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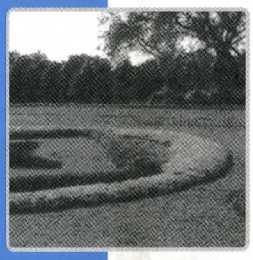
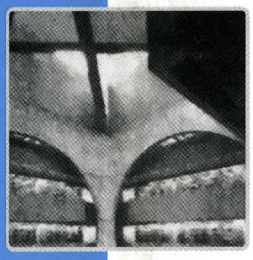
Housing



Landscape Architecture



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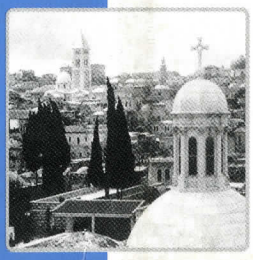

Morphology

Urban Design

Bangladesh University of Engineering and Technology, Dhaka

Protibesh

ENVIRONMENT

Protibesh is a peer-reviewed research journal published by the Department of Architecture, Bangladesh University of Engineering and Technologhy, in January and July every year. Protibesh, meaning environment, aims to provide a forum for publication of original research and scholarship, for better understanding of the different aspects of and intervention for environment in urban and rural settlements. Protibesh is committed to act as a catalyst to bridge theory, research and practice in the broad field of architecture in Bangladesh.

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Content

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Editorial

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The journal Protibesh, meaning environment, is committed to bring forward challenging concerns of all - the unprecedented explosion of urban population, approaches to current and historical built-forms and communities, erosion of social values and plummeting memories. Everyday we, the professionals dealing with physical environment, are indeed faced with fresh challenges in every sphere of our lives. At the same time, often in the name of development we find resolutions and images that are falling short in addressing the concerns. Any decision or project or attempt may be one of a kind, even unconventional but it ought to be desirable. It would be naive if we are not ready to accept attempts in any physical design that may not be extraordinary but it has to be significant — at least habitual. Under such constraints we are to strive for a congenial, vibrant and viable physical environment that improves understanding and compassion among people. The more we indulge ourselves into these endeavors we bring greater benefits to the nation, to the young minds and to the profession.

As the profession grows in society and the deeper the reach and influence of the thoughts are the stronger becomes the voice of design. Consequently when Bangladesh is in pursuit of articulating a language, a vocabulary and a style in its physical design arenas, these would indeed be able to capture the true spirit of the nation. Often a question may come up, is the current attempts a valid extension of tradition? In fact what is seen around triggers, of the many, two common notions - firstly whether the design is culture bound and secondly whether it suits the people's personal liking. These notions to some extent, may be, are pre assumed and cynical. There could be lots of arguments running back and forth on what should be the true nature of physical environment of Bangladesh. The continual presence of juxtapositions of different features in the streets and in architecture of our cities we may have developed a taste for organic image of contrasts and incongruity reinforcing a baseline - search for harmony in diversity.

This issue of the journal highlighted several current concerns, which are foundations of architecture, urban areas and cities. The articles focus on the message they uphold and consider adaptation of processes for implementation. Be it landscape design, creation of natural as well as artificial environments, housing for the urban poor, understanding of an urban space or morphological evolution of a city - the contributions of the authors are acknowledged with appreciation.

The journal also stresses the need of assessing the role of professional community; calls for further research and critical debate among people. Inter disciplinary and multicultural experts to review and understand significance of environments, physical in particular. Thus there is the greater likelihood of giving the people congenial physical environment they deserve. What better means can there be than a journal as Protibesh to publish research, dialogue, educational news, opinions and public outreaches incorporating both the Department's mission and the profession's focus? Comments on any aspect of the journal are welcomed. The Protibesh Committee, look forward to build the journal to be a national and regional resource for information and analyses on architecture, environment and related issues.

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Social Exclusion and Residential Densification: Implications for Integration of the Urban Poor in Dhaka, Bangladesh*

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Abstract: This paper reviews social exclusion of the urban poor and residential densification, under rapid urbanization of Dhaka, to show how they deprive the urban poor from their access to shelter. While exclusion and densification persist, integration of the urban poor becomes an agenda that this paper addressees in relation to sustainable urban development (SUD). SUD accommodates and maintains a balance among all income groups, in particular, in their access to shelter to live a decent life. Observation based on secondary sources and satellite images, however, shows that this balance is absent now in Dhaka: Exclusion and densification displace the poor from their informal settlements while contributing to the residential consolidation of the non-poor in their formal (planned) settlements. This observation has site- and city-specific implications respectively, for integration of the urban poor. First, insecurity of land tenure compounded by high-price and scarcity of land renders site-specific interventions in informal settlements, in city core and periphery, unsustainable in the long-term. Second, emergent urban structure and form exclude the urban poor by limiting their life-chances, to earn, learn, and live long. This paper concludes by drawing attention toward poor's integration in society, first, to the need to adopt an equity perspective for integration of the urban poor. Second, to consider planned residential densification—medium-rise and high-density—as an alternative option for the poor's integration to mediate fair distribution of life-sustaining resources.

Keywords: social exclusions, residential densification, integration, urban poor, Dhaka

Introduction

Population density in Bangladesh, estimated 834 per sq. km. during 2001 census, is among the highest in the world that creates heavy pressure on land for living and livelihoods. Proper utilization of land, therefore, attains a top priority in Bangladesh. Under the current trend of urbanization, industrialization, and river erosion, the country is reported losing 1 percent of its arable land, or 82,900 hectors each year (The Daily Star, 01.11.03). Within this trend, the capital city of Dhaka is expanding by 4.5 sq. km. per year (The Daily Star, 02.04.98); consequently, population density increases along side densification of the built environment, especially, residential area to accommodate increasing urban population. As city grows in area and population without due increase in employment opportunities and access to basic services, social exclusion of the urban poor becomes a reality in Dhaka. While Dhaka continues to grow, how social exclusion and residential densification have contributed to inequality among urban dwellers, especially, in depriving the urban poor from their access to shelter has remained unexamined. Gap in knowledge accompanies lack of policy directives. Existing literature on urbanization and housing in Dhaka in general, and compact cities and townships in particular (Mahtab-uz-Zaman and Lau, 2000; Rashid, 2001), fails to suggest ways in which city ought to address urban poor's integration amidst persistent exclusion and densification.

While this gap at the local level persists, public authorities' conventional urban development task of

* This article is based on a paper accepted for oral presentation at the 'Unit 14: Rapidly Populating Cities/Rapid Urbanization' of the *Action for Sustainability. The 2005 World Sustainable Building Conference* in Tokyo, 27-29 September, 2005. The paper was not presented and published due to non-registration.

ensuring employment, shelter, and services to the urban poor attains a 'sustainable development' imperative in the context of the dwindling land resource and prevailing social exclusion in developing countries (Mitlin and Satterthwaite, 1996). A concern for sustainable urban development (SUD) has arisen initially in the west to address, especially, the environmental problems broadly related to excess energy consumption and carbon emissions. The debate generated later in making and managing sustainable urban form—compact city (Jencks et al, 1996)—relates, among others, to the social and economic exclusions it created or would likely to create (Smyth, 1996); social equity effects of compact city later came under critical scrutiny (Burton, 2000). When rapid urbanization in developing countries has been associated with people's unequal access to opportunities and rights (UNCHS, 2001a), few argue that a city ought to be inclusive. Existing wisdom suggests that strategies for achieving social equity, social integration, and social stability are essential underpinnings of sustainable development of a well-functioning urban society (UNCHS, 1996, 422). SUD in Dhaka has a relevance insofar it accommodates and maintains a balance among all income groups, in particular, in their access to shelter to live a decent life.

This paper examines social exclusion and residential densification, during rapid urbanization of Dhaka, to show how they contribute to deprive the urban poor from their access to shelter. This examination contributes to develop a basis, first, for integration of the urban poor in society with reference to the 'intra-generational equity' principle of SUD; second, to search later an option of their 'sustainable shelter'[1], as part of an alternative to the prevailing policy regime that prescribes city expansion without specifying poor's access to land and livelihood. This examination is based on secondary sources; some of their data are dated but are believed to suggest trends that are valid even today. An introduction outlines the specific topic and question of this article. Next, a brief account on urbanization and urban poverty in Dhaka sets a background to the paper. The following two main sections of this paper examine the nature, extent, and implications of social exclusions and residential densification, during rapid urbanization. This paper concludes by drawing attention toward poor's integration in society in two areas: First, to the need to adopt an equity perspective for integration of the urban poor. Second, to consider planned residential densification—medium-rise and high-density housing—as an alternative option for poor's integration to mediate fair distribution of life-sustaining resources.

Urbanization and Urban Poverty in Dhaka

Since independence in 1971, Bangladesh has been undergoing rapid urbanization while Dhaka has always remained the largest city. Urban population in Dhaka has increased from a modest 0.55 million in 1960 to 9.91 million in 2001. Population in Dhaka has increased due to unabated rural to urban migration and natural increase of its existing population with an attendant aerial expansion of the city. The annual growth rate (AGR) of urban population has always been much higher than the rate of national population. Despite decreasing AGR of urban population and Dhaka since 1981, Dhaka will eventually become one of the top megacities. At present rates of population increase Dhaka City would be the 6th largest mega-city in the world in 2010, with 18.4 million people (UNCHS, 2001b).

Table 1: Population in Bangladesh by Rural and Urban Areas, 1960-2001. (in million)*

Area	1960/61*	1974	1981	1991	2001
Bangladesh	55.22	76.39	89.91	111.45	129.24
Urban	3.11 (5.6)	7.39 (9.7)	14.09 (15.7)	21.56 (19.34)	28.8 (23.39)
Dhaka	0.55	1.61	3.44	6.11	9.91
National AGR	2.26%	2.48%	2.32%	2.01%	1.48%
Urban AGR	5.40%	6.70%	9.20%	4.20%	3.76%
Dhaka AGR	5.20%	9.30%	10.0%	7.10%	--

Note* : Figures in parentheses indicate percentage
Source: BBS (2001), Asfar (2000) and Islam et al (1997).

1 UN-Habitat (2005, 164) defines sustainable shelter that is "environmentally, socially and economically sustainable because it satisfies the Habitat Agenda requirements of adequacy. Its acquisition, retention, and maintenance are affordable by those who enjoy it. It does not overburden the community with unaffordable costs. Finally, it is located in areas that do not constitute a threat to people or to the environment".

With this rapid increase in urban population, different public authorities have failed to address increasing demands for employment opportunities, adequate housing, and services. A visible manifestation of this failure is the extent in which informal sector flourished and slums and squatter settlements proliferated. According to mid-1980s estimate, 47 percent of Dhaka population lived in informal settlements and 64.6 percent population worked in the informal sector economy (Amin, 1989). A concomitant feature of this rapid urbanization is the presence of a large urban poor population. Among a host of reasons, falling real incomes, rising living costs and lack of access to adequate shelter and basic services contribute to urban poverty. Hardcore urban poverty in Bangladesh, based on Direct Calorie Intake method, has decreased from 27.27 percent to 25.02 percent between 1995-96 and 2000 (BBS, 2003, 38); however, its absolute number increased from 5.24 million to 6.33 million. Urban poverty not only sustained and increased the gap between the rich and poor also widened. Between 1999 and 2004, the urban poor household income fell by 5.34 percent while the non-poor's income increased by 7.96 percent. On the other hand, while per capita income of all urban dwellers registers 14.60 percent increase, the figures between the poor (2.22%) and non-poor (11.54%) remain wide apart (BBS, 2004, 24-25).

Dhaka has become a socially unjust city, divided in two societies in presence of two economies (Sobhan, 1998). Increases in income disparity between the rich and poor, their asymmetric access to power, and spread of slums and squats are the major outcomes of this premise. While measurable manifestations of inequality are evident, existing urban poverty discourse does not reveal their underlying explanations (Islam, 2004; Sen, 1998). Dominant discourse in Dhaka (Islam et al, 1997; Pernia, 1994; Khundker et al, 1994) follows a 'residual' approach, putting emphasis on identifying 'how many poor there are, where they are, their characteristics etc'. The concepts of 'entitlement' and 'basic needs' hold central position in defining poverty to guide policy directions for poverty reductions (Islam et al, 1997, 30). An assumption that the poverty exists outside socio-economic system characterizes the residual approach; moreover, poor's entitlement failure is not linked to social relations and institutions to explain how they influence as well as reproduce poverty (de Haan and Dubey, 2004). Although poor's deprivation from basic needs are described and quantified, multi-dimensional profile of deprivation is less noted. These profiles once examined would explain the specific position the urban poor have within the observed social divide.

Profiles of Social Exclusion of the Urban Poor

The concept of 'social exclusion' is a useful category to capture the multi-dimensional profiles of deprivation, and the processes and relations that underlie deprivation (de Haan, 1999; Sen, 2000). Literature claims that the term 'social exclusion' as useful for explaining deprivation in developing countries despite it had originated and seen wider application in different European countries. The term denotes the process through which "individuals or groups are wholly or partially excluded from full participation in the society in which they live" (de Haan, 1999). At a functional level, social exclusion denotes a group's or individual's "lack of access to at a level regarded by the wider society to be both normal and appropriate to the key offerings of society – in education, health care, housing and recreational facilities" (Townrow, 1996). Social exclusion, generally speaking, can result either from unforced choices, imposed circumstances or by the attitudes and behaviour of others. Social exclusion is a multivalent phenomenon, manifesting in a variety of ways in different times and places. Madanipour (1998), however, suggests that economic, political, and cultural arenas are the three broad spheres to identify and analyze manifest social exclusion. Next are sketches of social exclusion of the urban poor in Dhaka, manifested during rapid urbanization. Views on relational causation to deprivation in each arena are indicative and not exhaustive.

Exclusion at the Economic Arena

Gainful income opportunities are not available equally in Dhaka like most other major cities in the developing world. Studies have noted that one's social identity, education, and asset base are linked for his/her access to these opportunities. Hossain et al (1999) carried out a survey in 800 households in Dhaka. According to this study, per capita income of Dhaka dwellers has doubled in the last seven years (1991-1998); it rose from US$ 415 to US$ 843. However, this increase in per capita income is not homogenous, especially, among slum and non-slum dwellers in Dhaka. Less income from businesses and commerce and fixed assets contributed to half and

one-fourth of all disparity respectively. Seeds of (urban) income disparity are embedded in poor people's initial fixed asset disparity. In Dhaka, the lower 50 per cent households control only 7 per cent of all fixed assets in Dhaka. Whereas, the upper 5 per cent households control 40 percent fixed assets. To create earnings from business, commerce and assets, especially in the formal sector, one needs considerable capital and good education. In this case, formal financial and educational institutions do not favour the poor. On the other hand, the reality of daily subsistence does not allow them to accumulate capital or pursue education beyond the primary level. Dimension of income disparity depends on education, health, and housing. Existing gap between the rich and poor is likely to increase as the urban poor's spending on these fields is very low.

Exclusion at the Political Arena

The urban poor households have failed to receive their fair share of resources despite being a significant section of the city due to their exclusion in the political arena. Age-old formation of an exclusionary class-conscious attitude within the land owning rural elites toward the poor has its trickle down implications to guide present individual behaviour. This attitude encourages patronage distribution for gaining poor's support than treating them fair and square. A pre-existing hierarchy-patronage relationship has been aided further as "neither constitutionally nor through any legislation nor other special act, any provision was made to ensure representation of the poor in the lower [local government] bodies" (Afsar, 2001, 11). Consequently, ruling elite exclude the urban poor from all forms of social and political participation, and benefiting from basic civic amenities. Poor people feels disenfranchised, and withdrew them from participating in any initiatives to solve their problems. A recent report captures this state of withdrawal succinctly, "The urban poor households are pushed into the city, with a very weak sense of identity and belonging. Rates of participation in community activities are very low, with 94% of households not associated with any society or organization. Urban slums are often outside the main stream of governance and long-term strategic development planning. This creates the operational space of exploitation" (CARE-IFPRI, 2001, 2).

Exclusion at the Cultural Arena

Poor rural migrants arrive in a city with little if no education, without a job, and a place to live. They make use of their kin- or region-based social networks to get a foothold in the city. Their rural experience-based values and norms largely influence their adaptation of dwelling in the unplanned and illegal parts of the city. While dwelling, in slums and squatter settlements, their social structure and cultural practices remain different from the mainstream urban society. In terms of education, dress pattern, the structure of belief and superstition, and thought pattern one can notice greater degree of continuity of rural modes among squatter dwellers. Urban poor living in squatter settlements live a normative life, the breakdown of norms is almost absent among them despite their constrained socio-economic profile (Das, 2000). Associated implications that arise from where they live in and whom they socialize with contribute to their deprivation in different forms.

Whether casual inter-personal interaction or formal job interview, one's identity usually comes first in most cases. Homeless people who are in search of a job, women in particular, have been frequently denied a job for living in the street. On the other hand, homeless people are socially stigmatized. Society imposed an alleged identity on them based on prejudices and class-consciousness. As a result, society deprives the urban poor in general and homeless people in particular from their access to employment, education, and health based on 'who they are' (Ghafur, 2002).

Elite perception of poverty in Bangladesh is homogenous without any 'social distinction'. A recent study notes that elite tend to identify shades of difference in terms of regional or district stereotypes than more meaningful social distinctions (Hossain, 2005, 43). Elite perceive the poor as non-threatening to their interests and well-being, considers above reproach for their poverty who deserve help and assistance. In development practice and governance, these passive and benign views of the poor guide texts in public documents in one way or the other. While the gap between the rich and poor is widening in Bangladesh, absence of social distinction contributes to make ground for 'social cohesion' between the rich and poor. Different studies have suggested that denial of social distinction and call for 'social harmony' or 'cultural solidarity' is an ideological ploy by the ruling elite to maintain their control over resources (Wood, 1994; Arens and van Beurden, 1980). The participatory research has shown that social distinction of the poor in general, and their classification into types in particular, is more beneficial to the poor that to the rich (Nabi et al, 1999, cited in Hossain, 2005).

Implications of Social Exclusions on Poor's Access to Housing

Discrete profiles of exclusion from gainful employment, voice and participation, and identity, in the economic, political, and cultural arenas respectively, attest the multi-dimensionality of deprivation in urban poverty. They have 'constitutive relevance' for deprivation, meaning that they by themselves first cause deprivation, and may later lead to further deprivations. Full examination of the relational features—causal connections—in each and among them is beyond the scope of this paper. This paper, however, postulates the following implications for the urban poor's exclusion from housing –

- Lack of employment leads to the poor's failure to raise resources to buy or rent a shelter.
- Lack of voices and participation in the public decision-making processes restrict the poor's access to land, finance, and services for shelter construction and consumption.
- Lack of identity contributes to the poor's isolation from the mainstream society to their entrapping in a discriminatory slum sub-culture.

These implications have hindered the urban poor's access to housing in at least two areas. The first area broadly relates to the 'critical imbalance' between housing prices to household income ratio that characterizes housing supply in Dhaka by affecting household's owning and renting houses. Urban poor who have difficulty in affording a minimum acceptable standard shelter typically lie in the 0-50 percentile range. Median household income has increased as high as 85% between 1993 and 1998. Three types of land i.e. highly developed land, developed land, and raw land have increased 7%, 53% and 13% respectively during the same period (UDD, 2000). This higher increase in income apparently decreases land price-to-house ratio. This decrease in ratio, however, means nothing for households within the 0-50 percentile range. On the other hand, a survey by the Consumer Association of Bangladesh (CAB) in late 1999 reports about 177 percent increase in house rent in Dhaka in the last ten years (The Daily Star, 10.01.00). During 1998-99, the survey observed the highest 26 percent increase of rent in slums. High land price and rent have been the two critical factors prohibiting the urban poor's access to the urban land and rental market.

These implications, in the second area, make as well as maintain the urban poor's status as slum dwellers. An individual or a social-group, according to UN-Habitat (2003), becomes slum dwellers if lack(s) any of the followings: access to water and sanitation, living without over-crowding, structural quality of shelter and security of tenure. A recent study, carried out in slums and squatters in Dhaka City, reports that 37.4 percent of city dwellers (3.42 million) live in 5.1 percent of land (3840 acre); 85.4 percent of them are urban poor (CUS et al, 2006). The density has a contrasting profile: 891 person per acre in slums and 121 person per acre in the city.

Social exclusion of the urban poor has enforced their living in slums and earning livelihoods in informal sector as a survival strategy. The poor households' deprivation from access to shelter in turn has excluded them from fair distribution of life sustaining resources to earn, learn, and live a healthy life.

Densification of the Residential Space

Gradual densification of the built environment, with attendant rise in population density, is the other major impact of rapid urbanization in Dhaka. Table 1 shows that in the last fifty years, under rapid urbanization, while the city area has increased sixteen times its population increased twenty four times. These unequal rates of increases create a context of physical densification. Under densification, first, built-up area in a given plot increases with attendant rise in building height and volume; densification taken place within residential areas results in producing more dwelling units. Second, new buildings are constructed in vacant plots or land. Separate but linked to these

Table 1: Changing Profiles of Dhaka City 1700-2001 (Area in sq.km)

Year	Dhaka Status	Approximate Area*	Population	Density (per sq.km)
1951	Provincial Capital	85.45	411,279	4,838
1961	Provincial Capital	124.45	718,766	5,796
1974	National Capital	335.79	2,068,353	6,156
1981	National Capital	509.62	3,440,147	6,745
1991	National Capital	1352.87	6,487,459	4,795
2001	National Capital	1352.87	9,910,000	7,324

Note*: In 1991, the area of the Dhaka Statistical Metropolitan Area was increased to 1352.87 sq.km.
Source: BBS (1997, 90).

two categories is a third where water bodies are filled up and open spaces and agricultural lands are developed for land sub-division or future construction; it sets a context for future densification. This section explains the ways in which densification of residential areas affects different income groups, poor and non-poor in particular. It notes deprivation of the urban poor from their lack of access to shelter and the emerged inequality in access to shelter between the rich and poor as the two most significant implications of densification.

The Nature and Extent of Densification

Dhaka has been undergoing densification due to increasing demands for living and working space. Densification has had different manifestations in not only the old and new (post-1947) parts of Dhaka but also between planned and unplanned (but formal) areas in new Dhaka. The following sub-sections briefly describe the nature and extent of densification in Dhaka.

Increase in Land Coverage and Building Height

Old Dhaka, situated beside Buriganga River, has been the traditional centre of trade, commerce, and industry. Informal sector employment opportunities with the availability of low-rent housing in different parts of old Dhaka have always attracted unskilled poor migrants. Without possibilities of expansion, natural increase of the native old Dhaka population and continued influx of migrants had initiated densification of its physical fabric long ago. Old Dhaka possesses 15 percent of the population living in the city's urbanized area while occupying only 7 percent of the city's gross built-up area (DMDP, 1997). The gross urban density here is 323 person per acre, while in some areas in excess of 2000 person per acre. The indigenous city form of old Dhaka has problems in accommodating modern urban services and amenities like road, water, electricity, gas, and open spaces. Low incomes of a large section of landowners and their inability of housing improvement and maintenance have largely contributed to the deterioration of the existing housing stocks with the subsequent formation of slums. On the other hand, existing buildings on smaller plots with very high land coverage, due to land divisions for inheritance, are growing vertically well beyond their foundation capacity; these developments, for example in Shankhari Bazaar, proceed despite recent incidents of building collapses with human casualties (Ghafur, 2004). Excessive densification in different localities of old Dhaka, with attendant deterioration of living environment, has entrapped a large section of its lower-income people; while the well-off section has been opting to move out to new Dhaka for better housing and civic amenities (Khatun, 2003).

