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APPROPRIATE HOUSING SOLUTIONS
FOR THE FAST-GROWING MIDDLE CLASS IN KARACHI

by

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A THESIS SUBMITTED
IN PARTIAL FULFILLMENT OF THE
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MASTER OF ARCHITECTURE

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ABSTRACT

Fifty years after independence, Karachi, Pakistan's most important metropolis, continues to suffer from a widespread shortage of suitable housing and infrastructure. The recent growth of the newly empowered middle class has inflicted additional strains on this already overwhelmed megacity.

While the rich are well-equipped to look after themselves, and the poor are best served with a 'sites and services' approach, the middle class has few accessible housing options.

By looking at the development of Karachi, and its current urban form and infrastructure—in the context of patronage, planning and housing typology—this thesis reaches a better understanding of the issues, identifies appropriate housing solutions for the rising middle class, and proposes transformations of typology based on the target residents' social, cultural and economic needs.
ACKNOWLEDGEMENTS

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Mihail S. Lari
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PREFACE

As the son of a Pakistani architect—who is actively involved in all facets of the built environment—I've become intimately familiar with the profession as well as the challenges it faces in Pakistan. It is obvious that the scale of issues that need attention is immense, therefore I feel it is important for me to go beyond the scope of a private practice.

Since so little work has been done on Pakistani cities and architecture, research for this thesis was difficult but exciting. Over several years, often by pursuing the original sources, I have discovered information that had long been forgotten, and hundreds of documents that have never been seen before by more than a handful of consultants and bureaucrats. These have helped construct, layer by layer, a much richer and clearer picture of Karachi and the issues it faces. (All materials collected have been donated to the Heritage Foundation Archives for the benefit of future researchers).

In a country where political power and patronage are essential aspects of change, I will be in a position to reach those in power since my family continues to be involved in Pakistani politics. When I spoke with one of the leaders of the majority party in Karachi, I was informed that the party had no housing manifesto, even though it represents the middle class and housing is one of the most important issues for them. Half in jest, half seriously, I was told I could write come back and write a housing policy for the party. While this remark may surprise those of us living in the United States, it very much reflects the reality of how things are done in a country like Pakistan. By deciding to focus my thesis on Karachi, I have consciously made a commitment to play a future role in it.
1. INTRODUCTION

This thesis maps the development of the city of Karachi—from a small fishing village 200 years ago to the present-day home of approximately fifteen million people—in the context of patronage and policies, planning and housing typology. It focuses on the middle class, a fast-growing, recently politically empowered group in Karachi who’s current housing options are dismal, and for whom appropriate housing solutions need to be identified.

Chapter 2 places Karachi in an historical context starting with Alexander’s conquest of the area, and leading up to its proclamation as the capital of British-annexed Sindh that is the gateway to Central Asia.

Chapter 3 documents the development of Colonial Karachi’s ‘black’ and ‘white’ towns, and the accompanying dualistic colonial policies that affected both urban form and culture, up to the departure of the British.

Chapter 4 looks at the origins and rapid growth of the middle class, compared to its occurrence in the West, paying particular attention to its culture, needs and expectations in Pakistan.

Chapter 5 looks at the history of typology, and its importance in architecture, with a special focus on housing typology, both Western and indigenous.

Chapter 6 maps the development of the city from 1947 onwards taking into account government thinking as well as specific planning and housing policies that determined its urban form.

Chapter 7 identifies appropriate housing solutions for the middle class, and discusses the importance of transforming typology to suit the middle class’s changing needs and bridging the dualism between the lessons of the
vernacular and cultural tradition and modern architectural theory and building. It also identifies suitable planning and political strategies that need to be encouraged for the implementation of these solutions.
Map of Pakistan with Karachi at its southern end on the shores of the Arabian Sea.
Map of Sindh province with Karachi, its capital, at its southern end.
Karachi land use, 1974.
Typical street in the old town with retail and apartments, and relentless traffic.
Karachi’s commercial heart and main thoroughfare that leads into the city from the harbor.
2. HISTORICAL CONTEXT

Ancient Origins

Home to one of the oldest civilizations in the world, the Indus Valley Civilization which prospered some 5,000 years ago, the Islamic Republic of Pakistan is located between India to the east, Iran to the west, Afghanistan and the former USSR to the north-west, and China to the north. The Arabian Sea, part of the Indian Ocean, lies to the south. Pakistan covers an area of 304,374 square miles (796,095 square kilometers), and is populated by the descendants of the waves of conquerors who swept in from Greece, Tashkent, Afghanistan, Iran, Saudi Arabia and Britain, with "an idea of conquest, expansion or conversion".¹

It is speculated that two ancient cities, Alexander (356-323 BC) the Great’s Krokala as well as Muhammad bin Qasim’s Debal were located in the vicinity of Karachi—serving as a gateway to Sindh and beyond to Central Asia.

Alexander thought of the Indus, the main river running through Pakistan, as "the eastern frontier of his empire" and wanted to establish permanent commercial and political links with this region. Thus, he founded Pattala, believed to be the Thatta of today, and laid out plans for two ports, one of which was probably close to today’s Karachi.²

By sailing back after his victory, Alexander wanted to reopen the route probably used by the ancient inhabitants of the Indus Valley several thousands of years earlier.³ His admiral, Nearchus thus headed down the

¹ Duncan 1989:13
² Pithawaia 1936:66
³ Fox 1960:343
western branch of the Indus, eventually arriving (probably in 326 BC) at the
newest Alexandria—‘Krokala’ or Alexander’s Haven. Also known as
Krotchey, Krokala was the crucial stop from where supplies were collected for
the return journey.

Although the exact site cannot be determined due to the changing
course of the river, Alexander Burnes, author of *Travels into Bokhara*, notes
a definite similarity between the ‘Bay of Curachee’ and “the mouth from
which Nearchus took his departure from Sinde,” and identifies the nearby
“rocky range of black mountains, called Hala,” with the ‘Irus of Nearchus’.

In addition, Karachi is also identified with the ancient city of Debal,
conquered by General Muhammad bin Qasim in AD 711 for the great king
‘Rai Chach, son of Selaij, son of Bisas’ who’s capital was at Alor. “Muhammad
marked out a place for the Musulmans to dwell in” and “built a mosque”.
Historian Henry Elliot believes there is,

little doubt that Karachi itself represents the site of Debal.
The very name of Debal, or rather Dewal, ‘the Temple,’
was doubtless acquired from the conspicuous position
which that object must have occupied from the sea; where
it was calculated to attract the gaze and reverence of the
passing mariner…and as there is no other so eligible and
commanding a spot along the whole coast of Sind, from
Cape Monze to Kotesar, it is highly probable that the
promontory on which Fort Manora now stands is the
identical site occupied by the celebrated temple which
gave name to the port of Debal….6

According to Ibn Haukal, Debal was “a place of great sterility, and only
occupied on account of its trade. Nothing can be more decisive against the
fertile Thatta and in favour of the barren Karachi”.7 Debal flourished until the

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6 Burnes, A. 1834:3.10
7 Elliot and Dowson 1867:1.120
4 Elliot and Dowson 1867:1.376
7 Elliot and Dowson 1867:1.377
early thirteenth century when Sindh was invaded by Sultan Jalal-ud-Din of Khiva (1221) who "treated the people of that port with great severity and plundered the country". The next reference to this area does not occur until the early eighteenth century. From then on, the continuous evolution of the modern city of Karachi can be traced.

Trading Post

Lari Bunder, close to Thatta, was the most important port of Sindh for many centuries until its inhabitants were forced to relocate due to the changing course and silting up of the river Indus, finally settling in 1729 at Dirbo, a community of about twenty-five fishermen's huts. A deep pool of water located nearby was known as 'Kalachi's Kun'—Kalachi was the name of one of the fishermen, and Kun means ditch. This body of water, along with the proximity of the Lyari river—although extant only during the rainy season—made it possible for the community to survive the hostile environment. Even in the dry season, water could be procured from wells dug along the river banks. With the Arabian Sea to the west and the Lyari river to the east, surrounded by tamarind clumps and mangrove swamps, the village became known as Kalachi-jo-ghote or the village of the Kalachi.

The settlement soon became more of a trading post than a fishing village, but its exposed condition close to the sea made it vulnerable. With increasing trade, it became important to fortify and protect the settlement from intruders. The fortified town covered sixty to seventy jirabs (thirty to

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\(^{8}\) Lambrick 1986:1.185

\(^{9}\) Elliot and Dowson 1867:1.377

\(^{10}\) Lari 1989:10

\(^{11}\) Bhojwani & James 1915:37

\(^{12}\) Lari & Lari 1996:
thirty-five acres) and its distinctive form makes it easy to identify even today (marked as ‘Old Town’ in the maps of the mid-nineteenth century). The fortified town had two entrances: the one facing west towards the sea was called Khara Darwaza or Brackish Gate, while the one facing north-east towards the Lyari river was called the Mitha Darwaza or Sweet Gate—named respectively for the saline and sweet water sources at the two ends of town.

By the middle of the eighteenth century, Karachi had become the transit center of Sindh which was ruled by the Kalhora chief, Mian Nu’r Muhammad (1718-1755), a governor or imperial agent of the Mughal Court.\textsuperscript{13}

In 1730, an altercation between the Kalhoras and the Khan of Kalat, ‘the Royal Eagle of Kohistan,’ ended in the Khan’s defeat—who sought peace by offering the hands of his two daughters in marriage to the Kalhora ruler’s sons. In return, Kalachi-jo-ghote was ceded to the Khan as blood money for his brother’s death.

For India, it was a time of great upheaval because of attacks, first by the Persians led by Nadir Shah (1739), and then by the Afghans led by Ahmad Shah Durrani (1747), which weakened the Mughals’ hold over the Subcontinent. Sindh’s rulers were now forced to pay an annual indemnity to the Kabul throne. After a decade of internal strife, the Talpurs wrested control from the Kalhoras by obtaining \textit{sanads} from Durrani’s son, the Afghan King Timur Shah (who ruled from 1773 to 1793).\textsuperscript{14} The Kalhora territories were divided among Fateh Ali Khan’s Baloch kinsmen and the “government of Sind now became a confederacy of chiefs ruling each his own share independently”.\textsuperscript{15}

\textsuperscript{13} Fredunbeg 1902:2.145
\textsuperscript{14} Fredunbeg 1902:2.202; Aitken 1907:11
\textsuperscript{15} Aitken 1907:118
Aware of the importance of Karachi as a port, the Talpurs initiated a series of raids on Karachi to seize it from the Khan of Kalat. Since the Khan did not have any soldiers stationed there, it was left to the residents to defend it as best they could. After a prolonged unsuccessful siege, another attempt was made the same year, followed by a third attempt in 1794-95 which finally forced the residents to negotiate with the Talpurs.

**British Interest**

Although Captain Paynton landed in Sindh in 1613, and described Thatta as one of India’s most celebrated markets,\(^6\) the earliest British interest was expressed when Thomas Roe arrived at the court of Emperor Jehangir to explore possibilities of trade with the Mughal Empire (1616). Roe’s favorable reports back to the Company highlighted the commercial potential of ‘River Syndhu’ (the Indus).

Although the ‘London East India Company,’\(^7\) had registered its presence on the Subcontinent in 1611 at Masulipatam, north of present day Madras, it was unable to negotiate any trade facilities in Sindh from the Mughal Emperor even though Sindh was being ruled by Mughal subahdars or governors. This was due to the strong Portuguese influence over the area ever since the arrival of Vasco da Gama on the southwest coast of India in 1498 for “spice trade, the pursuit of which was the stimulus for European interest in Asia”\(^8\).

In 1774-5, Lt. John Porter was sent by the Company to Karachi during his exploratory voyage to the Indus and the Persian Gulf. Porter entered the

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\(^6\) Lan\' 1989:8
\(^7\) Incorporated on December 31, 1600, by Queen Elizabeth
\(^8\) King 1995:15
harbor between Manora and the Oyster Rock Islands, arriving at 'Crochey Town,' which he found "fortified by a slight mud wall and flanked by round towers". The town was situated about one mile from the side of a creek and five or six miles from the point where vessels could berth. Therefore, merchandise brought by sea to Kalachi had to be borne on small boats as the creek did not have "water enough in it for anything else".

With the arrival in 1798 of Lord Mornington, the Marquess of Wellesley, the face of the Subcontinent began to change rapidly. Wellesley's arrival coincided with Napoleon's forays into Egypt, and rumors that he was conspiring with the Afghan ruler, Zaman Shah (1793-1800) and Tipu Sultan of Mysore (1783-1799). Since the British considered access to Central Asia crucial to containing Napoleon's grand designs of a French eastern empire, Sindh assumed a strategic role.

With the Mughal empire disintegrating, small states vying for power and much of the old political, economic and social order in disarray, it was only a matter of time before all important states including Sindh came under the influence of the East India Company. The Colonists like Wellesley believed that, "no greater blessing can be conferred on the native inhabitants of India than the extension of British authority, influence and power". Armed with an irresistible compulsion for political maneuvering and territorial gains, the traders of spices and calicoes transformed themselves into imperialists within a century and a half.

The first British political mission to Sindh was initiated by Wellesley in 1799. Ostensibly commercial in nature, a local merchant was sent to the Talpur court for preliminary negotiations on behalf of the Company, and

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19 Mason 1985:84
20 Lari & Lari 1996:
found Karachi to be a place of "immense trade...through which all merchandise for Kabul and Kandahar finds vent".\textsuperscript{21} Nathan Crow of the Bombay Civil Service followed aboard \textit{The Drake} and on May 26, 1799, and landed at "Curachee, the only sea port town of Sindh with a population of ten thousand".\textsuperscript{22} After prolonged negotiations, the \textit{parwana} granted by the Talpurs allowed Crow to open factories at Karachi and Thatta, along with exclusive trade rights that precluded other Europeans.

The Karachi factory opened on September 29, 1799, on the banks of the Lyari river, a couple of miles inland, but was ordered shut within a year. The Company’s expansionist policies were now increasingly apparent, creating uneasiness among the native rulers such as the Talpurs.

\textbf{Renewed Interest}

As Gilbert Elliot, the first Earl of Minto, arrived in India as Governor-General (1807), the threat of Napoleon once again forced the British to want to establish friendly relations with the powers “that held the key of the north-western frontier”.\textsuperscript{23} Sindh’s position was strategically important, “nearly central between India and the whole of the dominions of the King of Kabool, together with Persian Khorasan, Bolkh, Bokhara &c”.\textsuperscript{24} A Mission was sent to Sindh in 1809 to secure a permanent commercial or political residency from Sindh’s rulers.

Karachi’s fortunes were now closely interlinked with the attitude of the British towards Sindh and its rulers. British relations with Russia, France, Persia and Afghanistan, and the perceived trade potential with Central Asia,

\begin{itemize}
  \item Thairani 1981:8
  \item Thairani 1981:9
  \item Caroe 1972:1.xii
  \item Pottinger 1816:344
\end{itemize}
all influenced Karachi's development. In 1815, Walter Hamilton confirmed the suitability of the port of Karachi:

Corachie is a sea port town in the district of Tatta, province of Scinde, 57 miles from the city of Tatta...The Bay of Corachie affords good shelter for shipping and vessels of three or 400 tons berthen may enter the port from the beginning of September to May...The entrance of the harbor is narrow and the deepest water is about 200 yards from the western point of entrance, on which is a castle, with two or three bad pieces of artillery.  

The town's population was approximately 8,000 at this time, a majority of them Hindu. Exports from 'Corachi' consisted of horses, musk, saffron and alum from Multan, swords and carpets from 'Candahar and Khorasan,' plus ghee, hides, shark fins, saltpeter, potash, Tatta cloth, indigo, frankincense, gum seeds and coarse cloth, worth seven lakh (seven hundred thousand) rupees including "the most valuable export" of Malwa opium. There was a brisk slave trade; "Muscat is the port from which slaves are all brought to Karrachi, and hence sent up the country for sale; they are divided into two classes, the Sheedees or Africans, and the Habshees, or Abyssinians". The vegetation consisted of some date, mango and Kanar trees, and a few vegetables such as pumpkins and brinjals of "an indifferent quality". However, camels and draught bullocks were of the "best description" and fish and poultry were abundantly available.

**Occupation of Karachi**

With dissensions growing within the ruling Talpur family, the British

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25 Hamilton 1815:311  
26 Hamilton 1815:312  
27 Postans 1843:24  
28 Postans 1843:358  
29 Hamilton 1815:312  
30 Hamilton 1815:312
arrived at Karachi on February 2, 1839, and ordered the Baloch garrison. An attack followed when “the fort at Karachi fired one or two guns at the ‘Wellesley’”. The British “levelled it with the dust” since “it will teach these savages to pay due respect to the British flag in time to come”.

In the town, the heavy fire from the flagship had created such thick smoke that it “spread like a dark cloud over the town and changed daylight into night”. After disembarking, the troops were garrisoned in “the plain between the town and Rambagh [now known as Arambagh]”, about one mile from the native town. Later, however, the Cantonment was established in the areas known as Jacob Lines and Saddar Bazaar, about two miles from the ‘Old Town’.

On receiving reports that the British troops had landed “by force”, the Amirs sent an emissary to Pottinger to negotiate a treaty. The Amirs were forced to agree to the stationing of a British force of 3000 men in Karachi on February 7, 1839.

The ‘Army of the Indus’ could now proceed without hindrance to Kabul, but the first major Afghan war during Queen Victoria’s reign ended in humiliation for the British. The absolute annexation of Sindh thus became imperative as a symbolic gesture of power.

