



INDIA

Peter Scriver
and Amit Srivastava



modern architectures in history

India



modern architectures in history

This international series examines the forms and consequences of modern architecture. Modernist visions and revisions are explored in their national context against a backdrop of aesthetic currents, economic developments, political trends and social movements. Written by experts in the architectures of the respective countries, the series provides a fresh, critical reassessment of Modernism's positive and negative effects, as well as the place of architectural design in twentieth-century history and culture.

Series editor: Vivian Constantinopoulos

Already published:

Brazil

Richard J. Williams

India

Peter Scriver and Amit Srivastava

Britain

Alan Powers

Italy

Diane Ghirardo

Finland

Roger Connah

Russia

Richard Anderson

France

Jean-Louis Cohen

Turkey

Sibel Bozdoğan and Esra Akcan

Greece

Alexander Tzonis and Alcestis P. Rodi

USA

Gwendolyn Wright

India

modern architectures in history

Peter Scriver and Amit Srivastava

REAKTION BOOKS

For Stefanie and Nicola
For Valerie, Chris and Smriti

Published by Reaktion Books Ltd
Unit 32, Waterside
44–48 Wharf Road
London N1 7UX, UK

www.reaktionbooks.co.uk

First published 2015

Copyright © Peter Scriver and Amit Srivastava 2015

All rights reserved

No part of this publication may be reproduced, stored in a retrieval system,
or transmitted, in any form or by any means, electronic, mechanical, photocopying,
recording or otherwise, without the prior permission of the publishers

Printed and bound in Great Britain by Bell & Bain, Glasgow

A catalogue record for this book is available from the British Library

ISBN 978 1 78023 437 3

Contents

7	Introduction
	one
23	Rationalization: The Call to Order, 1855–1900
	two
71	Complicity and Contradiction in the Colonial Twilight, 1901–1947
	three
127	Nation Building: Architecture in the Service of the Postcolonial State, 1947–1960s
	four
171	Regionalism, Institution Building and the Modern Indian Elite, 1950s–1970s
	five
223	Development and Dissent: The Critical Turn, 1960s–1980s
	six
271	Identity and Difference: The Cultural Turn, 1980s–1990s
	seven
311	Towards the ‘Non-modern’: Architecture and Global India since 1990
340	References
368	Select Bibliography
370	Acknowledgements
372	Photo Acknowledgements
374	Index



Introduction

‘India’ is a word that invokes a host of clichés: a timeless civilization of living traditions, great spiritual wisdom and artistic riches; a subcontinent of astonishingly diverse yet harmonious regional, religious and linguistic differences; a crucible of cultural synthesis. Architecture is central to the supporting imagery, the forms and textures of iconic buildings such as the Taj Mahal dominating the phantasmagorical images of exotic splendour and ‘difference’ that tourism, the media and popular culture readily propagate. For the urban middle classes and elites of modern India, no less than the desiring foreign tourist, these are some of the decidedly romantic idealizations of India that increasingly must be distinguished, if not salvaged, from the invading sameness of global urbanity.

The idea of ‘Modern India’ therefore invokes rather more equivocal clichés: a world of contrasts and contradictions, rich and poor, extravagance and destitution, space-age know-how but medieval means – an incomplete project. It is construction sites in this case, more so than finished buildings, that furnish some of the most telling imagery. As the four-year-old daughter of one of the authors asked with innocent fascination upon arriving in Bombay (Mumbai) for the first time: ‘Daddy, why are all the buildings falling down?’ Indistinguishable to her uninitiated eyes were the gangling new structures that clambered for presence in the cluttered skyline and the ramshackle *bustees* (slums) at their feet. They were still girdled in rough-hewn wooden scaffolding and ragged shrouds of hemp, and she could not discern the difference between the rising apartment towers and luxury condos intended for the upwardly mobile new middle classes and elites of metropolitan India, and the provisional accommodation that the low-paid migrant construction workers from the impoverished countryside had cobbled together from waste materials to shelter themselves during their seasonal employment in the big city.

It was a similar but almost wilfully naive sense of fascination with both the prospects and the paradoxes of India’s architectural engagement with modernity that began to be captured by architectural photographers in the 1950s as the newly independent, self-consciously ‘modern’ India began to build. Particularly telling are some of the early construction

Harbour-front view of modern Calcutta, c. 1960. The New Secretariat Building, visible in the distance, was designed by Habib Rahman of the West Bengal Public Works Department. It was the tallest steel-framed building in India when it was completed in 1954.



Hafeez Contractor,
The Imperial
residential
condominium towers
under construction in
Mumbai in early 2008.

photos of Chandigarh. This, the stridently modern and progressive new capital city that was being built from scratch for the Indian state of Punjab, had been boldly projected by the prime minister of the new-born Indian republic as an architectural and urban ‘symbol of the nation’s faith in the future’.¹ Now free from the imposed tastes and paternalistic expertise of British colonial technocrats, however, it was more than a little paradoxical that the commission for the planning and design of this icon of change had ultimately been awarded to a non-Indian team of senior consultants dominated, famously, by the Swiss-French ‘starchitect’ of the day, Le Corbusier, but still officially led by yet another Englishman, Maxwell Fry, in collaboration with his wife, Jane Drew. More paradoxical still was the gulf between symbol and reality from the point of view of technical development. Le Corbusier’s designs for the monumental capitol complex at Chandigarh were some of the most audacious masterworks of modernism the world had yet witnessed. Yet here they were in these canonical photographs emerging virtually handmade, as the picturesque compositions typically emphasized, from the rude materials and sweat of a still largely pre-industrial society.

For members of India's young architectural profession who first viewed such images in the pages of progressive international journals like the *Architectural Review* and its aspiring Indian counterparts, *Marg* and *Design*, among other local professional and trade magazines, if not through their own cameras on pilgrimages to the new city itself, the iconic building works at Chandigarh were an almost sacred site of encounter with the cutting edge of modern architecture, as well as the gaze of the international architectural community.

Through the lens of Chandigarh, by the mid-1950s architects and planners abroad had begun to watch modern India with increasing interest. For both the advocates of high modernism and its emerging critics, the conspicuous roles that progressive architecture, design and town planning were being called to play in India's nation-building efforts were test cases for the global extension of the Modern Movement and its claims of universal validity and utility beyond simply an 'international style'.² More than just an invigorating shock of the new, therefore, Chandigarh was the confidence-inspiring evidence that radically new architecture was conceivable in India and, moreover, that it could actually be built.³ This at least was the hope of Jawaharlal Nehru, India's erudite and charismatic first prime minister, who was the principal political patron of the project and its most articulate advocate to both his national audience and the world.⁴

In Nehru's strategic vision for India's modernization, Chandigarh was of 'enormous importance'. 'It hits you on the head, and makes you think', he famously argued. 'You may squirm at the impact but it has made you think and imbibe new ideas, and one thing which India requires is being hit on the head so that it may think.'⁵ Chandigarh was, thus, more than just a symbol of the modernity and associated democratic institutions of the new India. It was to be a catalyst for the real changes in thinking that would enable India's own professional experts to re-conceive the physical and institutional forms of a modern nation 'unfettered by the traditions of the past'. From Nehru's viewpoint, it was not the particular idiosyncratic templates for modern architecture and urbanism that Le Corbusier had exported to India that Indian architects were expected to emulate, but the free-thinking approach they might derive from a master modernist's creative response to the particular challenges and opportunities encountered in India. A new cast of mind, not shapes, was the key to the genuinely modern Indian architecture they would develop in the course of time and in which 'Modern India' would be at home.⁶

This book is an attempt at a longer critical history of this elusive notion of modernity in the changing architectural ideals and building cultures of modern India. While the growing body of literature on the



Philip Johnson gazing upon Le Corbusier's recently completed Legislative Assembly building in Chandigarh, photographed by Habib Rahman, c. 1965.

architectures of colonial and contemporary India now includes several relatively comprehensive surveys as well as more focused critical studies of different facets of the topic, this is a consciously less synoptic, more interpretive account than has previously been attempted.⁷ Such a history is needed not only to cross-examine and interpret the wealth of architectural discourse and related historical material that remains, in many cases, only footnotes to the established narrative. It is also needed to provoke and hopefully deepen critical assessments of architectural developments in India's recent past, and the debates that shaped them. Such a critical appreciation of previous modernities offers crucial historical perspective to address the huge new challenges and possibilities for the architectural and urban futures that the 'new India' of the twenty-first century is already beginning to build as it aspires to play a leading role in the increasingly Asia-centric world of the global present.