New Dhaka had started expanding rapidly ever since Dhaka became the provincial capital of the then East Pakistan in 1947. Dhaka—the provincial capital—had to meet increased demands, among others, for housing the government employees, different professionals, and businesspersons. As a response, the government acquired agriculture lands to develop a few planned residential areas for the higher income groups while significant parts of Dhaka remained unplanned. Dhanmondi Residential Area (DRA) is the first of these initiatives, of about 473 acres, which started during the early 1950s by the Dhaka Improvement Trust (now Capital Improvement Authority, RAJUK); 810 plots with an average size of 1,296 sq.m were distributed among the affluent section of society. Gulshan, Banani, Uttara, Baridhara, and Nikunja are the other major planned residential areas developed later by the government during 1960-1990. Among these areas, self-initiated densification has now approaching fast to its saturation in DRA (Figure 1); the ongoing densification process is evident in Uttara (Figure 2). The rate of growth in household numbers and density, i.e. person per sq.km, complements the rate of growth in residential densification, noted in Table 2; this observation suggests that different locality in Dhaka have different pace of densification as indicated in Figure 1 and 2. Old Dhaka, as evident in the case of Sutrapur thana, shows much lower annual growth rate

Table 2: Selected Thana Household, Density and Annual Growth Rates (AGR) in Dhaka: 1991-1981

	Sutrapur (Old Dhaka) 4.38 sq.km			Dhanmondi 9.74 sq.km			Mohammadpur 11.65 sq.km			Uttarra 36.91sq.km		
	1991	**1981**	AGR	**1991**	**1981**	AGR	**1991**	**1981**	AGR	**1991**	**1981**	AGR
Household. Nos.	49,286	46,471	0.59	33,451	20,691	7.08	57,551	36,795	4.57	19,413	7,409	10.11
Density per sq.km	70,202	68,182	0.29	16,881	11,603	5.95	27,142	18,851	3.71	2,928	1,167	9.64

Source: BBS (1993)

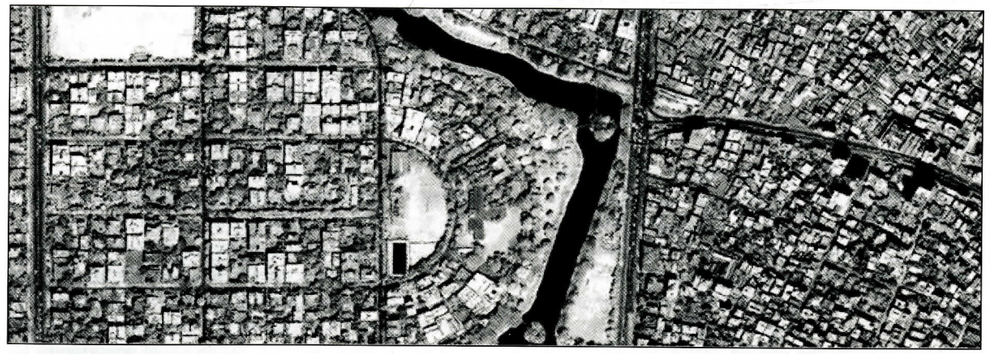

Figure 1: A Section of Dhanmondi Residential Area with adjoining unplanned area, 2002

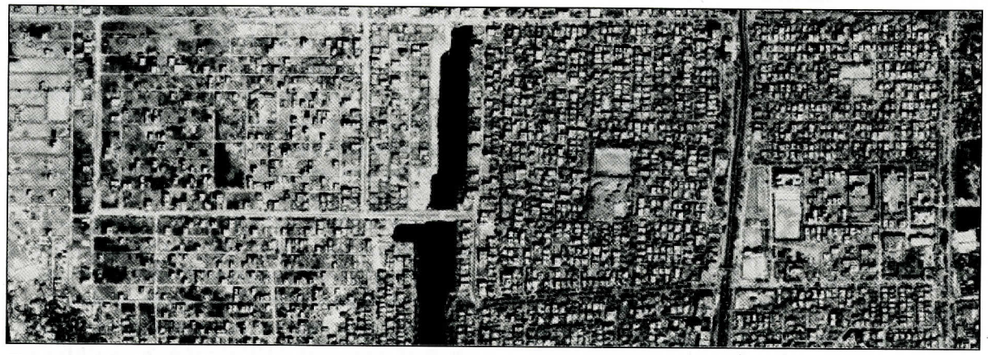

Figure 2: A Section of Uttara Model Town showing ongoing Densification, 2002
Source of Figure 2 and 3: CEGIS

Figure 3: Mohammadpur Locality on the Western Fringe with Adjacent Flood-prone Area – Mid 1970
Source: *Sthapattya O Nirman*

of household increase and density, compared to other thanas during the 1991-1981 inter-census period. While Uttara thana has the highest rates of annual growth followed by Dhanmondi.

In DRA, Islam and Khan (1964) note from their survey in 1961 that 72.9% buildings were single storied, 89.1% dwellings were single-family households, and 78.3% dwellings had large lawns. Since then, building density and ground coverage in DRA has increased many folds; a recent survey has found 1166 plots and 37 % of them now have 6-storied buildings (Majumder, 2004). DRA has a locational advantage in terms of its close proximity to different institutions and civic amenities that led to its densification. Amidst housing shortage in Dhaka city,

private sector developer-initiated six-storied apartments transformed DRA into a medium-rise and multi-households area for the high-income groups. The 6-storey limit is a development control imposed by RAJUK for all planned residential areas. Beyond these areas, developers built apartments are also highly concentrated in the central (unplanned) area, including Iskaton, Shantinagar, Siddheswari and Malibag (Siraj and Alam, 1991). In Dhaka, private developers have constructed around 47,713 apartments in the last twenty years, and at a rate of 4252 apartments per year for the last five years (Seraj, 2005). The demand side of this increasing construction by the private sector developers can be argued linked to the economic prosperity of the rich mentioned earlier.

New Buildings in Vacant Lands

Pockets of land in different parts of Dhaka remain vacant in absence of land use planning. These vacant lands are either government allocated plots for residential and institutional use or land initially acquired for different public institutions. According to an early 1990 estimate, around 500 acres of land remain vacant within the metropolitan city of Dhaka (Das 1992, 142). These unused lands are usually the sites of squatter settlements; in 1988, 29% squatters were located in these public lands. In recent years, there has been a drive of evicting these squatter settlements from the public land without compensation and relocation; the intention is either to regain control over land or for new construction. In cases where new developments are housing, they provide accommodations only to elite, including high government officials and members of the parliament (MPs). Agargaon slum, considered one of the largest in Dhaka with 40,000 people living in 66.66 acres of land, is one of the cases where eviction took place. An estimated 200,000 people had been affected and US$ 2.5 million worth of property were destroyed in 30 cases of major forced evictions in Dhaka from 1990 to 1992. According to the Coalition of Urban Poor, a local pressure group, 42 squatters were evicted between May and August, 1999. A total of 21,933 families living in 34 of these were affected (different sources cited in Ghafur, 2002). Prior to eviction, many of these squatter settlements were sites of NGO development interventions, especially, in areas of sanitation, education, and micro-finance. NGOs view these evictions as human rights violation and constraints against development.

City Expansion through Land Developments

In Dhaka, public institutions including RAJUK develop land—sites and service schemes—to meet the housing need of an increasing urban population. The land acquired for this purpose is peripheral agriculture land (Figure 3). RAJUK follows a selection procedure for allocating plots among applicants. Professionals without a house in Dhaka and expatriate Bangladeshis, who would pay in foreign currency, receive preference in the selection. Political affiliation also influences the plot allotment process. Application criterion, as in use today, precludes the urban poor at the out set from applying for failing to provide specific income Tax Identification Number. Failure to take note that the poor do not pay tax restricts an equal opportunity for all. Moreover, poor native old Dhaka applicants complain about their exclusion from applying despite living in over-crowded housing. In reality, RAJUK provides housing plots below market prices to politically influential and higher income groups, and thereby, contribute to urban land market distortions (Chowdhury, 1992). Since early 1980s, the private sector has also been involved in land development for housing in a significant scale. Private sector land developments often take place by violating wetland preservation rules. Illegal *khas* (public) land grabbing is another serious allegation that they are charged with lately; a specially commissioned parliamentary committee has recently revealed that around 6000 acres of *khas* land, located outskirts of Dhaka, are illegally occupied by different vested interest quarters, including land developers (The Daily Star, 04.02.05).

Observations on densification (and city expansion) so far help us reflect on the future projections by the Dhaka Metropolitan Development Plan (DMDP, 1997). DMDP has an area of 1528 sq.km. In this projection, population of Dhaka will increase from 7.35 million in 1990 to 15.57 million in 2015. Table 3 shows projected increases in the percentage share of the city population in different areas and the respective development strategy.

Trend in the projection suggests a gradual densification of the established urban area (31,700 acres), by the middle- and high-income groups who could afford buying apartments in the context of high land price. Drop in share of the total city population in the established urban area from 75% to 52% during 1995-2015 implies that the urban poor will be driven out from there due to their lack of affordability. Density will increase from 199 persons per acre in 1990 to 240 ppa (in 2005), to stabilize later at 259 ppa in 2015. But this increase in density is unlikely to accommodate only the rich and powerful. Past trend

of physical exclusion—70% people live in only 20% of the total city residential area (Islam, 1988)—is unlikely to improve in the future. Consequently, poor urban households will either be confined within inner-city slums or displaced from established urban core to peripheral lands. Inner-city slums of the urban poor, meanwhile, might fall in the hands of the developers for redevelopment schemes for the non-poor households. Almost half of the projected increase will take place outside established urban area. This means that future land has to be located outside urban core in urban fringe, new urban and peripheral areas. While the urban poor have been on the move from one place to another, it is difficult to imagine how will they ever get access to land and consolidate their housing permanently, i.e. not benefiting from densification. Their prospect of settling down seems remote as DMDP itself "always assuming that policies and mechanism are in place which ensure the urban poor access to affordable land with secure tenure rights" (DMDP, 1997, 36), which were never there.

Inequality and Deprivation: Implications of Densification

Under densification, urban space in Dhaka has been rearranging steadily with contrasting implications for different income groups. The manifest contrast is evident at the city and dwelling levels. At the city level, urban-core has extended well beyond old Dhaka while fringe has shifted to a newer and distant edge. While city-core densifies and extends, medium- and high-rise multi-household apartments have evolved as well-adapted and accepted housing types for the middle- and high-income groups.

The supply side of the market tends to provide different types of housing for the high-income groups even to an extent of over supply (Nabi et al, 2003). Dhaka's densification goes on parallel to the growth and spread of these types, but without developments commensurate to the needs of the lower-income groups. At the dwelling level, a transformation of the residential circumstances has been noted. At the advent of the developer-built housing, in a context of high land price, construction costs, and change in urban life-style, typical dwelling unit has become 'compact' than before in terms of allocation and utilization of domestic spaces of all but the urban poor. This compact dwelling made possible high-density apartment construction. Because of this compaction-densification, provision and maintenance of several services and facilities like security, elevator, electric generation and garbage collection are now better feasible than before.

As slums and squatter settlements remain invariably single-storied temporary structures and without significant increase in total area over-crowding causes decrease in floor area. Overcrowding in low-income households, besides health hazards, affects students in their academic performances (Farzana, 1996, cited in Begum, 1996, 112). Table 4 shows the trend of how the total floor space available per household has decreased significantly over the years; we should note here that 89 percent of all poor households in Dhaka live in one room (Islam et al, 1997, 205). Not only the poor are affected more by the decrease in floor area than others, the rent per square feet they pay is also equal if not higher than others. Nabi et al (2003, 55) report from their study of

Table 3: Percentage Share of Total Population of Dhaka City by Location

Location	1990	2005	2015	Development Strategy
Established Urban (pre-1983 urban area)	75	60.5	52.5	Consolidate
Urban Fringe (converted from rural use ,1983-91)	7.5	10	12	Accelerate
New Urban (new developments after 1991)	0.0	14	20	Promote
Peripheral (north and north-west of Dhaka)	17.5	15.5	15.5	Partially enable or otherwise discourage

Source: DMDP (1997, 48)

Table 4: Floor Area (sq.m) per Household in Urban Areas by Income Groups and Time

Income Group	Percentile (Approx.)	1974	1981	1990
High	2	460	280	185
Middle	28	280	185	140
Lower	20	93	74	46
Urban Poor	50	19	9.5	6

Surce: UNDP-UNCHS, 1993, 24

991 sample in 20 localities in Dhaka that renting *pucca* house of 801 to 1000 sft cost Tk. 6.6 per sft while Tk. 11.11 per sft. for those less than 100 sft. kutcha house in slums.

Dwellers of different income groups are constantly competing for their places in the city, with outcome either as a benefited land/dwelling owner or as deprived squatting/homeless loser in the process. A two-fold spatial implication of this competition embodies an inequality in access to housing:

First: Involuntary displacement of the urban poor. Low-rise, and high-density informal settlements in Dhaka are reducing in numbers due to state-sponsored evictions to make ways for densification; the evictees then resettle either in the already over-crowded inner-city slums or in the undeveloped peripheral lands. Livability further deteriorates, Iqbal (1994) reports, as locations of the polluting industries overlaps with dense (low-income) residential areas in Dhaka. Eviction deprives the urban poor of their housing rights; dwelling in slums and squatter settlements without access to services deprives them from human development, i.e. ability to earn, learn and live with good health.

Second: Residential consolidation of the non-poor. Gradual densification of the planned and unplanned (but legal) areas, by the private sector developers, tends to favour without exception the higher-income groups. This housing allows them living close to their place of work and consuming available best urban services and utilities like road, electricity, water and gas. Private housing construction and finance sectors have been facilitating this market-led densification by managing construction and providing loans to buy apartments or lands. As a result, Dhaka becomes a city to cater the residential expansion and consolidation of the non-poor.

Discussions on exclusion and densification have two site and city specific implications respectively, for any possible approach toward integration of the urban poor. They are –

- Insecurity of land tenure compounded by high-price and scarcity of land renders site-specific interventions in informal settlements, in core and periphery, uncertain in the long-term.
- Emergent urban structure and form exclude the urban poor by limiting their life-chances, to earn, learn, and live long.

Conclusion

Social exclusion of the urban poor and densification of the built environment are the two key outcomes of rapid urbanization that contribute to the deprivation and inequality among dwellers in Dhaka. Social exclusion and residential densification are not discrete but inter-linked in depriving the urban poor from their access to shelter—known to mediate their abilities to earn, learn, and live healthy. Market-led medium- and high-rise and multi-family apartments—manifest densification—have served well the upper income groups to live along side densification of the city while adapting to the consequent dwelling unit compaction. This trend is likely to continue in the future by maintaining the exclusion of the urban poor form its coverage. Inequality in getting access to shelter has been linked to the ways in which the public and private sector develops and allocates land (and apartments) and provides finance for shelter construction. This inequality persists as housing of the poor and non-poor remain separate.

The way housing of the urban poor and non-poor is discussed now a days has a corollary with the 'separate spheres' notion observed in gender discourse in Bangladesh (White, 1992). It is agued that viewing women in their own space is least helpful when they should be positioned in relation to men. As long as housing of the poor and non-poor are slotted in separate spheres, an equitable distribution of limited resources remains distant. Separate spheres in urban housing erode chances of unmasking relational deprivations, augmented by social exclusion and manifested in residential densification.

A way to overcome this inequality in access to land, in particular, would require the urban poor's integration by taking an equity perspective in relation to the principle of intra-generational equity of SUD. As population increase puts pressure on land, an equity perspective to SUD would have two inter-related objectives: first, to accommodate and maintain a balance among all income groups in their access to 'sustainable shelter' to live a decent life; second, to guide eradication of the prevailing exclusions of the urban poor by ensuring their access to 'sustainable shelter'. Shelter becomes sustainable when it is both adequate and affordable to its occupants. A careful reconsideration of the provision of 'social housing' for the poor within the concept of sustainable shelter, adhering to both adequate and affordable notions of shelter, has potentials to mediate fair distribution of life-sustaining resources. Recent post-occupancy evaluation study makes a case to rethink multi-storey social housing in Dhaka (Ghafur, 2005).

As densification is inevitable under rapid urbanization, future integration of the urban poor from an equity perspective, therefore, has to work through the ways in which densification takes place. It implies acknowledging as well as directing our attention to the following three emerging issues for further research:

- A departure from the conventional interventions in single-storied and high-density slum and squatter settlements, e.g. settlement upgrading, is required. Planned medium-rise high-density housing should guide slum redeveloped for its original tenants as long-term option.
- Indiscriminate eviction has to stop to vacant an illegally occupied land—squatter settlements—for future construction; future construction if deemed necessary for optimum utilization of land should include the urban poor's access to land for medium-rise high-density housing.
- Future allocation of land for the urban poor has not to be in terms of allocating small individual plots but large land conducive for planned medium-rise high-density housing.

References

Afsar, R. (2000). *Rural-Urban Migration in Bangladesh. Causes, Consequences and Challenges.* Dhaka: UPL.

Afsar, R. (2001). *The State of Urban Governance and People's Participation in Bangladesh*. A country report prepared for CARE International UK, Dhaka.

Amin, A. T. M. (1989). *Macro Perspective on the Growth of the Informal Sector in Selected Asian Countries*. Paper prepared for the Asian Employment Programme, New Delhi: ILO-ARTEP.

Arens, J. and Beurden, J. van (1977). *Jhagrapur: Poor Peasants and Women*. Amsterdam: Third World Publications.

BBS (1997). *Bangladesh Population Census 1991, Vol. 3 Urban Area Report*. Dhaka: Bangladesh Bureau of Statistics (BBS).

BBS (2001). *Population Census 2001, Preliminary Report*. Dhaka: Bangladesh Bureau of Statistics (BBS).

BBS (2003). *Report of the Household Income and Expenditure Survey, 2000*. Dhaka: Bangladesh Bureau of Statistics (BBS).

BBS (2004). *Report of the Poverty Monitoring Survey 2004*, Dhaka: Bangladesh Bureau of Statistics (BBS).

Begum, H. A. (1996). Psychological Consequences of Poverty Women in Bangladesh. *The Dhaka University Studies*, 53 (1), 107-119.

Burton, E. (2000). *The Compact City: Just or Just Compact? A Preliminary Analysis*. Urban Studies, 37 (11), 1969-2001.

CARE-IFPRI (2001). *Baseline Survey Report: Livelihood Security Analysis of Vulnerable Urban Households, Jessore and Tongi Pourashavas*. Dhaka: CARE-Bangladesh and International Food Policy Research Institute (IFPRI).

Chowdhury, A. I. (1992). Urban Land Market in Dhaka. In Islam, N. and Chowdhury, A. I. (Eds.), *Urban Land Management in Bangladesh*, Dhaka: Ministry of Land, 115-22.

CUS, Measure Evaluation and NIPORT (2006). *Slums of Urban Bangladesh: Mapping and Census, 2005.* Draft Report prepared by Centre for Urban Studies Measure Evaluation, Carolina Population Center, National Institute of Population Research and Training, Dhaka.

Das, A. C (1992). Urban Vacant Land: Public and Private Issues and Prospects for Developments. In Islam, N. and Chowdhury, A. I. (Eds.), *Urban Land Management in Bangladesh.* Dhaka: Ministry of Land, 141-50.

de Haan, A. (1999). *Social Exclusion: Towards an Holistic Understanding of Deprivation*. Social Development Department, Dissemination Note no. 2, DFID, London.

de Haan, A. and Dubey, A. (2004). *Conceptualizing Social Exclusion in the Context of India's Poorest Regions; a Contribution to the Quantitative-qualitative Debate*. Paper presented at Conference Q-squared in Practice: Experiences of Combining Qualitative and Quantitative Method in Poverty Appraisal, Toronto.

DMDP (1997). *Dhaka Metropolitan Development Plan* (1995-2015). Vol 1: Dhaka Structure Plan (1995-2015). Dhaka Metropolitan Development Planning (DMDP), Rajdhani Unnayan Kartipakha (RAJUK). Dhaka: Government of Bangladesh (GOB).

Farzana, R. (1996). *Academic Achievement as a Function of Household Population Density and Sex*. Unpublished research, Dept. of Psychology, University of Dhaka.

Ghafur, S. (2002). *The Nature, Extent and Eradication of Homelessness in Developing Countries: The case of Bangladesh*. Final Report submitted to the CARDO, University of Newcastle upon Tyne, UK, Dhaka.

Ghafur, S. (2004). Shakhari Bazaar: Sustaining in the Cultural Context. *The Daily Star*, 16 July, 2004

Ghafur, S. (2005). *Socio-spatial Adaptation for Living and Livelihood: A Post Occupancy Evaluation of Multi-storey Low-income Housing in Dhaka*, Final Report, Committee for Advanced Studies and Research (CASR), BUET funded research, Dhaka.

Hossain, M, Afsar, R. and Bose, M. L. (1999). *Growth and Distribution of Income and Incidence of Poverty in Dhaka City*. Dhaka: Bangladesh Institute of Development Studies (BIDS) and International Rice Research Institute (IRRI).

Hossain, N (2005). *Elite Perceptions of Poverty in Bangladesh.* Dhaka: UPL.

Iqbal, M. (1994). The Impact of Polluting Industries on the Residential Environment of Dhaka City. *Bangladesh Urban Studies*, Vol. 2 (2), 17-30.

Islam, N. (1988). The Poor's Access to Residential Space in an Unfairly Structured City, Dhaka. *Oriental Geographer*, 29 and 30 (1 and 2), 37-46.

Islam, S. A., (2004). Overcoming Poverty in Bangladesh: Search for a New Paradigm. *Bangladesh e-Journal of Sociology.* Vol. 1. No. 2. July

Islam, N and Kahn, F. K. (1964). High Class Residential Areas in Dhaka City. *Oriental Geographer*, 8 (1), 1-40.

Islam, N., Huda, N., Narayan, F. B and Rana, P. B. (1997). *Addressing the Urban Poverty Agenda in Bangladesh. Critical Issues and the 1995 Survey Findings.* Dhaka: UPL.

Jenks, M., Burton, E. and Williams, K. (Eds.) (1996). *The Compact City. A Sustainable Urban Form?*, London: E & FN Spon.

Madanipour, A. (1998). Social Exclusion and Space. In Allen, J., Cars, G. and Madanipour, A. (Eds.), *Social Exclusion in European Neighbourhoods*. London: Jessica Kingsley.

Mahbub-un-Nabi, A. S. M. et al (2003). Urban Housing Market – Towards a Market Responsive Supply. Proceedings of the International Conference *Architecture: Overcoming Constraints*, Dhaka, 53-58.

Mahtab-uz-Zaman, Q. M. and Lau, S. S. Y. (2000). City Expansion Policy versus Compact City Demand: The Case of Dhaka. In Jenks, M. and Burgess, R. (Eds.), *Compact Cities: Sustainable Urban Forms for Developing Countries*. E & FN Spon, 141-152.

Majumder, S. A. (2004). *Building Regulation and Development Process of Dhanmondi Residential Area* (Unpublished). Dept. of Architecture, Bangladesh University of Engineering and Technology.

Mitlin, D. and Satterthwaite, D. (1996). Sustainable Development and Cities. In Pugh, C. (Ed.), *Sustainability, the Environment and Urbanization.* London: Earthscan, 23-61.