Major-General Charles Napier arrived in Sindh on September 9, 1842 to command all the troops stationed in Sindh and Balochistan. Since the conquest of Sindh was Napier’s last opportunity to leave his mark on history, it was not enough to retain Sindh as a tributary or even a ‘Secondary Alliance’. “Sindh had to be taught a lesson; first, for not having given due regard to the might of the British Government; and second, to recover the

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31 Correspondence 1843:172
32 Bhojwani & James 1915:91
33 Bhojwani & James 1915:91
34 Fredunbeg 1902:224
power and prestige lost in Kabul”.  

Another reason was the prevailing belief that “Great Britain as the de facto, and in a certain sense the legal successor to the broken Moghul power had the right of supremacy and influence in all the provinces that had broken off the parent stem”.  

By conquering Sindh—a very easy task because of the presence of British forces—“lost prestige could be regained and British might established with a single stroke”.  

Napier believed in the legitimacy of British rule in Sindh, noting: “It is not for me to consider how we came to occupy Sinde....We were here by the right of treaties entered into by the Ameers; and therefore, we stand on the same footing with themselves, for rights held under a treaty are as sacred as the right which sanctions that treaty”.

However, at the same time, he was also conscious that: “We have no right to seize Sind, yet we shall do so, and a very advantageous, useful, humane piece of rascality it will be”.  

The annexation of Sindh, and Karachi itself, was immortalized by Punch magazine when it published, with a twist, the message sent by Napier “Peccavi ‘I have Sind’ (sinned)”.  

‘British Town’

Although the Karachi Cantonment had been under British control since 1839, the town of Karachi itself was still under Talpur rule. With Napier victorious at Miani, English soldiers took control of the old town and “cut down the Talpur flag. Having raised the British Union Jack in its place...a proclamation was drawn up declaring Karachi to have become a British

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35 Lari & Lari 1996:  
36 MacMunn 1978:106  
37 Lari & Lari 1996:  
34 Muir 1915:328  
39 Aitken 1907:125  
40 Baillie 1890:11
town” in 1843.

As the first Governor, Napier decided to make Karachi the capital of Sindh, a province which was, at 60,240 square miles, in size larger than England and Wales put together. The reason for this may have been a desire on Napier’s part to be known as the founder of a city, just as Alexander had twenty-one centuries earlier.

Karachi was very small at the time of the ‘conquest,’ but Napier believed that “the young Alexandria of our young Egypt”, as Burton called it, would become great one day. ‘Young Egypt’ had become a favorite sobriquet for Sindh, originating from an official proclamation which described Napier’s conquest as equal to “Egypt in fertility, a reminder of Amrou’s despatch to Caliph Umar, in which he describes the land of the Nile as successively appearing as a desert, a lake and a flower-garden”. Thus, in 1844, Napier predicted that Karachi “will become so rich that it may tempt the hill tribes to rush down and plunder it”. He was not far wrong.

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41 Bhojwani & James 1915:127
42 Bombay Records 1855:XVII.663
43 Burton 1851:1.17
44 Napier, W. 1856:88
45 Lari & Lari 1996:
First available map of Karachi by A.F. Bellasis showing the original town next to the river, and the grid of the new cantonment areas at some distance, 1852.
3. COLONIAL KARACHI

British Attitude

As compared to the Mughals, the British had a very different attitude towards the social and cultural values of native life, and remained detached from the locals during most of their three centuries of association, secure in their feelings of cultural and military superiority. Governor-General William Cavendish-Bentinck noted in a speech to the British Parliament after leaving India,

In many respects the Mohammedans surpassed our rule; they settled in the countries which they conquered; they intermixed and intermarried with the natives; they admitted them to all privileges; the interests and sympathies of the conquerors and conquered became identified. Our policy has been the reverse of this: cold, selfish and unfeeling; the iron hand of power on the one side, monopoly and exclusion on the other.\(^45\)

During the colonial period, urbanization was entirely dependent on policies devised by the rulers. Having assumed the authority to transfer indigenous wealth to parent cities in Britain, no compulsion was felt to industrialize or encourage production of goods in the local urban centres. Therefore, the urbanization which did take place was, in Castells’ words, ‘dependent urbanization’,\(^46\) as opposed to that in England or other autonomous societies where it was a consequence of industrialization.

Urban centres of the Subcontinent thus developed as a response to the condition of colonialism, which A.D. King defines as a contact situation between two cultures and two distinct value systems: the two cultures

\(^45\) Moorhouse 1984: 75
\(^46\) Ballhatchet et al. 1980:14
representing different 'levels' of economic, social, technological and political organization and development; and, the power structure consisting of a dominance-dependence relationship in which the ultimate source of social, economic and political power resided with the metropolitan society.\(^{47}\)

As Edward Said explains, colonialism, "which is almost always a consequence of imperialism,"\(^{48}\) is much more than,

a simple act of accumulation and acquisition. It's not just a matter of going out there and getting a territory and sitting on it. Both of these practices are supported and perhaps even impelled by impressive cultural formations that include ideas that certain people and certain territories require and beseech domination.\(^{49}\)

Alien rule brought an upheaval in cultural norms and affected the entire living pattern of the indigenous urban society. The city became the most visible manifestation of the colonists' reign, reflecting their attitude towards the native population. The traditional sections of the city were relegated as 'backward' or inferior parts, while the new cantonment, Staff and Civil Lines became the 'progressive' sections, synonymous with the modern city.

Just as architecture cannot be viewed in isolation without reference to the political and historical forces prevailing at the time of its creation, urban form is also closely inter linked with the political, social and cultural aspirations of the inhabitants. In the case of a colonial city, these were dualistic in nature because of the dominant position assumed by the occupiers and the subservient position imposed on the occupied.\(^{50}\)

\(^{47}\) Ballhatchet et al. 1980:7
\(^{48}\) Said 1994: 9
\(^{49}\) Said 1994: 6-7
\(^{50}\) Lari & Lari 1996:
Dual City

The planning and growth of Karachi from 1839 onwards followed the urban form devised by the British for subjugated territories—the 'Dual City' concept which consisted of 'black' and 'white' sections of a town, that had evolved out of the specific requirements and phobic attitudes of the colonists between the 18th and 19th centuries.

The seeds of the 'Dual City' can be found in Madras, the first town administered by the English in the Subcontinent. In 1639, a strip of land obtained on the coast of Coromandel from the rajas of Vijayanagar, was laid out and became a model for the Colonial city. The 'White Town' of St. George, as it became known, had "a college for the factors and merchants [and] a house for the Governor," and was surrounded by a wall.\(^5\)

By the mid-1600s, the new settlers in Madras had established full control over the territory occupied by them. "In the White Town, the Agent himself was commander of the garrison, and was the supreme authority for law and order".\(^6\) The treatment meted out to the inhabitants of the Black Town, which sprang up outside and away from the fortified White Town, was "more summary, [with] the Customer, or Fourth in Council, acting as Magistrate and condemning, flogging, fining or imprisoning at discretion".\(^7\)

"No houses were allowed to be built in the intervening esplanade"\(^8\) of Fort St. George and the Black Town. Signor Travideani, a traveler who visited Madras in 1811, noted that the Black Town was "so called from the prevailing colour of the population". These early British settlements marked the beginning of racism and discrimination.

\(^5\) Mason 1985:18
\(^6\) Mason 1985:18
\(^7\) Mason 1985:19
\(^8\) Bevan 1839:1.17
As the might of the Empire grew, so did the barriers that employed elaborate systems and procedures to ensure segregation and inhibit social intercourse with the indigenous population. In order to ensure effective administration, it became essential for the alien rulers to insulate themselves, with minimum contact and interaction with the local population.

The evolution of the 'Dual City' closely followed the fortunes of the 'Honourable East India Company', as it grew from a trading company to a colonial power. With the Ghaddar of 1857, it became imperative to reinforce the barriers, both physical and moral, between the natives and the rulers. Even in the cantonments, where prior to the Indian 'war of independence', a large number of local sepoys had lived in close proximity to British troops, separate areas for native troops were now established to ensure segregation. In Karachi, these areas were designated N.I. and E.I. Lines denoting Native and European Infantry Lines respectively.

Thus, like other urban centers which developed during the colonial period, two distinct kinds of spatial organization and characteristics were easily discernible in pre-Independence Karachi—the 'indigenous' or 'black' town versus the 'modern' or 'white' town.

Indigenous Town

The native town in Karachi was neither as large nor as impressive as some of the more well-known cities of Sindh like Thatta and Hyderabad, that had once been the center of political or economic activity. However, Karachi did share with the other indigenous towns a similar spatial organization.

A house survey carried out in 1813, on the orders of the Talpur 'Umeers', found thirty-two hundred and fifty houses within the city walls,
and an estimated population of "thirteen thousand souls, which [was] more than one-half greater than when the mission was there in 1809".\textsuperscript{55} By the time the British forces arrived in 1838, the population had risen to 14,000, "half of which are Hindoos, and the rest Belochees, Jokeeahs, Mowanas, and Jutts".\textsuperscript{56} These estimates differed from Alexander Burnes' calculation almost a decade earlier that Karachi had a population of 15,000.\textsuperscript{57} The composition of the population could be gauged from the existence of 21 mosques, 13 \textit{pir ki jagah} and 34 Hindoo temples, \textit{fakir maths} and \textit{dharmsalas} in the town and neighborhood.\textsuperscript{58}

As was common in the urban centers of the Orient, the city had grown organically with narrow streets and small semi-public, semi-private spaces. To Richard Burton, on his visit to Karachi during the mid-1800s (1844 & 1847), the indigenous town appeared dirty and shabby. Although sympathetic to the Orient, and remarkably observant as a writer, Burton's view remained that of an outsider's and he was unable to notice the positive qualities and interaction inherent in the organic city form. Nevertheless, the humanized environment and the multi-functional spatial elements of a traditional town are evident from his narrative.

As Burton walks through the "dark narrow alleys through which nothing bulkier than a jackass can pass with ease,"\textsuperscript{59} he sees "people preparing for prayers. The Hindoos are accurately washing their mouths, tooth by tooth, on the steps opposite their shops....The Moslems have spread their carpets, and are standing reverentially in the direction of Mecca".\textsuperscript{60} He hears the

\begin{itemize}
\item\textsuperscript{55} Pottinger 1816:344
\item\textsuperscript{56} Baillie 1890:29
\item\textsuperscript{57} Baillie 1890:88
\item\textsuperscript{58} Baillie 1890:34
\item\textsuperscript{59} Burton 1851:1.29
\item\textsuperscript{60} Burton 1851:1.31
\end{itemize}
“perpetual tomtoming and squeaking of native music, mingled with the roaring, bawling voices of the inhabitants”.⁶¹ Around the wells where women are drawing water, he finds that there is “an immensity of confabulation going on, and if the loud frequent laughs denote any thing beside vacancy of mind, there is much enjoyment during the water drawing”.⁶²

The native town comprised both Muslims and Hindus who lived in harmony as a close-knit community. This was apparent during the attacks of the Talpur rulers’ Baloch forces during the late eighteenth century when Karachi’s residents were able to join together to defend the city without having a military force available to them.

The organization of the ‘black’ or ‘traditional’ towns was based on animate energy, as was the case in the preindustrial towns of Europe, and evident even today in traditional Pakistani towns with their intricate pattern of narrow, meandering streets, suitable for pedestrians or animal-driven carts. With commercial and residential buildings intermixed, the town structure provides residents convenient access to work and places of worship. The main bazaar is only slightly segregated and snakes through the city as a major thoroughfare. In the case of Thatta,

it cuts through the center of the town, dividing it into two distinct parts, providing easy access for the inhabitants to the bazaar facility. Commercial buildings, residential areas and mosques are closely inter-linked, providing constant activity and interaction in this part of the city throughout the day.⁶³

The division of the town into mohallas provides separate enclosures for specialized craftsmen and ethnic groups, on the one hand; and, facilitates

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⁶¹ Burton 1851:1.29
⁶² Burton 1851:1.33
⁶³ Lari 1989:31
interaction within each *mohallah*’s own semi-public spaces, on the other hand. However, there is no functional specialization of land-use. Indeed, organic growth encourages a mixed-use development and an overlapping of functions. Thus, there is no segregation or conscious division between workplace and residence, resulting in a ‘24-hour cycle’ of activity.

The original native town of Karachi was a similar, dense development served by narrow meandering streets, where ‘musjids’ and ‘Hindoo temples’ acted as the foci of the mohallahs, and the ‘Jonna Market’ held a central position. The bazaar itself, “covered over with matting, to prevent the rays of the sun penetrating”; was an important urban element—cutting across the town from the Khara Darwaza in the west to the Mitha Darwaza in the eastern fortification wall. Neither the wall nor the *darwazas* (city gates) can be seen today, but the areas of the city known as Mitha Dar and Khara Dar reflect the origins of the city. Today, Khara Dar Lane leads from the western boundary of the Old Town Quarter to Mitha Dar Chowk, where Mitha Darwaza once stood.

**The Cantonment**

The ‘white’ section of the city had been established when the British force arrived as part of the ‘Army of the Indus’ (1839), even before Sindh had been annexed by the Kumpany Bahadur. The troops were garrisoned in an encampment laid at some distance from the indigenous town. Initially, they were ‘quartered’ on the “plain between the town and the Rambagh,” the garden of Ram Chunde, where the “Camp was surrounded by a forest of low

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64 Pithawalla & Kaye Sec. II 1946:48
65 Neill 1845:28
66 Bhojwani & James 1915:91
prickly-pear bushes. Later, the Cantonment was established on higher ground two miles from the existing town. Soon *pendals*, rudimentary structures of mud and thatched roofs, replaced the tents, which in turn gave way to brick or stone structures. Also constructed were mess rooms, officers’ bungalows, a parade ground and a garrison church, the symbol of the moral superiority of the rulers.

Shortly afterwards, the Staff and Civil Lines were delineated and a more exclusive area created. Within a couple of decades appeared tree-lined avenues and spacious lots surrounded by neatly trimmed hedges in which stood pretty, rambling bungalows. Quarters in the rear accommodated twenty or thirty servants, and once ample water became available, a mass of plantation appeared, with vines shading the verandahs. The Cantonment form was the basis of the ‘white’ city and provided the first physical and spatial distinction in Karachi between the two sections of the urban population, heralding a total separation of the rulers from their subjects.

The British cantonment was nothing like the great tented military settlements of Mughal rule, set up when its armies were on the march. As reported by Thomas Roe on his visit to the court of the Emperor Jahangir (1616), every nobleman and tradesman had an allotted place for pitching his tent, which was always at the same location in relation to the royal tent every time the army halted. The center of the encampment was the tent of the Emperor or Subahdār with other tents placed concentrically around it.

The British cantonment was laid out in a linear fashion on a grid, with the residences of the top brass at one end, and the accommodation for the ratings and sepoys located at a distance on the other end. If any similarity to

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67 Neill 1845:32
68 Davies 1985:77
the armies of the Great Mughals’ did exist, it was its enormous size due to the numerous camp followers and attendants for each European soldier. George MacMunn, a soldier, relates that the army,

had an immense train baggage; and a young officer of the 16th Lancers, writing in his diary, records that a hurricane had swept the camp, but that luckily his tent was a small one, and his seventeen (!) retainers had managed to hold it up. These would be siases, grass-cutters, tent-pitchers, and the like, as well as one or two personal servants.⁶⁹

Segregation

In other aspects, the British cantonment attempted to duplicate conditions at ‘Home’, employing special features and characteristics with their symbolism of superiority, typical of a colonial force. The most significant factor which contributed to the spatial form of the ‘white’ town was the use of the new rulers’ original metropolitan or parent city as a role model.⁷⁰ In contrast to indigenous multi-functionalism of spaces, there was a division of time through which human and social activities were organized into work and non-work areas. And, “not only were work and residence separate but also, place of residence was separate from place of recreation”.⁷¹

The ‘white’ town was meant to display the power structure of the new rulers as well as the technological innovations brought with them. Within a short period, the immigrant culture manifested itself through architectural symbols which were designed to impress and overawe the native population. The churches and town halls with their tall spires and clock towers unequivocally declared the supremacy of the alien culture. The purpose behind the spatial segregation between the two sections of the city was two-

⁶⁹ MacMunn 1934:57
⁷⁰ Ballhatchet et al. 1980:13
⁷¹ Ballhatchet et al. 1980:11
fold; first, to ensure that the identity of the alien power, and its social and political symbolism, would remain intact; second, and equally important, to facilitate the application of controls over the indigenous population.

Technological innovations of British industrial society, such as steam power, gas and later electricity, transformed the transportation system, and influenced the creation of a dispersed ‘white’ city form. However, the widely laid out lots in the ‘white’ cantonment were also due to the need for ‘sanitary space’ around the buildings, to avoid the spread of deadly tropical diseases common among the British occupiers.

The use of alien forms in the new, insulated section of the city are justified by many writers as being necessary for the members of the ruling class, since the sahibs had traveled thousands of miles from home. Furthermore, due to the uncertainty of their life span in a hostile environment, the enhancement of emotional and psychological support was considered essential. What is often not considered by writers is the disruptive influence of the alien spatial organization and architectural forms on the lives of the native population.\(^{72}\)

City Growth

After Napier’s departure the province of Sindh came under the jurisdiction of the Bombay Presidency, and Bartle Frere arrived in Karachi in January 1851 to take charge, as one of “only 2,000 odd servants”\(^{73}\) of the East India Company which ruled the vast territories of British India. For the time being, the majority of development in Karachi occurred along the major thoroughfares laid out during Napier’s administration, a rare sketch map of

\(^{72}\) Lari & Lari 1996:
\(^{73}\) Edwardes 1967:91
which was placed by Augustus Fortunatus Bellasis, Assistant Commissioner of Sindh in his Scrapbook of 1850-53. Frere hoped for a proper map to be prepared since, “here at Kurrachee, it is a matter of daily increasing importance for the town is spreading on every side”. Frere reported that although trade was profitable through Bombay it was now “obvious that it must be more profitable if direct from Kurrachee”. Frere, called ‘the importunate widow’ by Lord Falkland “on account of his perpetual request for funds to carry out improvements in the Province”, is attributed with having begun one of the most “remarkable pioneering periods of administration seen anywhere in the colonial world”. The annexation of the Punjab (1849) opened up the north to the marketing of English goods, and Karachi became “not only the natural port of Scinde, but also of the Punjaub and Central Asia”. However, none of this would have been possible had it not become essential to supply Lancashire factories with Indian cotton after the failure of the cotton crop in America (1846). And, it was not lost on the British that the installation of infrastructure allowed faster communications and movement of troops.