In taking on the challenge posed by the series in which this book is framed (*Modern Architectures in History*), our aim has been, first, to give closer and more extended attention to the multiple story lines that are interwoven in this history of architecture in the construction and conception of modern India. To do this it also necessarily attempts to

address some largely unexplored gaps between the dominant foci of the existing literature. These include the everyday buildings and infrastructure that comprised the ubiquitous background architecture and urbanism of modern India, much of which was produced by architects, engineers and teams of skilled subordinates working largely unacknowledged in government departments and corporate architectural firms. Resisting the temptation to counter 'global' trends and generalities with reductive and equally generalizing notions of a singular modern 'Indian' alterity, the present account has also attempted consciously to articulate the more contextually specific 'local' modernities of the many distinct regions and metropolitan centres that comprise modern India as the geographical, political and cultural constellation that it remains, despite more than a century of aspiration towards a more coherent ideal of modern nationhood.

A second and equally important aim is to exploit the opportunity that is afforded by the growing distance from the developments and ideas in question, to interpret these more thoroughly and richly in their historical contexts and interrelationships. As dispassionately as these interested authors are able to approach their topic, we have tried to stand outside the ideological space of the original issues, as well as the postmodern polemics and postcolonial critiques that the architectural discourse on modern India has taken on board, at least partially, in the intervening years. Our clear, though not necessarily easily accomplished, objective has been to reframe that evolving discourse in its own history; to confront the notion of a transcendent universal modernity with its inevitable historicity in this (as in any other) history of changing ideals and contexts.

To begin, as we have, with Chandigarh is not to start at the beginning of the story, but to address up front the relatively huge but equally problematic impact this singular project has had, not only on the existing discourse about the architecture and urbanism of modern India, but also on the larger canonical story of modern architecture and its global diffusion as well. Tendencies inherent in previous readings of Chandigarh foreground a more general problem of interpretation that we wish to articulate clearly at the outset since it underpins the basic argument of this book and the critical re-examination of these intertwining histories that it seeks to provide. From either point of view, the important connections between this local history and the global history of modern architecture are undoubted. But until recently, neither of these established narratives had been cross-examined closely enough to interpret the longer history and richer texture of their particular relationship.

Concisely stated, the tendency to romanticize the paradoxical contradictions of the encounter between high modernism and traditional India,

and the heroic creative struggle this entailed in high-profile projects such as Chandigarh, has underplayed the significance of the middle ground of 'colonial-modern' development on which post-independence India was actually built. In its public works and buildings as in its social policies, colonial India under the British was a test-bed not only for some of the most radical ideas about social and spatial engineering in the history of modern European thought, but some of the most reactionary policies and practices as well. To understand fully the 'differential' nature of architectural modernity in India's modern history, it is therefore imperative to appreciate the role that architecture played in the intrinsically intertwined history of India's colonization and, hence, the inherent postcoloniality of the architectural production and discourses that followed.⁸ The modern nation-state of India that came into being as a secular democracy in 1947 was among the first and by far the largest of the new nations to emerge from the rapid unwinding of the European colonial empires in the years following the Second World War. The progress of this unlikely new country – in many ways a radically optimistic federation of differences rather than a unified nation-state – was therefore closely watched from birth. In the eyes of a war-weary international community that was (at least temporarily) attempting to reconstitute itself through new forward-looking diplomatic frameworks such as the United Nations, 'Modern India' was regarded as a paradigm case of postcolonial nation building.

But naive perceptions of India from a distance, as a tradition-bound non-Western society poised for 'take-off' on a sky-rocketing course of modernization, belied ignorance of a much longer engagement with modernity. The new democracy was the product of more than a century and a half of social and cultural change within the framework of an inherently modernizing colonial state. This colonial-modern India was distinguished by a set of distinctly non-traditional cultural spaces and practices, and a rule of law founded upon the modern Enlightenment values of reason, justice and individual freedom in which, paradoxically, the very idea of the independent nation-state of modern India had also been framed.

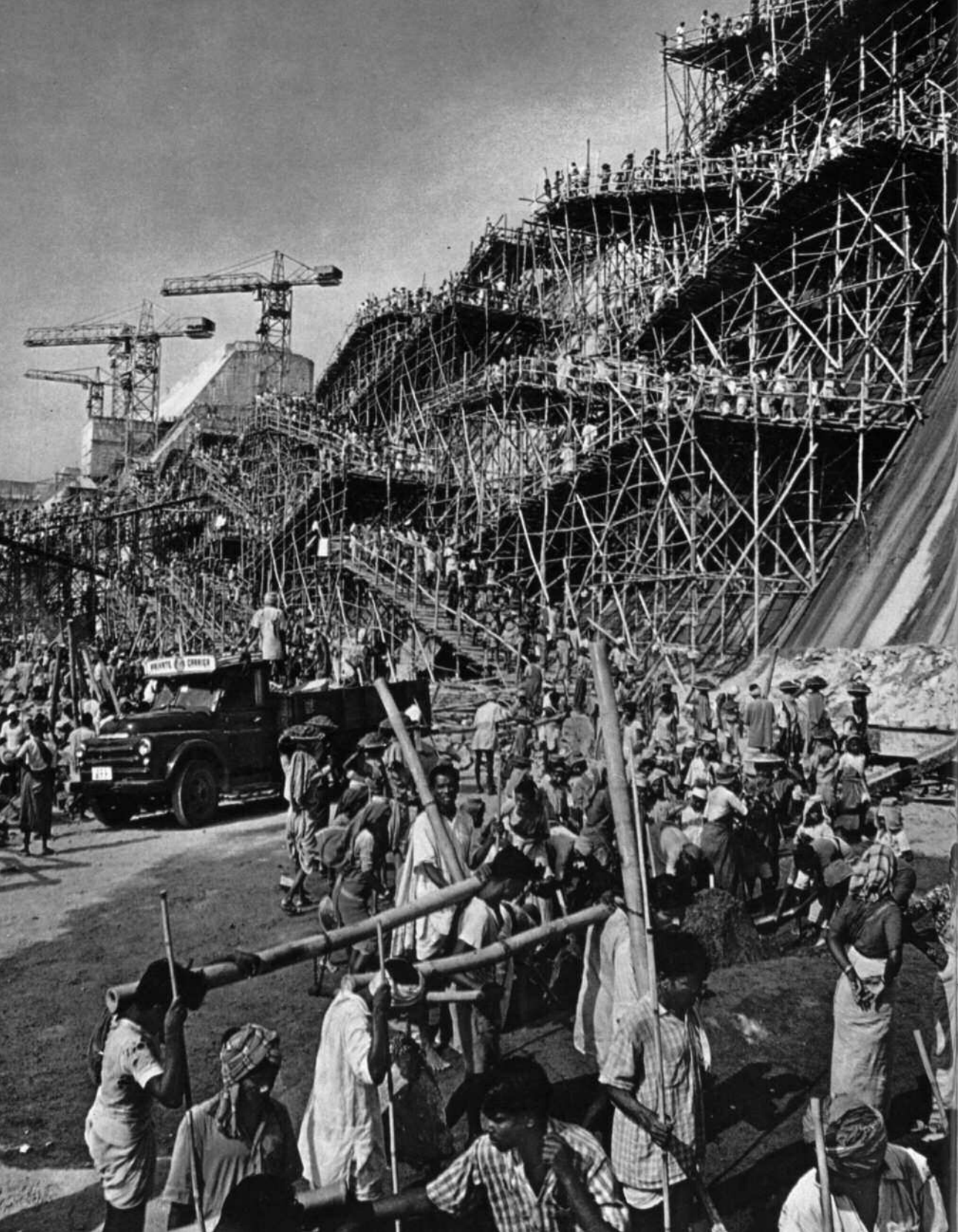
India's long but politically sophisticated freedom struggle had ultimately succeeded through some of the most original and radical tactics that the world of modern politics had yet conceived, not least the practice of non-violence. Behind the apparent solidarity of the movement, however, the emergent idea of 'Modern India' reflected a plurality of different and even contradictory visions of the society's future form and place in the modern world.