Nabi, R., Datta, D., Chakrabarty, S., Begum, M. and Chaudhury, N. J. (1999). *Consultation with the poor: Participatory poverty assessment in Bangladesh*, mimeo, Dhaka: NGO Working Group on the World Bank.

Rashid, S. (2001). Compact Townships as a Strategy for Development. *CTBUH Review*, 1 (3: Fall), 1-19.

Sen, A. (2000). *Social Exclusion: Concept, Application, and Scrutiny*. Social Development Papers No. 1, Office of Environment and Social Development, Asian Development Bank.

Sen, B. (1998). Politics of Poverty Alleviation. Sobhan, R. (Ed.), *Crisis in Governance. A Review of Bangladesh's Development 1997*, Dhaka: CPD and UPL, pp. 159-181.

Seraj, T. M. and Alam, M. S. (1991). Housing Problem and Apartment Development in Dhaka City. In Ahmed, S. U. (Ed.), *Dhaka: Past Present Future*. Dhaka: The Asiatic Society of Bangladesh, 471-489.

Siraj, T. M. (2005). *Real Estate Sector of Bangladesh*. A MArch guest lecture given at the Dept. of Architecture, Bangladesh University of Engineering and Technology on June 14, 2005.

Smyth, H. (1996). Running the Gauntlet: A Compact City within a Doughnut of Decay. In Jenks, M., Burton, E. and Williams, K. (Eds.), *The Compact City. A Sustainable Urban Form?*, E & FN Spon, 101-13.

Sobhan, R. (1998). From Two Economics to Two Societies. *The Daily Star*, 25.8.98.

Townrow, P. M. (1996). Urban Sustainability and Social Exclusion. In Pugh, C. (Ed.), *Sustainability, the Environment and Urbanization*. London: Earthscan, 179-195.

UDD (2000). *Indicators for Istambul+5*. Dhaka: Urban Development Directorate (UDD), GOB.

UNCHS (1996). *An Urbanizing World: Global Report on Human Settlements, 1996*. Oxford: Oxford University Press.

UNCHS, (2001a). *Cities in a Globalizing World. Global Report on Human Settlements 2001*. London: Earthscan.

UNCHS (2001b). *The State of the World's Cities 2001*. Nairobi: UNCHS.

UNDP-UNCHS (1993). *Bangladesh Urban and Shelter Sector Review*. May, 1993, Dhaka.

UN-Habitat (2003). *The Challenge of Slums. Global Report on Human Settlements 2003*. London: Earthscan.

UN-Habitat (2005). *Financing Urban Shelter. Global Report on Human Settlements 2005*. London: Earthscan.

White, S. (1992). *Arguing with the Crocodile. Gender and Class in Bangladesh*. Dhaka: UPL.

Wood, G. D. (1994). *Bangladesh. Whose ideas, whose interests?*. London: IT Publication.

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Constraints prevailing in the field of Landscape Architecture: A Special Reference to the Indian Subcontinent

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Abstract: The study aims at understanding the discipline of landscape architecture and its professional practice highlighting its different aspects on various scales and locations. Here an attempt has been made to portrait the general idea about the discipline as well as the profession. The paper defines scope of landscape architecture exploring opportunities of the same with a special reference to a specific geographic area, the Indian Subcontinent. Several constraints prevailing in this field has been pointed out with an objective to explore certain directions to overcome those constraints at the end. The scope of the paper is to some extent limited to the examples drawn from the prevalent landscape scenario of Bangladesh.

Keywords: Sustainability Constraint, 'Natural Capital', Utilitarian Evaluation of Nature, Ethical Constraint, Natural Constraint

Introduction

Landscape is an evolving cross-disciplinary area, which draws contributions from art, literature, ecology, geography and much more. Therefore, the term 'landscape' is used in a broad and inclusive way, as it is the holistic and integrated focus on land, which is the unique and distinctive feature of landscape architects, broadly defined. As various dimensions of landscape are developed in more detail, the issues are complex and challenging. The scale of thinking and action needed is large and this distinguishes landscape architecture from many other professions (Benson and Roe, 2000, 1-4).

A landscape professional finds himself in a position of a consultant in large-scale projects initiated from a multi-disciplinary approach, along with other professionals such as environmentalists, urban designers, planners, geographers, economists, artists and so on. Broadly he deals with "aesthetic, social and environmental issues" (Thompson, 2000) While doing so he experiences several constraints in the profession, which are all very relevant in this era of globalization.

As we proceed further, different constraints and opportunities with regard to the profession of Landscape Architecture have been identified.

Constraints to the extent of Scope of Work in the Professional Practice

Present status of the profession in the subcontinent:

- The scope of work for a landscape professional is limited to a few number of projects such as farmhouses, five star hotel complexes etc., which are meant to serve only a group of elite clients. That means the scope is limited only to small-scale situations, whereas the mass of the population is completely out of service of the profession. Public landscapes in a large scale would be beneficial for the mass population (Figure 1). Thus a landscape professional is constrained by the extent of the scope of his work itself.
- The practice of the profession is again constrained by the wrong interpretations of its role by the public and even by some of the architects. "The role of landscape architect is still perceived to be the one who adds 'landscape' to the building as a cosmetic or decorative treatment" (Khanna, 1999, 60) as we can experience it from Figure 2 and Figure 3.

Figure 1:
Location: Dhanmondi Lake, Dhaka
The beautified portion of this recreational site plays an insignificant role, as it becomes difficult to relate the land-scaping to city scale; an urban land-scape would have been effective with introduction of upper story plantation

Figure 2:
Location: Airport Road.

Figure 3:
Location: Prime Minister's Office Complex, Dhaka
respectively. A decorative arrangement of Planting layout makes the landscaped environment unfriendly to its users. Rather than intricacy, simplistic pure shapes are preferable so as to make the landscaping user-friendly

- The practice of the profession is again constrained by the wrong interpretations of its role by the public and even by some of the architects. "The role of landscape architect is still perceived to be the one who adds 'landscape' to the building as a cosmetic or decorative treatment" (Khanna, 1999, 60) as we can experience it from Figure 2 & Figure 3.
- A close association between architects and landscape architects is clearly absent in the profession. The scope of work left for a landscape architect is extremely limited, as he/she is being consulted only after the completion of the architectural design. In this situation he/she has nothing to do "except applying an ornament." (Bhan, 1997, 25)
- Standardized landscape planting design has led to an international design style, which is mostly without any reflection of local landscape character and ecology, requiring "considerable resource inputs in site preparation, plant establishment and long-term maintenance." (Dunnett & Clayden, 2000, 184) Thus the practice of the profession is constrained by the prevailing trends of design considerations which are far beyond the character of the local landscape quality of a place/ region.
- As landscape is a continuous design process and deals mostly with living beings (trees, shrubs, fauna of a particular region), the professionals in this field are constrained by the time period that is required to reach its maturity. Most of the clients they deal with are not patient enough to foresee the ultimate effect of a designed landscape. As a result landscape architects sometimes may have to compromise some of their design decisions to execute the project faster than what they had expected in order to meet the clients' desires.

Utilitarian Evaluation of Nature Impact of Industrialization on Landscape:

Since the industrial revolution in the 18th century, interest in profit making grew at a tremendous rate and utilitarianism, utility of any component being evaluated in material terms, flourished. Results of this ruthless pursuing for material gains, be it agriculture, forestry, industries and related activities like mining etc. or tourism, have changed the scenario of landscape (Palrecha, 1999, 51).

Constraint regarding preserving the original landscape character

Social/cultural impacts on land due to utilitarianism are:

- Standardization of materials and universally applicable design ideas has led to easy design solutions without any reflection of originality and diversity
- With the advanced technological development, even the native agricultural landscape scenario has experienced a change due to introduction of mono cropping, high yielding varieties, hybrid seeds and exotic varieties instead of indigenous seeds, local varieties esp. of food crops and natural herbs.
- The village ponds, wells and water bodies are going to be lost resulting into a threat to the traditional lifestyle of the rural populace.

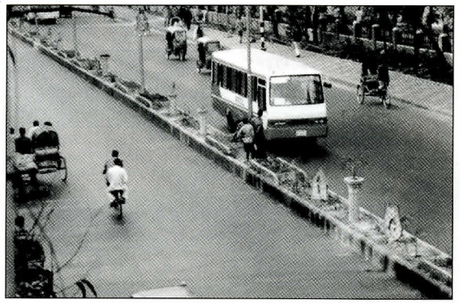

Figure 4:
Location: Vashani Road, Shahbag, Dhaka.
In the name of beautification.....a poor effort given to make the design culturally relevant, whereas the sites of our cultural significanee adjoining the road, namely Ramna Park and Suhrawardy Udyan remain untouched in the City Beautification Program

Figure 5:
Location: Kadam Foara, Dhaka
A very little significance of our cultural relevance, as the design reflects only a two-dimensional effect, causing almost no impact to the city dweller's mind

With this changing scenario due to socio-cultural impacts on land, the landscape professionals witness difficulties regarding preserving the original landscape character of a particular region for its community. It is a landscape architect's responsibility to revitalize these socio-cultural values (Figure 4 and 5), which have weakened the intimate link between land and its people.

But at the same time with this changing landscape scenario the scope of work of a landscape professional is widened from limited aspects to broader aspects of design/planning. Since different conservation issues are addressed by the landscape designer at this stage of design / planning, this can be considered as an opportunity for the landscape professional to play a significant role toward preserving the originality of the local landscape character.

Ecological/environmental impacts on land due to utilitarianism are:

- Unrestricted exploitation of natural resources has caused depletion and pollution of these resources
- Intensive energy-consumption has caused reduction in our stock energy resources
- Extensive usage of fertilizers and pesticides on agricultural land resulted in water pollution
- Extensive usage of water led to terrible depletion of ground water
- Surface water tended to be polluted by effluents of industries

The combined effect of the above has given rise to environmental degradation, which further gives rise to landscape degradation. Thus a landscape professional becomes pre-occupied with the constraint of this degraded landscape prior to the beginning of a Landscape Development Project.

A 'utilitarian' view also pervades our management policies for natural resources (Palrecha, 1999). For example, the major roads in the city of Dhaka are landscaped with trees having high timber values (i.e. Mahogany). In this case, the development authority is more concerned about economic value of the trees, rather than their ecological, social and aesthetic values. The urban landscape would have been more beneficial for the city dwellers if the trees were chosen more carefully.

Natural Constraints / Constraints inherent in the Geography of Landscape

Traditional and older settlements have identity, distinctiveness and character; their form evolves from prominent as well as subtle constraints inherent in the geography of the landscape on which they are sited, e.g. river, hill, valley, plateau, ridge etc. Districts within them acquire their sense of place from the geographical identity of the terrain on which they sit (Shaheer, 1999).

- Use of existing distinct landscape features – be it natural or historical, can act as a guiding principle in a new landscape development site. For example, Nishat Bagh, a Mughal Pleasure Garden is acclaimed for its Site Planning as the surrounding mountainous range has been taken care of very advantageously in order to get a magnificent view from the gardens.

In other words, if the Natural Constraints are advantageously taken care of by the landscape designer, then these can be considered as another opportunity to deal with within the professional practice. There would be another way to preserve the original landscape character of the region.

Strong Sustainability Constraint / Critical 'Natural Capital' Constraint

Sustainability Constraint

The term implies to the constraint related to sustaining the natural resources in the landscapes for future usage, which the landscape architects face in their professional field. A site may be rich in land resources full of biodiversity or other minerals, but the challenge is when it comes to providing sustainable design solutions for future generations within a specific time frame.

A useful notion here is the concept of 'natural capital' which includes not only material resources, but also other capacities and services which are supplied by the biosphere (Pearce et al., 1989).

- Material resources are usually divided into renewable and non-renewable categories. Renewable resources are biological resources such as crop plants, forests, fisheries etc. and are not necessarily depleted when used. Non-renewable resources are carbon and stock resources, mostly minerals, like ores or fossil fuels, which are only replenished on the scale of geological time and hence, strictly one-way flow resources (Thompson, 2000).

Strong sustainability constraint on such minerals:

One of the major concerns of a landscape professional is to give directions towards the consumption of natural resources as an integral part of Landscape Planning Policies. But as they proceed further they observe a strong sustainability constraint while formulating a policy to stop using the mineral resources at present so as to keep a stock for the future generations who again would be constrained to preserve it for their descendants.

- The capacity of the atmosphere, oceans and terrestrial ecosystems to assimilate waste products can be thought of as another form of natural capital with much in common with renewable resources. The biosphere also provides us with more general services which are essential for the continuation of life, including the maintenance of breathable air, stable global temperatures and dependable weather pattern (Thompson, 2000).

'Landscape' allow us to conceptualize and embrace all of these resources, and their impacts and the interactions between them, in a holistic way (Benson and Roe, 2000).

Thus, landscape professionals become an active participant of the Sustainable Development Campaign Program. In other words, there are opportunities to explore possible design solutions in sustainable land development issues for a landscape designer where Sustainability Constraint can be effectively utilized within his scope of work.

Ethical Constraints

Four varieties of ethics having a bearing upon the landscape practitioner are – personal, business, professional and environmental.[1]

Their analysis derives at the following constraints:

- *Lack of social and aesthetic values* – It does not take account of the aesthetic values which practitioners may seek to promote, nor of any obligations they may feel towards the well-being of individuals, communities and society as a whole (Thompson, 2000).
- *Clashes among the ethics* – Sometimes the landscape professionals have to compromise their environmental or professional ethics while meeting their clients' desires.
- *Constraints upon members of the professional body in relation to the preservation of the 'national landscape' (as in Britain)* – It seeks to define the purposes of the profession, recognizes that landscape architects have a role in the promotion of 'aesthetically pleasing, functional and ecologically and biologically healthy' landscapes, but also makes special mention of their responsibility for 'the appraisal and harmonious integration of development and the built environment into landscapes': (Landscape Institute, 1997, Section 5(2) d).[2] These purposes seem rather mixed (Thompson, 2000).

[1] Woolley and Whittaker (1995), presented a paper to criticize the Landscape Institute in Britain which placed ethical constraints upon its members.

[2] The Institute of Landscape Architects was formed in 1929 as a professional body for landscape designers, managers and scientists in Britain

In other words opportunity arises for a landscape professional toward the social obligations within the scope of work in the professional practice.

Planning Constraints

- Mushrooming urbanization and centralized development has resulted in concentration of mass people on urban areas . "Rees (1997) argues that people in cities rarely think of themselves a part of 'ecology' because they are distanced both spatially and psychologically from the landscape that supports them" (Roe, 2000, 67). So there is a need to bring the city dwellers close to the nature. But Urban Planning Policies do not take account of the society's changing needs. In such situations a landscape professional is constrained by poorly formulated Planning Policies, which lack in opportunities to create a close association between urban populace and natural processes.
- Open space provision in the development of new towns has not been recognized as an integral part of Planning. Consideration of open spaces as a positive feature of Urban Planning Principles has not been realized yet. As a result, open space is being kept bare minimum against a certain population figure. Such unsympathetic planning decisions create a negative impact on a landscape development project since a landscape architect mainly deals with design of open spaces.

Economic Constraints

Today most of the designed landscapes are concentrated in the urban areas where function and aesthetics dominate the design. Areas under development being restricted in size, the cost of development and maintenance are not the major issues. On the contrary, the issue of sustainable landscape is more significant in the development of areas which are vast in expanse and which need to be developed and maintained with economic constraint, predominantly located on the urban fringe (Hadap and Gavandi, 1999).

- Imitation of a completely exotic landscape style in our native landscape would require high degree of maintenance, which is not cost effective. Revival of our natural landscape type is therefore necessary.
- Sometimes landscape architects have no other choice than importing the products they use in their design, as they have not a range of products available to choose freely. Thus the landscape projects become economically not viable.
- In most cases the urban development authorities do not allocate even a minimum fund for landscape development projects. "Most of the urban spaces, even in New Towns, are suffering due to this situation" (Pradhan, 1999, 59).

Rcommendations

Generating Opportunities to overcome the Constraints

Opportunities to extend the Scope of Work within the Professional Practice

- Large scale Landscape Development Projects need to be initiated by the government development authorities in public sector so that Public Landscape can play its role for the betterment of the society. That means the scope of work in this profession needs to be broadened and clearly defined.
- A close association between the architect and landscape architect right from the beginning of the project would definitely ensure a better design quality. And this "forms today an essential pre-requisite to the design process"(Ganju, 1999, 56).
- Local materials and vernacular architectural styles should replace the conventional standardized materials and design ideas. This would definitely reflect the local landscape character of a place.
- Also "sustainable vegetation plans should therefore incorporate urban vegetation types which are native to the city region and will yield a planting character based on the city's ecological legacy" (Spirn, 1984, 188).
- Time constraint can be overcome by using native plant species which are suitable and easily adaptable to the existing site conditions and require a shorter period to reach its maturity. Thus by proper selection of landscape materials a project can come to a successful end without conflicting with the clients' desires.

Changing Viewpoint of Utilitarian Evaluation of Nature

- All natural resources need to be stopped to be looked at as commodity. Apart from their economic value, other aspects like ecological, visual, environmental, biological values are also need to be considered.
- The 'utilitarian' view pervading our management policies for natural resources has to be overlooked. Policy formulation for these resources should be based on the evaluation of the resources (i.e. firstly it is of what importance – economic/ecological etc.). The nature of the proposed development could be determined after formulation of the policies.

For example, in the heart of the city of Dhaka, a piece of land may be most valuable from economic point of view. Building developers may prefer to build a multistoried apartment, which is a profitable business and a common scenario in the present day context. But in the long run this will create a negative impact on the urban landscape. This unplanned growth of development without any foresight in its planning policies is only taking account of the immediate shelter demands of the city dwellers and should be checked immediately. And this is only possible when the policy makers would incorporate a long term view in their planning decisions, not only considering the 'utilitarian' view towards the resources.

Overcoming Natural Constraints through Site Responsive Planning –

- Constraints inherent in the geography of landscape can be treated as a positive feature in itself. Site responsive planning is necessary to overcome these constraints. Planning should be done with respect to the existing site features. It should be such that the designed landscape forms an integral part of the natural landscape.

Overcoming Sustainability Constraint through attributing values to Natural Resources

- A landscape professional can suggest the ways to overcome the sustainability constraint by attributing different values to different resources according to the type of the proposed development as well as that of the resources. For example, if a landscape development is proposed on a land rich in biodiversity, then a landscape professional would firstly prioritize its biological resources by labeling them as ecologically valued ones so as to avoid any negative impact on the environment and ecology of that region. It is desirable that the landscape professional would also suggest the proposed degree of development (i.e. intense or limited), which should take place on that land and define clearly to what extent these resources should be consumed or exploited.

Overcoming Ethical Constraints by recognizing /defining the Professional Ethics

- These can be overcome by recognizing the ethics of a landscape practitioner very carefully. A broad and clear understanding and awareness about the profession among the public would help to make it possible. A public campaign regarding landscape and the role of its practitioner can be helpful.
- Also the concerned professional body has a major role to play while defining the ethics for its professionals.

Community based Landscape Projects to overcome Planning Constraints

- These constraints can be overcome by using the urban landscape as a tool to promote environmental awareness and raising social values among the urban communities by involving them in community based landscape development projects. Social forestry can be an example to bring them close to nature.
- Open-space planning can be integrated with other policies so that a Landscape Development Program becomes self sufficient in itself.
- Provision of open spaces in Landscape Planning or Design cannot be thought of in isolation. The built spaces and the open spaces are complementary to each other. "There is a need to understand culture-specific patterns of open space usage and to consciously evolve away from the standard hierarchies to more user-responsive models" (Shaheer, 1999, 48).

Overcoming Economic Constraints through Sustainable Design Solutions

- A Sustainable Landscape Development Project can also be called as an economically viable one. Apart from its functions and aesthetics, a designed landscape can help generating income to support the local population's livelihood by accommodating productive organic gardens, social forestry, nurseries etc. within itself.
- Recognition and regeneration of our native landscape type can help overcoming the economic constraints.

- Economic Constraints can also be overcome by inclusion of a considerable amount of fund in the main urban development budget-proposals so that the urban landscapes do not lack in positive features within themselves.

References

Armstrong, H. *et al.,* (2000). 'Landscape Planning and City Form.'. John F. Benson and Maggie H. Roe (Eds.), *Landscape and sustainability.* 160-172. London: Spon Press.

Baweja, V., (1997). 'Ravinder Bhan', *Indian Architect and Builder,* Vol. 11, No.4, JBSPL Publication, Mumbai, 25.

Benson, J. F. and Roe, M. H., (2000). 'The Scale and Scope of Landscape and Sustainability.' John F. Benson and Maggie H. Roe (Eds.), *Landscape and sustainability.* 5-6. London: Spon Press.

Dunnett, N. and Clayden, A., (2000). 'Raw materials of Landscape.' John F. Benson and Maggie H Roe (Eds.), *Landscape and sustainability.* 179-200. London: Spon Press.

Ganju, N. M. A., (1999). 'Present Status and Future of Landscape Architecture Profession in India.' Special Issue on Landscape Architecture – II, *Journal of the Indian Institute of Architects,* Vol. 64, IIA Publication, Mumbai, 56.

Hadap, K. and Gavandi, V., (1999). 'Sustainable Landscape.' Special Issue on Landscape Architecture – I, *Journal of the Indian Institute of Architects,* Vol. 64, IIA Publication, Mumbai, 37.

Mandlekar, T., (1999). 'Urban Landscape Spaces.' Special Issue on Landscape Architecture – II, *Journal of the Indian Institute of Architects,* Vol. 64, IIA Publication, Mumbai, 59.

Palrecha, A., (1999). 'Landscape Development and Industrialisation - Some Issues.' Special Issue on Landscape Architecture – I, *Journal of the Indian Institute of Architects,* Vol. 64, IIA Publication, Mumbai, 51.

Parashar, J.L., (1999). 'Role of Landscape Architect in Multi-disciplinary Teams for Planning & Design.' Special Issue on Landscape Architecture – II, *Journal of the Indian Institute of Architects,* Vol. 64, IIA Publication, Mumbai, 60.

Roe, M. H., (2000). 'The Social Dimensions of Landscape Sustainability.' John F Benson & Maggie H Roe (Eds.), *Landscape and sustainability,* 67-68. London: Spon Press.

Shaheer, M., (1999). 'The Landscape of New Towns.' Special Issue on Landscape Architecture – I, *Journal of the Indian Institute of Architects,* Vol. 64, IIA Publication, Mumbai, 47-48.

Thompson, H., (2000). 'The Ethics of Sustainability.' pp. 19-29. John F. Benson and Maggie H. Roe (Eds.), *Landscape and sustainability.* London: Spon Press.

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Drama in Space: The Role of Natural and Artificial Light in Creating Space

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Abstract: Natural light, an essential element, helps to see things. The reflected light, on the other hand, provides an important communication channel just as the camera controls the process of seeing objects. Light holds a key position in visual arts, particularly in Architecture. Lighting condition affects human emotions too. The change in the quality of light brings a change in the mood of the observer. The space inside a building can be dramatized or emphasized with the desired artificial or natural light. Interior spaces require various quality of lighting, in relation to the activity to be performed in that space. In recent days, light is not only a prerequisite to observe things but also adds a philosophical aura in Architecture. We prefer natural light to artificial lighting for various reasons; in absence of natural light, artificial or supplementary lighting is required to improve illumination of the room to perform the assigned tasks. Whether emitted by a natural or artificial source, changes in the concentration of light or in the general characteristics of light emission often induce subconscious response in the observer. It is this emotional aspect of the lighting that outlines a real challenge to the imagination and creative judgment of the designer, and extends its role beyond the scope of simple illumination. This paper through a literature study, observes the performance of natural light; it gives special attention to some spaces designed by Louis I. Kahn to show his techniques of light sensitively to create certain moods in specific spaces.