With increasing amounts of cotton shipped to English factories, the resultant prosperity witnessed at the time, is referred to by Burton as “the downpour and deluge of gold” which came about as Bombay was transformed into ‘cottonopolis’, and since provincial Karachi clung to Bombay “as the ivy clings to the oak”, it too reaped the harvest from cotton exports.

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74 Bellasis 1850-53:3.175  
75 Lambrick 1975:255  
76 Andrew 1859:59  
77 Lambrick 1975:243  
78 Khuhro 1978:17  
79 Andrew 1859:50  
80 Baillie 1890:198
By 1853, the population of Karachi had been estimated at 22,227. Three
years later, the first census of Karachi found that the population had more
than doubled to 56,879 due to the first Karachi boom. However, when the
second census was conducted sixteen years later (1872), a slight decrease to
56,753 was recorded. The static nature of the population was astonishing since
it was “in 1856 that the export and import trades made a very great stride.”
Baillie attributed the low figure to normal fluctuations in the population of
the town, since “in addition to the permanent residents, there is a constant
flow of temporary visitors, consisting of natives from the surrounding
country and from remote districts of the Province; of Kutchees, Baluchees,
Mooltanees, and Punjabees, from inland, and of Arabs and Persians from the
Gulf.” He believed that the population figure would be low “if for any cause a
large portion of these casual residents were to remain away for any length of
time”.

The commercial activity in Karachi was given further impetus by the
opening of the Suez Canal (1869), which made Karachi India’s closest port to
Europe and cut the total distance by 4,000 miles. The Port Engineer
highlighted the fact that “Karachi is nearer to England by a day’s sail than
Bombay… [and] is not only a pleasanter but a safer passage in as much as it is
comparatively free from cyclones and the violence of the south-west
monsoon is much less felt…” There was also the added benefit of shorter land
journeys to various cities. Improved facilities at the harbor made Karachi an
all-weather port by 1873, and when the last link in the railway system
connected Karachi to the Punjab and Delhi in 1878, it was ready to rival
Calcutta and Bombay.

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81 Baillie 1890:89
82 KPT No. 25 1880-88
When the third census was conducted (1881), the population had increased by almost thirty percent to 73,560, including those who lived in the suburbs. When Baillie estimated in 1889, that "the population is now over 100,000", he was not far off the mark. The census of 1891 showed a population of 105,199, with the population of Karachi proper at 98,195. This phenomenal rate of increase of 43% was surpassed only in 1941 in the decades before Independence. By 1901, the population had increased to 116,683, a rise of only 10.9% compared to the previous census. There had been a steady increase in trade, reaching an all-time record which made Karachi "the biggest wheat exporter in the East" by 1899.  

City Quarters

Shortly after his appointment as 'Collector of Kurrachee' in 1858, Bellasis' "first step was to divide the town and suburbs of Kurrachee into quarters and then to get a good map of each quarter, sufficiently large to number each house upon the plan". There were 14 original Quarters, excluding the Cantonment. By the late 1880s, Baillie listed twenty-six Quarters. As the nineteenth century came to a close, an independent Cantonment Committee was constituted under the Cantonment Code of 1899. The Committee, consisting of five members with the Officer Commanding of the District as President, had its jurisdiction over the area designated as the Karachi Cantonment. In 1903, Manora was also declared a Cantonment, controlled by its own Cantonment Committee. By these acts, the city was for all administrative purposes divided into independent units, with

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53 Baillie 1890:89
54 Feldman 1970:57
55 Bellasis 1857-1859:74
no single authority having jurisdiction over the entire city.

By 1905, five more Quarters had been added to the Municipal District, raising the total number to thirty-one. By 1941, the number of Quarters had increased to forty-four including new cantonments created during the World War.66 The city was now also divided into eight Wards, the subdivisions of which were the Quarters.67

Planning continued in more or less a laissez-faire manner. Karachi developed more as a response to growing pressures rather than as a result of a design strategy, as is the case today. While the influences of certain architectural styles popular in contemporary England are easily discernible in the architectural forms, parallel planning concepts are not identifiable. Since residential lots were quite large, no influence of the Garden Squares of London’s Bloomsbury, the Park Crescent of John Nash or the Garden Cities of contemporary England was discernible.68

The first detailed city map was published in June 1871 by the Surveyor General’s Office in Calcutta as ‘Kurrachee Cantonment and Environs’, based on a survey carried out in the early 1860s. This was followed by the impressive ‘Map of Town and Environs of Kurrachee’ at a scale of 800 feet to one inch, derived from surveys undertaken in 1874-75, and detailed enough to clearly show all the structures and streets. The 1874 survey also produced maps covering each of the city ‘Quarters’, drawn to a scale as large as forty feet to one inch and comprising almost 150 meticulously drawn sheets showing trees, paths, culverts and building outlines.

Views of Karachi’s ‘white’ city during the 1890s show a sparsely

66 Pithawalla & Kaye Part II 1946:57
67 Pithawala & Kaye Part II 1946:79
68 Lari & Lari 1996:
populated low-rise settlement, with wide thoroughfares, young trees and little plantation. The general shape of the city was in the form of "a broad arrow-head pointing northwards, and striking the Fiumara, or Sukhi Naddi (dry river)". The road network had been planned, not under any grand design, but merely to provide "easy communication between all points".

The urban form exhibited distinctly different patterns within the various Quarters. Thus, while the 'Old Town' showed an organic growth, part of the Cantonment was based on a gridiron pattern with large lots. In the Civil Lines, the emphasis was on uni-directional roads, while the prestigious new mercantile centre, the Serai Quarter, relied on vistas created by the convergence of roads.

The origin of the 'white' city had been the Camp, which lay at the center of what became known as the Cantonment—the Camp bazaar was where native merchants and camp followers had initially settled to provide necessary provisions. The Cantonment area included barracks for the troops as well as a vast parade ground. The Commissariat area was located at one end of the Cantonment, while the 'soldier-civilians' or the bureaucratic elite, representing the privileged middle-class of the parent society, lived on lavish lots in the Staff Lines.

The two major poles were located at the two extremities of Karachi—the 'black' town in the north-west, now enlarged to accommodate the burgeoning Indian mercantile population, comprised the Old Town, Napier, Market, Bunder and 'Macchee Meanee' Quarters, while Burton's 'West End', the 'white' town in the south-east, comprised the Staff Lines bungalows in the exclusive Cantonment area, and the prestigious Frere Hall.

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9 Burton 1877:1.47
90 Baillie 1890:106
Masonic Lodge, Sind Club, Government House and the Collector’s Kutchery located in the Civil Lines.

There were two additional poles. The Saddar Bazaar area, originally part of the Cantonment but now separated into its own exclusive Quarter, was located close enough to the ‘West End’ for extensive use by its white population. The second pole was the Serai Quarter, the prestigious commercial area housing mercantile establishments of the European ‘Merchant Princes’, banks, telegraph and post offices, located south of the ‘black’ town.

Disparity of Services

While the traditional town was extremely congested with densities as high as 280 persons per acre in the Old Town Quarter, the large area occupied by the Civil Lines Quarter had a density of not even one person per acre. There was little space for vegetation in the Old Town, but even the newer areas occupied by natives, such as the Napier and Market Quarters, were ignored by the Municipality. In contrast, with the installation of the water supply system in 1883, the ‘white’ city began to acquire trees which gradually transformed its dry and dusty character. The effect was especially noticeable in the Civil and Staff Lines, where trees and shrubs were planted generously on roadsides as well as within the spacious grounds of the bungalows.

Even at this early stage of the city’s development only a few areas were designated as parks. The feeling of spaciousness experienced in the nineteenth century ‘white’ city was not because of an abundance of recreational spaces, but due to the enormous plots that housed relatively small single- or double-story buildings.
A better standard of infrastructure was provided for the ‘white’ town in preference to those areas inhabited by the native population. For example, street lighting or piped water was first laid in the areas occupied by Europeans and then, if funds permitted, in the indigenous town.

Due to a lack of investment, the quality of life in the native town became progressively worse, with little or no civic amenities. The greatest need for drainage was in the congested areas of the ‘Old Town’, where conditions were unbearable because of the extremely high population density. In spite of preventive measures taken at the port in the form of segregated quarantine sheds for Europeans and natives, the plague arrived in Karachi on December 4, 1896. By June 1897, it was estimated that at least 16,000 residents had died, a rate one and a half times that of Bombay.\(^{91}\) While the plague of 1846 had originated in the Camp because of the large concentration of troops and camp followers, and the poor arrangement of sanitary facilities, the 1896 plague started in the congested ‘Old Town’.

‘Gate of India’

Karachi went on to recover and soon regained its population with a sustained high growth rate during the early decades of the twentieth century. The native population expanded across the Lyari river and settled in the Trans-Lyari Quarter which now contained clusters of twenty settlements of “poor Muhammadans of different tribes, fisher people, Sidis, Makranis, Pathans, Baluchis, Brahmins etc., each in their separate village”.\(^{92}\) It was estimated that by the early part of this century, one-quarter of the population of the city lived across the Lyari river. By 1911 the total population of Karachi

\(^{91}\) Nathan 1898:1.377
\(^{92}\) Nathan 1898:1.377
was 151,903, an increase of 30%; by 1921 it was 216,883, an increase of 42%; and by 1931 it was 265,565, an increase of 21.5%.

With the shifting of the capital from Calcutta to Delhi by King-Emperor George V, Karachi was thrust into further prominence. Karachi was now heralded as the ‘Gate of India’ and the ‘Star of the East’ and maps declared that “Karachi is the hub of the commerce of Asia from which all the main-routes of trade and travel necessarily radiate.” In 1913, the Sind Gazette proclaimed that,

in order to reach THE INDIAN MARKET the enterprising Merchant, whether Exporter or Importer, will do well to go to THE GATE OF INDIA. Since the removal of the Capital from Calcutta to Delhi, the new Gate of India is now destined to be KARACHI. Karachi is the most progressive and the most vigorous sea-port in Asia". Construction of the Sukkur Barrage in 1932 also had far-reaching effects on Karachi since it changed "the economic pattern of the hinterland."

The inter-War period saw a sharp increase in the population of Karachi, almost doubling to 486,655 by 1941. Just as Karachi has attracted an enormous number of people from the hinterland since Independence, "The establishment of important [U.S.] military bases and other installations during the 2nd World War brought further expansion to Karachi including the development of a modern international airport".  

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* 'Presentation of Planning Problems' 1972:2
* 'The Housing Problem in Karachi':1
1895 map of Karachi showing the original 'black' town and the new 'white' town—the Cantonment areas.
1874 detailed map of the Staff Lines, Karachi Cantonment, showing the Colonial grid and bungalows for the elite on large lots.
Detailed map of the Old Town Quarter showing the original organic form of the once fortified native town, 1874.
(Top) The indigenous 'bangolo' or 'bangla', Mulnath, Bengal, 1859; (bottom) the official colonial bungalow as symbol of rank and status.
(Top) Row houses c.1910, an urban form that was obviously present in pre-Independence Karachi, and (bottom) the typical bungalow for the elite class.
4. RISE OF THE MIDDLE CLASS

Origins

While the middle classes were developing in the West, India was under autocratic Mughal rule. The upper crust of the Mughal hierarchy, the mansabdari system, was "identified in some degree or other with the aristocratic element of society, while the middle was reduced to the common category of the lower".\(^{55}\) As the seventeenth-century traveler Francois Bernier also observed, there is "no middle state. A man must either be of the highest rank or live miserably".\(^{96}\) Even before the Mughals, the economy of India had been controlled by the top 1% of its population\(^{97}\) since the Indian political and social systems had always been "highly prejudicial to the growth of an independent bourgeois class".\(^{98}\)

The Mughal village economy comprised 72% of the total labor force, and the tribal economy another 10%.\(^{99}\) The Mughal state apparatus was essentially parasitic in nature, and cannot be called "an agrarian bureaucracy. It was a regime of warlord predators which was less efficient than European feudalism".\(^{100}\) Villages were self-contained, defensive units that paid tribute to whoever ruled the area. Since this arrangement was a source of continuous and effortless income, conquerors who arrived in India did not seek to make any changes.\(^{101}\)

Since the Indian aristocracy was not hereditary, it was "either paid in

\(^{55}\) Misra 1961:64
\(^{96}\) Bernier:252
\(^{97}\) Maddison 1971:33
\(^{98}\) Misra 1961:8-9
\(^{99}\) Maddison 1971:33
\(^{100}\) Maddison 1971:22-23
\(^{101}\) Maddison 1971:29
cash or allocated the tax revenue from a collection of villages (i.e. they were given a *jagir*). Taxes on agricultural income were reduced from 30% during the Mughals to about 2% by 1947. This resulted in a greater income for the village elite that controlled the land, but scarcer amounts of land and higher rents for the increasing population. The landless agricultural labor increased from about 15% of the rural population in 1800 to 25% of the labor force in 1960.

However, since the peasant who worked the land as well as those who supervised them, had no actual claim to the land, there was little incentive to increase productivity or make improvements:

> The peasant cannot avoid asking himself this question: 'Why should I toil for a tyrant who may come tomorrow and lay his rapacious hands upon all I possess and value, without leaving me, if such should be his humour, the means to drag on my miserable existence'. The *timariots*, governors and farmers, on their part reason in this manner: 'Why should the neglected state of this land create uneasiness in our minds? and why should we expend our own money and time to render it fruitful? we may be deprived of it in a single moment, and our exertions would benefit neither ourselves nor our children. Let us draw from the soil all the money we can, though the peasant should starve or abscond, and we should leave it, when commanded to quit, a dreary wilderness'.

To this day, jobs are often made available on the basis of who one knows, particularly when it comes to government and semi-government institutions. Thus, one's livelihood depends on one's staying in favor. This insecurity permeates all levels of society—even Pakistan’s Prime Minister serves at the pleasure of the president and to a great extent the military.

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102 Misra 1961:22
103 Maddison 1971: 24
insecurity results in an almost unanimous desire to profit as fast as possible whenever there's an opportunity to do so.

Indian society was governed by three main institutions: joint family system, caste system, and the village community. The joint family system, which can be seen even today in both rural and urban Pakistan, consists of multiple generations of families living together and pooling their incomes. This communal system meant that there were no individual incentives to work or save.104

The caste system was "related to the law of property. It formed an integral part of the prevailing land economy. Under the law of inheritance, for example, succession depended upon the performance of caste obligations".105 The caste system ensured that all jobs were designated to different people or groups of people. Those with the worst jobs, carried them out dutifully, secure in the belief that this would ensure a better reincarnation since there was no chance of them bettering their status in their present lives.

In spite of the potential for a middle class (a money economy had started to develop early in India), "the immobility of the caste organization and the despotism of bureaucracy precluded such a development".106 For instance, Bernier relates how traders and merchants buried their wealth "at a great depth" so as to avoid inciting a local governor or officer possessing "both power and inclination to deprive any man of the fruits of his industry".107 Thus, profits were not necessarily invested back in business or entrepreneurial ventures. In so undeveloped a country, "the state's monopoly of production seriously arrested the evolution of an industrial

104 Maddison 1971:29
105 Misra 1961:9
106 Misra 1961:9
107 Constable 1891: 224-5
middle class—the product of free competition and a money economy".108

Between 1757 and 1857, the British decimated the Mughul court, and consequently Muslim cultural life, along with three-quarters of the warlord aristocracy excluding those in the princely states, and half of the local chieftaincy (zamindars) replacing them with a new bureaucratic class. While the middle classes in the West, especially England, emerged because of economic and technological change that benefited trade and industry, in India,

they emerged more in consequence of changes in the system of law and public administration than in economic development, and they mainly belonged to the learned professions. India's traditional emphasis on literary education combined with Britain's rule and her imperialist economy to make the intelligentsia the dominant strand in the composition of the Indian middle classes.109

Captured Economy and Culture

Colonial rule created a captured economy who's main task was to support the home country's economy—and what was good for England was not necessarily good for India. The Industrial Revolution in England was nudged on, to a large extent, by the enormous amount of wealth which was transferred from India to England. The implementation of protectionist policies allowed England to emerge as a major textile manufacturer. Since the market at Home was limited, India and other colonies were turned into captured markets under pressure from Manchester and Lancashire. Once the monopoly of the East India Company was broken with the Charter of 1813, which allowed other traders to also freely export to India and take advantage

108 Misra 1961: 40
109 Misra, 1961:v
of the sympathetic policies devised by viceroys in India, what remained of the indigenous manufacturing industry was also destroyed.

Another reason for the large-scale consumption of such goods was the prestige that had become attached to imported goods, just as prestige was attached to the use of the English language after Macaulay’s Minute. English products, however shabbily designed and produced, were given preference over the beautiful indigenous hand-crafted items by Indians themselves. Interestingly, at the time, there was an outcry even in England against the poor quality of factory-produced goods, by thinkers such as John Ruskin and artists such as William Morris. Commenting on the vast number of items displayed within the immense glass structure of the Great Exhibition in London (1851), Nikolaus Pevsner agreed that the “aesthetic quality of the products was abominable,” even though “the quantity of products shown was colossal”.