These contradictions were most famously represented by the diverging modernities of the two extraordinary individuals who emerged on the world stage as the political architects of modern India and the postcolonial

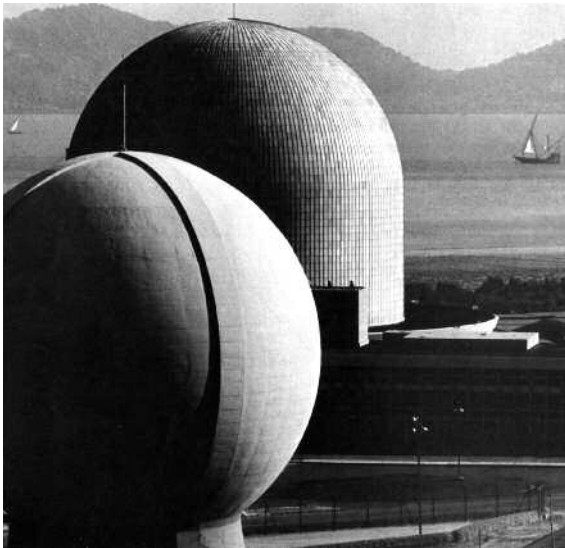
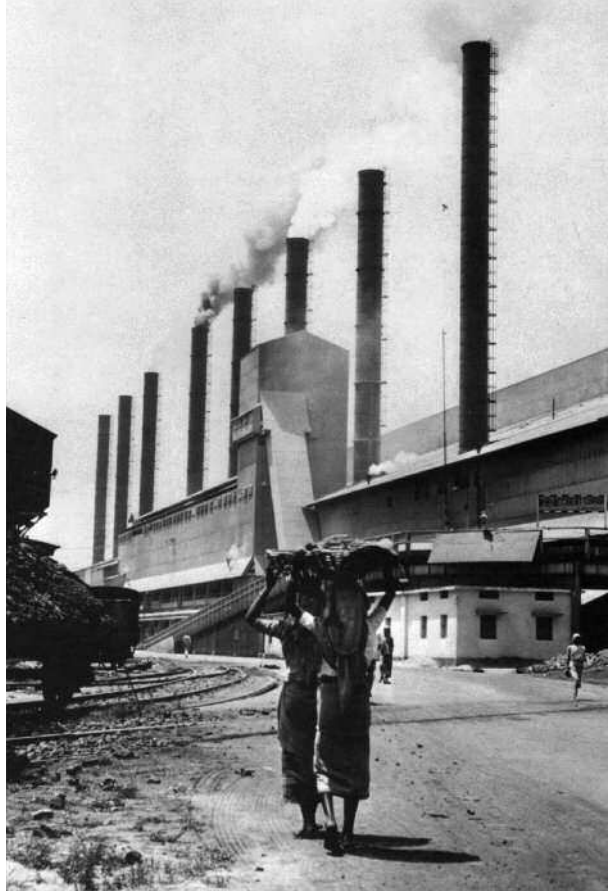
order it would pioneer. Jawaharlal Nehru's rationalist vision of a modernity defined by science and the ethics of secular humanism was the more overtly progressive of the two, although still relatively close to the mainstream of modern Western social and political thought. For Nehru the future lay in scientific application to the development of the new industries, technologies and associated infrastructure on which the independent nation would be built. Rationally planned new cities and the modernist buildings that would create them would not only be symbolic of modern India, but also the spatial and material framework in which this self-consciously 'new' and rapidly urbanizing modern society would find its true form and meaning.

Mohandas Gandhi's vision was seemingly much more pragmatic and conservative if not reactionary by comparison to Nehru's. But the modern India that Gandhi envisioned, in which the holistic coherence of its traditional village communities would be sustained against the insidious forces of industrialization and the city, was in many ways the more radical proposition. As the *Mahatma* (great soul) of the freedom struggle, as he came to be revered, Gandhi had an exceptional capacity to communicate effectively with the common people of India and transform the closeted nationalist project of an urbanized intellectual elite into a mass movement.

Metaphorical notions of 'building' were useful rhetorical devices for thinking through the compromises and contradictions of the freedom struggle, and for projecting the possible forms that the future Indian nation might take. Gandhi described modernizing India like a house in a storm: 'I do not want my house to be walled in on all sides and my windows to be stuffed,' he wrote. 'I want the cultures of all the lands to be blown about my house as freely as possible. But I refuse to be blown off my feet by any.'⁹ Brute and ignorant resistance to the wider world was futile, but the modern India he envisaged would emerge wiser and stronger from the encounter if it fortified the deeper core structures that gave coherence and value to its own ways of life. In Gandhi's view, 'the blood of the villages [was] the cement by which the edifice of the cities is built'.¹⁰ Industrialization and its corollary, urbanization, were precisely the yokes of economic and social servitude to the modern world system of Western domination that India's village-based civilization needed to throw off. Building on and reinforcing the core ideology of self-reliance and pride in indigenous cultural and economic production with which a previous generation of freedom fighters had launched the cause, the long final struggle for political independence was to be marked by Gandhi's extraordinarily original and successful strategic focus on non-violent non-cooperation with colonial authority.



'Temples of modern India'
as documented by Time-
Life photographers in the
1950s and '60s: the Bhakra
Nangal Dam, Punjab;
the Tata Steel Plant,
Jamshedpur; and the
CIRUS reactor in Trombay.



While ideological debates seeded by the original Gandhi–Nehru opposition have continued to temper subsequent politics and practice, it was Nehru’s more conventional vision of progress for modern India that took the lead after Independence, with the death of Gandhi shortly thereafter, in 1948. Nehru’s subsequent advocacy for the cleansing rationalism and aesthetic challenges of Chandigarh’s architecture must therefore be interpreted in the context of the ongoing debate about the virtues and functions of tradition, not only with the Gandhians, but also with the colonial-modern regime they had jointly expelled. Under colonial rule the historical building traditions and cultural differences of India had often been exploited both as a source of formal and technical ideas for building regionally appropriate architectures and as a politically useful form of symbolism to represent differences and thereby to ‘divide and rule’. By contrast, the abstract new forms and socialist ideals associated with high modernist architecture offered an alternative emphasis on the universality of basic human needs and aspirations.

The quest for new form, the creative struggles of the form-givers, and associated mythologies and realities of the actual means of production on the building site are intriguing threads of the story that followed. But the problem with subsequent assessments of the heroic late works of Le Corbusier in the crucible of the Indian sub-continent – and again with those of Louis Kahn a decade later, as will be seen – has been the tendency to emphasize the poetic inspiration and technological paradoxes of India as an ostensibly ‘timeless’ traditional society, at the expense of a more historically contextualized reading of the actual traditions in question.¹¹ Indeed, as the underlying question might be re-framed: ‘what was the modern India of the mid-twentieth century (not the imagined India) that these masters of high modernist architecture and their acolytes actually encountered?’

As we have now begun to discern, the architectural production of postcolonial India and its cultural politics were still intimately related to those of the preceding colonial era, and no less complex. Separated from any imagined India of pure traditional practices and values by centuries of colonial intercourse with Europe, the modernity of this new architecture was defined by its responses to the dwelling practices and building traditions of the immediate colonial-modern past. Indeed, the degree to which the new architecture of the 1950s was so successfully received and widely diffused throughout the country had possibly more to do with the peculiarly modern predisposition of a previously colonized society than with any spatial or symbolic emancipation that the new shapes and textures may have offered. Along with the institutional legacies of British India, independent India inherited the extensive body of institutional and

associated residential architecture in which these had been accommodated and supported. Together with the institutionalized modes of production through which such official buildings and the ubiquitous works and utilities of the more mundane public realm continued to be produced, this colonial-modern infrastructure was perhaps a pre-existing foundation of functionalist architecture and planning patterns on which postcolonial India would build.¹²

Furthering this point, one of the threads that the present account seeks to trace more explicitly in the weave of this history is the story of the particular social classes and their associated social spaces for which the new architecture of modern India was effectively, if not specifically designed. In large part these were the administrative and professional elite, their support staff and servants – the middling modernist strata of the ex-colonial society – to whom the banal rationalism of the planned environments of colonial ‘cantonments’ and ‘civil lines’ was normal. This urbane citizenry of the modern Indian state was predisposed to receive and embrace the alienating spatial logic of modernist architecture and planning because they already had a feel for the game.

