do the numbers and you will find it supports public transport and mass rapid transit by bus or train when combined with commercial development.

Above all, it is much more affordable compared to the high rise formula. It is 15% cheaper to build, less technology intensive, more fire and earthquake safe, suitable for all income levels.

The purpose of Urban Development and Urban Planning

It is time to re-state the purpose of urban development and urban planning in terms of the political economy of the city. Urban systems are to be seen as much as engines for distribution of wealth as they are thought of as being engines for the production of wealth. The task of planning urban systems, therefore, is to take affirmative and supportive action in favour of the poorer sections of the citizenry - to enhance their integration into the urban economy on the one hand, and on the other hand to minimise their cost of shelter and travel in the city. This requires a land and housing policy that provides affordable homes for the lower income and middle income groups distributed across the fabric of the city, near the places of employment. The principle would be - the lower ones wage or income the closer one needs to live to the place of work. In addition, the cost of land and the ‘standards’ for shelter and amenities such as water, sanitation and access, while protecting health and safety, need to be commensurate with affordability, especially for the lower income groups. There would no ‘slums’ and there would be no ‘unauthorized’ settlements. This purpose of ueban development should engage the creative imagination of planners, urban economists, environmental engineers and architects.

Next, urban planning cannot be divorced from the imperatives of environmental sustainability. The Environmental Law in respect of large developments already mandates this. Urban Planning cannot ignore this Law. Density of population and FSI are to be disciplined by long term environmental health and environmental economics. They cannot to be determined by monetary considerations alone. The idiocy of blind faith in the power of money to buy the technological fix to every kind of excess belongs to only in the worlds of gross concentrations of wealth, be it Dubai or Shanghai. Transplanted knee-jerk solutions must be shunned. We must first admit to the fact that in order to steer the juggernaut of urbanization toward a sustainable future there is plenty of serious work to be done - to develop principles of urban development that harmonise the objectives of growth with the imperatives of equity and environmental sustainability. We could then look forward to a more democratic city, affordable, hospitable, a place of communion rather a contested ground - a place of streets and gardens where we can breathe clean air and share the conviviality of free and varied encounters that enrich its creativity and enterprise.

Ashok Lall

April 2013

Illustrations and Graphics :- Chetna Singh

Photographs :- All photographs apart from the ones mentioned below are the author's own.

1)The Hon'ble Planner
The Common Man shown as The Hon'ble Town Planner - with apologies to R K Laxman
Bottom Left - http://www.delhitrafficpolice.nic.in/guidelines-for-pedestrians.htm

2)Multistorey Mumbai
Mumbai - http://www.skyscrapercity.com/showthread.php?t=1548682
Amsterdam - http://www.amsterdam-hotels-travel.com/photos/aerial-2.html
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