Overriding economic considerations required that the establishment of industry be discouraged in the colony. Some Indians were allowed to set up cotton and steel mills during the second half of the nineteenth century, but only after it was ensured that the products would not compete with Lancashire and Glasgow, and commercial centers separate from indigenous markets were established. However, the British agency-houses controlled all overseas trade, shipping and insurance, and banks established by Europeans controlled the money market, thus institutionalizing the ‘foreign leakages’ and drain of wealth from the Subcontinent.

In 1835, Thomas Babington Macaulay, declared arrogantly that he had not found “one among the [Orientalists] who would deny that a single shelf
of good European library was worth the whole native literature of India and Arabia”. Macaulay’s 'Minute on Education' had a significant impact on India in Westernizing it and transforming the educational system. The Orientalists thus lost to the Anglicists, and Persian was replaced by English as the official language (1837). Support for local languages was withdrawn and government jobs made available only to those who had proficiency in English.

The brunt of this drastic action was borne by the Muslim population of India. Having held important positions during the Sultanate and Mughal periods, Muslims, who had command over the Persian language, were now thrust into the background. Under the British, the status of Muslims changed in the eyes of Hindus to even below the position of lower castes. Since Muslims were unwilling through most of the nineteenth century to learn the new ways of the rulers by mastering, as a first step, their language. Sindh’s predominantly Muslim population took several decades before it gained any prominence.

Emerging Middle Class

While, "education could have played a major role in encouraging social mobility, eliminating religious superstition, increasing productivity, and uplifting the status of women…it was used to turn a tiny elite into imitation Englishmen and a somewhat bigger group into government clerks". Since the rulers wore European clothes and shoes, drank imported wines and spirits, and used European weapons, their tastes were copied by the male members of the new Indian 'middle class' which arose to act as their

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112 Muir 1915:299
113 Maddison 1971: 43
clerks and intermediaries.

Radical changes accompanied the advent of the British in India. In the absence of an adequate political and economic system, they transplanted into India their own form and principles of government and economic organization which they modified only to suit local conditions...These ideas and institutions of a middle-class social order were imported into India. They did not grow from within. They were implanted in the country without a comparable development in its economy and social institutions. The Indian middle class which the British aimed at creating was to be a class of imitators, not the originators of new values and methods...The educated class of Indians who emerged as a result of British educational policy cared more for position and influence in the civil service and councils than for mass education or economic development.¹¹⁴

These political and social changes destroyed about three-quarters of the domestic demand for luxury handicrafts, including clothing, jewelry, footwear, and weapons. This taste for imported goods and the export of purchasing power combined with the extreme poverty of the primarily rural population severely limited the growth of the Indian economy".¹¹⁵ The real picture of modern India was widespread 'de-industrialization'—that is, the decline of the old handicraft industry without the compensating advance of modern industry".¹¹⁶

Soon there were an increasing number of small businessmen, especially in the relatively independent province of Gujrat on the western coast of India. Its residents "resembled to some extent that of the precursor of the English middle class, the merchant-manufacturer or commercial capitalist who monopolized specific branches of trade and organized industry by the

¹¹⁴ Misra 1961:10-11
¹¹⁵ Maddison 1971:61
¹¹⁶ Dutt 1950:165
advance of capital, improvement of quality and sale of finished goods".\textsuperscript{117}

In addition, a fair number of Parsis, Bohras, and Jains started forming separate communities without caste barriers even though Indian society did not allow individuals to move up or down the social scale according to economic circumstances. This group "introduced into that region a nucleus of social mobility which would later contribute to progress on Western lines".\textsuperscript{118}

The Parsis became indispensible to the British agency houses, and carried out correspondence, and served as brokers, banians (traders) and even translators.\textsuperscript{119} While it was still being debated among the Muslims in the 1870s whether they should even learn English, Pherozeshah Mehta, a Parsi, had already been called to the bar from Lincoln's Inn (1868). By the early 1880s, Father Urwick reported that the Parsis of Bombay were "rivalling Europeans in opulence",\textsuperscript{120} and Baillie viewed them as "cultivated gentlemen of great wealth".\textsuperscript{121}

\textbf{Politics of Language}

A return of support for vernacular languages came about when the British realized that the 'black Englishmen' trained by the new system of education devised by Macaulay could not be restrained, nor could the self-determination demanded by them be confined to parameters imposed by the ruling authority. Paternalistic Englishmen were surprised that the 'new Indian', educated in their own mold, "had stepped right across the gap; he

\textsuperscript{117} Misra 1961: 31
\textsuperscript{118} Misra 1961: 31
\textsuperscript{119} Edwardes 1967:90
\textsuperscript{120} Urwick 1891:186
\textsuperscript{121} Baillie 1890:96
thought and talked like an Englishman and claimed to be judged by English standards". As a citizen of the British empire, he now demanded that Indians "should have their proper and legitimate share" in the government, and sought the justice and equality embodied in Queen Victoria’s proclamation of 1858 that “all shall alike enjoy the equal and impartial protection of the law” and “so far as may be, all our subjects, of whatever race or creed, be freely and impartially admitted to offices in our service".

Muslims joined in about fifty years after other Indians had, once they realized that learning English was the only way they could have a say in their future. Consequently, M.A. Jinnah, the founder of Pakistan, could speak only a few sentences in Urdu, and instead was more comfortable speaking in the Queen’s English. The policies which created a privileged English-speaking class also created a colonial attitude amongst the privileged natives, so that even today after five decades of independence, education continues to be equated with a knowledge of English and correct pronunciation. As a direct consequence, Pakistani society is divided into two distinct classes known as Urdu-medium and English-medium, the product of the respective schools.

In the early 1970s, most of the private schools were nationalized in an attempt to institutionalize education, however a couple of the elite schools including those run by the various religious organizations, both Muslim and Christian, were allowed to remain. These became the most sought after schools in the city since, "People want their children to be able to speak English....People are taken more seriously if they can speak English....So it

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122 Mason 1985:253  
123 Wolpert 1982:259  
124 Philips et al. 1965:11
isn't just the upper classes who want English as a pas-devant-les-domestiques code to distance them from the rest of the country: the lower orders want English to improve themselves." In the late 1970s, private English-medium schools were opened across the country in an effort to profit from this—while officially the government announced a policy to force a switch over to Urdu as the language of instruction in all schools.

Just as the 'white' towns of the Defence Housing Authorities and Cliftons continue to serve the wealthy and affluent classes, the poor sections of society are relegated to the 'black' towns of the Orangis and Korangis; similarly, the children of the 'white' towns continue to be served by expensive, private English-medium schools, while the children of the 'black' towns are herded into Urdu-medium government-managed schools. Fifty years of independence have not brought about a qualitative change in the minds fashioned by colonial rule.126

'Functional Inequality'

Populist nationalism (indigenist revival) gained popularity in India after 1905, with the swadeshi movement which encouraged the boycott of all British goods amongst Indians, and with Gandhi taking over the reigns of the Congress Party in 1920, forcing out leaders like Mohamed Ali Jinnah, who were bourgeois nationalists. Jinnah became involved with the Muslim League party instead, founded in 1906, and embraced the idea of dividing India into two parts—one for Hindus, the other for Muslims. However "the Muslim League was not a religious movement. The motivation was essentially bourgeois nationalism, its religious content was as much anti-

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125 Duncan 1989:26
126 Lari & Lari 1996:
Hindu as pro-Islamic".127

[Bourgeois nationalism] is a very important quality of Pakistani nationalism which helps to explain social and economic policy since independence. The political system of Pakistan which Jinnah created was Viceregal, and the primary locus of power has been the bureaucratic military elite. It is not a copy of Whitehall democracy but of the British colonial apparatus. It is not a theocratic state but bourgeois nationalism in its purest form, undiluted with indigenist mysticism, or social revolutionary intent".128

Since the caste system was a Hindu institution not a Muslim one, social reform was never an aspect of the Pakistan movement. While India "aimed to establish a 'socialist pattern' and to ensure that the benefits of growth filter down, whereas Pakistan in the 1960s proclaimed the need for functional inequality because of the alleged conflict between equity and growth".129

The area which became Pakistan had practically no indigenous industry,130 and had a primarily agriculture-based economy. Therefore, "The growth of capitalist enterprise has been deliberately fostered by government, which has been the universal patron of businessmen".131 Under extremely favorable government policies, a small but prominent group of businessmen began to build an industrial infrastructure for the new country. Patronage for this incredibly successful group of industrialists came from the political leaders as well as the Civil Service, the Pakistani version of the bureaucratic layer created by the British that mediates to this day between the politicians and the people—a kind of institutionalized class of middlemen and the

127 Maddison 1971:74
128 Maddison 1971:74
129 Maddison 1971:11
130 Maddison 1971:62
131 Maddison 1971:155
functional arm of each government. Thus, the relationship between business and bureaucrats has become increasingly corrupt because the Civil Service is in charge of approvals and licenses that are often of great value to businessmen.

The official doctrine of 'functional inequality' "argued that, in the early stages of capitalist development, a high degree of inequality is necessary in order to promote savings and create entrepreneurial dynamism".\textsuperscript{132} What it created instead was an elite rich; by 1968, the Chief Economist of the Planning Commission of Pakistan estimated that that "the top [twenty-two] industrial families control about 66 per cent of the total industrial assets, about 79 per cent of the insurance funds and about 80 per cent of the total assets of the banking system".\textsuperscript{133} Nevertheless, there were some trickle down benefits, and Ayub Khan's military dictatorship at the time brought "prosperity to many. Pro-business policies helped industry to boom.... Middle-class businessmen and traders prospered...".\textsuperscript{134}

Changing Landscape

By 1968, the social structure was showing considerable strain amidst a rising disparity between the rich and the poor. The new government led by Zulfiqar Ali Bhutto—coming after the war with India that led to the separation of East Pakistan from West Pakistan, and the creation of Bangladesh—tapped into this discontent. Bhutto's Pakistan People's Party swept into power on the strength of its populist slogan of 'roti, kapra aur makan', that is, "food, clothing and houses for all".

\textsuperscript{132} Maddison 1971:136
\textsuperscript{133} Haq 1968:67-72
\textsuperscript{134} Duncan 1989:62
Ayub Khan, the middle-class soldier, tried some land reforms, but they had little effect. Bhutto, the people's man, promised more: 'The remaining vestiges for feudalism,' he wrote, 'require to be removed.' But his efforts were half-hearted and because he himself was a major landowner was not taken seriously by other landowners who put their land in their peasants' name without their knowing this fact or their new rights, without literacy and their continued total dependence on their landlords for their livelihood plus unquestioned respect and devotion to their tribal clan/baraderi leader and often a religious power over them as pirs/syeds etc. They hope to have their leader in power because then the trickle down system of favouritism will help them get ahead, jobs etc.\(^{135}\)

The Bhutto Government inflicted a systematic nationalization (taking over by the state) of all profitable industry and financial institutions, ostensibly to reduce the disparity between the rich and poor. A more likely reason for these drastic actions was to reduce the power of the twenty-two families ("Bhutto did it not for socialism, but for power".\(^{136}\)). While the Government did succeed in decimating many of the business empires, it also destroyed most of the companies taken over due to mismanagement and financial pillage, and created unease and insecurity amongst the business community. The behavior on the part of the Bhutto Government was not unlike the threats and actions of the Mughals or the British, where one's fortune depended wholly on maintaining good relations with those in power.

Five years later, Bhutto was brought down when the business community enthusiastically joined the opposition parties to protest the People's Party and its suspected rigging of the national elections. Amidst the riots and crises, the military seized power and martial law was imposed until

\(^{135}\) Duncan 1989:105

\(^{136}\) Duncan 1989:205
the mid-1980s. A strong middle class began to emerge—encouraged by the absence of politicians in power, a deluge of earnings from the Middle East, a trickle down effect of foreign aid meant for Afghanistan, and a burgeoning illicit drug industry.

The get-rich-quick ethic is stronger than anywhere else... Over the past ten years, a lot of Pakistanis have seen a few Pakistanis become suddenly very wealthy from the Gulf, heroin and smuggling [and defaulting on loans or accepting land below market value from politicians]; and the speed of their rise, perhaps combined with the national insecurity that makes long-term investment seem pointless, leads people in all sorts of walks of life to want to emulate the nouveaux.\textsuperscript{137}

It was at this time that Karachi's urban middle class (primarily composed of immigrants from India known as \textit{mohajirs}) found a political voice in the MQM, the Mohajir Qaumi Movement that later changed its name to the United National Movement, which demanded "a wider stake in a system dominated by a landowner and business oligarchy that pays almost no taxes, yet holds most power".\textsuperscript{138}

The MQM's success—it won eleven out of fourteen national assembly seats in Karachi in the 1988 election—suggests that Pakistan, which is moving so fast in so many ways, has got its politics stuck in a sort of neotribalism. However disrespectful the mohajirs are of sifarish, of the old networks of patronage, they are beginning to operate in the same way themselves. They are beginning to look like a huge baraderi: voting for their own, demanding jobs for their own, closing their ranks against Them (the Pathans, the Punjabis, or anybody else who might seem a threat). That sort of politics must be regressive and inefficient.....\textsuperscript{139}

\textsuperscript{137} Duncan 1989:43
\textsuperscript{138} \textit{Wall Street Journal}, December 14, 1995
\textsuperscript{139} Duncan 1989:186
Urgency

In late 1995, the Wall Street Journal painted an especially bleak picture of the Pakistani middle class in a lengthy front page story headlined: 'Few Options: A Rising Middle Class Clamors for Changes in Troubled Pakistan'. The Journal reported that Pakistan "is facing a crescendo of political and economic challenges that many here believe will either modernize it or sink it. In the balance isn't only Pakistan's prosperity but also the stability of a cornerstone, nuclear-armed U.S. ally in a precarious region".

Pakistan has not taken a census, by which government spending and National Assembly seats are set, since 1981. As of 1995, it was estimated (in the absence of certifiable data) that at least one million Pakistanis make at least $700 a month, and several million more make just below that level. A substantial number of this,

ascendant group in Pakistan: the middle class [lives in Karachi]. They buy cars, television sets and other consumer products and shop at the glitzy new [malls]...where Christian Dior perfumes are sold alongside Hugo Boss suits. And they demand a bigger role in society. Construction and service jobs along with the spread of skilled work at home and educations abroad, have made them hungry for modernity.

The absence of adequate infrastructure means that private systems to fill the void are being created by those who have the motivation, either political or financial. For instance, "To address a big worry, primary education, some middle-class groups have set up private schools; one chain that prepares children for British [or American] university education has

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140 Wall Street Journal, December 14, 1995
141 Wall Street Journal, December 14, 1995
142 Wall Street Journal, December 14, 1995
143 Wall Street Journal, December 14, 1995
144 Wall Street Journal, December 14, 1995
30,000 students nationwide, each paying tuition of more than $100 a month".\textsuperscript{145}

At the same time, "Each morning, the previous day’s bloody harvest is cataloged in the newspapers as another day’s carnage begins". In 1995, a typical year recently, this 'Culture of Violence' claimed 1700 lives. "What makes it politically significant is that the violence was born of a feeling of disenfranchisement".\textsuperscript{146} The whole city is now in the hands of "the middle classes...the mohajirs, who have no class and no history to offer, only belligerence and energy".\textsuperscript{147}

The similarities between the French middle class after the Revolution of 1789 are very interesting. David Vanderburgh highlights the key concerns of the French in 'Typification and the Building of Society: "The Absent Patron"':

[T]he defining characteristic of the middle classes was anxiety, an anxiety with both spatial and temporal components. Because this amorphous group lacked the traditional status of those above and below, it had to create for itself a social space in the politics of the new nation. But the middle classes were also concerned about physical space: fear of the disease and disorder of the lower classes make them wish to be separate from these others.\textsuperscript{148}

Today, the relevance of finding solutions for the needs of Karachi's growing middle class has only increased in magnitude and urgency.

\textsuperscript{145} \textit{Wall Street Journal}, December 14, 1995
\textsuperscript{146} \textit{Wall Street Journal}, December 14, 1995
\textsuperscript{147} Duncan 1989: 172-173
\textsuperscript{148} Franck & Scheneekloth 1994:319
Pre-Independence two- and three-story walkup apartments in central parts of the city.
Middle-income villas in their private compounds seen with their front and side setbacks.
Small walkup apartments for the lower-middle income class.
Walkup apartments lining the secondary streets of Karachi, with the laundry hanging outside to dry in the balconies.
Major and secondary streets are lined with a wall of apartments in all residential areas.
Multiple high-density, high-rise apartment buildings adjacent to each other.
More high-density high-rises that occupy the whole plot and take advantage of the fact that building heights are governed by floor-to-area ratios.
High-density, high-rise apartments with little open space available to the residents.
Upper-income villas in the 'White House' style popular with the nouveau riches, and reflecting Pakistanis' continuing fascination with western images.
The ‘White House’ style even affects apartment buildings such as this one in the middle-class Clifton commercial area.
5. HOUSING TYPOLOGY

Introduction

Typology is a doctrine or theory that systemizes type—"an organizational device that embodies the essential salient characteristics of a certain set of forms,"\textsuperscript{149} Aldo Rossi quotes architectural theoretician Quatremere de Quincy:

'Type' represents not so much the image of a thing to be copied or perfectly imitated as the idea of an element that must itself serve as a rule for the model...an object according to which one can conceive works that do not resemble one another at all. Everything is precise and given in the model; everything is more or less vague in the type. Thus we see that the imitation of types involves nothing that feelings or spirit cannot recognize....