Iconic ‘new towns’ like Chandigarh, and the heavy infrastructure of big dams, power plants and factories that would serve them, were what Nehru regarded as the new ‘temples’ of the politically and ideologically liberated modern India that he and his technocratic administration began to build in earnest in the 1950s.¹³ But like the fledgling nation itself, the building projects of the postcolonial state remained entangled with the spatial and cognitive legacies of the colonial past, even as they aspired to engage with their wider geopolitical present and the new dependencies that entailed.

From the early 1950s through the 1970s India became a test-bed for the competing theoretical models through which the new superpowers of the Cold War world vied to influence the social and economic development of the so-called third world of emerging postcolonial nations. Among India’s keenest observers were competing proponents of modernization theory on the one hand, and central economic planning on the other, the contrasting mantras of economic development in the mid-twentieth century that the new Indian state was attempting to apply simultaneously in its own characteristically hybrid fashion.

In the development of massive hydroelectric schemes, steel plants and their supporting townships, institutes of technology and scientific research, infrastructure redevelopment and slum-upgrading projects in major cities, Indian architects and planners continued to work closely with foreign consultants. Under the sponsorship of agencies such as the (American) Ford Foundation, the (British) Building Research Station and

the United Nations, other luminaries of the modernist design pantheon – including Charles Eames, Richard Neutra, Buckminster Fuller, Isamu Noguchi and Louis Kahn – found their way to India in the middle decades of the twentieth century. Apart from the interventions of some of these individuals, the wider role of these agencies in the exchange of design knowledge and models has been little examined, but is crucial to the richer and more critical understanding of the story of modern architecture and planning in the history of India that this book attempts to frame.

Integral to this story is also the regional political context and history in which it is nested. In the complex and often violent geopolitics of the Cold War that were played out across Asia between the 1950s and the 1980s, ideological commitment to democracy, and the inertial values and practices embodied in India's legacy of colonial-modern institutions, enabled the fledgling state to maintain a sometimes difficult middle course between the revolutionary peasant-based communism that swept its northern (Chinese) and eastern (Indochinese) hinterland, and the reactionary military dictatorships that soon consumed the other nascent democracies of India's smaller neighbouring states, Pakistan and Burma (Myanmar).

Under Nehru, modern India coveted the representational democratic system and associated judicial and bureaucratic institutions of a secular state that it had inherited from its former British rulers. But it was also a founding member of the organization of Non-Aligned States that strove brazenly to maintain an independent status in international affairs, opting out of unilateral, neo-colonial relations with either side of the capitalist/communist divide.

Challenged by often fractious regional, ethnic and political differences within its own extensive geographical territory – not least the democratically mandated rule of communist governments in two of its regional states – the postcolonial Indian polity continued for decades to be characterized by the strong centralizing tendencies and technocratic paternalism inherited from the former colonial administration of British India. But committed to a dramatically expanded scope and accelerated pace of development, by contrast to its colonial managers, the new nation also looked cautiously but openly to the Soviet Union and the socialist democracies of Europe as models for a centrally planned, top-down approach to social and, specifically, industrial modernization.¹⁴ Through its first two decades of independence India had therefore pursued a policy of integrated social and economic development predicated on the over-arching quasi-socialist institution of 'Five-Year Plans'. Overall, the economy remained a hybrid mix of public and private sector interests, but had become increasingly constrained towards the end of this initial planning era by insular policies of protectionism and self-sufficiency.

India's economic isolation was effectively reversed by a strategic shift to neo-liberal economic policies, beginning in the mid-1980s, which have enabled reintegration into the rapidly globalizing world economy in the years since. This most recent period has witnessed dynamic growth in specific new sectors of the economy such as information technology, and the IT-linked industry of 'offshore' professional service providers – increasingly monopolized worldwide by English-speaking Indian 'call centres' – with a comparable increase in the size and wealth of India's educated urban middle classes. But the benefits of these developments have not been universally shared because the socio-economic gap between the upwardly mobile new white-collar/consumer elite and the far greater numbers of relatively unskilled low-waged labour – on which India's internal and still largely informal economy continues to rely massively – has widened rather than closed. In the meantime, the government sector has substantially withdrawn, in keeping with neo-liberal principles, from its prior commitment to direct technocratic investment in social planning and development.

These socio-economic rifts and tensions in the 'New India' of the twenty-first century are registered graphically, in built environment terms, in the persistent but increasingly complex reality of parallel 'places' within the same rapidly expanding 'space' of the contemporary Indian city. Between the surviving urban villages and gentrifying colonial urban fabric, on one hand, and the contemporary gated housing, shopping malls and software parks of the new rich, on the other, lie not only the vast matrix of so-called informal settlements that define and support what has been described as the 'kinetic city' of essential urban services and industry, but the almost equally vast urban landscapes of now mouldering government-built housing and infrastructure in which the emerging middle classes of an earlier era once framed their modernist ideals and aspirations.¹⁵

To discern and describe these multiple facets of modern India's architecture and urbanism, and to draw together the many threads of their story – familiar, less familiar and, in some cases, previously untold – is the challenge of the critical narrative that follows. The seven chapters articulate a series of recurring oppositions, but with inevitable evolution as well as the story progresses. Chapters One and Two encompass the colonial-modern stages of our account, describing and illustrating a shift from a 'rationalizing' paradigm in the architectural thinking and building of the second half of the nineteenth century, to a more 'rhetorical' ideal about the purposes of architecture in the final decades of colonial rule. Architecture in the proto-modern India discussed in chapter One was addressed as 'building', that is, as a physical phenomenon of nature amenable to scientific

and technical improvement. To conquer the technical problems of building a modern India was the primary aim. By contrast, chapter Two explores how 'Architecture', as a cultural and aesthetic phenomenon, was the predominant focus of critical debate and practice in India in the early twentieth century, when imperial rhetoric reached its apex, countered by the increasingly sophisticated oppositional figures of Indian nationalism and its artistic avant-garde. The complex and contradictory dialectic of modernisms and atavisms explored in the public and private architectures of this era describe a struggle for political and cultural control over the future course of modern India, and the question of modernity itself.

Later chapters map the imprint and implications of this colonial tension between issues of 'becoming' and 'being' on the postcolonial architectural history of India. The 1950s under Nehru, the focus of chapter Three, marked a return to an overtly rationalizing, techno-scientific paradigm of modernity as 'progress'. But chapter Four articulates a shift already evident by the 1960s to a new rhetoric of modernity in which modern architecture was exploited by ambitious institution-building clients predominantly for its symbolic function in a struggle with the centralized nation-state for individual and emerging new regional stakes in the power and prestige of Indian modernity.

The pendulum swings back again in the 1970s, the focus of chapter Five, to more emphatically rational, systemic and universal concerns regarding the role of architecture in social development and modernity. By the close of the 1960s, however, the centralized-industrialization model of the Nehruvian era was under question. Although closely allied, on the global scene, with the critical turn of the late 1960s, the emerging ecologism of the 1970s and increasing exposure to political and technological alternatives through engagement with the outside world, a new focus within the architecture and planning disciplines of India on the basic human shelter issues of the country, as a context of postcolonial 'underdevelopment', also reflected a parallel political revival of Gandhi's ideal of *sarvodaya* (progress of all) – a mission that his assassination two decades earlier had interrupted abruptly. Beyond relatively uncritical previous accounts of alternative technology and housing activism in India in the 1970s, we attempt to interpret these developments with particular attention to the national context of the 'party-less democracy' that briefly defined the transitional political scene of the later 1970s, and its impact on the ensuing decentralization and regional resolution of what nevertheless was still a unified concern for the social development of the entire nation.

