

URBAN IDENTITY THROUGH HERITAGE AND SUSTAINABLE ARCHITECTURE

BY

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INTRODUCTION

Without going into the alarming statistics of the impact of global warming, and our ever increasing ecological footprint, the intensifying frenzy of violence and aggression that is commonly witnessed today - a direct consequence of enduring years of surviving in unsustainable harsh urban settings, the prevalence of hostile city milieu that marginalizes women, youth and those with disabilities, are causes for apprehension and distress for all those engaged in trying to make cities vibrant and alive and fit for human habitation.

Against this backdrop, I would like to paint a canvas through which our centuries' old urban heritage treasures are placed centre stage to create a stake and identity for our citizens; and, in order to achieve sustainable construction in our fast growing urban centres, introduce our ages-old eco-building vernacular techniques developed by rural communities which would lead the way to reduce our ecological footprint.

It is my belief that these twin approaches alone will begin to humanize our cities, foster attachment and pride, and inhibit the depletion of resources occurring as a result of unviable building activity in the country.

My presentation today consists of three parts:

- First, the reality check;
- Second, the assets;
- Third, the way forward.

THE REALITY CHECK

Let us look at the picture of urban centres in the country – I will not talk about Islamabad it remains a city 20 km from Pakistan even as we saw how easy it was for a mob's lynching to take place in its hallowed red zone.

So our focus is cities such as Karachi, Lahore, Peshawar, Quetta et al.

Each city is divided into the Upper Circuit enclaves of privilege – the Bahria Towns and Central Business Districts providing ostentatious and extravagant facilities for the benefit of a handful; and the remaining Lower Circuit settlements, consisting of poor and marginalized communities forced to live in closely stacked vertical slums or proliferating informal settlements, usually located far away from city centres and livelihood opportunities.

As we know our cities are ever-growing, burgeoning with migrants from other parts of the hinterland or from other provinces, a pull for livelihoods and jobs, devouring open green spaces and urban nooks and corners due to greed and speculation; deficient physical and social infrastructure leading to water and power famines, non-existent or overflowing sewerage, flooded streets sans storm water drainage, and mounds of solid waste waiting for disposal by inefficient municipalities, ever aggravating the health status of weaker sections – the underprivileged, women and young children - with insufficient or non-functioning schools and health facilities, breeding an urban population that suffers from ill health and is hugely non-literate, with no expectation of taking advantage of the current 21st century of knowledge, that is providing a level playing field to nations that are literate.

Political and mayoral ambitious desires keep adding to the automobile passageways at the cost of pavements for pedestrians and non-car owners; the introducing of ugly spiraling overhead bridges attracting more and more private transport, with ever-increasing pollution and felling of trees if they happen to come in the way – and no thought of a mass transit to ease the life of those who toil everyday and who have built the city brick by brick.

There seems no appreciation among the powers-that-be that cities are for people, not for vehicles – no thought for women’s safety or facilitation to bring them into the mainstream of productive occupations; no inclination towards gainful assignation of children and youth - our cities remain deficient in playgrounds and sports facilities, parks and green areas – and with hardly any public toilets!

There is no emphasis on creating enclaves and venues within all neighbourhoods, rich or poor, for art and culture to divert our populace towards creative and cultural activities.

There is little respect for zoning, planning and building laws. In all cities there is now an explosion of poorly built matchbox-style five story walkups tightly piled up with no consideration for air and light, and little thought of negative impact on women and children, creating concomitant abrasive environments leading to aggression among those who grow up here.

There are lax controls on quality of construction due to corruption, connivance and inefficiency, playing with lives of the citizens – the resultant fires in Karachi and Lahore to quote recent examples, and God forbid if an earthquake or a sunami happens!

There are no approved structure plans or master plans for any city, no vision among administrators to create sustainable cities fit for human habitat; no thought or attention to develop a national urban policy nor how to control the direction and growth of urban centres.

With half the urban population in informal settlements, poverty stricken and marginalized, living in ghettoized precincts, women cooped up in dirty narrow lanes, children skipping among garbage – this is the reality. Leaving aside the privileged in their gated compounds, this is what urbanization means to most of our urban population.

The built environment is thus harsh and unfriendly, electrical wires twisted and entangled, with city walls full of chalking and graffiti, expressing anger, fury and rage;

smoke emitting vehicles creating increased air and noise pollution, blackening heritage walls and increased ill health for the populace, no city claiming to be women friendly or one that nurtures youth, children and the disabled. With scant humanizing features, harsh concrete and steel structures - whether high- or low-rise - increasingly adding to the ungracious, and hostile character of Pakistan's urban centres.