Typology as an operational device is useful "in the fact that it is generative....Therefore, a typological precedent does not necessarily lead to imitation but can rather lead to transformation."\textsuperscript{150}

Historically, type had been looked at "as part of the architectural courses of the nineteenth and early twentieth centuries" by J.-N.-L. Durand and Julien Guadet et al.\textsuperscript{151} In 1970, Nikolaus Pevsner compiled the first comprehensive history of building types, although Pevsner's book did not include housing since, "dwellings, including apartment houses and suburban villas, would have needed another volume altogether."\textsuperscript{152}

When certain singular elements of the city (which belong to a particular typology) combine, they may create a new typology. For example,
the arcade or square, "aggregates some shared qualities into unique places or elements that operate at the scale of the whole city." Buildings that belong to the same typological category can vary both stylistically as well as functionally —as is apparent from the wide range of functional transformations seen in a city like Houston.

Ultimately, it can be said that type is the very idea of architecture, that which is closest to its essence. In spite of changes, it has always imposed itself on the "feelings and reason" as the principle of architecture and of the city.

Western Housing Types

The 19th Century rowhouse was "probably the most successful United States housing prototype" since it was used to accommodate, along with tenement buildings, the escalating urban populations as migrants arrived in the cities. These were systematically removed from the city during the urban renewal programs implemented in the 1950s and 1960s.

The evolution of 20th century housing can be attributed to the proposals of the Congrès Internationaux d'Architecture Moderne (CIAM), k who's 1928 declaration asserted that architecture was "unavoidably contingent on the broader issues of politics and economics and...the universal adoption of rationalized production methods". The first era of CIAM concentrated on finding minimum housing standards, and efficient use of materials and resources. With the 1929 Charter of Athens, CIAM was committed, in the words of Reyner Banham a few decades later, to "(a) rigid functional zoning

\[153\] Lari, M 93: 4
\[154\] Frampton 1985:269
of city plans with green belts between the areas reserved to the different functions, and (b) a single type of urban housing, expressed in the words of the Charter as ‘high, widely-spaced apartment blocks wherever the necessity of housing high-density of population exists’.155

In the Unité d’Habitation at Marseilles, Le Corbusier sought to provide high-density housing based on the idea that “mass production should be co-opted to deal with housing shortages”,156 while ensuring a comfortable level of space, light and views. The balconies were designed so as to double as living space, and the rue intérieure, interior street, along with the rooftop terrace were meant to encourage interaction amongst the residents. The relationship between the Unité building and the site was based on Corbusier’s belief that, “modern techniques of construction and production were to be used to create high concentrations of population so as to liberate the ground for traffic and nature”.157

The consequent criticism of the Charter of Athens which had propagated the separation of urban functions into “broad divisions of living, working, leisure, and circulation [resulted in a] new sensibility [that] something less simplistic and mechanical [was required]”.158 Alison and Peter Smithson, Aldo van Eyck and other Team 10 members dismissed the Garden City and the ‘Rational Architecture’ of the 1930s.159 Van Eyck was especially active, and took it upon himself to bridge the gap between the bland, soulless rebuilt cities after the War and the rich, traditional Dutch cities, explaining his position at the 1959 CIAM meeting: “The time has come to gather the old

155 Frampton 1985:270
156 Curtis 1987:286
157 Curtis 1987:286
158 Curtis 1987:288
159 Curtis 1987:289
into the new; to rediscover the archaic qualities of human nature, I mean the timeless ones...". The 1960s thus saw the explosion of low-rise, high-density housing as an alternative.

The dual problems with the Modern Movement were apparent event to proponents such as Le Corbusier:

On the one hand, the ‘machine-age’ forms had not always proved to be the most efficient, economical or readily adaptable to mass production; and on the other hand, they appeared to impose serious restriction on poetic expression.\textsuperscript{161}

After his visit to Algeria in 1931, his projects for Algiers reflected ‘regional syndicalism’ —even though eight years earlier in L’Art décoratif d’aujourd’hui he’d urged architects to “Abandon regional expression in favor of an international idiom—and a respect for Muslim vernacular, as stated in the Radiant City: “O inspiring image! Arabs, are there no peoples but you who dwell in such coolness and quiet, in the enchantment of proportions and the savor of a humane architecture”\textsuperscript{162}

In the United States, of course, it was the single family house that was sweeping across the nation. As L. Hilberseimer wrote:

\begin{quote}
The one-family house is generally regarded as the type which best fulfills the social, psychological, and hygienic requirements of life. It will always be the ideal type of dwelling for families because it connects the house with a garden, a playground for children, and provides the privacy necessary for relaxation and recreation. The row-house may achieve a considerable amount of privacy also if it is planned carefully and adequately. It can, however, never be quite as satisfactory as the free-standing house.\textsuperscript{163}
\end{quote}

\textsuperscript{160} Curtis 1987:290
\textsuperscript{161} McLeod, ‘Le Corbusier and Algiers’:55
\textsuperscript{162} McLeod, ‘Le Corbusier and Algiers’
\textsuperscript{163} L. Hilberseimer 1944:75
Walter Gropius in 1931, on the other hand, had dismissed the "tendency to house the majority of the population in detached dwellings" as utopian and believed that "the one-family house will remain reserved for a higher stratum of the population". But with immense government subsidies and an increase in car ownership and a growing network of roads, the single family house became the prevalent housing type for the United States and very much the American Dream.

By the late 1960s, zero-lot-line house types appeared in the United States; these allowed developers to have higher densities while still allowing a sense of independence that comes with a truly detached single family home. Townhouses were one variation on this theme of the zero-lot-line typology. The same developers who had been guilty of suburban sprawl began to make high-density low-rise housing, the 'condominium vernacular', popular. This was made possible with the help of PUDs or Planned Unit Development which allowed the unified development and design of larger tracts of land rather than dealing with each included piece separately. Pomeroy Green in Santa Clara, California, by developer Joseph Eichler in 1962, received national attention as an early successful PUD. "It powerfully advanced the high density, low-rise idea by permitting clustered and attached dwellings where heretofore only detached and sprawled single family houses were allowed".

Typology: Point of Departure

With no enforcement of building regulations, and a laissez-faire

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164 Pawley 1971:85
165 Davis 1977:938
attitude that has accompanied Karachi's and its residents' rise in fortune, there has been widespread transformation of use. Houses that once housed the extended family, are now home to families and/or offices, workshops or *karkhanas*, studios, art galleries, display showrooms, fashion boutiques, studios, tutoring centers, even schools and colleges. "When there is a shortage of space, as demands far exceed supply, and entrepreneurship abounds, such transformations are natural occurrences. However, these transformations are limited to use, and not the typology itself."\(^{166}\)

A continuing ignorance of housing typologies on the part of both architects and developers, and the concomitant drop in design quality, makes it highly appropriate and increasingly necessary to look at how this building type can be improved, adapted and transformed into suitable new prototypes that meet the challenges of the non-traditional contemporary American city. As Doug Kelbaugh writes in 'Towards an Architecture of Place: Design Principles for Critical Regionalism':

Typology, in many ways, is the opposite of regionalism in that it seeks truth and beauty through typicality and universality, rather than uniqueness and particularity. Nonetheless, typology is a good point of departure when designing. Enduring types can be creatively transformed to express and accommodate both local contextual and new programmatic forces. Traditional architectural typology and vocabulary can evolve, much as language does in cross-lingual and regional dialects and much as new terms are coined to name new scientific or technological developments. Familiar architectural language can be slowly converted, subverted, and inverted.

\(^{166}\) Lari 1993: 4
Influence of the Vernacular

Housing must take into account what it means to live as a middle class household. For example, the relationship of public, semi-public, semi-private and private spaces in the spatial arrangement of the housing units; the relationship between interior and exterior spaces in day to day living in the face of a severe climate—the need to have cool outdoor sleeping areas in the face of frequent power breakdowns or areas where the laundry can be hung out to dry away from the ubiquitous crows; the central role played by the charpoy (a rope bed which is used for much more than sleeping), and an appropriate setting for it; the inappropriateness of the increasingly rampant 'American-style' kitchen with its waist-height counters, when the essential task of kneading flour for making roti or the grinding of spices, occurs squatting down, and so on.

Examination of existing vernacular building traditions is a starting point for theoretical considerations of regionalism, insofar as architecture as seen to embody values and processes particular to a culture. The history of interpretation and transformation of indigenous traditions is revealing of its persistent timeless qualities as well as its ability to sustain change—William Bechhoefer, 'Aspects of Regionalism as a Tool of Teaching'

Colonial Native Houses

The original houses were simple structures, which employed a construction technique similar to that still seen in Thatta: a frame of heavy wooden logs upon which short, interlaced wooden strips were placed to receive a thick layer of mud plaster\(^\text{167}\) topped by the distinctive badgeers—windcatchers used to direct the cool sea breeze into the

\(^{167}\) Lari 1989:36
houses—described by Captain J. Martin B. Neill, Acting Adjutant of the 40th Regiment, as, “wicker ventilators facing the sea, which perform the double duty of windsail and skylight”.

The occupying army marched to the new encampment down a dirt strip—the track that would later carry the imposing name of Bunder Road, literally Port Road—passing by the native town, which appeared but “a cluster of mud huts” surrounded by “a tumble-down curtain-cum-bastions of mud.” Built on a slight mound, “a humble platform of mud-covered rock”, the town was barely a few feet above the high water mark, and its northern boundary sloped “abruptly down to the dry bed of Lyaree and its frontage on the high-way consisted mainly of a burial ground and a cattle market”.

Barrack Form & Wind Scoops

As the British gained control, architecture also began to appear in an alien garb, and a distinct new architectural form became apparent. The tall, cuboid, flat-roofed buildings and “the badgir ‘seizer of wind’…fixed on the summit of many houses” were replaced by monotonous, dreary, look-alike barrack buildings topped by pitched roofs; a form transplanted on to the soil of Sindh following its use in other Anglo-Indian cantonments, notably Bombay.

In the early stages of British occupation Karachi was essentially a military settlement. Buildings were needed to provide accommodation for three distinct categories of residents: the occupying army, the European administrative staff, and the native camp followers. Thus, large single-storey barracks and stores were constructed at the north end of the Cantonment for

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1 Neill 1845:28; Baillie 1890:7
2 Burton 1877:1.45
3 Baillie 1890:86
4 Baillie 1890:177
the use of the European and Indian troops (initially planned to accommodate 5,000 men), and single-storey houses within spacious compounds were constructed at the opposite end for Napier’s ‘soldier-civilians’ who had been appointed to administer the newly acquired territory. This area was known as the Staff Lines, while the Government House stood in a sprawling enclosure in the Civil Lines Quarter.

Lockwood Kipling explained the reason for the monotonous character of government buildings: “Since the Government is compelled to be as economical as its machinery will permit, and since, for administrative convenience, uniformity is considered as necessary as economy, its buildings must as a rule, be devoid of architectural pretension.” Kipling justifiably concluded that such buildings “are not suitable models for imitation”\(^{172}\).

The design of barracks was also dictated by “the necessity in India for providing for free currents of air,” which according to R.C. Temple resulted in “a long building, one room only in width, facing to the right quarter”\(^{173}\). The form was particularly suitable for Karachi, where the long barrack structures were oriented to face the prevailing breeze from the south-west. On his second visit to Karachi in 1876, Burton described the barracks as: “parallelograms of unlovely regularity, with walls of sun-dried brick, double white washed to promote cleanliness and glare; some times level above, more often pent-shaped with red or blue tiles; while the pulled-out eaves, prevented from falling by clumsy brick or rough wooden pillars, made the interiors pleasantly or painfully dark”\(^{174}\).

In most stations it was customary to skillfully use chunam to

\(^{172}\) JIAI No. 3 :886:1.1
\(^{173}\) JIAI No. 8 :886:1.60
\(^{174}\) Burton 1877:1.66
camouflage the baser materials, producing an impression of stone. Karachi, however, was blessed with an abundant supply of local Gizri stone, which although soft had an attractive color. This stone in a rough, hammer-dressed state became the most widely used material for walls, providing an economical and relatively convenient means of construction which was employed extensively in barracks built as late as the Second World War.

The Indian camp-followers were allowed to construct shops and accommodation in what later became the Saddar Bazaar Quarter, which was laid out in a close-knit gridiron pattern.

**Bangla or Bungalow**

The pitched roof form found in barrack construction was also popularly used in the bungalows—an adaptation of a native type—which served as residences for Anglo-Indian administrators and their families. The housing type, native to Bengal (what is now known as Bangladesh, until 1971 East Pakistan), was initially adopted by the British in the area to denote temporary shelters, but later it became "the form of habitation affected by Europeans generally throughout India..."\(^{175}\):  

The style of private edifice that is proper and peculiar to Bengal, consists of a hut with a pent roof constructed of two sloping sides which meet in a ridge forming the segment of a circle so that it has a resemblance to a boat when overturned....This kind of hut, it is said, from being peculiar to Bengal, is called by the native Banggolo....Among the natives, the poor man has one hut for himself and cattle, the richer men increase the number without altering the plan of the building.\(^{176}\)

\(^{175}\) JIAI No. 8 1886:1.59  
\(^{176}\) King 1995:18
Certain writers believe that the prototype for the modern bungalow was another housing type similar to the *bangla* called *ath-chala*, who's name implies that the roof had four sides, with four projections that covered the verandah around the square house. In either case,

The plan is as simple and square as possible, and mainly consists of four thick mud-brick walls pierced by the necessary doors, and surrounded by a verandah carried on pillars, while the whole is surmounted by a pen roof of thatch. This comfortable but hideous structure is the type of Anglo-Indian domestic structure.\(^{177}\)

Within a couple of decades of its appropriation in Bengal, bungalows began to appear in other cities including Bombay (1793). While initially, "If a house has a flat roof covered with flag-stone and mortar, it is called a pukka house; if the roof be raised and it be thatched, it is called a bungalow".\(^{178}\) Soon, two distinct forms of the single-story bungalow were making their appearance—one based on the continued adaptation of the Bengali hut, the other on the English ‘classical’ tradition. These, more substantially built stone or brick buildings adopted the “the Indian idea of the flat, beaten clay roof”.\(^{179}\) and were meant primarily for housing British officials such as the district officer, judge, civil surgeon, and superintendent of police:

Here the form was increasingly influenced by metropolitan pattern-books of ‘cottage architecture’ familiar to the engineering officers who supervised their building. With the establishment of the Public Works Department (PWD) in 1854, an ‘engineering vernacular’, known more widely as the ‘Military Board’ style, became the standard form for official Government of India buildings.\(^{180}\)

\(^{177}\) JIAI No. 8 1886:1.59
\(^{178}\) King 1995:37
\(^{179}\) King 1995:38
\(^{180}\) King 1995:38
In Karachi, within a decade of occupation, the single-story *bangla* was found giving way to double-story structures in stone. However, the basic features such as “the sloping roof on two sides and two gable ends”\(^{181}\) as well as the encircling verandah were maintained. Also, since every resident who could afford it owned a carriage, the bungalow included a carriage porch, stabling and coach houses as well as servants’ dwellings, all sited within a large compound—“a compromise between a meadow, an orchard and a garden”.\(^{182}\)

The oldest extant example derived from the *bangla* form can be seen in Karachi in the shape of a small two-story building now used as the Office of the Commissioner of Karachi (built in 1855 as the Collector’s Kutchery). Although it has undergone extensive alterations internally, the deep verandahs in the front and rear which provided shade to the rooms can still be identified.

**British Influence**

The new architectural form of the barracks and bungalows gained popularity among the natives as well, and was particularly apparent in the new area developing close to the indigenous town. In order to serve the conquering army, many natives had found accommodation in the ‘Black’ or ‘Native’ town, which began to overflow beyond the collapsed fortification walls into what later became known as the Napier and Market Quarters.

In photographs from the 1880s, the ‘Old Town’ with its dense development retains the cuboid badgeer-topped profile, but the area that developed next to Bunder Road, new building forms incorporating stone

\(^{181}\) Yule 1968:128
\(^{182}\) King 1995:47
walls and pitched roofs had started to appear. This form was similar to that of the bungalows built in the Staff Lines:

The style of the well-tiled dwelling houses built by Europeans pleases us as much as their material does the reverse. All are faced, roughly speaking, north and south, the latter direction being seawards, a benefit which Bombay cannot enjoy; in the upper story they have deep and shady verandahs, and some of these retreats are adorned with round arches and monolithic pillars.\textsuperscript{183}

The architectural expression favored by the rulers was enthusiastically adopted by a rising class of Indian merchants, contractors, suppliers and others. Thus, neoclassical, and later neo-Gothic, buildings, which had no roots in the soil of Sindh or for that matter in the Subcontinent, began to sprout.

The acceptance and popularity of the alien architectural forms among the local population were the after-effect of the enormous changes which had been brought about since the dawn of the nineteenth century, of which the most drastic and damaging was the cultural mold devised and determined by the rulers.

\textbf{Architectural Character}

The architectural character of the Anglo-Indian Empire's nineteenth century buildings was determined by the amateur dabbling of administrators and engineers, whose preference of a particular architectural style was greatly influenced by the corresponding contemporary popular revivals in England. Writing in 1913, E.B. Havell (1861-1934) described such buildings as 'stage architecture' promoted by the 'European dilettante' which showed “itself in

\textsuperscript{183} Burton 1877:1.41
India about the end of the 18th century”. Havell referred to French General Claude Martin and his La Martiniere in Lucknow, however, his comment was just as applicable to Governor-General Wellesley and British Resident Kirkpatrick.