The distinct cultural turn in architecture that coincided with the sea change in political and economic perspectives in India between the 1980s

and the early 1990s is explored in chapter Six. In our reading, this rhetorical return to regionalism and historicism, and their various romantic and critical applications, is interpreted as a renewed struggle to redefine and affirm a distinctive architectural identity for modern India that arose primarily from the Indian socio-political context of the late 1970s. We offer thereby a more situated historical explanation of a shift that has previously been inadequately scrutinized if not simply subsumed in a broader critique as a local reflection of contemporary 'postmodern' debates and propositions in America and Europe. The new-found rhetoric of established modernist practitioners renouncing both the 'duck' and the 'decorated shed' to find solace in *ragas* and *mandalas* is seen as a reflection of the penchant for contemporary mythologies that also coloured the political rhetoric of the rising Hindu right during the 1980s in the wake of the waning Nehru-Gandhi dynasty and the original postcolonial project of a secular modern state.

While the new generation of architectural leaders and students that emerged in the late 1980s and early 1990s, invigorated by the burgeoning of new architectural schools and publications, anticipated a decisive battle for indigenous roots and inspiration over the rote clichés of universal modernism, the game was suddenly changing once again as the final gates of latent Nehruvian fiscal policy were opened to the forces of globalization. In the seventh and final chapter we attempt a brief and necessarily more conjectural, rather than historical, assessment of the range of new trends and developments in the Indian building and design worlds since the advent of neo-liberal market economics in the 1990s, and the ensuing contest between cosmopolitan and neo-conservative tendencies in the globalized cultural politics of India today. In a contemporary cultural landscape that simultaneously accommodates all states – pre-, post- and modern – of a society that continues to transform, headlong on its journey of becoming, recent architectural developments in India are interpreted as some of the more telling evidence of what has been posited as the potential 'non-modern' world of the future.¹⁶ Here both Reason and Rhetoric are seen to be thriving in equal measure.



Rationalization: The Call to Order, 1855–1900

By the middle of the nineteenth century modernity was already pervasive in both the political and everyday life of India under British colonial rule. Indeed, for more than three and half centuries since its first contact with the Portuguese in 1498, the subcontinent had been almost continuously engaged in increasingly complex economic and political relationships with the expanding imperial powers of modern Europe. Outflanking their rivals through the exploits of the East India Company, by the mid-eighteenth century the British had opportunistically appropriated the revenue-collecting privileges and associated administrative system of the waning Mughal Empire, becoming the effective rulers of the greater part of the Indian subcontinent. Armed with the rationalist convictions and prejudices of the British Enlightenment, however, colonial policy makers in the service of the ‘Company’ had not been content to be mere tax collectors and had begun, as early as the 1790s, to implement radical reforms to fundamental structures of Indian society and economy that would have profound and lasting consequences. Two reforms in particular – the rationalization of the traditional land tenure and taxation systems along radical new lines more familiar to European notions of landed property, and the later adoption of English as the official language of government and higher education¹ – had engineered the emergence of self-consciously modern new social classes. Striving for further social and political progress, however, it was this new colonial-modern elite of landlords and urban professionals that would also rise in due course to lead the struggle for freedom from colonial rule with the goal of building a modern nation-state.

By comparison to the social upheavals in the countryside and the radical new developments in urban culture, modernity in architecture was later in coming and relatively unobtrusive. To later critical commentators, however, the watershed in the architecture and building world of India that was crossed in the middle decades of the nineteenth century was unequivocal. Indeed, in the bitter assessment of Ernest Havell, principal of the Government College of Art and Craft in Calcutta (1896–1906), modernization had almost completely undermined the tradition

Railway workers’
quarters, Ajmir,
Rajputana, c. 1900,
detail of vaulted
concrete construction.

of Indian architecture. The 'departmentalism' of the colonial-modern state had introduced 'a system of building, demoralizing alike to the architect and the craftsman, which [had] been so injurious to the true interests of the British Raj as it [had] been fatal to the development of art and craft in India'.²

Writing early in the twentieth century as a passionate advocate for the ideals of the Arts and Crafts movement in late colonial India, Havell directed his indictment not so much at the changes in architectural form and function that the British had introduced, but at the revolution in the whole mode of production in the Indian building world that had been imposed over the preceding half-century of technocratic colonial administration by the adoption of what he characterized as the 'paper'-based design methods of modern architects and engineers. While the modern profession of architecture had yet to be established on an autonomous and organized basis in India, British-trained military and civil engineers had subsumed almost all the official building activity of the colonial government under their professional ambit, effectively denying public patronage not only to their professional rivals, but also to the traditional master builders and craftsmen of India as well. The singular agent of this calamity, in Havell's view, was the engineer-dominated system of the Public Works Department.

The Public Works Department, or PWD, as it is still commonly referred to in India today, was formally established in 1855 as the technical development and logistics arm of the Government of India and soon became one of the most familiar and instrumental tools of the British colonial system in India. The actual extent and impact, for better or for worse, of the technical development undertaken by the colonial state is a topic of continuing debate among historians and critics of colonialism.³ But the agency of the PWD in its various branches – buildings and roads, irrigation, railways and communications, as well as military works – was ubiquitous and, in many instances, profound in its power to transform the fabric and spatial order of the growing towns and cities of the Indian subcontinent and the cultural landscapes that they comprised.

Together with India's earliest railway developments and modern postal service, the creation of a centralized public works department was the initiative of Governor-General Dalhousie (1848–56), an aggressive modernizer who had previously overseen Britain's railway construction boom of the 1840s as the president of the Board of Trade. A powerful and efficient agency for planning and construction was urgently required, he argued, to address the maturing colonial regime's need to consolidate its physical presence and control over a large and fragmented territory. In Dalhousie's strident utilitarian vision, the new department

would 'exercise the universal control confided to it over public works in India with the weight of scientific knowledge, with authority and system'.⁴ In no uncertain terms this mandate marked an unprecedented commitment to the building of modern infrastructure in India, as well as the adoption of a consciously rational approach to the design and production of the built environment, from which it would soon become too difficult to turn back. Emphatically rational in its problem-solving purpose, though destined to become increasingly dogmatic in the 'rationalism' of its methods and routine practices, the installation of the PWD system was one of the more telling indicators of the consolidation of the formal colonial state that the British were finally to declare three years later with the restructuring of their Indian empire under direct Crown rule.

The long-term implications of these policy changes, and the physical and methodological developments that ensued, were enormous. In due course the departmental system would be responsible for the conception and construction of almost all buildings associated with colonial authority, encompassing everything from domestic plumbing to urban and regional planning, and for laying down the patterns of building and thinking about architecture in modern India by which future developments would continue to be measured, directly or indirectly, well into the postcolonial era.

While the British departmental engineers and their Indian subordinates were among the most prodigious builders in the early years of this new imperial regime – what came to be known as the 'British Raj' – the independent patronage of public works and buildings by India's nominally independent princely states and the emerging new urban elites was an important counterpoint to the agency of the colonial government. Together these competing and contrasting contributions to the construction of 'modern' buildings and settlements deemed suitable for India ramified the patterns and paradoxes inherent in the colonial-modern cultural landscape that emerged in its canonical form in British India in the second half of the nineteenth century. In this, its heyday as the leading industrial power of the world, Britain's fortunes were increasingly to depend on India, paradoxically, as the keystone of a colonial empire in which modernization was necessary yet necessarily limited at the same time.