Should we then wonder as to why rage and viciousness are being bred? With no attachment, respect or esteem for our habitat, or sense of identity or identification with the city's built environment, which as we know, is hugely inhospitable, composed as it is of anonymous architecture and vandalized urban spaces.

THE ASSETS

Based on the above scenario, there are innumerable factors that can be itemized which would limit environmental degradation and promote sustainability, but for today I will limit myself to those that would, among other benefits, instill and foster, that elusive, but highly valuable phenomenon, known as 'pride' – that aspires nations to scale great heights.

- Firstly, tangible heritage or urban historic architecture.
- Secondly, Eco building techniques based on traditional vernacular construction and local materials.

Heritage

Let me put it to you that Pakistan is a treasure-house of ancient heritage, spanning over scores of centuries. It is home to Mehrgarh, Moenjodaro and Harrappa —it is the land that beckoned Alexander to sail down river Jhelum with purple flags fluttering; the spectacular Gandharan civilization as the seat of Buddhism; the devotional carvings of the Hindu Shahi temples of the Salt Range and Tharparkar; the stately funerary clusters of Makli, Multan and Uch Sharif, a fusion of local trabeated and imported arcuate, representing successive Sultanate dynasties; the heart-expanding chahar-baghs and jewel-like edifices of the greatest kingdom in the world, established by the young ruler of Farghana; the Sikhs emulating the Great Mughals, and the shared legacy of eclectic architecture with its European overtones, a bequest of the British who colonized this land.

Along with the ancient sites and historic monuments, we have innumerable historic urban cores, stretched from the peaks of the Khyber in the farthest north to the southern-most edge of the mighty river Indus — Peshawar, Multan, Thatta and Karachi, and scores of other living cities with their historic environments, all valuable in our search for, and understanding of our identity.

There are the Walled Cities, a depository of irreplaceable architectural heritage, with their organic morphology and the meandering streetscapes, which need to be saved from destruction, and revitalized to continue to endow our fast-growing urban centres with distinction, and historical flair. These footsteps of history are a reflection of a traditional value system, tempered over centuries, but needing support to meet the demands of contemporary life without losing their inherent radiance — the traditional lifestyles determined by, and themselves determining the historic environments.

This is our heritage that we need to safeguard as if family silver to be passed on to future generations to maintain our distinctive identity.

These are the assets that provide our cities with historic propensity and civilized environments. These are themselves eminent illustrations of sustainable architecture, with built-in factors of insulation designed to take advantage of their mass and scale that requires little or no energy, itself creating a microclimate for ease of living. These all need to be integrated with new urban development and made ready for adaptive reuse to fulfill the requirements of contemporary life.

These are the landmarks that endow each city with its special character.

Karachi – the rainbow city with its diverse communities, and its innumerable Imperial-Vernacular mercantile buildings of the native merchant princes, along with the past rulers' imperial edifices in their vast estates with huge banyan trees, evoking the images of the past, and softening the impact of harsh contemporary high-rises.

Lahore, with its presentation of varied architectural milestones belonging to eras past: Pre-Mughal, Mughal, Sikh, Hindu and British, the meandering streets of the Walled City, the bustle of its bazaars and the semi-private, semi-public spaces for

community interaction, its British boulevards and Government Officers' Estates (GOR) evoking the Raj and its grandeur, once again providing a humanizing backdrop to the new shiny structures.

Peshawar, its reservoir of winding bazaars named after traditional artisanship and artisans, reminders of the caravans that once traversed the land and brought stories and merchandize from far off destinations of Central Asia, extending even as far as the Czarist Russia.

One could go on extolling each historic city, but the urban historic assets of each city are our family silver, if woven into the contemporary fabric, would form the ingredients for a more civilized environment, softening the harsh contours created by contemporary concrete structures, using this reservoir for added sustainability of cities, and obviate the necessity for many new constructions.

These are the constituents that evoke past memories, that provide motivation for attachment, pride and ownership. Once these irreplaceable historic assets are pulled down or destroyed in the name of modernity, along which are lost historic trees and urban spaces, resulting in an anonymous urban environment of ill-designed concrete jungle, leaving no possibility of identification or feeling of proprietorship for the citizenry.

Traditional, Sustainable, Vernacular Construction

As is well known, building industry (mostly for urban development) worldwide devours “40% of the world’s energy, 16% of world’s water usage, 3 billion tons of raw materials (~ 40% of global total) and 15-20% of the waste stream” (S. Dobson, EBAA 2009).

As is also well known steel, cement and burnt brick are among the highest energy consumptive materials in their production, requiring temperatures in the order of 1600-1800 centigrade for steel, 1450 to 1550 for Portland Cement and 800 to 1000 for ceramic bricks (Ariaiza et al, 2009).