An underlying cause for the blind adoption of ‘styles’ was the lack of trained architects. Engineers, at best trained in ‘civil architecture’, were relied upon to design major edifices of the empire. As late as 1869, The Architect deplored the absence of any architectural merit in most of the buildings built in India by engineers rather than architects:

If the former rulers of India showed a refined taste for architecture, as witness many of their ancient buildings of world-wide renown, the present Government would appear until quite lately, to have ignored the necessity of securing architectural effect in its public edifices. There is, indeed at the present day, no opening for architects in the public service, beyond one at each Presidency. The designs for nearly all the most important buildings fall to the lot of Royal or civil engineers, many of whom can but at best boast of being amateurs at that art—and hence are to be found in palaces, churches and other public edifices, if not absolutely grotesque in their design, at least deficient in any title to merit.\footnote{Havell 1913:215} \footnote{The Architect September 1869:123}

The pattern books and architectural treatises available at the time greatly assisted the ‘amateur architects’, enabling them to choose models which could be suitably adapted to Indian climatic conditions. The latest architectural modes were conveniently available through professional journals published in England. The first such journal was The Builder which began publication in December 1842, and publicized itself as a magazine which was of use to the “Architect, Engineer, Archaeologist, Constructor,
Sanitary Reformer and Art lover." Another journal, *The Architect* and *Building Gazette* was established in 1850, while *The Architect*, a profusely illustrated magazine, started publication in January 1869, as 'A Weekly Illustrated Journal of Art, Civil Engineering and Building'. These publications had a profound influence, since illustrations of the latest buildings being built in England were now easily and, since the opening of the Suez Canal in 1869, speedily available.

**Housing since Independence**

A city like Karachi, which lacks "in the physical presence of public institutions and the definition of an identifiable single public center...it is in housing and houses that our architectural life values are most clearly expressed." Even after political independence from its colonial rules, cities like Karachi, "continue to embody the colonial and racist principles on which the societies rest".  

The housing most desired by all income groups is the single family detached house in its own compound (the Pakistani dream), a result of the British Westernization of the *bangla* form which resulted in a,

change [everywhere, but] especially in Northern India, from a one-, two- or more-storeyed, courtyard-type dwelling, with rooms giving inwards onto the courtyard, and structurally joined to similar houses on one or more sides, to a free-standing, 'courtyard-less', 'outward-facing', one- or two-storeyed 'European-style' bungalow.... The change in house form also involves a change in location. This, therefore, involves a move away from the traditional, indigenous city to a suburb....

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166 Polyzoides et al:2
167 King 1976: xii
168 King 1995:51
At the same time, the high cost of land and materials, and a current prevalence of violence and lack of security is fueling a demand for apartments amongst the middle class, and patronage policies towards a favored elite is resulting in an increasing number of mid- and high-rise apartment buildings rather than the low-rise buildings most of Karachi is zoned for.
(Top) row houses at the Weissenhofsiedlung by J.J.P. Oud, 1925-27; (bottom two) typical row housing by Ernst May et al. at Römerstadt, Frankfurt, 1925-35.
Semi-detached villas which comprised two-thirds of British housing built between the World Wars.
Charles Correa’s Previ Project with narrow attached housing, Lima, Peru, 1969-73.
Moshe Safdie’s Habitat in Montreal that includes large open-to-sky spaces but did not turn out to be as affordable as planned.
6. POST-INDEPENDENCE KARACHI

Growing Population

With Karachi's designation as capital of the new country, Karachi's population more than doubled between 1947 and 1951, rising to over 1,000,000, and then to over 2,000,000 by 1961. The increase in population between 1947 to 1951 is attributed to those who migrated from India at the time of Independence (660,000 out of a population of 1,100,000; however, by 1961 the migrants from India constituted only [20%] or 180,000 of the increase, while 32% was attributed to in-migration from other parts of Pakistan.

The large share of population increase due to in-migration was no doubt due to an unprecedented increase in the industrialization of the city. Where, at the time of Independence in 1947, there were only 41 industrial units in 1948 there were 62 but by 1957 the figure had multiplied over 17 times at 1069. By 1972 industrial establishments had risen to 5,000 spread over 8,000 acres.

In spite of the transfer of capital from Karachi to Islamabad in 1961, by the early 1970s Karachi, with 6% of the national population, had grown into the most important economic center of Pakistan. To this day, Karachi is considered "an engine of development for the entire country" and is now home to an estimated 15 million people. And, according to the U.N. Centre

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189 Document No. KDA/TP/PD/4 1961
190 Figures from KDA TP Dept: An outline of scheme for Resettlement n.d. 1968?
191 Figures from KDA TP Dept: An outline of scheme for Resettlement n.d. 1968?
192 Document No. KDA/TP/PD/4:1961
193 KDA Report 1972:13
194 Document No. KDA/TP/PD/4:1961
195 KDA Report 1972:13
196 NPP No. 3 1974:13
for Human Settlements (Habitat), Karachi is predicted to become one of the ten largest ‘megacities’ in the world by 2015.\textsuperscript{197}

**Migrant Housing**

At the time of Independence, the two ends of the city ‘white’, and ‘black’, had begun to consolidate into a continuous urban landscape, with less affluent areas growing along the Lyari river in the north-west. The eastern limit was defined by the cantonments and the west was largely undeveloped since it consisted primarily of mangrove swamps.

The early migrant population was accommodated in what were called Displaced Persons (D.P.) Colonies. However, not all of the migrants were or could be accommodated in these colonies, and a large number squatted illegally on open land within the city center.

Most of the D.P. Colonies or refugee settlements had to be sited at a greater distance from the city center than the middle class housing societies which commandeered land close to the city center early on. “In the case of the refugee settlements of Landhi, Drigh Road, and Malir the only areas that could be found were to the east of the vast expanse of Drigh Road Cantonment and the Civil Airport and this at a considerable distance (up to 12 miles) from the city”.\textsuperscript{198} Just as “Manhattan denigrates as ‘bridge-and-tunnel people’ those who need infrastructural support to enter the city, and makes them pay for it”,\textsuperscript{199} the poor were ostracized to the farthest outskirts of Karachi and forced to take inadequate public transportation into the city center after spending hours changing buses and bus lines.

\textsuperscript{197} *The Wall Street Journal*, 11/6/1995
\textsuperscript{198} Powell & Ali 1961:3
\textsuperscript{199} Koolhaas & Mau 1995:1248
The colonies were constructed by the Government of Pakistan in a hurry, therefore according to a later report by KDA, "no town planning principles were followed because of urgency. As a result these colonies lacked many community facilities."²⁰⁰ These colonies were transferred to the Karachi Development Authority (KDA) in 1958 when the Directorate of Housing Management was established to manage these projects.²⁰¹

**Housing Societies**

The more influential and affluent groups—upper- and middle-income—settled in housing societies in the late 1940s and early 1950s adjacent to the central parts of the city: "With few exceptions the land allotted to the Housing Societies was sited immediately adjacent to the existing city and in the area bounded by Lyari River, Malir River and the Drigh Road Cantonment".²⁰²

Residential societies had first appeared in Karachi after the Bombay Town Planning Act of 1915, when the Karachi Municipality decided to prepare proposals for "making certain Town Planning schemes for the planning of suburban areas....".²⁰³ Soon, much of the development of Karachi's residential sectors was due to the popularity of the cooperative housing movement led by the well-known Parsi Mayor of Karachi, Jamshed Nusserwanjee, who initiated what was probably the first planned residential area for the middle class (later named after him as Jamshed Quarters). Under this scheme, land was provided free of cost to the cooperative housing societies, and the construction of houses financed by cooperative banks.

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²⁰⁰ MP-RR/13 1971:11
²⁰² Powell & Ali 1961:3
²⁰³ RTPVD 1926-30:2
According to former mayor of Karachi, Hatim Alvi, describing pre-Independence Karachi, "many cooperative housing societies were started and they built beautiful little villas for their members. Nearly 95% of these houses belonged to the upper and lower middle classes".\textsuperscript{204} Societies such as Cincinnatus Town, Amil Colony and Katrak Parsi Colony (whose foundation stone was laid by J.L. Rieu, Commissioner-in-Sind on March 21, 1923) were founded.\textsuperscript{205} A small residential area was also opened near Bath Island, on land partially reclaimed from the backwaters of the Chinna Creek.

However, as Jamshed Nusserwanjee noted in 1934, a substantial number of Karachi's residents thought of Karachi as their temporary home while they took advantage of job opportunities, and they continued to have important ties with their cities and towns of origin:

We will have to be clear in our mind that the expansion of the city of Karachi is mainly due to the fact that it is a transit place, pure and simple, and its trade is chiefly a passage from Karachi to other places. The population increases mainly because of that; otherwise there will be no purpose to live in the City of Karachi.\textsuperscript{206}

This would never be more true during the Middle East boom in the 1970s, when hundreds of thousands of Pakistanis from other parts of the country passed through Karachi on their way to well paying jobs in the Persian Gulf.

As Karachi continued to grow even before Independence, Maneck Pithawalla, writing in 1946, made an earnest plea:

Like all other cities Karachi must have some kind of planning before it is too late. Already it has reached a stage when an expensive Improvement Trust under the Town

\textsuperscript{204} Minwalla et al. 1954:93
\textsuperscript{205} Pithawalla & Kaye Part II 1946:65
\textsuperscript{206} Pithawalla & Kaye Part II 1946:87
Planning Act will have to be instituted to make
alignments of many old roads and cross roads and their
corners, to remove congestion in the Old Town and
neighbouring areas....\textsuperscript{207}

After independence, most of the cooperative societies were established
in 1948 and 1949, except Rizvia CHW which was registered in August 1947;
PECHS was the largest single cooperative society, registered in 1949 and
consisted of 1268 acres and 4,704 plots [3.7 plots/acre]; Karachi Cooperative
Housing Societies Union consisted of 24 members societies, registered in 1949
and consisted of 1200 acres with 5,029 plots [4.19 plots/acre]; Mohammad Ali
Memorial Society was registered in 1948 on 92.7 acres of land with 298 plots
[3.21 plots/acre]; Pir Ilaahi Bux CHS was registered in 1948, on 187 acres of land
and 2,539 plots [13.57 plots/acre]; Rizvia CHS was registered in 1947 on 56 acres
of land with 428 plots [7.64 plots/acre]; Firdous CHS was registered in 1949 on
57.75 acres of land and 330 plots [5.71 plots/acre]; Allama Usmania CHS was
registered in 1949 on 25 acres with 389 plots [15.56 plots/acre].\textsuperscript{208}

Other housing societies sanctioned by KMC were Muslimabad
registered in 1947 on 40 acres with 87 plots [2.17 plots/acre]; Sindhi Muslim
CHS registered in 1944 on 165 acres with 444 plots [2.69 plots/acre] and
Ismailia Garden CHS registered in 1948 on 36 acres and 400 plots [11.1
plots/acre].

Since much of this area had been used for quarrying stone during the
past century, “the grid iron pattern of streets adopted by the Societies
unrelated to any contours proved rather expensive to develop”.\textsuperscript{209} However, it
was a planning model that was followed in most of Karachi due to its

\textsuperscript{207} Pithawalla & Kaye Part II 1946:127
\textsuperscript{208} KDA MP-RR/13 1971:15
\textsuperscript{209} Powell & Ali 1961:3
association with the ‘white’ towns of the Civil Lines and the cantonments.

**First Master Plan 1949-52**

The absence of a master plan for Karachi meant that housing could not be provided for the refugee population within any framework. Since Karachi was the capital of the country at the time, it was decided that to, "prevent any haphazard development on the one hand, and in order to systematically regulate the land use and plan the future development of the city on the other, the preparation of a Master Plan was assigned in [April] 1949 to a Town Planning Firm, Morz Rendel Vatten, Pakistan (M.R.V.P.)".\(^{210}\) A preliminary report was submitted by MRVP as early as December 1949, which "determined such basic assumptions as the principle type of development, the location of the Capital...".\(^{211}\)

The completed MRVP Plan was submitted in 1952, and the accompanying report emphasized that, "a town plan must be continuously coordinated with the latest developments, modern ideas and fresh aspects, yet it is necessary for practical reasons to decide the layout of a plan for a definite period until a general revision is found desirable".\(^{212}\)

Although the MRVP Master plan was never implemented, "KDA’s town planning staff effected a certain degree of coordination in respect of the MRVP Plan and managed to maintain some of the major road reserves suggested therein",\(^{213}\) which were very generous.

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\(^{210}\) DOX-PA 83 1960:1
\(^{211}\) MRVP Letter, April 1952
\(^{212}\) MRVP Letter, April 1952
\(^{213}\) DOX-PA 83 1960:1
Deteriorating Conditions

In the meantime conditions in the city continued to deteriorate. The large influx of refugees who continued to arrive in the city could not be accommodated in an organized manner.

By 1957, Pakistan had undergone a coup d’etat and a military regime took over power. In 1958 the firm of Doxiadis Associates was appointed by the Government of Pakistan to assist in the construction of large-scale housing projects.

Thus, a survey of shelterless persons in Karachi was carried out in January 1959. This survey discovered a staggering numbers of families who needed shelter and related infrastructure. Out of the 119,402 shelterless families (527,535 persons), it was estimated that 101,178 were Muslim refugees from India.\(^{214}\)

The census of 1961 found that the total population of Karachi had risen to over 2,000,000, and almost half of that, 840,000 were refugees (This figure varies slightly from the 1959 survey of the shelterless). According to the census, after a major influx of refugees up to 1951, the decade that followed 1951-1961, saw only 19% of the increase in Karachi’s population due to refugees, while 32% was due to in-migration and 28% to natural increase.\(^{215}\)

The Report on ‘The Greater Karachi Resettlement Programme’ noted that this influx, “created tremendous problems and basically changed the appearance of the city”.\(^ {216}\) Apart from the overcrowding, the Report also pointed out that, “The lack of pure drinking water, roads and other public utilities and amenities has turned these areas into a breeding place of disease

\(^{214}\) Doxiadis 1961:1
\(^{215}\) Resettlement of Squatters, TP KDA Report n.d. 1968?
\(^{216}\) KDA/Doxiadis Report 1:1961
where epidemics spring up and spread and endanger the health of the whole population of Karachi". Even before Independence, according to then mayor Hatim Alvi:

The question of adequate water supply for the whole city was never satisfactorily settled during the tenure of Jamshed’s presidency (until July 1934, when he tendered his resignation). Finance was the biggest obstacle. The people of the [Bombay] Presidency were getting jealous about the rising strength of Karachi as a potential rival to Bombay. Some of their representatives had an effective say in the counsels of the Government of Bombay who wanted to be sure that the citizens of Karachi did not die of thirst but who were not too keen to provide the growing city of Karachi with an ample water supply.

With the start of the War on September 1, 1939, and the establishment of an American base in Karachi, immediate steps were authorized for solving the water shortage. With the building of the Haleji Water Works, the water supply of Karachi reached a somewhat satisfactory level for the first time, but not for long.

The supply of adequate amounts of water has remained a recurring problem for the city, and funds for this basic necessity have always been withheld. One of the critical factors is the underestimation of Karachi’s population and therefore the projected water consumption. From the day the city was declared the capital of Sindh, its population has grown at a faster pace than its planners have envisaged.

Even today, with the latest master plan having been updated for the years up to 2000, the provision of infrastructure is based on an estimated population of eight million when many experts agree that Karachi’s

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217 DOX-PA 83 1960:1
218 Minwalla et al. 1954:91
219 Minwalla et al. 1954 :91
population has probably crossed the 15 million mark. Funding for infrastructure is perpetually given a low priority, and even today the investment required for a sufficient water supply is not forthcoming from Islamabad, resulting in a water famine in all the less-advantaged areas on the periphery of the city, and many of the central city areas.

Although Hatim Alvi had proudly recorded after Independence in 1947 that "Karachi is the only city in Pakistan with complete underground drainage." Today, most parts of the fast-expanding city still survives on a drainage system that was laid more than half a century earlier.

Also, there is no overall coordination of services within the city limits since there are over a dozen different authorities and organizations with their own rules, bylaws and jurisdictions, including the Karachi Development Authority; Karachi Municipal Corporation; Landhi Korangi Municipal Committee; the Cantonment Boards of Karachi, Drigh Road, Korangi, Malir, and Manora; Karachi Port Trust; the Central Government's Public Works Department; SITE; various housing societies; the Civil Aviation Department; Town Committees; and, Sind Public Works Department's Buildings and Roads Department.

While most civic agencies consult KDA's Town Planning Department and adhere to its town planning guidelines, the case of the Central Government agencies, such as the Cantonment authorities establishment of the Pakistan Defence Services Cooperative Housing Society, is different. The Central Government still owns much valuable land in the city even though Karachi is no longer Federal Capital territory. This results in each organization making its own plans and laying its own infrastructure, and having rules even at complete variance to each other's—causing much of the
chaos and the uncoordinated activities seen in Karachi today.

**Expansion of the City**

Under a crash program of housing designed by Doxiadis Associates, two townships, Korangi and North Karachi were planned, and construction of 14,000 dwelling units (nucleus houses) begun in December 1958 and completed in the summer of 1959.\(^{220}\) A special organization called the National Housing and Settlements Agency, (NHSA) was created to continue this work.

However, the location of these townships, about 15 to 20 miles outside Karachi, was too remote from job opportunities. The plan was only partially implemented before it was shelved in 1964.\(^{221}\) A KDA report in the late 1960s noted that squatters continued to occupy government land close to the city center, and the normally dry river beds:

> The main problem is that the people from danger zone are allotted plots in the Plot Townships but as soon as the conditions normalize, these spaces are again occupied with the result that a vicious circle is created.\(^{222}\)

Having worked on the problem of housing, Doxiadis Associates was now hired by the Ministry of Rehabilitation and National Housing and Settlement Agency to prepare proposals for the future development of Karachi, since the MRVP master plan of 1951 had never been implemented and was also out of date.