Keywords: Memory, Place, Space, Urban, Manifestation

Introduction

The major source of natural light is the sun. From which we receive also a large amount of thermal radiation together with the light. In bright sunshine the illumination is around 100 K Lux (100,000 lux), the intensity of thermal radiation is about 1 KW/m^2 (Koenigsberger et al, 1978). Here we need a filter so that heat is admitted limitedly while admitting light. The building envelope is thought as a barrier between the controlled indoor environment and the external environment. The indoor environment is within the control of the designer but the external environment is beyond human being's control. So architects play an important role here to create such a barrier that filters the unwanted elements (like rain, heat, and dust) and admit the desirable elements like light, air into the internal environment.

For the obvious relationship between light and visibility of work, some designers and engineers had considered light as a necessary mechanical feature, but light has qualities other than simple illumination. Almost every one of us has felt the holding power of a spotlight on a stage or reacted to the mood of a beautiful sunset or sunrise – conditions created by the gradual changes in lighting. Similarly bright lights create the excitement. Designers are aware of the dynamic quality of light, but the significance of these changes is sometimes overlooked or underestimated. Light can have a strengthening or reinforcing effect similar to that of background music in creating an appropriate emotional environment and a complementary psychological setting (Flynn and Mills, 1962).

The impression of pleasantness and well being that an individual receives in a space may influence his attitude, which is a major factor in performing a task or an activity. In this sense, the visual impression induced by the lighting systems is fundamental in planning and design and they become a functional part of the activity.

Light Used in Historical Periods

Architects and designers have been trying to create impact inside the buildings from a long time. In

classical roman architecture in Pantheon, light is used in such a way to make a special effect inside the space. The great dome of Pantheon of 142´-6´ diameter had only one circular unglazed opening at the top of 27´-0´ in the crown of the dome through which light enters and floods the whole space and cascades over the surface of the dome (Fletcher, B., 1967, 197).

The changing quality of natural light brings a change in light inside the space and dramatizes the internal space. The endlessly changing quality of natural light makes the space different every second of the day.

Lighting in Church

Form the origin of church building; light has been treated very carefully to create a mystic and overpowering mood. In the basilican churches in Early Christian period in around 300 AD to 800 AD, clerestory lightings were used to bring lateral light inside the nave by making the nave height and aisles height different (Fletcher, 1967).

Later in Romanesque period with the development of vaulting system, the height increased and in Gothic period the flying buttresses allowed the walls to become curtain walls and free from bearing the load of the roof and vault. Thus it could be glazed hugely and used for bringing in light.

Gothic Cathedral with their traceried clerestory openings, rose windows and other stained glass work presented a picturesque quality of light and color inside the lofty cathedral interiors.

The Use of Light

Design of the lighting system must provide for the observer's ability to see and perform the physical aspects of the activity. In simplest form, a single spotlight or luminous element in a room might provide very high illumination over a confined and concentrated area. This will however, leave the rest of the room in relative darkness. At the other extreme, the lighting system may be designed for general diffusion to provide the required quantity of light over the entire space. Light, therefore, is a variable factor and changes in color, direction and diffusion affect the subjective impression of the environment.

Light is a narrow wavelength band of electromagnetic radiation form about 380 nm to 780 nm. (1 nm = 10^{-9}m) and due to different wavelength it is of different colours.

Light defines certain spaces according to its nature. For example,

Classroom, office spaces → uniformly lighted,

Restaurant, museum → spot lighting and high contrast environment.

Lobby, bedroom etc. → generally lit or low lighted

The hierarchy of lights can define hierarchy of the spaces. Bright and high contrast light creates lively environment while low, dull and low contrast lights create gloomy environment. Directional light with high contrast and focus is used in the museum and theatre. Directional light breaks monotony and boredom and stimulating environment can be created where as low contrast non-directional light, which cannot cast shadow, creates a monotonous environment with no focus. The lighted space tends to dominate the observer, directly and holding his attention and interest.

A lighting system that reduces or eliminates contrast produces a diffused environment. For casual circulation, congregation and assembly the diffuse lighting approach produces a more desired environment.

Light casts shade and shadow of forms and creates a three-dimensional quality in a surface. In addition to altering the visual characteristics of the space itself, the light condition also affects visual perception of surfaces and objects in the room. Three-dimensional form is "seen" as a relationship between high light and shadow. It changes the visual impression of depth and form. (Flynn and Mills, 1962, 46)

Light character and distribution influence the surface texture, sculptural form and the visual characteristics of materials. High light and shadow reinforce the impression of natural textures and sculptural relief and all the blemishes and errors in workmanship on the surfaces become clearly visible. Conversely, a more diffused lighting condition will reduce the visibility of surface flaws, giving an impression of flatness and surface unity.

The presence of shadow in the high contrast lighting condition, in the working environment, may be the cause of distraction. In some cases, these shadows may be the cause of irritation while writing under a concentrated light source. The excessive concentration and constant re-adaptation required of the worker in such a situation can, over a period of time, result in visual fatigue, accident and errors.

Above all, light creates a spiritual effect. In the churches and mosques light is brought from high above to create a flood of light inside and a heavenly quality.

Indirect Lighting in Architecture

Light creates life in architecture. It creates shade-shadows and .this shade-shadow plays a great role in changing the mood of the observer. The natural light with its changing quality gives character to a space.

There are mainly two kinds of light –

- Direct light
- Indirect light.

Most of the times architects use indirect light because of its softness and glare free nature. Direct light also produces heat.

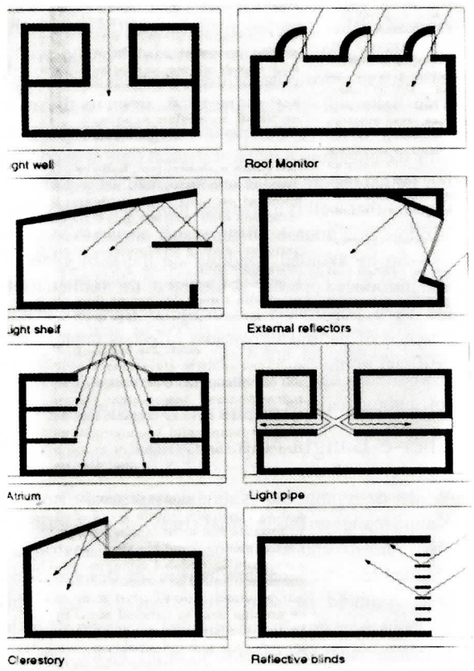


Figure 1: Some methods allowing sunlight into deep internal spaces

(Source: Goulding Lewis and Steemers, Energy in Architecture, 124)

In the commercial zones, as office buildings are of deep plan for the scarcity of land and its high price, it is difficult to bring light in the central areas. For lighting a large space or deep area indirect lighting is effective. If the sunlight is diffused or brought indirectly by reflecting it onto the ceiling or walls then it can make a worthy contribution to lighting requirements.

Some methods, which allow sunlight to the deep internal spaces, without glare, are shown in the following figures.

Though most of the greatest architects have their own concept or philosophy on light still they emphasize greatly on their effective use. Among those who have worked with light brilliantly in their design, Louis I. Kahn's name is worthy of mention. A few of his works on light will be discussed here to find out the techniques of bringing in light in his designs and ultimately how light changes the character of space by adding a separate philosophy in building environment. According to him, *light is the giver of all presence* (David B. Brownlee and David De Long, 1991, 212).

No space is really an architectural space unless there is natural light in it with its changing quality.

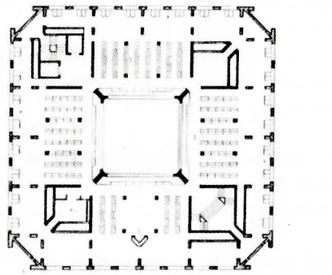
Philip Exeter Academy, Library (1966-1968)

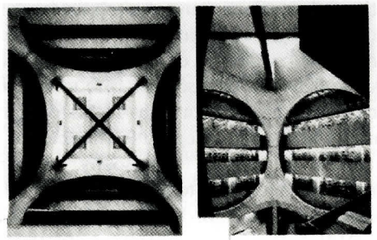
"*A man with a book goes to the light, a library begins that way*" – Kahn.

This is an example of a simple plan, filled with light, expressing the basic idea of the space – functionally a library, but spiritually a sanctuary where books are offerings. There upon a simple plan be erected a great room filled with light. The diffused light is coming from the ceiling. Philip Exeter library is a square space defined by structure and light circles of concrete frame each interior elevation, bracing the main piers at the corners, and the sun entered from above to bathe the whole in brightness. Around the central space on all sides are the book stacks. At the perimeter of the building, the individual reading area receives daylight through the external windows, which also provides pleasant view to the individuals.

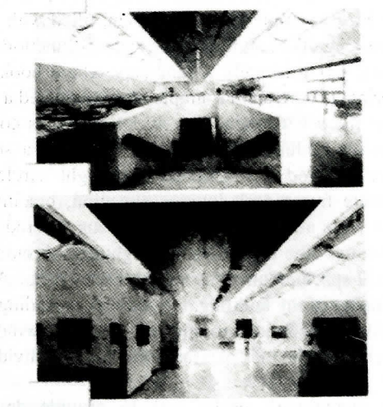
The committee's desire was to provide daylight intelligently wherever possible, since artificial light lacks the color range of natural light. As a result Kahn's library was a combination of the following two aspects:

Figure 2: Philip Exeter Library and Kimbel Art Museum





Sketch section. Inscribed September 22, 1967.



Source: David B. Brownlee and David De Long, Louis I Kahn: In the Realm of Architecture, Rizzoli International Publications Inc. NY, 1991

1. A grand public hall surrounded by books and lighted with overhead divine light.
2. An intimate space for reading and connecting visually with the outdoor.

Kimbel Art Museum, Texas.

"Structure is the maker of light, because structure releases the space between and that is light giving" (Brownlee and Long, 1991, 212)

At Kimbell, it was the roof, not the wall that was parted. Each vault split along the full length at its crown and acts skylight. Kimbell Art Museum is a building of domestic scale. The basic unit of the whole composition is the barrel-vaulted space. The natural lighting in each gallery provided the sense of totality of the galleries. Kahn thought that sky lighting of the galleries would give a comforting feeling of knowing the time of the day. The whole plan is composed of a number of rectangular rooms with cycloid vaults.

Kahn considered the fact that the painting and objects that may fade in direct bright light should be lighted modestly. Therefore he created a vaulted roof with a slit opening at its crown towards the sky, with a reflector to spread the light on the sides of the vault. This light will give a touch of silver to the room without touching the objects directly. At the same time the changing quality of natural light will comfort the human being inside, without creating glare. He thought that wall is a precious thing in a gallery and a window is a source of glare and disturbance to the eye. So he avoided windows on the wall generally and introduced opening at the top of the vaulted roofs. He even positioned the artificial light so that in absence of natural light same affect is created with artificial lights.

The National Assembly Building, at Sher-e-Bangla Nagar, Dhaka.

While designing the National Assembly Building, Kahn made a thoughtful study of the climate, environment and light quality of this region and reached to a decision that light in the designs of this region should be softened and at the same time precious breeze is to be allowed. As a result of his elaborate studies, several lighting techniques and design decision were used which gradually became the guidelines to define a space. In deep plans the central space does not receive direct light from the external walls. In those spaces light is to be taken inside at some points from over head plane and this

spaces act as light as well distributing light to the adjacent to the inner areas. The techniques that are used in National Assembly Building, Sher-e-Bangla Nagar, Dhaka are discussed below:

1. *Use of Screen Wall*

   The outer shell of concrete is perforated with large openings, which allows the breeze and light to flow inside the office spaces through window openings, which are placed on a recessed wall. Thus strong light is softened without shutting the breeze.

2. *Clear Story Opening*

   The ambulatory – an inner street open to the ceiling 7 stories above – is lighted through glass strips on overhead ceiling.

3. Light Wells

   A number of open to sky light wells acts as light source to the inner space of the rooms adjacent to the central assembly room. The overhead light illuminates the vertical plane of the concrete walls of the light well, which in turn acts as the source to an internal space. The internal rooms have window openings towards these light wells. The changing nature of the light on the vertical plane presents the picture of environment although these rooms are detached from external environment.

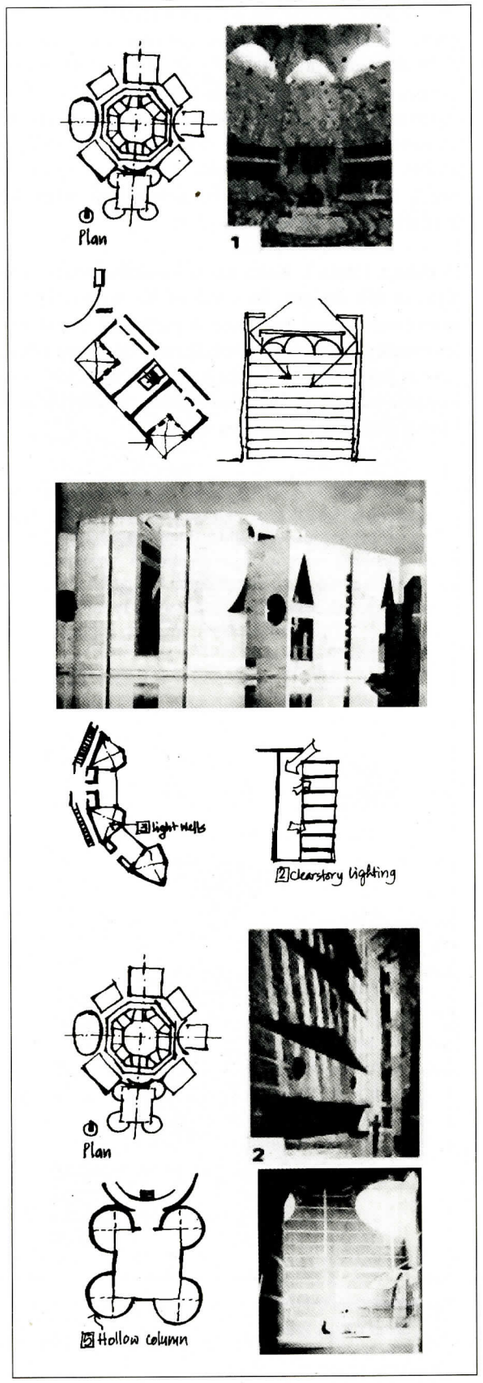
4. Lighting in the Assembly Chamber

   The main Assembly Hall is placed at the centre, the heart of the total octagonal plan and there is no way of receiving light from external wall opening directly. So Kahn here again brought light from overhead level and distributed it indirectly through out the whole chamber.

5. Hollow Column

   To bring natural light to the interior space, Kahn developed the hollow columns, which are something like a light well. Kahn said, "*In the plan of the assembly, I have introduced a light giving element to the interior of the plan. The columns as solids frame the space of light. Now think of it just in reverse and much bigger and their walls can themselves give light, then the voids are rooms and the column is the maker of light*".

Figure 3: National Assembly Building, Sher-e-Bangla Nagar, Dhaka



Conclusion

In this above review we have observed that light, the energy of environment, is essential for seeing things; light also adds a philosophy in architecture. Light creates a link between the indoor space and outdoor environment. It changes with the change of nature and environment. And this changing quality of light makes it interesting and adds a drama in space. A space that is static can be dramatized with the accentuation of light and shadow.

Architect Louis I. Kahn made extensive study with light in his designs. In some of his works light is marvelously used to create a particular mood and spirituality. He came up with several decisions which acts as guidelines for future Architects who wishes to explore more and use this natural resources as a strong element of their own designs.

References

Ahmed, Z.N., (1987). *The effects of climate on the design and location of windows for buildings in Bangladesh,* unpublished M.Phil. dissertation.

Bell, and Burt, (1995). *Designing Building for Day lighting,* BRE pub.

Brownlee, David B. and Long, David De, (1991). *Louis I Kahn: In the Realm of Architecture,* Rizzoli International Publications Inc. NY.

Fletcher, B. (1967). *A History of Architecture on the comparative method,* 17th edition, New York. Charles Scribner's Sons.

Goulding, John R., Leewis, J.Owen and Steemers, T.C., *Energy in Architecture,* The European Passive solar handbook.

Flynn John E. and Mills, Samuel M. (1962). Architectural Lighting Graphics, Reinhold Pub. Corporation, NY.

Koenigsberger, O.H., Ingersoll, T.G., Mayhew, A., Szokolay, S.V., (1978) *Manual of Tropical Housing and Building,* London : Longman Group Ltd.

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Jerusalem City: An Inquiry into it's Morphological Evolution

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Abstract: Jerusalem, one of world's holiest cities, is sacred to Jews, Christians, and Muslims. The location of synagogues, churches and mosques as well as shrines and tombs of the holy, the learned, and the martyred have made Jerusalem one of the most important pilgrimage centres for monotheists. The Temple Mount, the Wailing Wall, the Dome of the Rock, the Church of the Holy Sepulcher, to name a few, award Jerusalem with a very special holiness to half of the humanity. Over the centuries, numerous historic events had left footprints in Jerusalem contributing to its morphological evolution. The focus in this paper is the socio-spatial issues that had contributed over the centuries to the city's morphological evolution. This review has found that the sense of belongingness derived out of religious attachment has ultimately promoted the mass awareness regarding the cultural, historic value of Jerusalem's spatial footprint. Moreover, successive governments have shown firm determination to preserve the distinctive urban space by devising and implementing supportive planning guidelines and public consciousness regarding the preservation and protection of natural landscape; these initiatives have maintained the spatial harmony and also contributed to keep Jerusalem's unique character for decades.

Keywords: Jerusalem, urban morphology, cityscape, conservation

Introduction

Urban entities are basically culture and geography's largest artifact-product of a very complex play of varied forces (Dickinson, 1984). Numerous theoretical understanding has come forward regarding the formation of urban entities hence illustrating the process of morphological evolution of human settlements. Many ways of conceptualization of urban morphological evolution have been proposed by anthropologists, historians, geographers, planners, architects and other professionals due to its multi faceted, interdependent, social, physical and spatial dynamics. It has been the intention of researchers in urban studies to seek out the 'generalized rationalization' of the urban form and structure which is the outcome of the socio spatial dialectic at a particular point in time. Indeed, the initial objective of all studies on urban areas is to identify spaces within the cities which exhibit distinctive social or spatial characteristics. Thus the main focus is on the segments or parts or sub areas which may be termed morphological regions, neighborhoods, localities, districts, precincts, urban social areas or urban regions, according to the type of approach and semantic taste of the researcher. Besides, city form and morphology tends to change less rapidly than many human institutions because these are non-generational, lacking the definite life span like human organism (Vance, 1990). Basing upon these theoretical propositions, this study has been initiated to investigate the issues and components that have dictated the formation, growth and maturing of the spatial fabric of the mystic and historical city of Jerusalem. The core focus here has been the components of urban spatial structure and socio-political affairs that dictated the morphological form from time immemorial. The continuing process and forces of the interrelationship of morphology is being illustrated here from various points of view.

Jerusalem: The City at a Glance

Location and Landscape

Jerusalem is located in the middle-eastern part of Israel. It is a 3000-year-old city covering an area of about 629 sq.km (Sharon, 1973). It is one of those places on earth where human civilization had first settled and flourished. To day, it is a city where mysticism and optimism have merged completely.

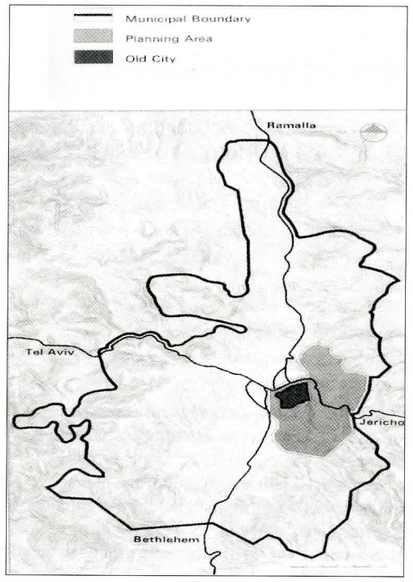


Figure 1: Map showing old city and municipal boundary.

Figure 2: Map showing modern day city core

Figure 3: Open Spaces–creating balance between natural and urbanized spaces in Jerusalem.

Topographically, Jerusalem is at 800-meter high plane from the Mediterranean Sea (Sharon, 1973). Mount olives in the east and mount Zion on the north are bordering the city. These mountainous ridges along with an artificially maintained open space are covered with lash greens that appear as a dividing zone between the old and the new city. Moreover, this carefully designed green space is designated for conservation, for recreation and as an escape from the haste of urban life. The valleys that remain unspoiled are preserved as the natural setting to support the urban environment (Sharon, 1973).

Jerusalem is a good example of maintaining green spaces in an urban eco-system (Hasson, 2001). Parks, gardens and courtyards as well as ecological niches are conserved, both as a public or private property.As per contemporary standards, the urban planning allocates a reasonable ratio of green space per capita. It also guarantees playgrounds and green spaces with in proximity of each neighborhood. The existing 'Open Space Plan', with its balance between natural and urbanized spaces, is adopted and put into practice (Hasson, 2001). The importance of green spaces and environmental issues in influencing the quality of physical and mental health, is emerging as a central criterion in all development decisions.

Cityscape

Jerusalem is a living city that has grown in an organic manner and is well based economically and socially. For centuries, it has been an extremely vibrant cultural and spiritual urban entity. During the early days of modern Israel, Jerusalem was supposed to be the state capital. Later, Tel Aviv was selected as the capital (Hasson, 2001). Such postulation of being the state capital initially, and later emerging as a regional city, has affected the cityscape by slowing down its physical growth (Hasson, 2001).

Townscape of Jerusalem is marked with vaulted alleyways, narrow lanes open to sky, fore court and interior plaza, stone paved streets with plenty of greens (Hasson, 2001). It is also dominated by domes of vanity, towers and minarets that can be seen anywhere from the city. As a whole the city, the cityscape is rich in format and colour (Hasson, 2001). From the early decades of 20th century, Jerusalem emerged as a city divided into two parts, namely old Jerusalem, which was established centuries ago as a fortified urban enclave, and the new city that has emerged circling the old city. Each of these two parts are standing today with their own distinctive spatial character.

In the old city of Jerusalem, the distinctive characters are as follows:

- Comprised of ancient architecture and built form emerged on different era representing different religious philosophy- resembling organic form of growth.
- Buildings are of low heights with open courtyards covered with narrow, crowded, bustling pedestrian alley.
- Houses, synagogues, mosques, churches, religious schools are ornamented with decorative grafting.

Figure 4: Sky-line of Christian quarter at old Jerusalem

Figure 5: "Open Court yard"-one of the common spatial character of old city buildings

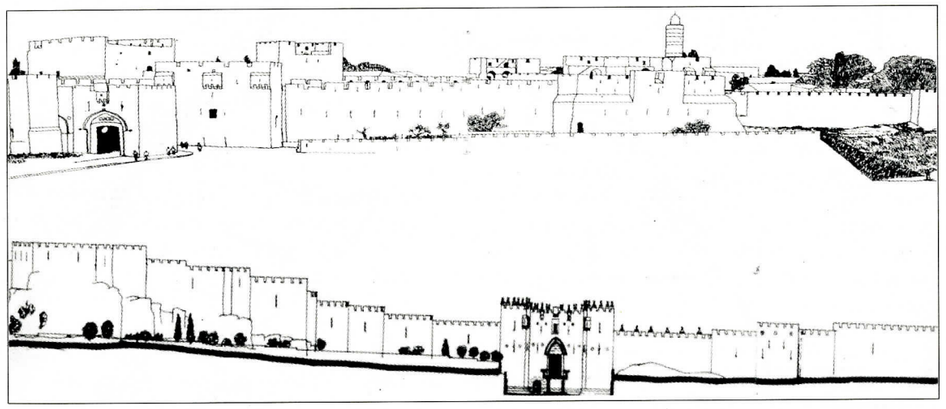


Figure 6: Artists impression of the fortified old city.