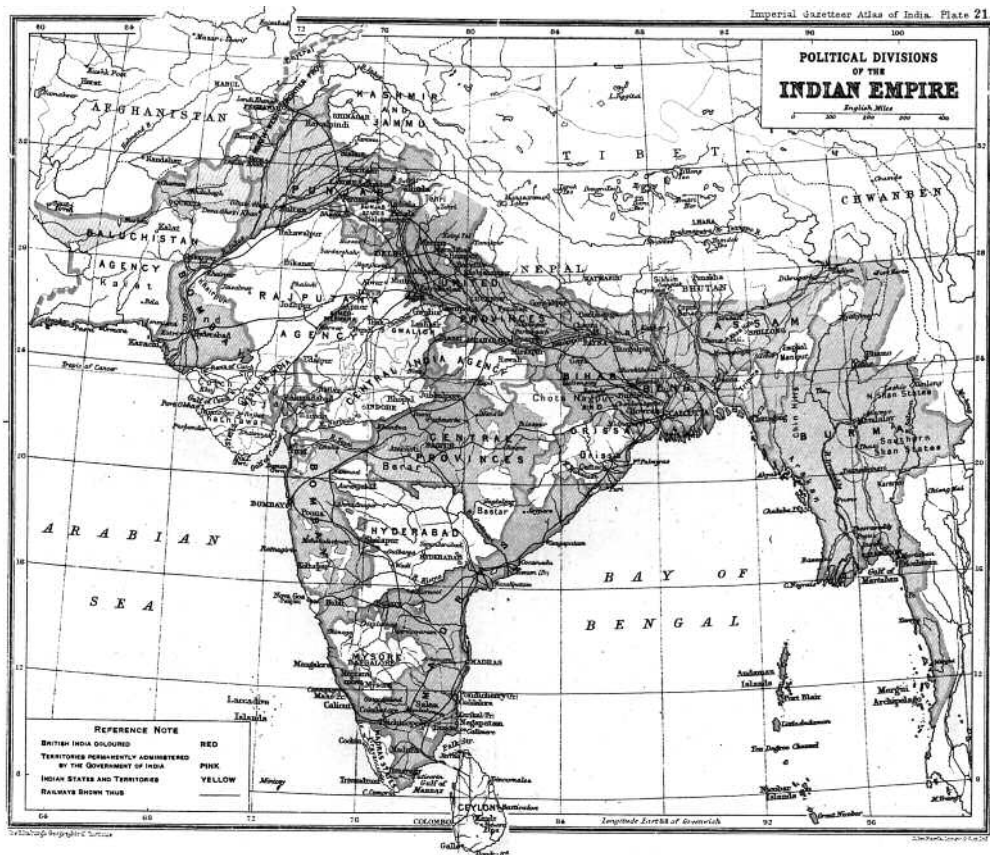
Technical Development and the Colonial-Modern Technocracy

The virtues of building a modern, technically developed India were never straightforward under the conflicted interests of colonialism. As the British

Indian technocracy assumed its definitive form in the middle decades of the nineteenth century, the commitment to rationalize and develop the physical infrastructure of India was motivated by both political and practical concerns.

By this time the East India Company's original trading monopoly, for and through which the British Indian Empire had been assembled, had long been revoked. In its stead, however, the 'Company' had come to be the effective administrator of a geographically, politically and ethnically complex patchwork of territory enveloping most of the Indian sub-continent. This was the wellspring of a huge taxation revenue that the British now reaped directly, as had the Mughals before them. As Britain's domestic industrial economy was reaching its zenith, however, India was also becoming invaluable as a protected source of cheap raw materials such as cotton and indigo for Britain's textile mills, and as a vast captive market of potentially hundreds of millions of consumers that could be

Political divisions of the British Indian Empire at the turn of the 20th century.



targeted, as economic rationalists conceived, for the export of Britain's surplus manufactures. The key to sustaining this inequitable economic relationship would be a degree of limited, selective development that could secure it strategically and support it technically, without raising expectations of broader social and cultural changes that might destabilize the profitable status quo.⁵

Yet, even after almost a century of political dominance in the region, Britain's managerial control of this quasi-imperial undertaking remained diffuse and irregular as a result of the incremental and opportunistic manner in which it had been cobbled together. The previous century had been a period of political and cultural decentralization in the Indian subcontinent. As the waning Mughal Empire, with its capital in Delhi far to the north, had gradually lost its military and political grip over the rest of the subcontinent, other regionally based and culturally distinct centres of power had emerged.⁶ The British had come to dominate not through any outright military superiority but by infiltrating and assimilating their own administrative practices within the existing power structures of this diverse and decentralized political landscape. As a result, Company rule was characterized by varying policies and practices that had taken root in different regions where relative isolation and the exigencies of local conditions and precedent had superseded central authority. It had not, to that point, been inspired by a collectively compelling ideal of government on an imperial scale, nor had the responsibilities entailed been fully accepted.

Not surprisingly, the built evidence of the political and economic dominance of modern Britain in India remained eclectic and relatively insubstantial by the mid-nineteenth century outside the crucial colonial port cities of Calcutta (Kolkata), Madras (Chennai) and Bombay (Mumbai), and the constellation of military settlements known in British India as 'cantonments' that were maintained inland by the Company's army. The establishment of the new Public Works Department in 1855, with its mandate for extensive new construction, was thus a particularly conspicuous and substantive first step on the path to the more centralized and systematically rational approach to the governance of India as an imperial whole that would characterize the next few decades. In addition to irrigation canals, railways and other works of 'public improvement', the PWD would be responsible for constructing and maintaining the panoply of minor public buildings of standardized design which would become part of the everyday experience of ordinary Indians in almost every walk of life.

While impeding progress temporarily, the outbreak of the Indian Rebellion of 1857–8 – the 'Great Mutiny' as it was recorded by British

imperial historians – just two years after the establishment of the PWD was a resounding shock and call to order for the colonial regime as a whole that gave further political momentum to this constructive technical initiative, and clarified its strategic objectives.

The historical facts and circumstances in which an initially isolated mutiny in an Indian regiment of the Company's Bengal Army, in the summer of 1857, was transformed into a widespread popular rebellion across much of northern India are the focus of a major body of historical enquiry and debate into which we cannot afford to digress. Critical for the present narrative, however, was how this pivotal conflict foregrounded the question of modernity and its consequences in the colonial imagination, and the profound impact that this new consciousness would have on subsequent policies and practices. While colonial officials and apologists of empire attempted to delimit the wider implications of the violence by emphasizing its origins in issues of technology transfer and culture change within a modernizing army, subsequent nationalist critiques offered an equally reductive and polarized view of the mass, emancipating character of the struggle, as the 'First War of Indian Independence'. The reality was more ambiguous, as the subsequent repair and reconstruction work of the PWD emphasized. Official buildings and dwellings of colonial administrators had been targets of attacks in localities where the modernizing land tenure reforms of the British had been particularly disruptive of the previous social order, and hence ill received.⁷ Other regions, however, had remained loyal, for example, where the recent irrigation works of government engineers had liberated the peasant cultivators from endemic drought.⁸ Recognizing this pattern of revolt between the military mutiny and its various repercussions among the different factions, classes and regional groupings of the civilian population of northern India, later more dispassionate historical assessments have generally concurred in a view of the rebellion as a last-ditch defence of the old order by those who had most to lose in the new.⁹

British control had been restored by the end of 1858, but only after a long and costly campaign in which much blood was shed by both sides. The British Indian Empire emerged from this conflagration physically whole yet morally scarred, having lost the naive self-assurance with which it had been so casually assembled. Chastened also was the ardent idealism with which earlier generations of reformers had sought to 'improve' India according to their own imported models of modern civilization.

Under the irregular and indirect administration of the Company Raj, both Liberal and Conservative factions of modern British political ideology had exploited the quasi-despotic opportunities of colonial rule to experiment freely in India as policy makers and social engineers. Now

under the direct control of the British Government, with the 'Queen-Empress' Victoria as India's symbolic head of state, policy would be subject to the checks and balances of much closer political scrutiny. While the stratagems of imperialism would be debated with increasing passion as well as ethical concern in the British Parliament, the outcome of the post-rebellion reforms in the Government of India was a cool new pragmatism in approach that would tow a consciously rational middle course between the more radical and reactionary excesses of the past. Under the sway of English Utilitarianism, among the various rival political philosophies that had vied for dominance in the Company era, a tyranny of law, order and technical expertise was now to prevail in which public works rather than public morals or Western values were to be the proof of progress.¹⁰ Progress of a concrete and practical sort could be pursued selectively with a new degree of authority and system, but the deeply conservative convictions of most experience-hardened veterans of colonial service would equally be accommodated in an authoritarian machine of government that retained the tools of power firmly in the hands of an enlightened few, to rule the many 'for their own good'.¹¹

The centralizing and standardizing rationale of this revamped technocracy would, however, be tempered by caution raised by the recent rebellion not to unsettle the existing social order unnecessarily. From now on, the stability vested in traditional forms and practices would be given much greater deference and respect. Traditional Indian society and culture was to be carefully defined and preserved as such under the new Raj so that the government would be able to know it and thereby control it more effectively as it pursued its imperial agenda.¹² The modern infrastructure of the newly rationalized colonial state would serve to contain and support that existing order, if not bypass it altogether. But more culturally sensitive questions of architectural style and symbolism would largely be avoided, at least for the time being.