While preparing the proposal, Doxiadis warned that since the city is a living organism, "existing problem will keep on presenting new aspects,

\(^{220}\) Great. Kar. Resett. Prog KDA/Doxiadis 1961:1
\(^{221}\) Kinhill, Nespak 1990:3-2
\(^{222}\) Scheme for Resettlement of Squatters TP KDA n.d. [1968?]
whereas new problems perhaps more complicated, will not fail to appear". And, since the problems that are to be solved, "are not static, it is evident that the Master Plan will not in itself be sufficient to solve the problems of the city and regulate its future development".

Since the expansion of Karachi was found to be hindered by the hills and the sea, and delimited by two rivers, Doxiadis proposed that "Future development, therefore, should take place mainly towards the north, northeast and east while development of minor importance should take place towards west and northwest".

A preliminary Master Plan was devised, the basic principles of which included the need to permit unhindered expansion of the present center of the city as the city itself was extended, and the desire for large independent communities in which all needs and functions are provided. Doxiadis hoped that once the linear expanding center (a sequence of centers) was established, a grid could be imposed on the major communities developed on both sides of the center.

Apart from townships for those living in squatter settlements, KDA continued to create middle- and upper-middle income housing schemes. Among the most prominent were Clifton (Scheme No. 5) and Gulshan-e-Iqbal (Scheme No. 24). Clifton was considered,

the most important development project of Karachi Development Authority. The purpose is to reclaim all the low-lying marshy areas and sand dunes and develop the area for high density housing. The city will thus be extended southward right up to the sea and for the first time in history, will have a sea frontage.

\textsuperscript{223} DOX-PA 83 1960:13
\textsuperscript{224} DOX-PA 83 1960:13
\textsuperscript{225} DOX-PA 83 1960:20
\textsuperscript{226} KDA Dev. Decade 1958-68
The location of the Clifton Scheme, in the south of the city, was contrary to the recommendations of Doxiadis Associates who had suggested growth of the city towards the north and north-east. This was due to the fact that the middle- and upper-income groups were not willing to live far away from the original city center. Neither were the poor, but they did not have as much of a choice unless they returned to the city center as squatters, and many did.

Having experienced the lack of enthusiasm for plots and nucleus houses located 15 to 20 miles away from the main city center, KDA decided in the mid-1960s to increase residential densities in the central city:

In order to promote low-cost multi-storey housing in the congested parts of the City, KDA launched two pilot projects, Lyari in 1964 and Golimar in 1965. One hundred two-roomed flats in five floors were built at Lyari and ninety in Golimar. The purpose of these two Pilot Projects was to attract private enterprise to invest in such multi-storey low-cost housing. The response has been very encouraging.\footnote{KDA Dev. Decade 1958-68}

Overall, the Karachi Development Authority had two goals: planning of new Town Expansion schemes so that residential plots could be made available to the general public; and, the development of residential plots, laying down of roads, water supply and sewerage in KDA Schemes and offering those plots to private builders.\footnote{‘The Housing Problem in Karachi’:6}

A New Plan as the Crisis Deepens

The first comprehensive studies of the issues and problems in fast-
growing Karachi were undertaken with the initiation of the Karachi Development Plan 1974-85. In the late 1960s, "the United Nations Development Programme (formerly the Special Fund), in response to a request from the Government of Pakistan...agreed to assist the Government in establishing planning for the Karachi Metropolitan Region". A Plan of Operation was signed on 17th March, 1970, which became the formal basis, of the Project, later named Karachi Development Plan 1974-85. KDA established "a new, separate, semi-autonomous Master Plan Department (MPD)", to collaborate with the U.N. staff group.\textsuperscript{299} It was hoped that the involvement of the UNDP would train professionals to meet future urban challenges.

The formulation of a team to work on Karachi Development Plan coincided with the installation of a new political government. The explosion of urban population all over Pakistan underscored the need for some control over urban growth. In 1972, a new federal ministry for town planning was created. Among the basic principles enumerated by the new Government was that, "Measures should be adopted to control the increase of population in the city. A system of agrovilles established in the upper regions may help to form a buffer for the growth of Karachi".\textsuperscript{300}

Furthermore, the government proposed that, "Multi-storeyed housing should be encouraged as it solves the problems of transportation and other services. As far as possible, the height should be limited to 4 storys, so that the lift is not required".\textsuperscript{301}

Studies conducted in the early 1970s, established Karachi's dominant role in the economy of the country. With 6% of the total population, and 22%
of the total urban population of Pakistan, Karachi was found to contribute
"15% of gross domestic product, generates 42% of value added and 35%
employment in large-scale manufacturing; 50% of bank deposits, 72% of
capital issued; generates 25% of all Federal revenues".\textsuperscript{232}

Since the new Government policy proposed the curtailing of Karachi's
growth, and consequently expenditure on the city, the 1974-85 Development
Plan Report hastened to record that,

Although the prospect of such growth in a single center is
regarded with concern by some, any attempt to slow down
its growth drastically would be an economic and social
folly. A recent study by Chichi Mera suggests that from an
economic point of view, even the largest metropolitan
area in the world today is likely to be less than the optimal
size. Karachi has a long way to go before its relative
advantages are exhausted. The need is for increased not
decreased public expenditure in the Metropolitan area.\textsuperscript{233}

Since Karachi contained large labor pools, and offered social and
economic advantages to its residents, even the rural migrant population was
able to transfer resources to its original home. Nevertheless, it could not be
denied that the lure of economic opportunities in the city had resulted in,
"Congestion, squalor and human suffering that accompany rapid
urbanization," which were the "prime concerns of the entire Karachi
planning effort".\textsuperscript{234}

With the crisis deepening at an ever larger scale, the physical
infrastructure was severely strained: only 30% of the population had access to
water through a piped connection, 20% to a sewer connection; affluent areas
received 100 gallons/day of water while the disadvantaged received only 10
gallons. Out of 1500 to 2000 tons of refuse generated every day only 50% was being collected.\footnote{KDA NPP 3:1974:18-19}

The effect of earlier development decisions now assumed critical proportions. Some of the anomalies identified were: adoption of high density low-standard for the poor; low density high-standard for the rich; large low-income populations were remote from highly concentrated employment centers; as population grew, single downtown core became more and more susceptible to congestion and physical break down; there was no order to early planning, planned commercial areas built at public expense remained unutilized, and "unprotected spaces for recreation remain as dust bowls".\footnote{KDA NPP 3:1974:133}

The policies which had the most damaging effect were:

\begin{quote}
[the increasing] investment on infrastructure, and by disposal of public lands at prices far below market values are going almost entirely into private pockets. The multiplying benefits of urbanization are private while the multiplying costs of public services and costs of congestion and squalor are being borne by the public agencies and the poor.\footnote{KDA NPP 3:1974:137}
\end{quote}

**Decentralization**

By 1974, large scale decentralization had taken place. Several factors were at work here. As has been noted earlier, the central part of the city was largely occupied by public land which was not available for development. For example, the Cantonments close to the city center which were assigned for various military functions, although extremely low in density, had grown from 1,600 to 3,000 acres. Cantonments that had been established just prior to Independence also lay in the path of development on the West, north-east
and south-east. Altogether 29,000 acres of land, were creating “an effective barrier to the economic growth and development of the city”.  

Other factors had led to an extremely low gross density of 39 persons/acre. High-income areas had densities as low as 90 persons/acre; and a relatively high proportion of land had been assigned for “transport rights-of-way because of the high standards at which arterial roads were developed after the preparation of the 1951 Master plan”.

Furthermore, land allotment was continuing unabated contributing to the development of Karachi farther and farther out—Korangi, North Karachi, Qasba, Aurangi, Baldia, Nazimabad, North Nazimabad, Federal ‘B’ Area, Defence Housing Society, Clifton, Bath Island and the Housing Societies area—resulting in “a fairly large-scale decentralization of population during the decade caused largely by public development decisions”.  

Not much attention was given to the protection of the historic core and historic buildings of the city, and in spite of rather congested conditions, it was suggested “The most important trade and service centers proposed are the existing McLeod Road-Sadar complex, in which there still is a great deal of scope for expansion”. This recommendation would later result in KDA’s decision to increase the Floor-Area Ratio (FAR) of new buildings in the historic core, thus contributing in large part to the demolition of historic structures.
Karachi Today

The most recent plan finds that the public sector continues to dominate the land and housing market; the KDA and Government of Sindh control approximately 61% of the land in metropolitan area. Cantonments and other military land also occupy additional large portions of city’s built up area.244

Infrastructure and services continue to remain dismal. By 1990, 1,330,000 cubic meters of water per day were available, and only 5.2 million of the ‘official’ 7.8 million population had piped water supply. And, only 36.5 % had direct sewage connections.245 In 1971, 37% population lived more than 10 kilometers from the city center; by 1987, that number had increased to over 50% due to various KDA schemes and cooperative housing on urban periphery where large, inexpensive tracts were available, but where the provision of infrastructure has been even more difficult and costly to provide.

The most staggering revelation is that incredible amounts of developed land—more than 50% of land within 15 kilometers of the city center— lies vacant.246 There are two unfortunate policies that have contributed to this. One policy has involved the awarding of developed land for residential and commercial building—to those in favor as well as those who get lucky in lotteries held by the development agency—at absolute minimal prices, resulting in profits for a chosen few rather than the development agency which would otherwise reinvest the profits:

Former prime minister Benazir Bhutto allotted as many as 544 residential plots to the same number of MNAs, senators, bureaucrats, PPP leaders and workers and high

244 Karachi 2000:xiv
245 Karachi 2000:xx
246 Karachi:2000:18
military and civil officers during her regime from November, 1988 to August, 1990.\textsuperscript{247}

In one recent case a vibrant park and ‘lung’ for the city, built on top of the old sewage deposit grounds was designated as land for single family housing, but instead it was discovered that,

...plots for the proposed KMC officers cooperative society at the 200-acre Ghattar Baghicha land have been given to people who are either KMC outsiders or do not come in the officer's rank...[it was alleged] that all these plots were to be sold to a construction firm, which planned to bring up a high-rise on the land. And the rules of the sale had been, therefore, amended to allow plot owners to sell the same without the two-year bar for such a transaction.\textsuperscript{248}

Although much of the land in the central city is still unbuilt, and is being held on to by government agencies and speculators, there is a second serious problem—the arbitrary conversion of land that is meant for low-rise building or reserved as amenity plots for parks and schools to high-rise zoning:

Some of the residents of the PECH Society and members of a non-governmental organisation SHEHRI-Citizens for a Better Environment staged a demonstration...to protest against the commercialisation of residential plots in the area...The demonstrators said that PECHS which stood for Pakistan Employees Cooperative Housing Society has now been turned into: P-Police apathy; E-Encroachments; C-Commercialisation; H-High Rise; S-Showrooms.\textsuperscript{249}

There are now frequent protests against the approval of buildings that have not met building bylaws and regulations:

Small traders and cottage industry organisation organised

\textsuperscript{247} Dawn 8/23/93
\textsuperscript{248} Dawn 8/25/93
\textsuperscript{249} Dawn 8/20/93
a demonstration against the Karachi Building Control Authority (KBCA) here in front of the KBCA office to protest...alleged allotting of amenity plots of individual owners and the irregularities in the approval of building construction without any approved plan. The KBCA officials have been taking 'bribes' to approve the defective plans of the buildings and to overlook the illegal constructions.  

The patronage policies that have allowed, and even encouraged, a rampant disregard for the building regulations, first became apparent during the Bhutto 'socialist' Government, but have increasingly worsened. Today, they garner vocal columns in the newspapers and protests in the streets, especially from the middle class which is most affected by them.
Doxiadis Associates’s recommendation of six areas which could house up to 5,000,000 persons each to deal with the growing population, 1960.
Boundaries of Karachi in 1960 and future expansion possibilities as recommended by Doxiadis Associates.
Post-1947 housing areas including residential societies as well as displaced people (DP) colonies for refugees from India.
Plan of Gulshan-e-Iqbal laid out in a grid pattern.
Plan of Defence Housing Society laid out in a grid pattern.
KDA meets the challenge of growth
PUBLIC HOUSING – progressing towards development in rapid strides

By the Grace of God, Karachi Development Authority has successfully completed five major housing projects, under its Public Housing Scheme.

KDA’s entrance in the field of public housing was mainly due to realising the difficulties of general public, particularly the Pakistanis living abroad, in acquiring residential accommodation.

KDA entered the field of public housing to cater to the needs of all income groups and offered built-up flats and bungalows to the public for purchase at a fixed price with fixed schedule of completion and proper quality control.

KDA’s completed projects:
- Flats for low income group in North Karachi.
- Flats for middle income group in Gulshan-e-Iqbal.
- Luxury apartments in Kehkashan, Clifton.
- Apartments for Pakistanis living abroad in Gulshan-e-Iqbal.
- A prestigious project of independent bungalows in Gulistan-e-Jauhar is progressing fast. Few bungalows are still available for booking.

Karachi Development Authority

Overview of Karachi Development Authority-built housing targeted particularly towards Pakistanis living and earning abroad, 1986.
High-rise apartments became popular in the mid-1970s in an effort to tap into expatriate Pakistanis' foreign earnings by selling to them a Western image.
MODERN BUNGALOW in posh most segments of Defence Phase V — 4 bedroom with foreign fitted baths, on 500 yds. Please dial 542327, 540094 UNITED for detail.

CHARMING American style three bedroom bungalow on west open 724 sq yds near K.D.A. Scheme I large bright airy rooms fruit garden. Call 440432.

EMERGENCY sale, new SPANISH bungalow 6 bedrooms, aluminium windows, MARBLE stairs 1000 yards near Shamsheer and 200/1000, plot Boulevard. 433707,


Typical classified advertising bungalows in the daily Dawn, Karachi’s leading English newspaper—note the mention of “No water problem”.
TYPICAL FLOOR PLAN
Scale: 1/8" = 10"
Area = 810.125 sq ft.

Typical 4-Story Walkup Apartments, Clifton, Karachi.
Bedrock Apartments, Frere Town, Karachi.
TYPICAL FLOOR PLAN
Scale: 1/8" = 1'0"

Area: 1135 sqft

Galleria Apartments, Kahkashan, Karachi.
TYPICAL FLOOR PLAN
Scale: 1/8" = 1'0"
Area: 1270 sft

Marine Drive-2 Apartments, Kahkashan, Karachi.
TYPICAL FLOOR PLAN

Scale: 1/8" = 1'0"

Area: 1350 sft

Marine Drive, Kahkashan, Karachi.
TYPICAL FLOOR PLAN
Scale: 1/8" = 1'0"

Area: 1630 sq ft

Silver Sands Ocean Beach Apartments, Clifton, Karachi.
TYPICAL FLOOR PLAN
Scale: 1/8" = 1'0"

Area: 1720 sft

Cornische Apartments, Clifton, Karachi.
7. SOLUTIONS FOR TODAY'S MIDDLE-CLASS KARACHI

Karachi Today

The Pakistani city—especially Karachi—has become a sprawling soulless concrete jungle where services are scarce and sporadic at best and the architectural quality bleak and alienating. A rapidly expanding middle class population has put additional strains on the city and its infrastructure.

With an estimated total population of approximately 15 million people already, Karachi has continued to grow at unbelievable rates ever since the British took control of it in 1843. According to the U.N. Centre for Human Settlements (Habitat), Karachi will be one of the top ten megacities of the world by 2015.

Dual City Perpetuated

Since Independence, the government and those who play key roles in have continued to perceive themselves as paternalistic, and have retained the attitudes and habits of the former British rulers. This has resulted in the perpetuation of the colonial Dual City with the poor living in squatter, sometimes semi-planned, settlements in the 'black' areas with almost no services or support, and the rich living in the well laid out 'white' areas with large lots and low densities, that are actually cantonments in spirit.

As the city has developed, the Karachi Development Authority, the main agency in charge of providing housing and developed land, has avoided housing different income groups within the same areas. The more affluent have been situated closer to the city center, while low-income families have
been exiled to the outskirts of the city, 12-15 miles from the city center.

The rationale given for segregating communities is similar to the one given by the colonists—since the poor are unable to pay for services, they cannot be provided with any. Thus, the new housing areas for the less advantaged were planned by the development authority but left without any infrastructure, that is water, sewerage or electricity or roads. The opportunity for intervention by architects in such areas is limited, and we are now beginning to see the implementation of a minimal ‘sites and services’ approach as the most appropriate and affordable. A number of projects are already underway which deal with that income group’s particular problems and needs.

Although the more affluent areas were initially developed fully with water and sewerage lines, gas, electricity and telephone connections, even the services planned for these communities have been found to be insufficient. By the 1990s, most affluent households were buying their own water via private water tanker deliveries, generating their own electricity, and with the arrival of cellular phones creating their own communication system. The middle class has been the hardest hit since it is caught in the middle, unable to always afford a private infrastructure but needing, and expecting, more services than the low-income group.

Just as the 1959 Plan Cerda for Barcelona (as Aldo Rossi writes in The Architecture of the City), “ended up lending itself magnificently to the aims of speculation, and as such came to be realized in a degraded form...[but] did not have the power to transform the city’s political-economic objectives and was little more than a pretext or an image to which to conform”, the

251 Rossi 1982:150
Doxiadis Plan of 1958 and all subsequent plans for Karachi since then have been largely useless in guiding the development of the city in an appropriate manner.

Rise of Apartment Buildings

The technical device that made the multistory building feasible in the Indian subcontinent for apartments and offices,

was the electric ceiling fan. The bulky, hand-operated punkah required a lofty space. With the introduction of electric fans in the late 1890s, rooms could be scaled down to European dimensions. As a result, it was noted, ceiling heights in luxury apartments became comparable to those of workers’ chawls.\textsuperscript{152}

Since the turn of the century, especially in major cities such as Bombay, three- or four-story apartment buildings have been occupied by native residents although the single-family detached home has always remained their dream—in emulation of the British colonial rulers’ bungalows on large lots in the elite Civil Lines and cantonment areas.