Source: Sharon (1973)

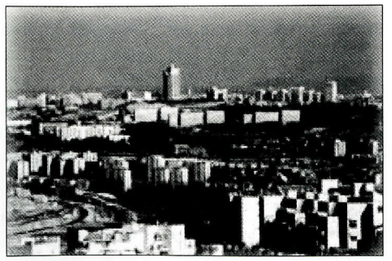


Figure 7: Sky line of New city

Figure 8: Light rail – one of the popular mode of transport for intra-city commuting

The distinctive characters in the newer part of the city are as follows:

- *Grew around the old city.*
- *Developed in Grid-Iron pattern.*
- *Building heights are maintained at low level to confirm with the sky line of the old city.*
- *Criss-crossed with ample vehicular transport network.*

Context of Morphological Evolution

The city of Jerusalem came into being approximately in the sixteenth century B.C. (Sharon,1973). Abraham in the eighteenth century B.C. was associated with Jerusalem when it was a city of the Canaanites, and it became an Israelite city in the tenth century B.C.-the City of David. It was David who built up Jerusalem's fortifications, erected impressive public buildings, and made it the political capital of the kingdom of Israel. David's successor, Solomon, established the most imposing building; the First Temple.

Although Babylonian emperor Nebuchadnezzar II destroyed it in 586 B.C., a second temple was built on the same site in 515 B.C. under the tutelage of the Persians (Sharon, 1973). This temple stood until A.D. 70, when it was destroyed by the Romans; and Jerusalem became a Roman city - later a Byzantine one (Sharon, 1973). Muslims conquered the city in A.D. 638, and the ancient Temple Mount soon became known as Haram-esh-Sharif, the Noble Sanctuary, as it became the site of the Dome of the Rock and the Al Aqsa Mosque (Sharon, 1973). The "Rock", which is particularly sacred to Muslims, had became the core part of Jerusalem and still it maintains such status in the changed world fabric (Sharon, 1973).

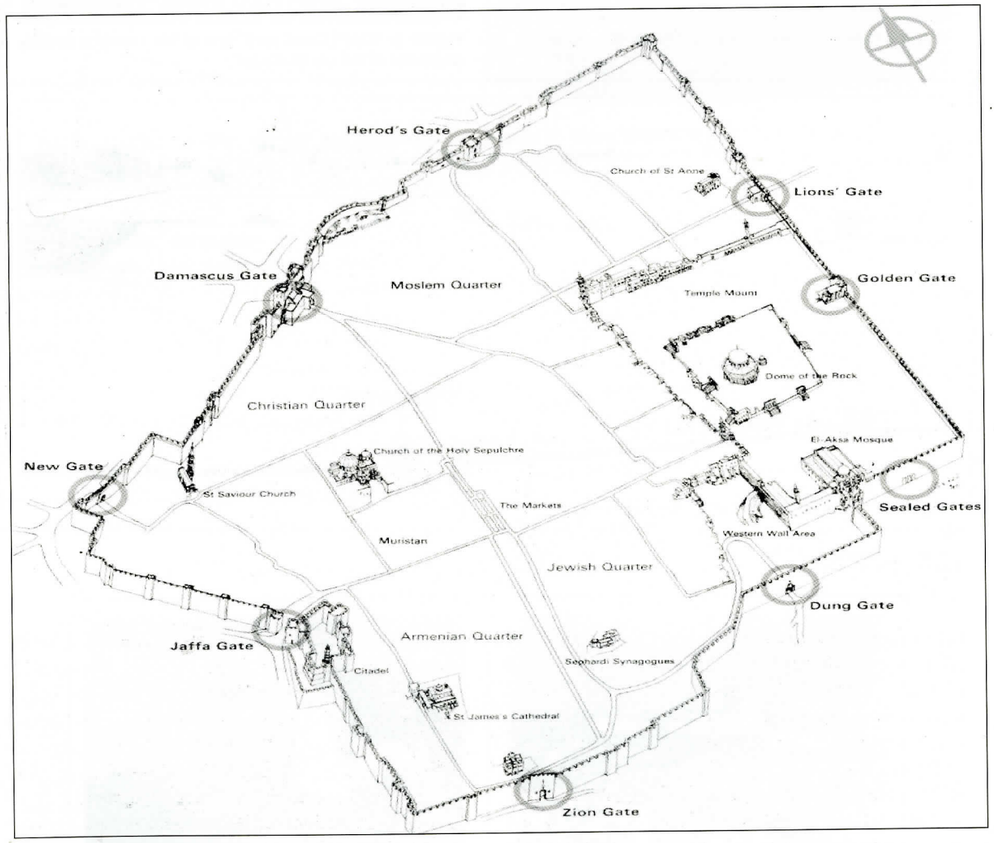
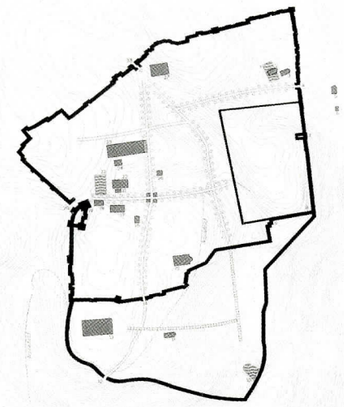
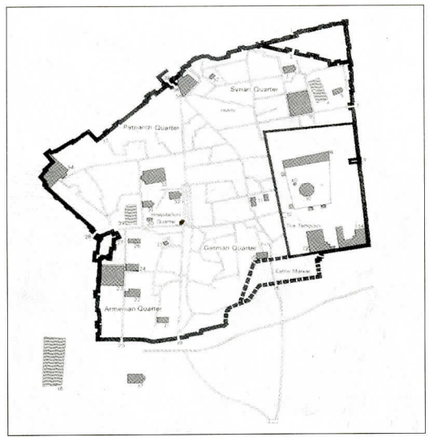


Figure 9: Old city with Harem-ash-Sharif (Dome of the Rock) at the Centre

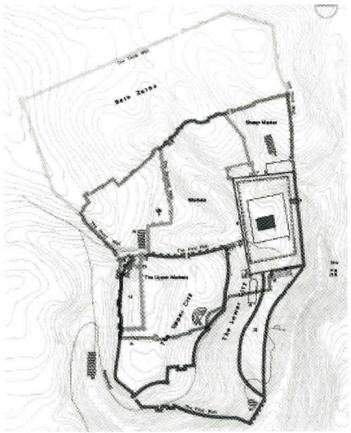
Source: Hasson (2001)



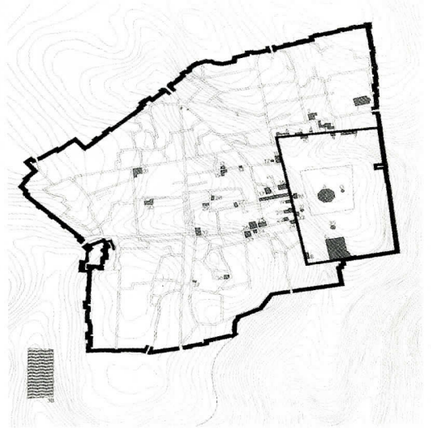
Jerusalem during Byzantine period (324-638 AD)



During Crusade period (1099-1187 AD)



During 2nd temple period (537 BC-70AD)



During Ottoman period (1517-1917AD)

Figure10: Development of Jerusalem city in Different Periods.

Source: Hasson (2001)

Urban fabric of Jerusalem has long been influenced, affected and dictated by the politics of religion (Brunn, 1993). As such it grew as a partitioned/divided entity. In fact such a political phenomenon and subsequent spatial development policy have started shaping the urban fabric and form of Jerusalem to a notable scale from the late 19th century when members of Jewish faith started immigrating to the then Palestine and settled mainly around Jerusalem (Brunn, 1993). These immigrants started to buy out Arab lands in and around Jerusalem (Brunn, 1993). Such an initiative naturally triggered refurbishment of individual household, blocks, quarters and community that formerly belonged to other religious faiths, in accordance with the belief, culture and heritage of Judaism. Numerous Synagogues, Yeshovts (Jewish religious schools) were built within the city in between 1885 to 1947 (Brunn, 1993). Thus with these the urban fabric of Jerusalem started to incline towards Jewish heritage steadily. Meanwhile the city continued to be divided between Moslem, Christian and Jewish quarters increasingly.

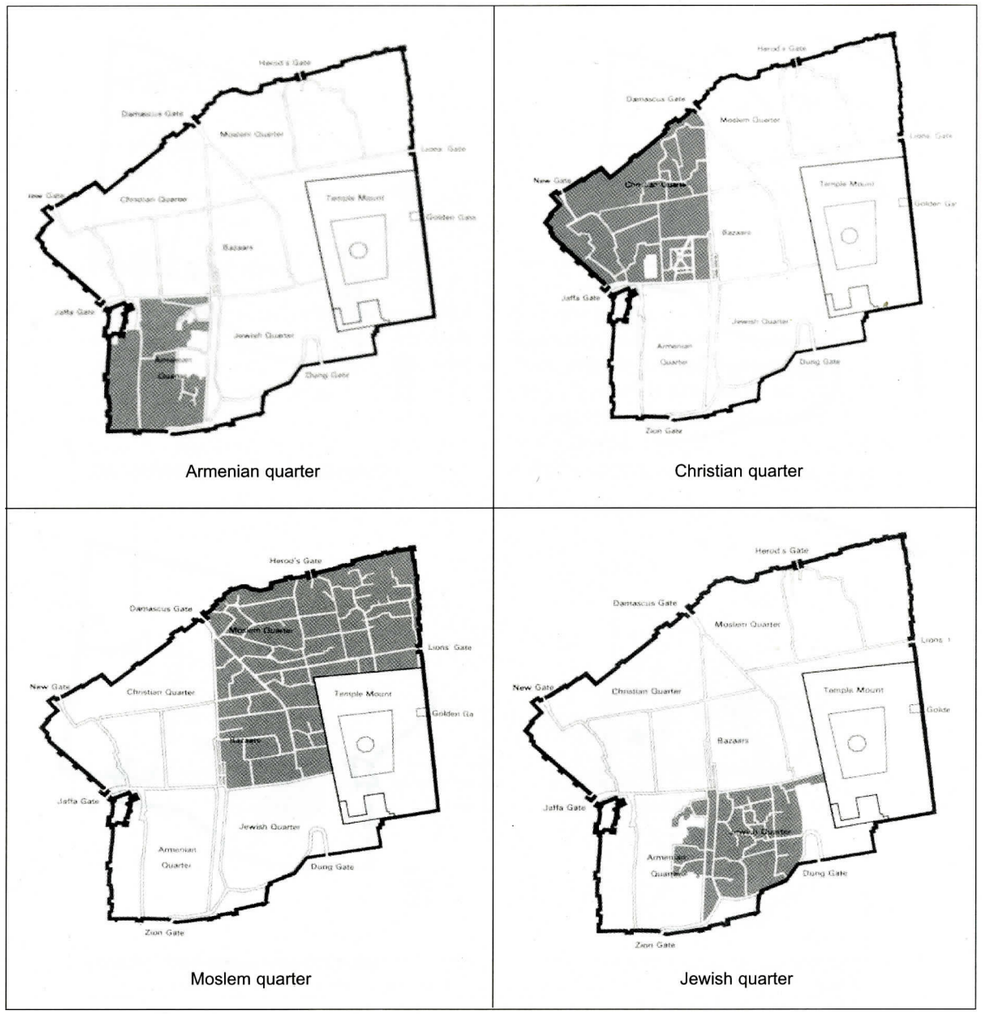


Figure 11 : Map of old Jerusalem divided on the basis of inhabitant's religious belief

Source: Sharon (1973)

After the war of independence in 1948, Jerusalem found itself partitioned into two parts and ruled by two different countries- Israel for the Jewish part and Jordan for the Moslem part. After 1967 war, the size and shape of Jerusalem changed as the Arab parts of the city had been conquered by Israel. In order to sustain the occupancy of the whole of Jerusalem, state promoted Jewish immigration grew tremendously. Previously old Arab settlements were annexed as Jewish land and were developed in a different fashion, i.e, housing neighborhoods, administrative districts, CBD's, playground, green spaces, theatre halls etc (Brunn, 1993) for the Jewish community. Places with Jewish heritage attracted the attention for renovation, restoration works, while places with Christian and Moslem cultural values being neglected. Thus from a more cosmopolitan, secular image, Jerusalem has again transformed into an Israelite city again after King Solomon 586 BC (Brunn, 1993).

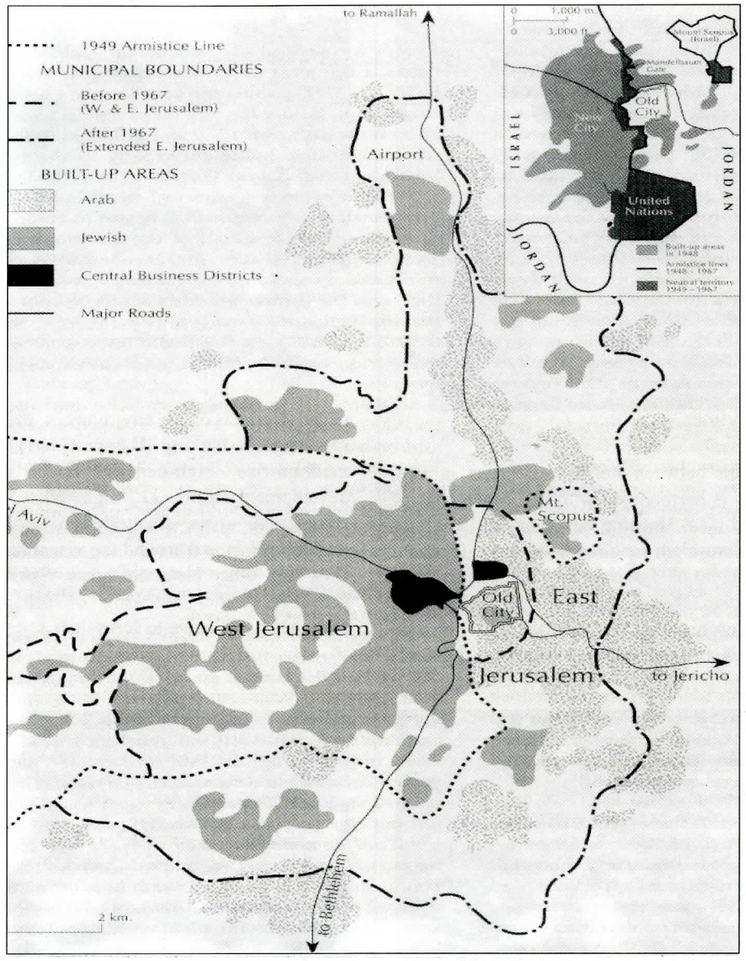


Figure 12: Map showing present day Jerusalem with enclosed enclaves chalked on the basis of dominant religious community

Source: Brunn (1993)

State of the Present Day Urban Fabric

Urban Design Philosophy

"The architecture of Jerusalem situates up a dialogue between old and new" (Choshen, 2001, 87). It takes into account of social needs, natural topography and cultural heritage. The quality of important projects is increased through architectural competitions, public debates and exhibitions (Choshen, 2001). The scenic and historic heritage of Jerusalem is designated as a heritage of 'Outstanding Universal Value', and actively conserved. International charters relating to historic cities and landscape preservation are adapted to Jerusalem's specific character, their adoption guaranteeing the continuation of the legacy (Brandeis, 2002).

A full conservation survey of the urban fabric of the Old City is accomplished, thus arresting the ongoing degradation of Crusader, Mameluke and Ottoman architecture (Brandeis, 2002). Pre-state monumental sites and vernacular stone buildings outside the walls are preserved and renovated for contemporary needs, or reserved for future generations (Kaplan, 2001).

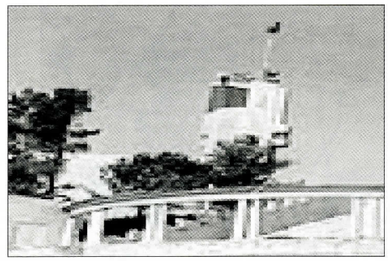


Figure 13: Postmodernism dominates in the current urban form Figure

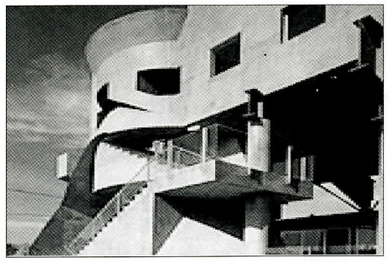


Figure 14: Observation kiosk near old city

Source: Brandeis (2002)

The City Skyline

The proportion between height and mass in new developments is harmonized with the dimensions of landscape and man. Housing development integrates the intimate Jerusalem neighborhood scale (Hasson, 2001). The height of new buildings is regulated by a new overall plan, thus conserving open spaces and avoiding anarchic land speculation. High-rise construction is banned because of their long-term negative effects on the environment, the economy and the image of the city (Hasson, 2001). Low-rise and medium-rise high-density buildings meet all development needs, i.e, eight-storied buildings in commercial areas, six-storied in residential areas, four-storied in and around the visual basin of the Old City, and other historical areas. Sensitive planning prevents further blocking of urban vistas and panoramas exclusive to Jerusalem.

Figure 15: Height regulation ensures balance between old and new

Figure 16: Medium height public housing

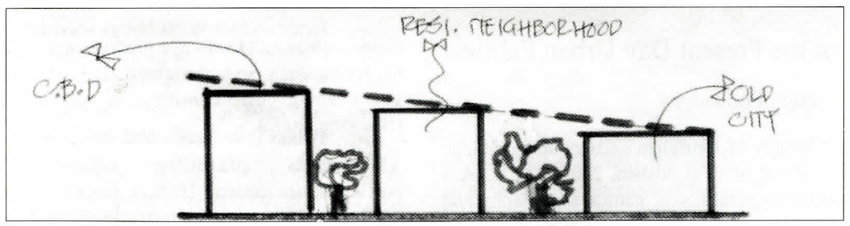


Figure 17: Trend of Jerusalem's skyline –from old city towards outskirts

Source: Developed by Author (2003)

Special care is given to the planning and embellishment of urban public spaces. Streets and squares (including sidewalks, lighting and urban furniture) are designed in harmony with the historic

fabric and constructed with sustainable materials (Hasson, 2001). Mature trees are respected, while new trees are planted. The importance of green spaces and environmental issues in influencing the quality of physical and mental health becomes a central criterion in all development decisions (Hasson, 2001).

Jerusalem has ensured quality space for pedestrians through traffic calming measures, and serious prohibition of parking on sidewalks. Careful attention is paid to the disabled, while cyclists enjoy safe routes throughout the city (Choshen, 2002).

Figure 18: Public place like Holocaust memorial are national scale landmark of Jerusalem

Source: Chosshen, 2002

Figure 19: Natural landscape is a common feature of Jerusalem city

Source: Choshen, 2002

Forces Contributing to Urban Morphology

Architecture of the city

In it's 3,000 year old history, the last fifty years since the founding of the State of Israel or the "Israeli period", is a brief moment - but responsible for an unprecedented drive for spatial development (www.jda.il/english). From an architecture of impoverished slums and cheap housing projects to one of prosperity in the suburban neighborhoods and prestigious medium-rise condominiums; from standardization and conformity to uniqueness and originality; from a conservative, restrained and humble approach to a style that often borders on vanity (Kroyanker, 2001). Nevertheless, the influence of the rapidly changing ideologies in built form has attributed the city with the following design features.

From unity to diversity

Under the British mandate, all residential construction was in the hands of private contractors and entrepreneurs. After the state of Israel was founded, the Ministry of Housing and Construction did more than half the work in this area (Turner, 2001). Buildings constructed during the British rule, being site-specific and gradual, eventually created an urban fabric. But since 1948, public construction has created masses. Residential neighborhoods went up in one go, planned and built within a short period as a single entity. Such construction had an impact beyond its size, mainly due to its dominance of land allocation, housing policies, planning, subsidization and inhabitation (Turner, 2001). Over the years, these aspects have changed significantly, in terms of the nature of planning, neighborhood location, building placement, architectural shape, reference to open spaces, parking solutions and investment in public building. During the years when Jerusalem was a divided city, the political and security situation led to the development of the western and south-western quarters, which were almost entirely filled with housing projects in the 50's and the 60's (Turner, 2001). The reunification in 1967 led to a government policy designed to prevent the city from ever being divided again by the quick establishment of "facts on the ground" (Turner, 2001). The construction of satellite neighborhoods surrounding the inner city drastically changed the city's shape. Most cities grow through the gradual expansion of their built areas; here, several neighborhoods were built simultaneously at a distance from the centre (Turner, 2001).

Architecture of public housing projects and private building

The transition from the two-family house of 35 sq.m. per family, to the large, well-kept villas of the "Build Your Own Home" project in the 70's and 80's expresses the shift from lack to plenty, the rising standard of living and the change in consumer habits

(www.jda.il/english). Changes in architectural style followed, going from the International "box" to the semi-oriental structures of the '70s, with their many arches and retractions (www.jda.il/english).

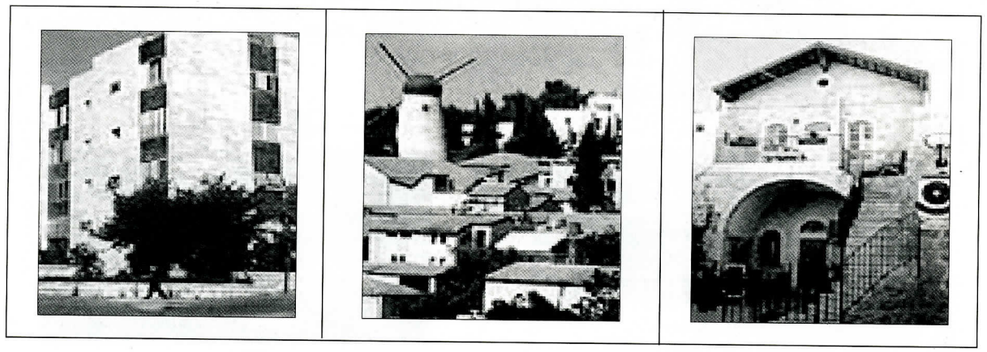


Figure 20: Photograph of housing schemes of 1950's, '70's and '80's

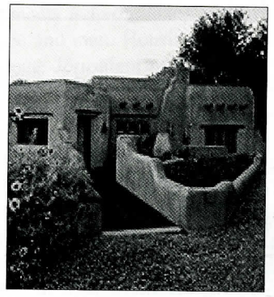


Figure 21 : Modern day independent villa

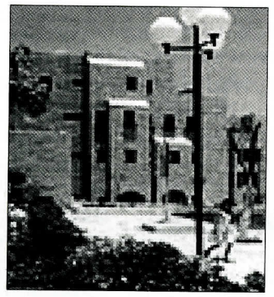


Figure 22: Modern day public housing

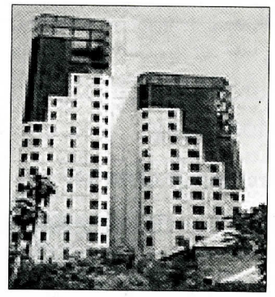


Figure 23: Modern day apartment

This was an attempt to escape anonymity and to create an original and local architecture that would match the unique nature of Jerusalem and organically continue its structural heritage.