On the other hand the lowly mud material, a favourite for centuries in rural areas of Pakistan is 100% biodegradable, 100% recyclable and 100% reusable, thus, with its zero or low embodied energy, imposes low environmental impact. Recent studies also show that unfired clay plasters provide breathable walls, humidity buffering and healthier indoor environment (T. Morton, 2008 and P. Walker, 2005) and thus, avoid contemporary buildings being subjected to the 'sick building syndrome' and consequent danger to health.

With current focus on depletion of earth's resources, should we not marvel why we continue to impose urbanized industrialized techniques on our rural areas, destroying the terrain and its scenic beauty – we only have to look at the damage done as a result of massive reconstruction in the name of safety and modernity in the mountainous terrain affected by the Earthquake 2005 or promotion of burnt brick and steel girders in areas affected by Floods of 2010 and 2011.

Not only did we destroy the landscape and denigrated the traditional and highly sustainable ways of construction, we have vastly added to our ecological footprint in areas which traditionally enjoyed zero carbon dioxide emissions due to the use of adobe/mud with its zero embodied energy.

After much experimentation and research, earthquake and flood resistant alternatives developed by Heritage Foundation are available. These are highly sustainable, are drawn from vernacular building techniques, and are based upon traditional skills and methodologies. Under a program *Build Back Safer with Vernacular Methodologies*, the methods promote the use of mud, lime and bamboo, resulting in a low carbon footprint package, which is now being scaled up to help thousands of shelter-less, through DIFID support.

I would like to put it to you, that at a time when the world is searching for sustainable construction and eco-building techniques, it is Pakistan, with its striking vernacular architecture, that can take the lead. Clearly, the time has come to transfer these techniques to urban settings and incorporated into mainstream architecture.

Beginning with building for urban marginalized sections, bamboo dhijji-cross-braced structures with their extremely low plan footprint, occupy even less space than concrete block or burnt brick masonry walls. Adobe/mud has its own advantages and when used with lime can be extremely strong and weather resistant but has slightly larger plan footprint.

Having tested the value of mud and lime for the last several years on several hundred structures in different parts of Pakistan, and particularly since the winter of 2010, and the more recent monsoon 2012, it has been proved that these structures provide necessary insulation and barriers against snow and rain as well as heat.

Should we not then strive to replicate these highly economical, sustainable alternatives for the vast majority of our urban marginalized population who are today forced to live in unhealthy walkups or makeshift structures – a shelter option that can provide low rise, high density habitat, with open to sky terraces, conducive to the needs of women and children?

Should we not endeavor to protect earth's resources for future generations by incorporating knowledge developed for shelter construction for the poor, into contemporary urban edifices built for the Upper Circuit in central business districts and palatial estates of the rich?

THE WAY FORWARD

The phenomenon of urbanization in the 21st century compels us to devise strategies which will not only lead towards fulfillment of the Millennium Development Goals (MDGs), at the same time provide acceptable standards of quality of urban life.

- Let us begin with a national urban policy and the ways to accommodate the mushrooming populace through extensions or satellites.
- Let us ensure formulation and implementation of civic structure plans/master plans for sustainability and orderly growth of our urban centres.
- Let us foster pride based on our historic legacy, provide protection to urban heritage, develop heritage districts and integrate heritage enclaves into contemporary urban structure plans.

- Let us provide maintenance and adaptive re-use of historic architecture as significant examples of sustainable buildings and as a means to humanize the urban environment
- Let us transfer the knowledge of sustainable traditional materials and vernacular construction techniques from rural areas into the mainstream.
- Let us help marginalized urban communities to have access to economical and sustainable building methods and use of their own skills for safe shelter.
- Let us introduce mass transit systems for the convenience of the general public, and minimize the use of private vehicles.
- Let us give priority to foot-travellers, by introducing landscaped pedestrianized areas and walking streets in all downtowns. Let us have designed urban spaces for human interaction to counteract anonymity, harshness and brutality.
- Let us ensure the implementation of all zoning, planning and building byelaws for the safety and well being of the populace. Let us raise our voice when due to corruption or malpractice, heritage buildings are pulled down, urban open spaces are usurped or trees are felled, or when buildings violate structural and safety codes.
- Let us make our cities women-friendly, that would lead to better facilities for the marginalized, elderly, disabled and children.
- Let us create youth-responsive enclaves, through conception of creative, leisure and sports facilities.
- Let us bring a high level of design in our urban centres, whether for the privileged or the disadvantaged, through well-designed signage for streets or places, street furniture and plantation.

And above all, let us strive to make each city, a *City of Peace*.