For James Fergusson, the prolific Victorian architectural historian and theorist and self-educated authority on India, the very idea of a 'modern Indian architecture' was a problem in itself. In collaboration with the newly established Archaeological Survey of India – another one of the so-called scientific branches of the colonial government, set up relatively soon after the PWD, in 1862 – Fergusson was then intensely engaged in documenting the architecture of ancient India and constructing the canonical history and theoretical framework through which this was to be interpreted well into the postcolonial era. If British architects could learn anything from his herculean scholarship, he argued, it would be to recognize the nature of what was a 'true' architecture in his estimation, uncompromised by cross-cultural miscegenation or irrational historicist

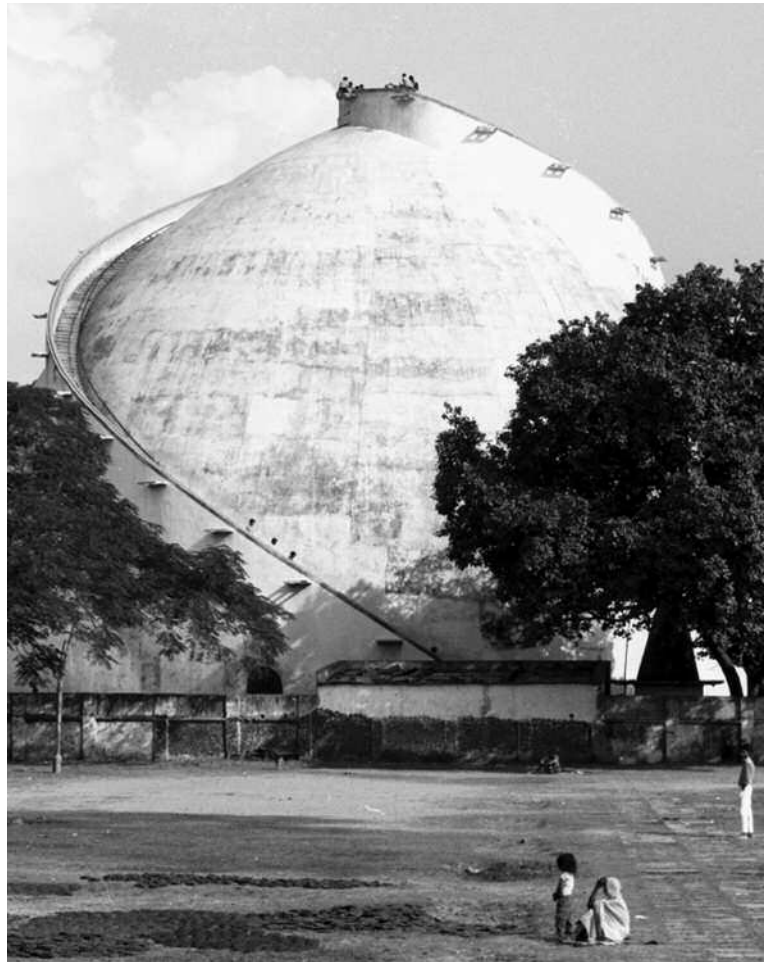
mimicry. These were the sins of the ‘modern styles’ of post-Renaissance European architecture in Fergusson’s view. While the colonial expansion of Europe had enabled such modern styles to be dabbled with in India, however unpromising the prospects for doing this well in the amateurish circumstances that prevailed, the notion of a ‘modern Indian architecture’ was perverse. Indian architecture *was* ‘Indian’ (or at least had been), just as a truly rational English architecture might be ‘English’ again one day after the fashion and foibles of modern mimicry had passed.¹³

Fergusson’s arguments and prejudices would resonate deeply in many later critiques and deliberations on questions of architecture and modern India, but they had little bearing yet on contemporary building practices in British India. While the tricky counterpoint between the appeasing and improving compulsions of development in the aftermath of the Indian Rebellion remained in the forefront of colonial policy makers’ concerns, the major new works and building programme in which the government was already deeply invested by the mid-1860s would remain firmly in the grip and prosaic purview of the PWD engineers. ‘To keep peace, and to push on the public works’ was the overarching strategy, as the Secretary of State for India, Viscount Cranbourne, encapsulated it succinctly in his budget speech of 1866.¹⁴ The means to peace were internal security and social stability. These could be substantially engineered, it was felt, through judicious physical planning. A rationalized colonial social space, ameliorated with strategic transport and communications, would embody law and order but could also enforce them when necessary. At the same time peace and stability were necessary conditions for the major public works to be undertaken and, as Cranbourne promised, the basis on which the colonizers might further the technical development of India, through scientific cultivation and industry, to ‘draw forth the enormous elements of prosperity that lie in the richness of her soil and the teeming millions of her population’. The assurance the regime placed in the pragmatic rationality of its engineers and their empire-building endeavours was left in no doubt by the conventional architectural metaphor that Cranbourne chose to drive home his policy. The fragile edifice of the British Indian Empire was being placed ‘upon foundations that cannot be shaken’.¹⁵

Rationalizing Colonial Infrastructure and Space

The military engineers who dominated the executive ranks of the Public Works Department clearly appreciated the strategic aims of the imperial politicians. Within the department, however, this metaphorical project of empire building was translated into a programme of concrete action

that would be highly practical in intent if not entirely prosaic in character. Tactically, this would be pursued in the short term by the repair and completion of the modern infrastructure of roads, railways and telegraph lines that would enable efficient and consistent government and the rapid deployment of the army wherever required to maintain internal security and the integrity of India's frontiers. The other crucial tactical objective of the department on which it was to focus in the longer term was to rationalize the design and cost of a well-tempered built environment functionally appropriate for the everyday operations of the civil and military services. More elaborate public buildings would take a back seat in the order of priorities.



John Garstin,
experimental granary,
Patna, 1786.

The very substantial reconstruction that the PWD was compelled to undertake in the wake of the Indian Rebellion was to provide an opportunity for some important rethinking of the principles on which the architecture and planning of British India had evolved. It would not be the first time that engineers would attempt to rationalize the design of the most basic Anglo-Indian building types, namely the bungalow and the barrack. But the unprecedented scale on which reconstruction and projected new development was contemplated in the short term caused them to perceive the issue of rationalization from a much more comprehensive perspective. The importance of general economy in design and building methods was accentuated both by the temporary deficit in public funds as a result of the great expense of the recent conflict and by the exceptional volume of new construction and repairs anticipated. Meanwhile, the perennial quest for improved healthiness and comfort in the accommodation of Europeans, who generally regarded the Indian climate as oppressive, encouraged further innovations in the technical and architectural conception of the generic Anglo-Indian building envelope. Ultimately, the need to keep the little community of European colonial administrators and soldiers in India both secure and physically fit to rule would be regarded as a problem of environmental design and planning at the scale of settlements and entire regions – the rationalization of the colonized space of the Indian subcontinent as a whole.

The sheer scope of technical development and building undertaken by the Public Works Department in the second half of the nineteenth century was extraordinary, encompassing almost everything from major infrastructure to the simplest of dwellings for menial government servants.