Changes in standards and shapes

One of the most outstanding feature of the fifty years of Israeli public architecture is the transition from the anonymity and monotony to the uniqueness and individualism (Turner, 2001). This may be seen everywhere, from government sponsored public buildings to privately built condominiums. The main change was from the stone box on concrete pillars of standard two - to three-bedroom apartments, to a variety of penthouses, multi-level flats and studio (Turner, 2001). Houses were designed to spread as rows of adjacent cottages or built one on top of another with masses of roof tiles, extra floors, retracting balconies and a multitude of stonecutting techniques and styles (Turner, 2001). This shift from least standard to unique can also be observed in industrial construction. From the multi-purpose modular buildings, as built in the '50's, to the "industrial villas" since the 1980's which architecturally radiate economic and technological power, progress and originality.

From minimalism to structural pluralism

Another aspect of the transition from anonymity to identity was the shift from minimalist aesthetics to structural extravagance (Turner, 2001). When the city was divided, the majority of its buildings reflected lean and rational efficiency, expressed through modest design. The architecture of the 1970's and 80's reflects the economic boom through sensual and blunt shapes, as well as extravagance.

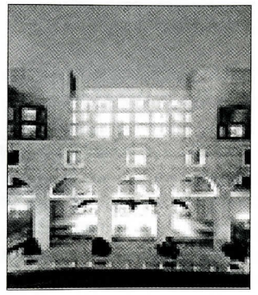


Figure 24: A mall in Jerusalem

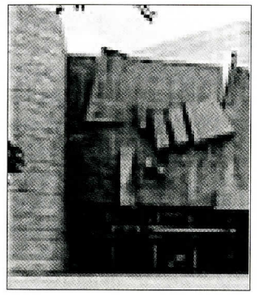


Figure 25: Jerusalem theatre

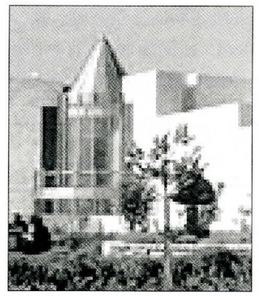


Figure 26: Jerusalem High court

Changes in consumption patterns since the 1970's

The gradual rise in the standard of living led to an increased demand for new structures. Newly introduced concepts such as the cottage, basement, pergola, pedestrian mall and attractive sidewalks, reflects a fresh trend in residential architecture (Turner, 2001).

The rehabilitation and preservation of the old neighborhoods south and west of the city center reflects the improved economic status of the educated middle-class, as well as the growing awareness for preservation.

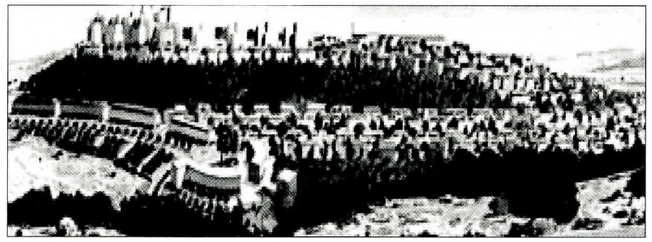


Figure 27: "Har-Homa" new private housing neighborhood in south-west Jerusalem

The religious sector

Jerusalem's religious and ultra-Orthodox populations have increased significantly since the British rule(Turner, 2001). This, coupled with the expansion and strengthening of new currents in Judaism, has led to a rising demand for places of worship and a need to change planning concepts. The old single buildings that housed yeshivot (religious schools) during the mandate have been replaced by complexes for the ultra-Orthodox, which include synagogues, yeshivot and dormitories reflecting religious liberalism of the reformists through architecture (Turner, 2001). In the 1980's, synagogues built around Jerusalem displayed a variety of influences, ranging from the biblical "Meeting Tent" to European synagogues destroyed during the Holocaust (Turner, 2001).

Public buildings

The rise in the culture of consumerism is reflected in the Jerusalem theater, the adjacent concert hall and in the reconstruction of buildings of historic and architectural value, most of which are located on the "cultural promenade" of the national park arch (Turner, 2001). The neighborhood groceries are being replaced by the spacious supermarkets. In addition, the conventional commercial activity at the heart of the downtown is being replaced or complemented by the large shopping malls and the industrial building converted into shopping areas (Turner, 2001). The newly built recreational complexes, community, and sports centers in the neighborhoods and the growing demand for country clubs reflect the changes in leisure habits. The "free time" culture arising from the move to a five-day workweek also created a demand for public open spaces (Turner, 2001). Promenades and observation sites have become urban points of attraction. Open-air sculptures such as the "Monster" in Kiryat Hayovel represent yet another aspect of consumer habits and a growing environmental awareness.

Continuity

Jerusalem, a changing city, has maintained its architectural continuity. The Israeli planners have preserved the basic design principles devised by the British during the initial period of their rule (Turner, 2001). The Jordanians, in their time, also observed the principle of building on ridge tops, not in the valleys (Kroyanker, 2001). Until this day, all governments have carefully preserved the Old City and its environs, making sure that new houses are built almost exclusively of stone (Kroyanker, 2001). To a certain extent, state-sponsored buildings in the 1950's continued the "pre-state" architectural trends.

Regulative Planning

Although from time immemorial, Jerusalem grew in such a fashion that could be treated, more or less, systematic in respective time, but the city really started to flourish in a regulative pattern from the early 20th century with the introduction of first town planning scheme in 1918 (Brandeis, 2002). In this scheme, the city was divided into four zones each with specific planning guidelines (Brandeis, 2002). Such as,

- For old city within the walls- medieval features were to be respected and construction would be permitted under special condition.
- Areas immediately outside of the walls- undesirable buildings to be demolished and no new buildings were to be permitted.
- Areas north and north-east of the old city- Buildings are to be designed in harmony with the scheme and not to conflict with the skyline of mount olives.
- Areas north and north west- to be preserved for future development

Within these zones buildings were permitted under the following conditions (Brandeis, 2002):

- No building was to be placed so as to appear on the skyline of the Mount Olives and to the south of the city.
- No building was to be of a height than 11 meters above ground level.
- Roofs were to be constructed of and covered with stone or other approved materials.
- No building intended for the industrial purposes were to be permitted.

In the later years, eight new master plans were proposed- in 1919, 1922, 1930, 1944, 1950,1959, 1960, 1968 respectively (Brandeis, 2002). And the regulative framework so cited in the 1918 scheme has been the basis of the proceeding planning schemes (Brandeis, 2002). In fact, 1918's scheme has helped the planners in devising land use planning guidelines for the future. For example, in 1930's scheme, it was proposed that the new residential and business zones to be established in the north and north western part of the city- which is very much in line with the guidelines so framed in 1918's scheme (Brandeis, 2002). Such a state of compliance to regulative planning has led to the flourishing of today's Jerusalem. Regulative planning schemes basically systemized the urban form and fabric of Jerusalem. It has laid down the foundation of today's skyline, conservation, restoration activities and conservation strategies, paved the path for systematic preservation of the old city and expansion of the new city. Incorporation of old façade in new buildings in areas with heritage value is a must in conservation works at Jerusalem (Sharon, 1973).

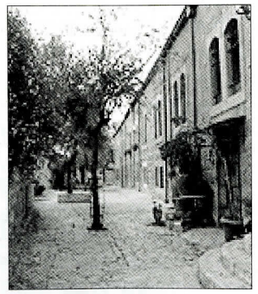


Figure 28: One of the Renovated Jewish Quarter of Jerusalem

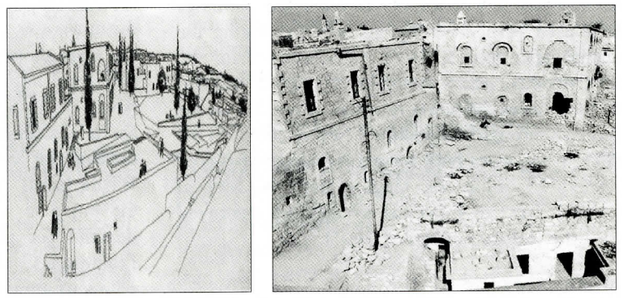


Figure 29: Work of Reconstruction and Architects Impression of the Project

Preservation, Conservation and Renovation

From the early nineteenth century, conservation, preservation and restoration of city features with long standing and strong heritage value has become a major concern of the urban development and planning schemes in Jerusalem (Sharon, 1973). It was partly due to the good understanding of the heritage and aesthetic value of the city by the then British Rulers. Since then, conservation, preservation, maintenance of old city skyline is on top agenda for the city governance. But after 1967, the focus is on to the old Jewish quarters, synagogues, traditional buildings of 19th and 20th century (Sharon, 1973). This is achieved through the restoration of original look by the effective use of crafted materials, Jerusalem stone (Sharon, 1973). Alongside, a selection of twentieth century architectural landmarks and garden neighborhoods, characterizing Israel's modern architectural achievements, is designated for preservation.

Conclusion

Jerusalem has been quite successful in maintaining it's heritage, mystic value while moving towards modernism. Decade long careful planning and implementation of urban design, development and management schemes have paid off in true terms. Post-modernistic ideological transition in urban design and planning has truly blended in the ancient fabric of Jerusalem making the city an ever interesting and unique space on earth. But still, the dividing form of city space is quite contrasting to modern day city living. In this era it is quite astounding to believe that a city could be partitioned on the basis of resident's religious faith. The trend of division based upon religious beliefs is going on for decades. Recent Palestine-Israel crisis has attributed the city fabric with stricter segregation. People belonging to Moslem faith need permission, need to pass through various checking for setting off to predominantly Jewish part although these two communities have resided side by side without being threat to each other for centuries. Such a division has given the rise of a tensed situation between communities and the urban fabric started observing discrimination on spatial terms.

Reference

Brandeis, Phillip (2002). Urban Renewal Alongside Historic Conservation. Menachem Zalutzky and Shoni Goldberger (Eds.), *Preserving Jerusalem*, New York: John Willey & Sons.

Brunn, S. D. (1993). *Cities of the World : World Regional and Urban Development*, 2nd Edition, New York: Harper Collins College Publishers.

Carter, H. (1995). *The Study of Urban Geography*, Arnold: London.

Choshen, Maya (2001). *Future City Limits, Urban Growth Patterns, and Spatial Interaction.* Menachem Zalutzky and Shoni Goldberger (Eds.), *Preserving Jerusalem*, New York: John Willey & Sons.

Conzen, M. P. G. (1981). The Plan Analysis of an English City Centre. J.W.R. Whitehand (Ed.), *The Urban Landscape: Historical Development and Management,* London: Academic Press.

Conzen, M. R. G. (1981). Historical Townscape in Britain: A Problem in Applied Geography. J.W.R. Whitehand (Ed.), *The Urban Landscape: Historical Development and Management*, London: Academic Press.

Dickenson, R. E. (1984). The Scope and Status of Urban Geography, *Land Economics*, Vol. XXIV, 221-38.

Doxiadis, C. A. (1976). How can we learn about Man and his Environment? A. Rapaport (Ed.), *The Mutual Interaction of People and their Built Environment: A Cross Cultural Perspective*, Paris: Mountain publisher, 77-117.

Hasson, Sholomo (2001). Urban Renewal alongside Historic Conservation. Menachem Zalutzky and Shoni Goldberger (Eds.), *Preserving Jerusalem*, New York: John Willey & Sons.

Kroyanker, D. (2001). *Fifty Years of Israeli Architecture as Reflected in Jerusalem's Buildings*, London: The John Hopkins University Press.

Moti, Kaplan (2001). Relationship between Jerusalem and its Surrounding Open Spaces. Menachem Zalutzky and Shoni Goldberger (Eds.), *Preserving Jerusalem*, New York: John Willey & Sons.

Rapaport, A. (1977). *Human Aspects of Urban Form Towards a Man-Environment Approach to Urban Design*, New York: Pergamon Press.

Safdie, Moshe (1970). *Beyond Habitat*, Cambridge, MA: The M.I.T. Press.

Sharon, Arieh (1973). *Planning Jerusalem: The Master Plan for the Old city of Jerusalem and it's Environment*, MaGraw-Hill Book Company.

Smailes, (1995). *Sustainable Development: An Introductory Guide*, London: Earthscan.

Turner, Mike (2001). Preservation of the Unique Character and Harmony of the Old City Basin, Preservation of Historic Neighborhoods, Limitation of Building Height, Moving Highrisers to the Outskirts of the City. Menachem Zalutzky and Shoni Goldberger (Eds.), *Preserving Jerusalem*, New York: John Willey & Sons.

Vance, J. E. Jr (1990). *The Continuing City: Urban Morphology in Western Civilization*, London: The John Hopkins University Press.

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Memory Association in Place Making: Understanding an Urban Space

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Abstract: We relate to place physically and mentally; both of these relations are important in our understanding of place. However for the purposes of this paper only the mental association between place and memory will be considered. This will be examined by looking at the role of event, history and monument in our remembrance of place and how that enables us to perceive place through memory association. In the first section the notion of memory will be considered, in order to establish a background on which to develop the ideas of place memory and remembrance. Then the connection between memory, event and the history of place would be identified and how they relate to engender a sense of place examined. This will be considered by looking at the notion of public history and its representation both in the collective memory and in public space; looking specifically at the city of Dhaka and the ways in which it has sought to remember and forget its public history. The study will then move on to question the validity and necessity of designed, built space in order to construct and invent the notion of place in a way that gives the imagined realm authenticity. Finally the study seeks to test the hypothesis that we are in danger of becoming a people without a sense of place by not associating our memory in place making.

Keywords: Memory, Place, Space, Urban, Manifestation

Introduction

Dictionary meaning of memory is the process of recalling facts or experience. Memory association is very important in creating a sense of place. We experience our present world in a context which is causally connected with past events and objects, and hence with reference to events and objects which we are not experiencing when we are experiencing the present. Area between and within an object is space which becomes place when occupied by some person, thing or any other attribute. The remembrance of an event or events is a valuable identifier of space. Our personal histories and identities are interwoven with space and places. We attribute to places a personal memory-tagging which marks them in our mind. In this way we might say that we need to remember in order to have an identity and sense of place. Why do we need a sense of place? Why is much of our security bound up with place and our place in the world? A short reminiscence of my childhood will explain this question:

I am with my friend. He has never been to the place where I grew up and so I show him the field where I used to play with my sister and the orange garden from where we use to pick oranges. It doesn't matter that the hut we used to, hide behind is no longer there because I still see it in my mind's eye. I still see the garden and the hut; fragmented by the images and the sights and the sounds of the many different times I came here in my childhood I have not been here for years. But he doesn't see it as I see it. For him; it will be the place that I used to play in. He will remember the place differently to me although I have often described it. He came with an image of what the space was like and has left with an imprint of the place.

This reminiscence poses a further question. Have we lost our sense of place, a communion with the land? To be displaced is to be without a sense of place, to be without the boundaries set in place. When does space become place? Carter, James & Judith (1993) put forward the idea that a sense of place is engendered when space has been named and rendered in architectural form and embodies the symbolic and imaginary investments of the population. A further hypothesis put forward by geographer Yi-Fu Tuan (in Casey, 1993) is *What begins as undifferentiated space ends as a single object - situation or place ... When space feels thoroughly familiar to us, it has become place.* A sense of place comes from physical, sensual and emotional responses to a site. Space becomes place through the interactive association with the site itself, events that occur there, and with people in that space (Zeldin, 1995). To be disorientated is to be lost in space. In cities there are landmarks, buildings, spaces that act as signifiers of space (Mowla, 2002). In Dhaka city some of the examples acting as signifiers are Shaheed Minar, Baitul Mukarram, Stadium, Farm-Gate, Gulistan or Sangshad Bhaban and so on. The sight of a building or space tells us that we have gone the wrong way and that we are no longer where we want to be. This is orientation by default. If we understand that there is a sense of place then we must consider that one can have a sense of non-place.

Memory is a subtle signifier of place, it could be individual or community based. It becomes a very personal identification with a place. Our memory-image is unique and individual. The images giving a sense of place are related to our physical senses. But this merely physical memory-experience of place is limited. For example, *the smell of humus will always remind me of my time in Lahore when I was* a kid *running through the orange trees and the sense of freedom and joy I had during my time there.* For me the smell is a memory signifier of place in my mind. It instantly triggers a whole catalogue of memories and experiences stemming from that initial sensory reference.

I want to conceptualize memory as a layering of ideas, remembrances and images that affect how we perceive and remember things, sedimentation of image and memory, the intimate layering of memory over memory. It is our fingerprint of a place; it is our unique memory and individual conception. It is our baby born out of remembrance of place. Inasmuch as we fill the physical outline of a person with what we know of them, we fill space with the memories of our experiences there. Places become filled with the residue of reminiscences (Proust, 1981 in Connerton, 1989). It is extremely important that our experience of space is both personal and relevant. What is interesting to me is the experience of space as opposed to the mere sitting of the physical in space and how that experience continues to affect us – to make it a place. The study is an attempt to show the role of memory in place making. The laboratory is Dhaka.

Memory

Our memory-images of space are formed by the remembrances of our personal experience of spaces. We remember spaces by having walked around them, by having been in them. This feeling of familiarity with a space creates a sense of place. However, if our experience of space does not meet our pre-conceived ideas or expectations then it feels like we have not been in 'place'. When I visited the Mahasthangarh it was several minutes before I realized that I was standing in front of this historic site that I had previously only seen in reproduced images. In fact, because the image was so engraved upon my memory, I could not see beyond the image to the site itself because I had already seen it hundreds of times before in other medias. As John Berger (1993) remarks, the image frequently outlasts its representation and this illustrates why the construction of memory is an entirely retrospective act. An image is a sight that has been recreated or reproduced. *Every image embodies a way of seeing* (Berger, 1993). However it was the experience of being there, watching the sun set over Mahasthangarh and being able to create my own memory-images that was fascinating. The actual physicality of being there and the sensory pleasure that experience afforded can never be reproduced by merely having 'seen' the building.

The unseen, the imagined experience, creates a sense of place in our mind of what it might be like. The reality, however, gives an, immediate sense of place, which might be very different from that which we have imagined. People's preconception of a space relates to their culture and their individual memory of place. Over time there is a layering of images and sensations, which are 'stored' in our memory based upon both the imagined experience of place and the reality. It is the stabilizing persistence of place as container of experiences that contributes so powerfully to its intrinsic memorability. An alert and active memory connects spontaneously with place, finding in it features that favour and parallel its own activities. *We might even say that memory is naturally place-orientated or at least place supported* (Casey, 1987).

Spatial Memory

The spatiality of memory is intriguing. The most potent images we can store are those in our mind's eye, those images that are unique and personal to our experience and us. It is very often through place by place association that we do remember. Association,

through the imagery of places that we know and are familiar to us, we remember sights, sounds, smells, people, conversations, events. These place-images are memory triggers. Sensory recollections take place in remembered places. In the introduction I told the story of my childhood where memory association with Lahore was activated by the very noticeable smell of humus. This memory does not remind me of humus but rather I remember the place that is associated with it. If we are honest very few of our memories are placeless (Forster, 1990). They have a context and place form. *Place serves to situate one's memorial life, to give it 'name and a local habitation'* (Forster, 1990).

Situational Memory

Some people remember by assigning physical structure to memory. I use the construct of an imagined file card in order to remember details about people. The physicality of this remembering system allows him to locate memories and recall very quickly. The use of physicality and place in terms of *aide de memoir* has been well documented by Yates (1966) and others. Situational memory is interesting because it is place itself that aids memory. As has been discovered by memory theorists there are many things in place to which one can attach memory. Place can be re-entered and explored mentally. Place is a *container of memories* (Casey, 1987).

Collective Memory

Having considered the idea of a personal memory response to space and its inherent memorability, I want to look at the idea of collective memory of place and how this relates to a public historical understanding of space. Public memory is seen by Young (1993) as the viewers' response to their own world in light of a memorialised past - the consequences of memory. In general the history of a place is its collective memory. It could be collective as well as individual but with the passage of time collective memory out lasts individual memory in the urban place making. Rajarbagh Badhabhumi, Surrender of Pakistan Army at Race Course (Surhawardi Uddayan) are examples. Which collective memory will persist will depend on many intricate socio-cultural or political catalysts. Instead of a 'collective' memory Young (1993) advocates a 'collected' memory of *many discrete memories that are gathered into common memorial spaces and assigned common meaning.* Public memory is an aggregate collection of its members' many memories. People share forms of memory, even the memories generated from them, but not the same memory. Ordinary citizens have a unique understanding of their neighbourhood's landmarks, signs, sounds, and organisations. Using the urban fabric they attempt to illustrate history by encompassing shared time in the form of shared territory (Hayden, 1995). They recognize that the cultural context of our history and memory is important; understanding and remembering our history forms part of our identity. Identity is intimately tied to memory: both our personal memories (where we have come from and where we have dwelt) and the collective and social memories interconnected with the history of our families, neighbours, fellow workers and ethnic communities (Hayden, 1995). In this way memorials should always aim to educate following generations and to engender a sense of shared experiences and destiny (such as represented by Bahadur Shah Park, Central Shaheed Minar, Savar Sriti Shawdha etc). *By themselves, monuments are of little value ... But as part of a nation's rites or the objects of a people's national pilgrimage, they are invested with national soul and memory* (Young, 1993).

The City

The city is possibly the most exciting and accessible of all history's textbooks. It is constantly changing (Mowla,1997 & 2003a). Names of areas and places with memory signifiers, gives a place a natural identity e.g. Moulana Bhashani Road and Elephant Road clarifies the difference. *Story telling with the shapes of time uses the forms of a city ... to connect the residents with urban landscape history and foster a stronger sense of belonging* (Hayden, 1995). The places of everyday urban life are, by their nature, mundane, ordinary and constantly reused, and their social and political meanings are often not obvious.

Our images of past and future are constantly changing because of a continuous re-creation of present images, an overlaying and reworking of history and its memory. The idea of using the city to remember is not new to the urban designers with commemorative structures as artefacts. Walking along the architectural promenades would not only link areas of a city but would be a memory walk stimulated by the historic monuments which represented city's past power and importance. *Europeans tiptoe through their cities as museums because they are museums* (Carter, Donald and Squires, 1993).

The Familiar

In contrast with the idea of city as museum Kevin Lynch (1972) advocates a remembrance of history based upon people and events rather than upon

special places, claiming that people have little desire in retaining old physical things, unless they are personal to them. It is the familiarity that people want to remember. If there is no personal association, over time the memorials become less and less important and their potency diminishes.

We are likely to be able to remember the houses that our father and our grandfather lived in but the locations of the houses of important historical figures are probably uninteresting and unknown to us. Preservation of history is of short-lived significance if the present no longer has any connection with the past. Ahsan Manzil may be considered a point explaining the case, it was in ruins until it was made a period museum.

The Fluidity of Time

We need to be aware of the fluidity of time. An attempt to preserve the memory of a particular point in time can result in our consideration of the past as vitrified and stale. *A sense of a stream of time is more valuable and more poignant and engaging than a formal knowledge of remote periods* (Lynch, 1972). A monument (or historical structure) should enable us to remember but instead it fixes memory and it becomes static and petrified. By embodying memory we displace it; its material form is stronger than society's memory work. By giving memory a form we divest ourselves of the need to remember because we become so used to the form that we allow it to do our remembering for us (Young, 1993).