With a rapidly increasing population to house, the Pakistani Government aggressively encouraged the construction of pilot projects consisting of apartment buildings in the mid-1960s. By the early 1970s, this housing type was being encouraged for all income groups by the socialist Bhutto Government that hoped to provide housing for all. Walkup apartment buildings were thus built throughout Karachi, although they would only be affordable to middle-income residents by the time they were completed.

Apartment buildings were seen as not only helping solve the housing

\textsuperscript{152} Evenson 1989:164
shortage, but also as symbols of progress and westernization. They were "the image of sophisticated urban development most often exported to the developing nations. There, excised from the complex service industries of its countries of origin, high-rise building revealed appalling shortcomings...".253

With political whims and patronage increasingly affecting all nationwide policies in Pakistan, Karachi began to see the approval and building of increasingly dense apartment buildings from the mid-1970s through the mid-1990s. Against all recommendations in development plans, and often distorting policy suggestions for focused high-rise development, apartment building became a conduit for rewarding the privileged friends of politicians or the politicians themselves.

Thus, high-rise and mid-rise buildings have risen in areas that were meant exclusively for low-rise buildings resulting in the absence of amenities such as parking and open spaces, as well as services and infrastructure, that greater density developments require.

**Typical Apartment Building**

A typical apartment building constructed recently (Plot No. FL 10, Scheme 5, block 2) was built with a far higher FAR (floor-to-area) than what was permissible under the existing bylaws. Instead of the 350 persons/5000 square meters (or 1.237 acre), or an average of 433 persons per acre, the site had a substantially higher density as can be seen by the calculations that follow.

The 300 feet by 229 feet, or 68,700 square feet, site with roads on all four sides, contains four blocks, each facing a road. Two blocks are 13 storeys tall

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253 Pawley 1971:85
and two are 7 storeys tall. The total number of apartments is 234. By taking an approximate density of 5.5 persons per apartment, there are approximately 1287 persons living there.

The allowable density according to the density standards of the Town Planning regulations (Schedule G, clause 6 (e)), apartments for the middle income groups should be no less than 350 and no more than 550 persons per 5000 square meters or 53,900 square feet (a minimum of 433 persons per acre and a maximum of 680 persons per acre).

Thus, while this plot should have housed between 446 and 700 persons, it has closer to 1287 residents. And, according to the plans, the allowable built area has also been exceeded. The total built-up area should have have been no more than 120,225 square feet according to the bylaws which defined the FAR at 1:1.75. Instead, the total built-up area is 344,470 square feet, or an FAR of 1:5.

These densities result in conditions that are not at all conducive to decent living and are in rampant disregard of building bylaws due to political influence. The outcry in the West against high-rise living for income groups other than the high-income forced the evolution of the multiple-family housing model into high-density, low-rise developments. This typology was, “canonized in the form of Moshe Safdie’s Habitat, which was a great success at the Montreal Expo of 1967”, although less successful later as a prototype for affordable modular housing. The tendency in Pakistan is similar to the situation in Saudi Arabia as described by Peter G. Rowe:

The models for new development are unmistakably Western and of the immediate post-World War II era. However, they do not seem to have progressed or become

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254 Pawley 1971:85
transformed as they have in their originating cultures. The prevailing paradigm is still very closely aligned with a doctrine of 'form follows function' and a rather reduced version at that. Professional practice seems to have been oblivious to any critique of 'modernism'...".255

Construction and Densities

In the formal private sector, individuals have been the main producers of single family housing (in 1987, 83.7% of building permits were issued to individuals). In the most recent housing census conducted in 1981, Metropolitan Karachi contained 811,850 dwelling units, with three-quarters of the housing having less than three rooms, and the average at two rooms, reflecting some overcrowding since the average size of households in Karachi is 7.2.

While 70% of housing in Karachi's planned areas is comprised of single-family independent units, the percentage of those living in apartment buildings has been increasing. Nevertheless, the Pakistani Dream continues to be based on a single-family detached villa in its own compound, based on the Colonial bungalow type.

Apartment buildings are built by developers who negotiate the purchase of commercial plots from KDA or the societies, or they purchase multiple parcels of land from private owners. The advent of formal housing developer is relatively new; most of the members of the Association of Builders and Developers (ABAD) became established in the 1970s and 1980s; 60% of the housing units produced in 1986 were apartments. In the early years after Independence, housing would be developed by public corporations or constructed by individuals.

255 Low 1989:320
Cost of construction for middle-class housing is as follows: a 2-story single family home would cost Rs. 800-900/square feet; a 4-5 story walkup apartment building would cost Rs. 600/square feet; and, a mid-rise apartment building would cost Rs. 800/square feet ($1 = Rs 40 approximately).

As Charles Correa writes, housing construction itself can be of great importance in the generation of jobs. For example, the expertise for building highrises is the monopoly of a few.

Compare this to the number of jobs in the bazaar sector (masons, carpenters, petty contractors, etc.) that the same amount of investment would generate if the pattern of development consisted of the kind of development we find in old city centers, throughout the Third World, viz. small, tightly-packed buildings, each 4 to 5 storeys high.\textsuperscript{256}

The covered and open spaces are interdependent on each other, and many do not realize, "the fundamental principle, namely, that in a warm climate—like cement, like steel—space itself is a resource."\textsuperscript{257}

In using open-to-sky spaces, the territorial privacy of the families is of decisive importance. For as the surrounding buildings get taller, these spaces get more and more restricted in their function. A ground floor courtyard can be used by a family for many purposes, including sleeping at night. Two storeys and you can still cook in it. Five storeys, and it's only for children to play in. Ten storeys, and it's a parking lot.\textsuperscript{258}

Correa points out how a 20-fold increase in building height may only produce a neighborhood density increase that is barely 4-fold. In the larger context of the city then variations in density even less: "contrary to popular belief, doubling building heights doesn't save drastically on the overall area

\textsuperscript{256} Correa 1985:20  
\textsuperscript{257} Correa 1985:38  
\textsuperscript{258} Correa 1985:39
of a city".\textsuperscript{259}

"In its concentrated form, low-rise housing is the timeless and classic pattern of residential land-use."\textsuperscript{260} It has a number of crucial advantages: freedom to improve and expand incrementally; provides ability to upgrade finishes or add rooms, provide variety; more suited to people's lifestyles, since more sensitive to social, cultural and religious determinants; and, speedier to build (especially if people build themselves).

**Changing Dynamics and New Issues**

In order to begin improving the quality of housing available to the expanding Middle Class in Karachi, a number of fundamental changes must be made in the design, planning and provision of Middle Class housing.

The inherent dualism found in the balkanized city of Karachi, leading back to the British Dual City concept, can no longer be supported. Simultaneously, the paradox between the traditional and Islamic forms and ways of living, and the strong influence of Modernism and Western planning and housing models, must be bridged so as to provide new models of living that have a continuity with the past. The issues that need to be addressed include:

- Housing priced out of reach (single-family housing on larger plots is priced beyond the reach of middle class residents).
- Increasing entrepreneurial work being done at home (trend in both men and women, and transcending generations).
- Smaller family units (extended families increasingly consist of only one nuclear family and one or two older relatives).

\textsuperscript{259} Correa 1985:41
\textsuperscript{260} Correa 1985:51
• Inadequate infrastructure (shortage of water and electricity, and the deteriorating roads and decreasing number of parks has adversely affected the quality of life).

• Access to Central Business District (CBD) and jobs (suburban sprawl has meant more traffic and declining job access as affordable residential areas get further away from the central city).

• Substandard housing units (lack of enforced standards and poor construction has been resulting in overcrowding and poor value).

Solutions for the Middle Class

Modern urban development, both state-funded as well as entrepreneurial private efforts, has for the most part adopted Western models without a critical evaluation of their suitability. And, many of the same models that were present decades ago in the West are being used, without the critical temperance that has helped evolve them in the West.

The following solutions are being proposed to help alleviate the conditions and availability of housing for the expanding middle class. The solutions are closely related to each other and do not necessarily fall wholly into the sections they appear in for the sake of clarity.

• Consolidation of infrastructure

It is important that high-rise apartments be restricted for the most part to the highest-income markets, and four- to five-story walk-ups encouraged instead through financial and planning incentives, so that the overall quality of life for middle class residents may be improved. In addition, plans for such apartment buildings need to be inspected carefully so as to ensure that
adequate open space, outdoor living areas such as balconies and utilities are provided.

Those who learn to work creatively within [regulations], will likely make good and safe buildings. Those who, exhausted or enervated by the codes, merely succumb to their prescriptive provisions will make safe but bland housing. Many regulations can be turned into architectural advantage. The awnings and trellises that help comply with energy codes make for lively architecture. The minimum size required for a bedroom window to aid in rescue also provides more light and ventilation to that room.\(^{261}\)

"Buildings can be reflections of the code, or they can be faithful to its intentions".\(^{262}\) Zoning regulations or bylaws have often been prepared with the help of western consultants, or Pakistanis trained in the western tradition, who propagated land uses, subdivision layouts, lots sizes and setbacks, based on a western mindset and requirements.

If one studies the plans of the ready-made flats that are advertised with full support of KDA...A cult of attached bathrooms and TV lounges is being created by these official highrise havens. A two bedroom apartment has nine or ten taps, a three bedroom 'luxury' flat has three attached bathrooms, one washbasin in the dining area, a servant room with its own toilet and of course the kitchen water supply. Four toilets in a three bedroom accommodation! Even in Canada where water resources and technology are in unmatched abundance this would be considered as beyond 'luxury' and environmentally quite irresponsible. By patronizing standards like these for middle classes KDA is suggesting norms of water consumption and sewage production that will only worsen its future problems...This crisis of expectations is slowly spreading over all aspects of life and traditional contentment is being eaten away by unbridled greed and

\(^{261}\) Davis 1995:77

\(^{262}\) Davis 1995:77
purely perceived deprivation.\textsuperscript{263}

It is estimated, that the vast "middle and high income land bank— consisting of between 300,000 and 350,000 plots—[may] represent a 15 to 20 year supply for these income groups".\textsuperscript{264} Since 50\% of the vacant land is within 15 kilometers of the city center, this land must be utilized for the city inhabitants who need it. The gross urban density of 39 persons/acre in the central city is very low due to the vacant lands, in the hands of either speculators or the government and military. Higher densities should be allowed in the central city but only within the bounds that allow the suitable provision of infrastructure. It is important for the government to repossess vacant plots which have not been built on within a specified time limit in their lease agreements. Smaller division of plots, attached villa house development, and walkup apartment buildings that take advantage of the vernacular, and cultural and economic needs of the intended residents, will greatly enhance the city's fabric and the lives of those who live in Karachi.

- **Transformation of housing typologies**

  Greater densities, and more cramped apartments, have resulted in apartments becoming more affordable than single family homes, for the middle class. However, affordability does not automatically translate into livability. In the absence of appropriate infrastructure such as the reliable supply of water and electricity, it is important that only walkups be allowed by the Karachi Building Control Authority.

  In addition, it is important that the building regulations for these

\textsuperscript{263} Haider:17

\textsuperscript{264} 'Urban Land Management Study-Document 1 Final Report', December 1990:E.1
three- to five-story apartment buildings encourage the transformation of the apartment building typology by taking advantage of the vernacular traditions, and cultural and economic needs of the residents.

Attached villa housing is another solution for the middle class housing shortage. The lots laid out in relatively affluent areas have been quite large for the most part e.g. standard lot sizes of 2,000 square feet or greater. Since land is only affordable for the middle class if these original lots are subdivided into 4, 6 or 8 parts, zoning regulations should be changed in appropriate areas. The current 5-15' building setbacks for all plots result in the wastage of space and inefficient utilization of land, when what is needed is an allowance for zero-lot homes such as attached single family villas.

This is an important type that should be encouraged, since on one hand it allows people to build their home incrementally, enjoy the ownership of the land, as well as feel independent yet are close to their neighbors. This is a step up from living in an apartment building, and takes people closer to their dream of owning a single family detached villa.

While transformations of use are interesting, transformations of typology are much more intriguing and challenging. Even though entrepreneurship is booming amongst housewives and the younger generation, architects and builders have yet to respond. New homes or apartments should have a room available which can double as a workplace with a separate entry and bypassing of the inner, private areas of a home.

As Peter Rowe writes about Saudi Arabia, there is a paradox in Pakistan as well:

On the one hand there is a deeply felt need to reaffirm traditional values and a sense of national identity
continually. On the other hand, there is a strong continuing commitment to the use of modern Western technology....To survive, tradition must cope with the inherent dualism presented by the paradox and provide direction for contemporary circumstances as well as continuity with the past...Rather than adopting building processes which seek to merge or accommodate the old with the new, approaches must be found that transcend such differences in origin.265

Islam and the sayings of the Prophet Mohamed (Hadith) do play a significant role in people’s behavior, and include guidelines on privacy, gender separation, concept of unselfish interdependence among people, property rights and building regulations, special status of neighbors and the encouragement of good relationships with a number of them.266

It is important that attached housing and walk-up apartments with open-to-sky areas, and appropriate zones of privacy and independence, be looked at, starting with current typological options that are transformed according to the local cultural, social, economic and climatic needs.

• Adapting traditional design and planning elements

Instead of the ‘Instant Islamic’ architecture championed by foreign architects such as Edward Durrell Stone who presented government building designs with a selection of roof and dome treatments to ministers for approval, a more sensitive and deeper synthesis is necessary today. For example, no longer is it enough to shroud a building such as Karachi’s Intercontinental Hotel in a cement jali (screen) that has only a decorative purpose when traditionally jalis shielded buildings and inhabitants from the

265 Low 1989:303
266 Low 1989:308
harsh sun and provided privacy.

The traditional planning elements that governed the incremental expansion of the urban fabric must be reinterpreted and synthesized with the ubiquitous orthogonal grid shaping the new Karachi. The ideas behind the traditional cul-de-sacs in the old city *mohallahs* can be used to enhance the grid since cul-de-sacs as a form are not necessarily beneficial to the city fabric, nor can they be merged with the grid already in place. For example, cul-de-sacs put unreasonable traffic demands on the central roads that serve as spines for these dead-end roads. By slowing down and discouraging traffic through secondary streets the grid can become a hierarchical artery system that benefits neighborhoods by allowing more traditional street usage on certain streets and streamlining more efficient traffic passage through the major streets.

In addition, instead of forcing the development of detached villas in compounds due to setback and zoning regulations that are based on western suburban development guidelines, attached urban housing must be encouraged within the city grid. This is especially important since large chunks of land lie vacant within the existing city grid, and tend to be priced out of reach of the middle class. Furthermore, attached housing is more efficient in terms of heating and cooling resources since there are fewer exposed walls in each housing unit. Attached housing also provides greater security for the residents since neighbors are more aware of each other’s lives and activities. With robberies and intrusions increasing at a rapid pace over the past few years, this is a benefit that is increasingly important to residents. This reversal of the relationship of the housing unit to the street, and reduction of the importance given to vehicular traffic can only enhance the
residents' quality of life.

- **Political Will & Implementation**

  These solutions can only be implemented if there's a political will. Since the government planning and financial lending agencies are very much influenced by the political leaders of the city, the political and economic rise of the middle class over the past decade has enabled the middle class constituents of Karachi to finally have a voice amongst those who matter. It is hoped that the political leaders will take heed to some of these suggestions to help alleviate the housing conditions of the middle class as well as enhance the overall city fabric and quality of life.
Doxiadis’ example of an incrementally built urban house in the United States.
Doxiadis Associates' typical house plan for attached, incremental housing for lower-income groups.
Doxiadis Associates' typical house plan for attached, incremental housing for lower-middle-income group.
Views of Naval Housing by Yasmeen Lari with generous open-to-sky areas for each apartment that extend the indoor living spaces, Karachi, 1974.
Apartment #2 at Naval Housing by Yasmeen Lari with generous open-to-sky areas for each apartment that extend the indoor living spaces, Karachi, 1974.
Attached housing by Yasmeen Lari for low- and middle-income families at Angoori Bagh, Lahore.
Attached housing by Yasmeen Lari for Karachi Steel Mill workers.
Walkup attached housing by Yasmeen Lari for low- and middle-income groups at Angoori Bagh, Lahore, 1977.
EXAMPLE FOR BLOCK OF FLATS
26'-0" OPEN SPACE REQUIRED
ACCORDING TO 62° ANGLE

UP TO 50' HEIGHT
WITHOUT ANY TYPE OF PROJECTION.
Building bylaws for height restrictions and set backs.
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Interviews

Ardeshir Cowasjee, Karachi.
Popular columnist for the daily national newspaper, The Dawn. The most vocal and well-known activist against illegal development of flats and destruction of amenity plots.

Arif Hassan, Karachi.
Consultant and author of various reports on housing in Pakistan. Designer of housing projects in Karachi.

Nasreen Jalil, Karachi & Islamabad.
Senator. A leader of the Mohajir Qaumi Movement (MQM), the majority political party in Karachi.

Yasmeen Lari, Karachi.
Prominent national architect. Former president of the Institute of Architects, Pakistan, chairperson of the Pakistan Council of Architects & Town Planners. member of the Majlis-e-Shura (Federal Advisory Council) and Chief Minister's High-Rise Committee and various housing policy commissions.

Naeem-ur-Rahman, Karachi.
Well-known barrister. Scheduled to present a landmark case in front of the Pakistan Supreme Court against the illegal development of multistory buildings in areas unable to support them.

Residents of apartments in Karachi.