In this way there is an important difference between an object built as a memorial and one that now serves as a memorial. The latter continues to remind and helps us to remember. For example, the renovated and reconstructed Ahsan Manzil in Old Dhaka, where the Dhaka's Nawabs once lived and historic events took place, or the Bardhaman House which was torched during mass uprising, can be regarded as space created in order to remember the past.

Dhaka's Collective Memory

If in considering collective memory we neglect the plurality of voices that now make up a city we will ignore immigrant peoples, women, religious groups and others. These groups have little or no representation in the public spaces of our cities, leaving instead well designed, gentrified 'nodes' which have no reference to the majority of the city and its peoples. In our country the landmarks, official history and biographies favour a small minority of elites, in prominent leadership and political roles, which may not appeal the commoners (Mowla, 1995). Collective memory of a more civic past can be recaptured by a proper appeal to traditional symbols.

Dhaka's Public History

In this way Dhaka is an interesting case study. Seemingly little of its metropolitan history has been physically remembered in the city fabric – to foreign tourists a walk along river *Bouri Ganga* from Sadar Ghat to Swari Ghat or Chandni Ghat is more enthralling as in there they can feel the pulse of Dhaka as well as recall the origin of these ghats and the city. Official heritage walks are not so fascinating as they merely connect old buildings without memory association. Dhaka's *Kutti* or perhaps *Shankhari* community or near by Panam village is its greatest asset. The result of more than five centuries of infiltration, of people washing in and out of the city, means that Dhaka has acquired a gene pool that rivals any cosmopolitan city for resilience, colour and energy. However I question the idea of mummification of *Kuttis* or *Shankharis* of Old Dhaka to enable people to understand the rich heritage Dhaka people have brought to the oldest part of the town. It is possible to have urban historic public places with personal resonance for large numbers of people. But we opt out and buy the hundred taka ticket to 'heritage' in Dhaka, agreeing with Charles Moore (in Hayden, 1995) that *'You have to pay for public life'*. A visit to Dhaka's Old Town river front or historic Sonargaon is for the tourist and could be exotic enough to fool us into believing that it is a little taste of Dhaka or Bangladesh.

Dhaka's Marketable History

The corporate sell-out of our history has become increasingly prevalent over the last few decades. The contemporary arts of city building are derived from the perspective of middleclass architectural and planning professionals. The professionals worry in a depoliticized fashion about a city's competitive location in the global restructuring of capital, and thus the old town, of course, are what brings many visitors to Dhaka, and the city caters for them well. There is an area / park of Dhaka dedicated to the Commander-in-Chief of our liberation movement. Is the subject properly depicted or this part of the *whole liberation related industry or even the man* Usmani *as* described in the city's promotional literature? But not all Dhaka's past is built upon the success and achievements of the Sultanat or the Mughals or the British or even contemporary men.

Dhaka's Infamous History

Other than the tawdry tourist history, seemingly little of Dhaka's public history is displayed in the form of monuments or other recognized historic structure. However, street names or *mahallas* become vehicles for remembering its history. For example, an area named *Palassy* commemorates our defeat and betrayal in the hand of the English. Victoria Memorial in Bahadur Shah Park reminds us of our betrayal in favour of the English. Rayerbazar *Baddabhumi* or *Budhijibi Sritiswadha* represents the heinous crime committed by the fellow Bengalis under the patronage of Pakistanis. Noor Hossain or Milan Chattar reminds us of our own dictatorial rule. There is a need to remember its infamous past. *To neglect history, to neglect memory, that which is owed to our ancestors is then to deny ourselves, it is to begin suicide* (Daly, 1862 in Boyer, 1994). It would be a pity if the fights, riots, and other things (Jinnah/Liakat/Ayub), which do not reflect the 'glory days', are forgotten. These things need to be remembered so that their importance is not diminished.

Sk. Mujib's house in road number 32, where he was killed along with his family in 1975, was donated by his family to the public. Bangabandhu Museum housed there, for many in Dhaka, now stands as a befitting memorial to the killing. Bardhaman House, which was partially burnt/destroyed during political agitations, was reconstructed at the government initiatives. Ironically, its renovated building was an attempt by the government to erase the damage, and therefore the agitation, from the collective memory. Ayub Gate renamed as Asad Gate is a befitting memorial of a movement against a dictator Ayub and the victim Asad but recently there were attempts to erase this collective and the collected memory. Is it possible for people to remember and accept accountability for their part in atrocities committed against other peoples? At present there is scarcely any mention of the plight of the Muslin weavers or the Indigo cultivators in the hands of the British era (However, there is a place after Indigo plantation named *Neel Khet* in Dhaka).

An understanding of a city's full history can only be successful if there is dialogue and understanding as to why the inglorious past should be remembered. There needs to be some consideration of an appropriate form of memorial, *no public art can succeed in enhancing the social meaning of place without a solid base of historical research and community* support (Hayden, 1995). Recovering the past and remembering it, neither refurbishing it, nor making it acceptable and 'nice', can revive cities. It helps generate an understanding of the relationship between people and their cities and their histories. It restores for some, and generates for others, memory-association, over time, with the city's remembered places.

Event

I may now want to look at the idea of event in space and how it aids our understanding of place. I am interested in how it can affect our consciousness of space through time and its importance in our place-world. Bernard Tschumi (1994) considers that there is no architecture without action or without program, and that architecture's importance resides in its ability to accelerate society's transformation through a careful agencing of spaces and events. He seeks to emphasize the experience over the physical.

By event I refer to those situations or circumstances, which become so associated with a site in our mind that they become part of the memory of that space. Even if the event is no longer there it becomes linked by memory to that site; not so much linked to a time but to a place e.g. Hatir pool, Chankhanr pool or Lohar pool or even Pheel Khana or Paltan or Dholai Khal etc. *What is remembered is well grounded if it is remembered as being in a particular place - a place that may well take precedence over the time of its occurrence* (Casey, 1987) without event is meaningless but architecture or the built realm is not the event. I wish to concentrate on two aspects of event: that of the permanent event, such as a memorial, which seeks to have a direct place association and that of the temporary event, such as a festival (example: Amor Ekoshe). Both of these events have potency and strength, the permanent by its physical association and also by its memorial association with a previous event, and the temporary by its repetition. It is the time and frequency of the event that is important and builds a strong memory connection.

Festivals and Fair

Festivals and fairs are events connected with place and memory. A fair has the ability to totally transform a space and completely change the way a meaningless site is seen. It alters dramatically the perception of a site so that it is not merely seen as space but as a place of fascination. This type of event has the ability to transform a landscape quickly and immediately. Calendar based repetition means that each day can

have two interpretations; the day on which the event takes place and something happens, and the day on which a celebration is held to the memory of the event. Many fairs now have a heritage value due to their frequency and longevity, but authorities see fairs as having an historical value as well as bringing 'life and colour' to a city or town.

Dhaka has a long history of street fairs and festivals. Dhaka's Ekoshe Boi Mela in Bangla Academy Complex, virtually transforms the city for about a month, likewise Pahela Baisakh or Pahela Falgun, the two indigenous cultural events, provide colour to the city. The idea for the fair, I believe, comes from Italo Calvino's (1974) argument that *Cities, like dreams, are made of desires and fear ... everything conceals something else* ... In the above referred book Marco Polo discusses with Kublai Khan the cities he has visited. After a time Khan realises that Polo has been describing the same city in eleven different ways and Polo said: *'Every time I describe a city I am saying something about Venice* (Calvino, 1974).

It is this notion of being able to describe the same city in very different ways, which is at the heart of these fairs hidden manifesto. Since the trade fair or computer fair festival or Baisakhi mela was based in Shere Banglanagar or Ramna or Bangla Academy obvious references were made to Dhaka's glorious past as a major trading post, but also to its involvement in the capital (Mowla, 1999). The river is probably the heart and soul of Dhaka and the source of its wealth, diverse population and importance within Bangladesh and the world. Festivals and fairs show that event and the arts can alter how people perceive their city. It is hoped that the people who saw the event or were involved in it will never again see the site merely as site; but as a place of memory and associate it with the events that took place. The things seen, heard, and smelt during the festival are now synonymous with that place and the festival will always influence their association with the place.

Festivals and parades also help to define cultural identity in spatial terms by staking out routes in the urban cultural landscape. *Although their presence is temporary they can be highly effective in claiming the symbolic importance of places. They intermix vernacular arts traditions with spatial history* (Hayden, 1995). Festivals and street parades (processions) have always been recognised as being important to the control and influence of society's memories. If there is such a thing as social memory ... *we are likely to find it in commemorative ceremonies; not commemorative ceremonies prove to be commemorative only in so far as that are performative; performativity cannot be thought without a concept of habit; and habit cannot be thought without a notion of bodily automations* (Connerton,1989).

Ritual and Memory

Rituals are regularly occurring events connected with a site and therefore, memory. There are two means of bringing the past into present consciousness: by acting out and by remembering (Connerton,1989). The former is realised in commemorative events (Eid-ul-Azha) and the latter in memory (Victory Day parade). These two actions are interdependent because in order to act out we need to remember. By acting out we seek to remember and to remind ourselves. These events or ceremonies are often more than a one-off enactment; they become a fixed performative ritual. *We would underestimate the commemorative hold of the rite, we would minimise its mnemonic power if we were to say that it reminded the participants of mythic events ... the sacred event ... was re-presented; the participants in the rite gave it ceremonially embodied form. The transfigured reality of the myth was again and again re-presented when those who took part in the cult became so to speak contemporaries with the mythic event* (Connerton,1989).

It is often considered that ritual formalises and stylises events so that they have a tendency to occur at special times and in special places. It is because the ritual occurs in place that the space becomes special. An event 'takes place'. Often the ritual will have a connection with the site where it occurs because of a previous event but after time it is the ritual that is remembered and associated with the site, not the event. Viswo Istema or International Mother Language Day / 21st February or Bat Tala, Bakul Tala etc may be a case in point. *For all rituals, no matter how venerable the ancestry claimed for them, have to be invented at some point, and over the historical span in which they remain in existence that are susceptible to a change in their meaning* (Connerton,1989).

Ritual is the embodiment of memory. As Lukes (1975) proposed, ritual is rule-governed activity of a symbolic character which draws the attention of its participants to objects of thought and feeling which they hold to be of special significances. It does not merely imply continuity with the past but explicitly claims it. By its conspicuous regularity an event becomes a ritual or a rite. These commemorative ceremonies, like Tazia or Miladun-nabi procession or

even boat race in the Bouriganga play a significant role in the shaping of communal memory. A community is reminded of its identity as represented by and told in narrative. Yet it is more than a story told and reflected upon. It is a ritual re-enacted. In recent centuries there have been many new semi-ritual practices invented: the Olympic Games; Ekoshe pilgrimage; *Baisakhi Mela*; *Ananda Michils* or Muharram procession etc during different occasions. *Such occasions, it is true, no longer make imaginatively available to us that strong sense of imitation as mythical identification ... but they do still produce and provide shape for a communal desire - a wish to repeat the past consciously, to find significance in celebrated recurrence* (Connerton, 1989).

I consider that the consistent regularity of an event provides a space with such a strong identity that the event becomes associated with it and that memory association engenders a sense of place, for example, Muharram mela in Azimpur, Viswa Istema at Tongi or Boi Mela in Bangla Academy Complex. The place of re-enactment has an importance and a profundity of its own. It becomes mythologized and venerated.

Designed event

There is now a different kind of design. This is the design of experiences, of theatrical, multi-media, multi-sensory events in which architecture is just one tool among many and in which all the scruples dear to modern architects - truth to materials, abstraction, use of natural light, careful detailing - only get in the way. *Experiences take the properties of theme parks and make them into a kind of essence that can be reconstituted almost anywhere, so that you don't need an expanse of land next to a motorway intersection to enjoy them* (Moore, 1996).

Experience-design

As mentioned above experience can be designed and having discussed the necessity of event in space, I now question the use of event as a marketing tool. The above quote refers to experience-design as promoted by a company called Imagination. The idea behind 'brand experience' is that if you want to sell something you therefore have to engage your buyers more forcibly, not only by making them look at your product, but by making them live, think, breathe, eat, hear and smell it. *You are no longer pushing a product but dimensionalising its essence* (Moore, 1996). By leaning towards experience architecture I fear we will see designs built around manipulated experiences. Increasingly we seem to be living out the truism that life follows the theme park: the aim of stimulating as many senses, as quickly and as fully as possible, through as many media as possible. We suffer from experience overload. We come away disconnected from the event, have no association with the space, and wonder what has happened. For a successful architecture and urban design, we may say that event association is needed.

Event-association

In event-successful spaces the architecture is built around activities inherent to the space. The water source or *hat* becomes a natural meeting point, around which village life is formed (Mowla, 2002). In event-successful schemes, the event has association with the space before the architecture and the scheme is designed so that further event naturally takes place. Event-association is wedded to the space. In many urban design proposals there seems to be an inherent desire to 'create' event and an unwillingness to realise that it needs to be engendered by a space. Labelling a space, dictating its purpose and what will happen there, leads neither to an understanding of that space nor to a sense of place. By naively designating an area on a drawing as a 'performance space' or an 'outdoor theatre' without fully considering the full potentials of that space is surely woeful indeed, and accentuates the egotistical notion that architecture is the event rather the site of event. It is disturbing that designed space is so often divorced from the reality of its use.

Bernard Tschumi (1994) claims that *Architecture [is] as much about the events that [take] place in spaces as the spaces themselves.* He calls for a replacement of the static notions of form and function by activities inside, outside and around buildings. *Attitudes are as important as buildings; individual and social relationships as important as material goods* (Landry and Bianchini, 1995) *and that what urban design is all about.* The tendency prevalent in architecture to view the physicality of design as entirely sufficient in itself and the blatant manipulation of people in space does not engender place. Architects have not remembered that people are both users and creators of place. They are neither trained nor prepared to see people as 'consumers' of space but merely consider them users of space. Thus architects and urban designers often miss the central role of people in creating place. People activate settings merely by their presence. *Their bodies, faces and movements create an energy that is almost metaphysical aesthetic, because the central core of the enacted environment is motion* (Hayden, 1995).

Events as pixie dust

Events could be imaginary. In the Dhanmondi Lake Redevelopment proposal undertaken by the City Corporation of Dhaka, they claim that events, animation, sculpture, and illumination will improve the image and perception of the Lake and the Road no. 32 by reinforcing a strong sense of place and by giving a clearly defined identity to the area (Mowla, 2003b). I question on what grounds these conclusions were made. Aside from these grandiose and elaborate proposals there seems to be no consideration of the actuality of event, other than the desired atmosphere they hope to create. It is the apparent ease by which atmosphere and event can be manufactured that concerns me. In terms of design proposals and decisions it would appear that there is little concern for the event even ecological aspects were totally ignored. Tschumi (1994) understands that *a praxis is constantly responsible to others, precisely because it has to render an account: to those who, by their use of the space, will create the event.* Richard Rogers (1991) designed the Pompidou Centre so that it would *not be a remote monument but a people's place. The competition report recommended that the Pompidou Centre be developed as a 'live centre of information covering Paris and beyond ... a cross between an information orientated computerised Times Square,* Madam Tussud and the British Museum, with the stress on two-way participation between people and activities / exhibits.

The whole analysis of why certain spaces work and others do not is not for exploration here but I merely challenge the hypothesis that such interventions (prescribed event, illumination, sculpture) will create a sense of place and the atmosphere proposed by designers, planners and architects in their Technicolor plans and perspectives. A prescribed event may not work. The space then becomes un-useable if it cannot adapt to the demands of its potential public. *The expectation, or desire, that work outside and in public can have effect, that it can transform and modify the spaces and audiences with which it works, runs throughout the twentieth century* (Rogers, 1991).

Concluding Remarks

Experience oriented design becomes increasingly important in a society obsessed with the experiential and the next event. The immediate appears be the really interesting time reference. Will physical space continue to have much relevance for us? If our understanding of our place world continues to diminish, I believe that we shall experience loss of place and experience displacement. Loss of place leads to a loss of a sense of security (Mowla, 2003b) and this may be the reason why virtual worlds seem so appealing (this may be an area of further research, which the author is undertaking separately). If we lose our sense of place we shall have lost something fundamental to our sense of self. Awareness of the physical world can be on many levels; we know this from the way we understand complex environments like cities.

Every city is, in fact, at least three cities. *The first is the artefact: physical, indisputable, the network of streets and urban places and the buildings that surround and define them. The second city is perceptual, and it introduces the human presence to the urban conglomeration.* The perceptual city is a negotiation between the artefact and the human being. It is form limited and redefined by the human senses. Here the city can be sensed as brilliant or depressing, glorious or terrifying, odoriferous or fragrant, loud or quiet - this is the realm of how it seems. *Finally there is the cognitive city, the product of the brain and its experiences how the inhabitant structures his or her perceptions and links them to a physical network* (Trelb, 1993)

If our place-world is to remain relevant to us, it must be considered on these multi-levels of consciousness. The perceptual, in particular, is the level at which we try to understand space as a sensual experience. Loss of this sense will have significant implications for our relationships with people and the physical world itself. This perceptual sense is linked to a development of our memory-association with place. Our perception of what space 'means' to us engenders a sense of place. Our sense of place comes from both a pragmatic and metaphysical interpretation of space relating to our cultural background and the influence of time upon our perception of that space.

How is memory-association with place developed? The (manufactured) event can be seen as a somewhat artificial method of engendering a sense of place. Design can play an important role in the development of perceptual sense of place. However, manipulation of people's sense by event in a designed space does not necessarily engender a sense of place. For an event to be successful in this regard, memory association must be created. The event may not be significant or even successful, but it must have a relationship with place and memory. Without memory-association the event has no importance perceptually. It will not allow a place association as its image is not strong enough to engender a sense of

place. An event image is generated over time both by repetition and by re-enactment.

I suggest that design schemes seriously consider the implications of trying to create meaningful space by means of event. Design should move away from treating events as gestures towards the creation of public space and humanisation (Mowla, 2004). There is too strong an interest in abstract notions of beautification and urban 'nicety' rather than in the actual nature of the city, its history, utilities and its potential. Dynamic, meaningful design should not direct people to be engaged in designated activities such as roller blading or sipping coffee in outdoor cafes, as indicated on dazzling design perspectives. Designers should not be surprised or offended if their road beautification or amphitheatre seating, for example, are laughed at or becomes used in a less formal way. The event should not have to be extraordinary, but it must be able to captivate and motivate people.

The use of the city fabric to portray history, and not merely the state established history, is one way that spaces can take on deeper, perceptual meanings. The idea of a collective history has yet to be explored in any great sense in Dhaka, which is a shame. Dhaka suffers from absent memory and does not have a deep enough realistic understanding of its potential as a city of vitality. This is not history remembered in order to be a tourist attraction but so that its people do not forget and remain connected to the city. Dhaka must look carefully at whether now is the time to remember its history. The heavy-handed signing of projects has left us with no understanding of the city's history or its peoples (demolition of Gulistan Cinema or the Shah Bagh round-about may clarify the point).

If there is no memory-association with a place then there will be no experience of place. Without this perceptual level of experience our place-world will diminish. Through events, ritualised and repetitive, a clearer understanding of the history of the spaces around us and their meanings to us now we can have memory-association with place. Place means nothing without association, without memory – it is a dull space. Design must become increasingly aware that people can use spaces, making them meaningful for themselves. It must move away from the imposing use artificially by means of prescriptive structure whether it is an actual physical construct or bed event. It is, however, design without content or vision, and hopefully design without a future.

References:

Berger, J. (1993), *Ways of Seeing* London: BBC and Penguin Books.

Carter, E, Donald, J and Squires, J. (Eds.) (1993), *Space and Place: Theories of Identity and Location,* London: Lawrence and Wishart Ltd.

Casey, E. S. (1987). *Remembering: a Phenomenological Study,* Bloomington: Indiana University Press. 186-187.

Casey, E. S. (1993). *Getting Back into Place: Toward a Renewed Understanding of the Place World,* Bloomington and Indianapolis: Indiana University Press, 35-37.

Calvino, I. (1974). *Invisible Cities* Orlando, FL: Harcourt Brace and Co. 31

Connerton, P. (1989). *How Societies Remember.* Cambridge Cambridge University Press, 2-3.

Daly, C. (1862). *Vue Interieure d'un Tombeau a Corneto* Paris. J. Claye quoted in M. Christine Boyer: de Certeau, Michael *Walking in the City* Ferguson, R. (Ed.) (1994) *Urban Revisions – Current Projects for the Public Realm* Cambridge, MA: MIT Press, 16.

Forster, E. M. (1990). *A Room with a View,* London: Penguin Books.125.

Harvey, D. (1991). *From Space to Place and Back Again: Reflections of the Condition of Post-Modernity text for* UCLA GSAUP Colloquium, May 13 1991, 39

Hayden, D. (1995). *The Power of Place.- Urban Landscapes as Public History,* Cambridge MA: MIT Press,43

Lukes, S. (1975). *Political Ritual in Social Integration* Sociology, 291

Landry, C. and Bianchini, F. (1995). *The Creative City,* London: Demos. 106

Lynch, K. (1972). *What Time is This Place?,* Cambridge MA: MIT Press. 44

Moore, R. (1996). *Goodbye Architecture, Hello Experience* Blueprint, no. 131 Sept. 3

Mowla, Q. A. (1995). Architecture in Bangladesh and the State - A Historical Perspective, *EARTH*, 2 (1), Winter, Dhaka. 16-17.

Mowla, Q. A.(1997). Ancestral Urban Pattern: Study of an Indigenous Neighbourhood at Dhaka, paper presented at a seminar on *Settlements - Traditional Physical and Cultural Settings*, Feb 12-13, University of Liverpool, UK.

Mowla, Q. A, (1999). Spatial Manifestation of Societal Norms: A Case of Urban Design in Bangladesh *Khulna University Studies,* Vol.1, No. 2, 177-186.

Mowla, Q. A. (2002). Emergence of Civic Space in Dhaka, *Plan Plus,* 1(1), 2002, 98-116

Mowla, Q. A. (2003a). Urbanization and the Morphology of Dhaka – A Historical Perspective, in *Journal of the Asiatic Society of Bangladesh*, 48 (1), 145-170.

Mowla, Q. A. (2003b). Towards a paradigm of Liveable City – The Case of Dhaka in the *Jahangirnagar Review*, Vols. XXVII-XXVIII, June, 15-25.

Mowla, Q. A. (2004). *"Sense of Place – the Case of Dhaka"* Catalogued in the International Research Paper Competition 2004 with the theme 'Sense of Place: The Indian Subcontinent', conducted by the University of Melbourne, Australia.

Proust, P. (1981). *Remembrance of Things Past* (Translated by C. K. Scott Macrieff and T. Kilmartin), London vol. I.

Robbins, K. (1993), *Prisoners of the City: Whatever Could a Post-Modern City be.* Erica Carter, James Donald and Judith Squires (Eds.), 1993, 303.

Richard, R. (1991). *Architecture: a Modem View* London: Thames and Hudson, 14.

Starsmore, I (1975). *English Fairs,* London: Thames and Hudson, 17.

Trelb, M. (1993). *Tokyo: Real and Imagined* Yelavich, Susan (Ed.), *The Edge of the Millennium,* New York: Whitney Library of Design, 88

Tschumi, B. (1994). *Event-Cities (Praxis),* Cambridge MA: MIT Press. 11

Yates, F. A. (1966), *The Art of Memor,* London: Routledge & Kegan Paul.

Young, J. E. (1993). *The Texture of Memory: Holocaust, memorials and meaning.* New Haven: Yale University Press. ix.

Zeldin, T. (1995), *An Intimate History of Humanity,* London: Minerva, 16.

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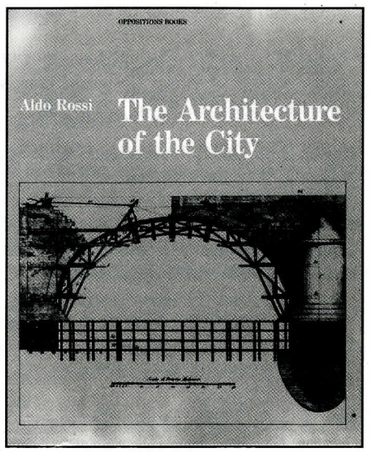
Book Review Article:

The Architecture of the City – City as Evaluated by Aldo Rossi



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Introduction

The 'city' has been the focus of many literatures in urban theories where the scholars try to understand the city and try to determine how to design it. Aldo Rossi is an influential theorist in such discipline. This paper is concerned with the review of the theoretical argument about the 'City' as a definable system as developed in the phenomenal book of Aldo Rossi: **The Architecture of the City**. Its original Italian publication—*L'architettura della citta*—was in 1966 and was translated in English in 1982 by Diane Ghirardo and Joan Ockman[1].

Aldo Rossi, a practicing architect and leader of the Italian architectural movement *La Tendenza*, is also one of the most influential theorists writing today. Rossi is regarded as an intellectual critic on the failure of the modern movement to realise its projected utopia. In the context of modern architecture Rossi tried to find out a solution to the problem – 'what should be the inner logic of the whole structure of a town'? 'The Architecture of the City' is his major work of architectural and urban theory. Here the thoughts of this author are analysed and the fundamental issues are put forwarded as he identified regarding city building through a theoretical review. It tries to make a through, exact and well argued account of the author to help the prospective readers in understanding 'city' as explained by Rossi. Here the paper will summarize the key ideas expressed by Rossi. It will also elaborate the discussion by emphasizing the theoretical assumptions and arguments developed in the book. Finally it will argue that Rossi's book, in spite of a few uncertainties of thoughts, expresses on the whole process of transformation and psychological entity of the city as a place of humanism.

[1] The English translation was published for the Graham Foundation for Advanced Studies in Fine Arts, Chicago, Illinois and the Institute for Architects and Urban Studies, New York. The MIT Press, Cambridge: Massachusetts and London, UK.

Urban Artefact and the Theory of the City

Aldo Rossi's book appeared as a polemical critique of the state of modern movement on the city. Editors' commented on this book as it stood as a singular and parallel record of ideas that Rossi had been developing in both drawing and other writing as such it is in itself an analogous artefact. Here expressed Rossi's own uncertainty with the general ideology of modernism indicating certain aspects of failure of modern architecture.

The subject of this book is 'City' which Rossi wants to be understood as 'Architecture'. To consider the city as architecture means to recognize the importance of architecture as a discipline that has a self-determining autonomy. Here architecture does not mean the visible image of the city and the sum of its different architectures but architecture as a construction of the city overtime. This process of construction link the past and present and thus it addresses the ultimate and definitive fact in the life of the collective, the creation of the environment in which it lives. To Rossi, architecture is inseparable from life and society. People create them with an intention of aesthetic and the creation of better surrounding for life. This intention also goes with the creation of cities.

City and its architecture, i.e. construction, is studied in this book as an originator of the contrast between particular and universal, between individual and collective. This contrast is manifested itself through the relationship between the building and spheres of public and private, between the rational design of urban architecture and the values of locus or place.

Rossi wants to consider a city as a unified element - as an overall synthesis of its different parts. At the same time he recognises the need of realizing a city by parts, i.e. a singular place, a *locus solus.* City and its parts are always undergoing some changes due to natural and man-made reasons. In this process of urban dynamics monuments are the fixed points and the only sign of the collective will.

In this book Rossi attributed particular emphasis on historical methods to compare the cities. But he also thinks that theories must elaborate a city's enduring elements or permanence so as to avoid seeing the history of the city solely as a function of them. In his view the significance of permanence in the study of the city can be compared to that which fixed structures have in linguistics.

In order to develop a program for the development of urban science Rossi tried to translate the points specified by Ferdinand de Saussure (1966) for the development of linguistics. However, Rossi dwells particularly on historical problems and methods of describing urban artefacts, on the relationship between the local factors and the construction of urban artefacts, and on the identification of the principal forces at play in the city in a permanent and universal way.

Finally Rossi tried to identify the political problems of the city. He thinks of such problems as one criterion to study the dynamics of the ideal cities and urban utopias. To him the history of architecture and built urban artefacts are always the history of the architecture of the ruling classes and the revolutionary impose of alternative proposals for organizing the city. In his view without outlining an overall frame of reference for the history of the study of the city there remain two major systems for studying the city. They are, one that considers the city as the product of the generative functional systems of its architecture and thus of urban space. In this system the city is derived from an analysis of political, social and economical systems and is treated from the view point of these disciplines. The second one considers city as a spatial structure, which system belongs more to architecture and geography. Rossi identifies himself with the second view point but also draws on those facts from the first which raise significant questions.

All the thoughts here are extended and related among themselves. However Rossi divided his book into four main parts. They are:

(a) Problems of description, classification and typology
(b) Structure of the city
(c) Individuality of Urban artefacts and the locus i.e. the urban history
(d) Urban dynamics and the problem of politics as choice.

Certain parts of this book touch on matters which remain to be developed further but which are quite important for a complete panorama of architectural studies. These include the theory of permanence, the meaning of monuments, the concept of locus, the evolution of urban artefacts, and the value that architecture as the physical structure of institutions gives to a place. Other questions treated here in a systematic way for the first time, such as a building typology and urban morphology, or the issue of classification in architecture. These have subsequently been amplified by important contributions. The following discussion addresses such issues those are significant in Rossi's text.

Urban Artefact as a work of Art

Rossi is primarily concerned with the form of a city which is the summary of its architecture. Two different hypotheses are taken here to mean the architecture of the city. Firstly Rossi finds city as a manmade object, a work of engineering and architecture. Second, certain more limited but still crucial aspects of the city, such as urban artefacts, which like the city itself are characterized by their

own history and thus by their own form. Rossi's direct rejection of function shows his preferences to explain the city form as an object of art. He emphasizes here that functions are dominated by form and this forms determine the individuality of every urban artefacts. The urban artefacts such as a building, a street, a district are considered as a work of art, which are the manifestations of social and religious life. He stated that there is something in the nature of urban artefacts that renders them very similar and not only metaphorically - to a work of art. Urban artefacts are material constructions, but they are something different form the material; 'although they are conditioned, they also condition'. To him urban artefacts and the city itself can be considered as an art for their link to their quality, their uniqueness, their analysis etc. It also appeared difficult to him to explain the underlying principles of their variety. Rossi supports Claude Levi-Strauss (1972) and consider that the city achieves a balance between natural and artificial elements as it is an object of nature and a subject of culture. He never had the misconception of thinking a city as an art object of an artistic episode. Besides he recognizes the artistic quality of each and every urban artefact –as a single street, an individual plaza etc. In Rossi's view city is a human achievement per excellence. Finally Rossi believes that the whole is more important than the single parts so he wants to examine the total architecture of the city in terms of its parts.

Typological Question and Naive Functionalism

Type is attained according to needs as well as the aspirations to beauty. Thus it deals with the basis of architecture. Typological questions always entered into the history of architecture. But Rossi defined 'concept of types' as something that is permanent and complex, a logical principal that is prior to form and that constitute it. Although many studies addressed the problem of typology in relation to 'function' but according to Rossi, existing classification have failed to go beyond the problem of function. In his view 'any explanation of urban artefacts in terms of function must be rejected if the issue is to elucidate their structure and formation'. Because he thinks the function of an urban artefact is changeable with time. He sees function as physiological in nature which justifies the formation, development and alterations of form and vice versa. From this point functionalism and organicism, two principal currents in Modern Architecture, reveal their common origin and the reason for their weakness and ambiguity. By these theories 'type' is reduced to a simple scheme of organization. Although some theoreticians like Kevin Lynch (1958) assigned priority on 'form' and 'function' over urban landscape in classifying cities; they identify these as the most viable criterion of classification. To Rossi 'type', on the basis of functions, seems to be inadequate in classifying cities.

Rossi argues that 'since every function can be articulated through a form, and forms in turn contain the potential to exist as urban artefacts, so forms tend to allow themselves to be articulated as urban elements. It is precisely a form that persists through a set of transformations which constitute an urban artefact per excellence. He thinks function can not be indicated as a principal issue in relation to cities like individuality, locus, memory, design itself. His study is a denial of the explanation of the urban artefact in terms of function. He rejects the concept of functionalism, which is dictated by an ingenious empiricism that holds 'functions bring form together'. So he thinks urban artefacts even the city itself is free from rigid rules of functions, on the other hand, all their forms are capable to incorporate function with some alternations and transformations if required.

Theory of Permanence

Rossi's ideas support the theory of permanence as proposed by Lavendan (1926). This theory is related to Rossi's hypothesis of the city as a giant man-made object produced in the process of time. Thus evolves Rossi's 'Concept of Permanence', which affects collective and individual artefacts in the city in different ways. Rossi thinks 'urban history' is the most useful way to study urban structure. The persistence of the city is revealed through 'monuments' as well as through the city's basic layout and the plans. Cities tried to retain their axis of development by maintaining the position of their original layout and growing according to the direction and meaning of their older artefacts. However permanence may be 'propelling' or 'Pathological'. Artefacts help to perceive the city in totality or may appear as an isolated element as a part of urban system. A monument becomes propelling when it survives precisely because of their form which accommodates different functions over time. When an artefact stands virtually isolated in the city and adds nothing, it is pathological. However, in both cases, the urban artefacts are a part of the city.

City as a spatial system

City is conceived as a spatial system composed of

many parts. Residential area is one of such elements in the total form of the city. It is closely attached to nature and evolution of a city, and constitutes the city's image. According to Rossi this part and whole character of a city challenge an aspect of functionalist theory i.e. zoning. He considers the specialized zones are characteristics of a city and may have their autonomous parts. Their distribution in the city is determined by the entire historical process but not on function.

Primary Element and their dynamics

One of the important concepts derived by Rossi is the identification of the 'Primary Elements' of a city. The urban elements those function as nuclei of aggregation and are dominant in nature are primary elements. These are capable of accelerating the process of urbanization in a city and they also characterize the process of spatial transformation in an area larger than the city. These elements play a permanent role in the evolution of the city overtime and constitute the physical structure of the city. Many eminent cities started to grow centred on an urban artefact, like monument. Over time these generating artefacts become transformed and their functions altered. Such elements have meta-economic character and also become woks of art.

History and the Collective Memory

The history is the 'collective memory' of people of the city and it has an important influence on the city itself. The history expresses itself through the monuments. Sometimes myth precedes the history of a city and thus become important. Athens is the first clear example of the science of urban architecture and its development through history which is initiated by a myth. Rossi thinks that thus the memory of the city makes it very back to Greece, where lies the fundamentals of the constitution of the city. The Romans and the other civilizations conspicuously emulated the example of Greece. According to Rossi Rome reveals total contrasts and contradictions of the modern city; but Athens remains the purest experience of humanity, the embodiment of condition that can never recur. Rossi believes in the dominant role of politics played in the evolution of cities. Political decisions settle on the image of the city if not the city itself. Thus city becomes the reflection of the collective will.

Rossi thinks that 'urban history' is most useful to study urban structure. The continuity and therefore the history are important aspects underlying his theories. To Rossi historical methods are weak as they isolate the present from the past. Urban aesthetics constitute a science founded in meaning inherent in the pre-existing building stock of the city. Through collective memory the intellect is engaged to discover their meaning and beauty. He does not distinguish between continuity and history.

Rossi's 'past' was not overwhelmed by the ancients. Rather he emphases on the cultural stability and inspires its further development in all the ages. He sees building of cities as part of culture. To him people had civilized nature and brought it under control by discovering the secrets of her materials and with them made constructions for the collective purpose. This demands organized systems of division of labour and commands, and the technical advancement to refine tools for the task.

The Monuments

There remains strong relationship between the monuments and the rituals, Rossi places importance on monuments in the foundation of the city and of the transmission of ideas in an urban context. The persistence of a city is revealed through monuments - physical signs of past. Rossi advocates that the dynamic process of the city tends more to evolution than preservation. In this evolution process monuments are preserved and also continuously presented as propelling elements of development. One can experience the form of the past in monuments and monuments as urban artefacts become an important element of the city which helps to constitute the total picture of an urban context. To Rossi sometimes monuments become pathological as they stand in isolation from the present.

The Locus

The meaning of the term 'Locus' was extensive to Rossi. The locus is conceived of a singular place and event, which works as the relationship of architecture to the constitution of the city and the relationship between the context and monument. Rossi distinguishes some differences between locus and context. Usually locus is the conditions and the qualities of a space necessary to understand an urban artefact. On the other hand, architecture shapes a context, which again constitutes changes in space. To Rossi context is associated with some illusion and has nothing to do with the architecture of the city as it depends on the necessary permanence of function.

Conclusion

The text of Aldo Rossi has been a study of 'city' considering the urban form as a whole. This book is concerned with an abstract theoretical idea where the city is conceived as a physical phenomenon, which is an instrument for man's delight through the realm of aesthetic potential of its form. The context of the problem was the twentieth century town planning approaches which had been generated some cities as machines. Here the author refers to the historical methods to get rid of the present day's modernist concepts. However, Rossi's method is much more academic. His new construct begins as a critique of nineteenth century functionalism. From this he proposes the city as the ultimate and verifiable data and as an autonomous structure. He also identified some of the key elements of the evolution and transformation of cities. Rossi assigns particular importance to institutions as truly constant elements of historical life and to the intricate relationship between myth and institution.

Moreover, Rossi conceived the city as an archaeological artefact. To him history was analogous to a 'skeleton' whose condition serves as a measure of time and in turn, is measured by time. His object of analysis, the city, is measured by the instrument of 'typology'. Rossi analyzed the city, as a whole constructed by its parts. His inspiration was perceive a lack of any rational approach to structuring knowledge of the city. In response the study undertaken is analytical and inductive, and firmly set within the domain of architecture. It was however not intended 'as a confirmation of results' for Rossi wished to encourage more necessary theoretical development and research on the city.

This book presents a protest against functionalism and the Modern Movement. At the same time it attempts to restore the craft of architecture to its position as the only valid object of architectural study. Besides it analyses the rules and forms of the city's construction. Therefore, it has become immensely popular among architects and urban designers.

References

De Saussure, F. (1966). *Course in General Linguistics,* McGraw Hill, New York (originally in French 1915) translated by C.Bally and A. Sechahaye with A. Riedlinger

Lavendan, P (1926). *Histoire de l'Urbanism*, Vol- 4, Paris: Henry Laurens.

Levi-Strauss, C. (1972). *Structural Anthropology,* Harmondsworth: Penguin.

Lynch, K. and Rodwin, L. (1958). A Theory of Urban Form, *American Institute of Planners,* 24 (4), 201-214.

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Book Review:

Cities in Transition
Transforming the Global Built Environment*

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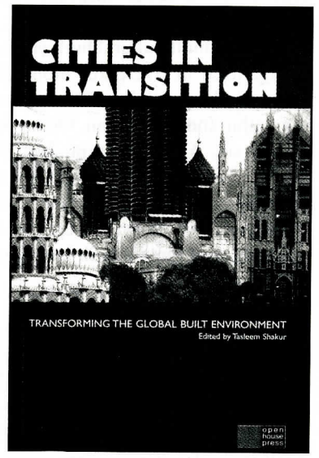

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To view cities as both reflector and producer of society, if not civilization, is perhaps not an over statement. In history, cities had gone through a process of physical change: they expanded, decayed, shrunk, or underwent internal reorganization. There are, however, limits to thinking city's change only in physical terms; change has many facets beyond the physical and spatial. Cities, especially the large ones, rarely remain static in the physical, social, economic, and cultural arenas. In terms of generic change, cities of today are no different from their historical precedence. Nevertheless, what makes the case of today's city unique is the pace of change; cities of the 21st century are changing fast. The notion that the 21st century cities are in 'transition', in a given space and time, imply those cities are in a process of change; change from one state to another, albeit in a short timeframe. Where, why and how cities' built environment change are the core questions, arguably not exclusive to the design and planning disciplines. However, we, from within these design and planning disciplines, wish to understand city in all its complexities to play our role in its transformation as a better place for living, working, moving, and recreation. Recent developments taken place in social sciences help our probing these questions. Our ongoing quest to investigate these questions are becoming more important than ever as more people are now living in cities than rural settlements. On the other hand, we have also started reflecting critically on the autonomous design and planning paradigms; the reason is cities' failing to ensure equal and equitable opportunities they ought to offer to their citizens.

The book *Cities in Transition – Transforming the Global Built Environment* is about manifest changes of cities, observed in recent times in different parts of the world. *Cities in Transition* is a collection of

* Presented at the Book Launch Ceremony held at the North South University, Dhaka, on 18 August 2005.

fifteen articles, published earlier in the *Global Built Environment Review* (GBER) – a web-based journal. Contributors to this book are either academic or professionals from the fields of architecture and urban design/planning. The introduction sets its intention to identify some 'emerging trends' associated with the radical change cities across the world have been experiencing in the 21st century. The five generic themes identified from the contributions are as follows: cultural identity in transition; transforming participation and community; redefining the design institution interface; contested space and the new world order; and lastly, from multiple to multicultural built environment. The book is organized in five parts, along these themes, each part with three articles. Cities covered by the articles are within India, Pakistan, Oman, Kuwait, and China from Asia; Algeria, Egypt, and South Africa from Africa; Turkey, United Kingdom and the Netherlands from Europe; and Mexico and Cuba from American Continents. All papers except the opening article on the traditional Omani built environment are premised in the present context.

The title of the book under review—*Cities in Transition*—is powerful enough to create curiosity among the readers of the city. Being curious, I have found *Cities in Transition* an interesting book to read but rather challenging to review. *Cities in Transition* gives its reader glimpses into many different facets of rapid changes that are transforming the built environment and the quality of life lived within. *Cities in Transition* presents to its readers discrete snap-shots of changes and conflicts from both developed and developing countries. Not only are these snap-shots topically wide apart they even oscillate within specific themes in which they are grouped. Their variety and quality, within each theme, make readers aware of the changing nature of the global built environment. Readers would get a heavy dose of information and the associated debates while assimilating these enormous diversity and depth of these papers. The ease at which an informed reader would extrapolate the gist of and make links between the papers is not going to happen for a beginner. *Cities in Transition*, nevertheless, is a good introduction for the beginner if he/she can pick the specific topic or theme to focus on. This book will surely act for them as a gateway to the current states and debates within the built environment.

The value of an individual paper often rises above a set of papers in a given theme. We can note at least four papers whose inclusions add extra value to this book. First, Arif Hassan's close overview of how the informal sector in Karachi, Pakistan, has changed due to global restructuring and liberalization; second, Noha Nasser's depiction of South Asian diasporas' transforming the built environment for identity in the UK; third, Erik Bahre's critical insight in to the unforeseen intra-community conflicts and policy contradictions for access to housing in the post-apartheid South Africa; and lastly, Karen Leeming and Tasleem Shakur's sensitive portrayal of how groups within multi-cultural community contest for housing in urban regeneration in the Netherlands. These papers in their own unique settings, among others, are lucid description of where, and insightful explanation of why and how cities of the 21st century transforming.

Decades ago, Janet Abu-Lughod observed that the dichotomies of the first and third worlds are disappearing fast. Cities of these two worlds are indeed coming closer to each other due to all-encompassing influence of capitalism, spread of information technology, and political reforms. Developed world's material culture and its values, among others, are now more visible in the cities of the developing world. Nevertheless, erosion of the cultural boundaries of the developing world comes with a cost. Erika Liu's commentary on major Chinese cities' uncritical acceptance of Western architecture makes a point. While the developed and developing worlds are coming closer, *Cities in Transition* asserts that segregation and integration remain burning issues in their respective cities. As major economic, social and political forces of society are in play community suffers in many different ways. *Cities in Transition* also shows how community fights back to restore its normalcy with the sustainable development and eco-design agenda. Papers by Karen Leeming in the UK, Pedro Moctezuma-Barragan in Mexico, Dania Gonzalez in Cuba, Peer Smets in India, Michael Clark in the UK, and Ian Jackson in the UK are significant case studies offering innovative methodologies for intervention at the community level. In addition, papers by Omar Khattab in Kuwait, Magda Sibly in Egypt and Algeria, and Hulya Turgut in Turkey touches issues from within an architectural premise.

While observed changes in cities are grouped within discrete themes, there is a possibility that common agent of change acts across themes to put cities in a state of transition. In this regard, all papers are also potential raw materials of a future project for tracing agents of change in the 21st century cities of both developed and developing countries. The wider coverage of *Cities in Transition*, apparently, poses no

problem as to why one theoretical construct cannot deal both these contexts. One would then expect, a post-compilation discussion that gels both these context's position in a common ground. The editor, unfortunately, misses this opportunity in the introduction. This could also be a strategic omission, left for the future to reckon with. It is now up to the readers to pick up the relevant papers, across themes, toward outlining his/her version of the project, i.e. knowing cities in transition, and importantly, knowing their agents of change.

A major realization of this book is that the built environment of the 21st century cities are marginalized, politicized, and commodified; the nature and extent of these manifestations vary across the world with different consequences. While these top-down processes cause despair, hopes emerge as citizens mobilize to establish their claims on space, whether by negotiating with the local authorities for community development or by initiating changes at the domestic level.

Theorization that would emerge from all these discrete papers should naturally lead us to a discourse of the built environment. The editor has indeed hinted toward that possibility at the end of his Introduction by citing David Harvey's comments on "materialization of utopias of spatial form". Gone are the days of modernism when society had to wait to listen to what a visionary individual architect/planner had said. Alex Krieger (2004) from Harvard GSD supports – "After all, the twentieth century witnessed immense urban harm caused by those who offered a singular or universal idea of what a city is, or what urbanization should produce". We now live in a time when a local fit is preferred with a global relevance. In this context, *Cities in Transition* emphasizes a methodological shift from viewing the built environment only in concrete terms. Most of the papers, in one way or the other, suggest that the physical hardware is inadequate; scopes for software are necessary for making the built environment relevant to people and their way of living. This book, in this respect, supplants built environment *per se* to become a study in urban culture. *Cities in Transition* is a timely contribution to our ongoing project of understanding the conditions of our material existence. *Cities in Transition* deserves to be in the library, especially, alongside Harvey's *Spaces of Hope*, King's *Spaces of Global Culture*, and Appadurai's *Modernity at Large*.

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Nasreen Hossain, and sultana Emran Sikder

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Abul Mukim Mozammel Haque Mridha and Khandaker Shabbir Ahmed

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Mohammed Zakiul Islam

Hidden Morphological Order in an Organic City
Farida Nilufar

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Shayer Ghafur

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Zainab Faurqui Ali

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Habermas, J., (1983). 'Modernity – An Incomplete Project'. Hal Foster (Ed.), The Anti-Aesthetic. Seattle: Bay Press.

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