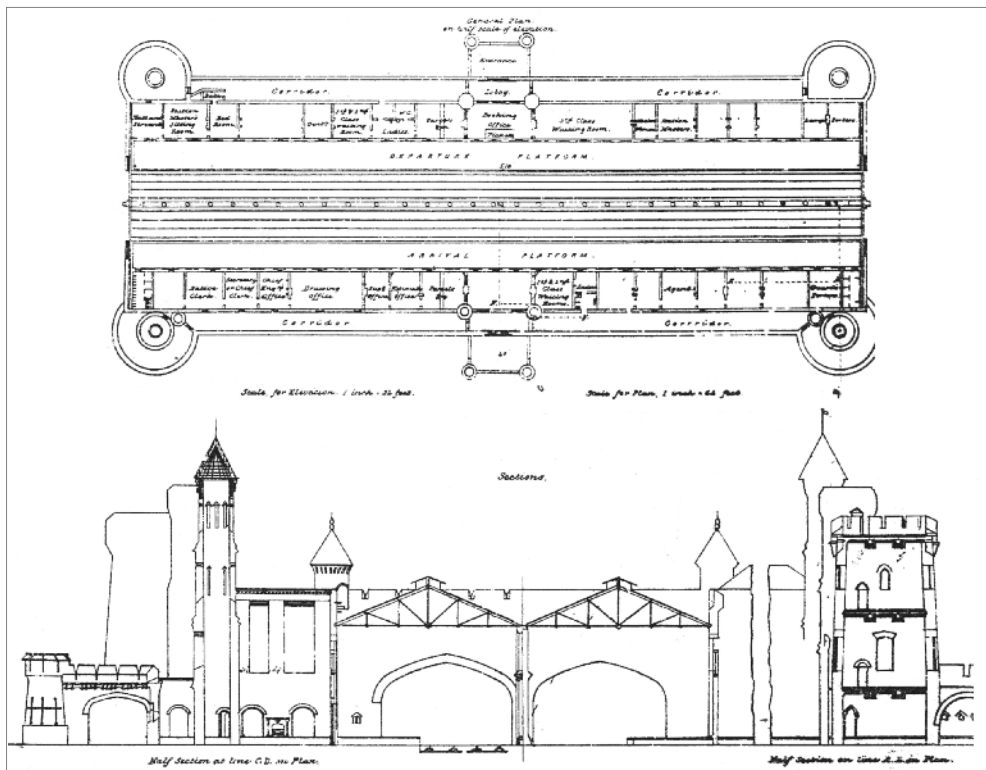
The endemic threat of famine in India had ostensibly been confronted by modern engineering as early as 1786 when an experimental prototype for large vaulted granaries was built by the East India Company at Patna, on the banks of the Ganges. For its day, the monumental utilitarian structure, with its 120-foot radius and arrestingly pure form, excited professional admiration within the colonial engineering fraternity comparable to the formal and functional inspiration that Le Corbusier and other twentieth-century modernist architects would later ascribe to the great grain elevators of the American Midwest. Designed by the Bengal Army engineer John Garstin, the monumental granary, referred to locally as the Gola, was constructed using an innovative vaulting technique of hollow pottery construction with which local masons were familiar. As a one-off experiment, however, the project was evidently more focused on the appropriation and practical testing of indigenous building knowledge than any systemic strategic solution to the storage of surplus grain.¹⁶

Solani Aqueduct,
Ganges Canal,
elevation and
foundation
engineering details.

Solani Aqueduct,
Ganges Canal,
Roorkee, Uttar
Pradesh, 1854.

But the appropriation of further practical knowledge and technique in the realm of Indian hydraulic engineering would lead eventually to far more comprehensive and consequential works. It was the benefits accrued from the construction of increasingly extensive and innovative new irrigation schemes, beginning in the 1830s, that had largely made the case to colonial policy makers for the potential scope and benefits of a broader public works agenda. Major schemes such as the Ganges Canal, completed in 1854, engineered whole new landscapes comprising entire regions of newly arable farmland. At 840 kilometres in length, it was the largest irrigation scheme of its day in the world. Even more impressive were the monumental head-works of the canal that diverted close to the entire volume of the Ganges at its lowest level where the river emerged from the Himalayan foothills at Hardwar. The canal then flowed over almost 5 kilometres of earthen embankments before being carried across the Solani River on a massive 338-metre-long masonry aqueduct.¹⁷ This project had become such a significant focus of resources and expertise that an unofficial school of engineering had emerged at

William Brunton,
Lahore Railway
Station, 1858, plan
and section.



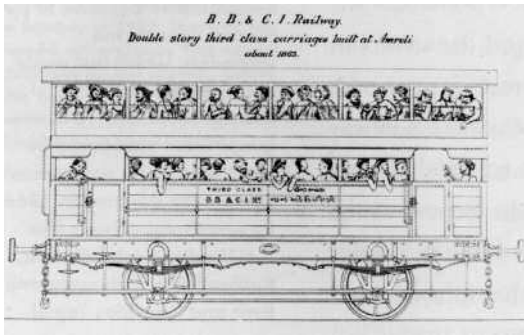
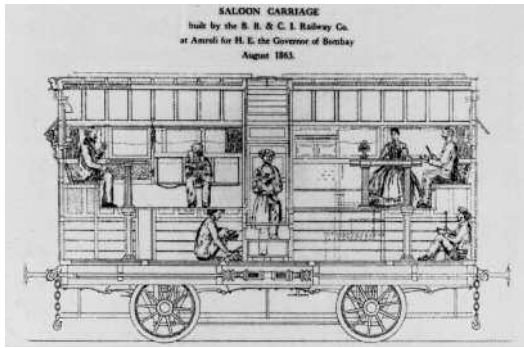
Roorkee, adjacent to the Solani works, by the mid-1840s. Formally established in 1848, the Thomason College of Engineering was among the very first civil engineering colleges anywhere in Britain or its empire. It would soon become the premier academic training ground, among a constellation of similar colleges established subsequently in other parts of British India, for the 'native' assistant engineers and subordinate technical staff of draughtsmen and 'overseers' who carried out the great majority of the routine design and construction work of the PWD.¹⁸

Other irrigation schemes only slightly less heroic than the Ganges Canal were constructed and extended in this era in the great river deltas of the south, and even more monumental schemes were to be undertaken in the Punjab and Indus basin in the early twentieth century. But it was the development of extensive networks of new roads, telegraph lines and, above all, railways that would most substantially transfigure the economic and cultural geography of the subcontinent from the 1860s.

Railway development had begun somewhat tentatively in India, in 1850, as a public-private joint venture. While British investors provided the capital in return for a guaranteed 5 per cent annual return, the Government of India took an equal share in any profits and retained control over all planning and operations through what became the Railway Branch of the PWD after the establishment of the department in 1855. Under these essentially risk-free terms of investment construction accelerated markedly after the suppression of the rebellion in 1858, and by the late 1870s all the trunk lines of what was already becoming one of the largest railway networks in the world were complete.¹⁹

Initial scepticism over the value and technical feasibility of railway development in India had soon been dispelled from the government's point of view when partially completed sections of the new railway proved to be instrumental for the rapid deployment of troops and evacuation of European civilians during the events of 1857-8. The fortress-like Lahore Railway Station, designed in 1858 by the civil engineer William Brunton, made these security concerns an explicit functional and formal conceit. Brunton was the chief engineer of the Punjab section of the Sind, Punjab and Delhi Railway (SP&DR), the first of the so-called 'state railways' to be built directly under the superintendence of the PWD in the post-rebellion era. When the railway reached Lahore the Punjab was still very much the wild 'frontier' of British India. The new railway was therefore regarded as a strategic lifeline for the province, and station buildings were designed to serve also as fortified strongpoints for the refuge of European civilians in times of danger.²⁰

But the relatively tiny number of 'Europeans' in colonial India were not the only beneficiaries of the new railway system. To the surprise and



First- and third-class carriages of the Bombay, Baroda & Central India Railway, 1863.

passengers. These facilities typically included an array of spaces designated for waiting, 'retiring', bathing and dining, and were frequently further sub-classified according to gender and dietary practices. The larger Indian railway stations were thereby to become some of the most elaborate

profit of their private investors, the railways proved to be a far greater success with ordinary Indians than had ever been imagined. This entailed the design and construction of thousands of everyday railway stations and related buildings to serve the exponentially growing tide of goods and passenger traffic, and the emergence in effect of a new form of public space in modern India. Along with the unprecedented speed and social-leveilling fluidity of train travel, the generic typology of modern railway stations articulated and, at the same time, confounded the concerns of both colonizers and colonized with social, gender and racial segregation.²¹

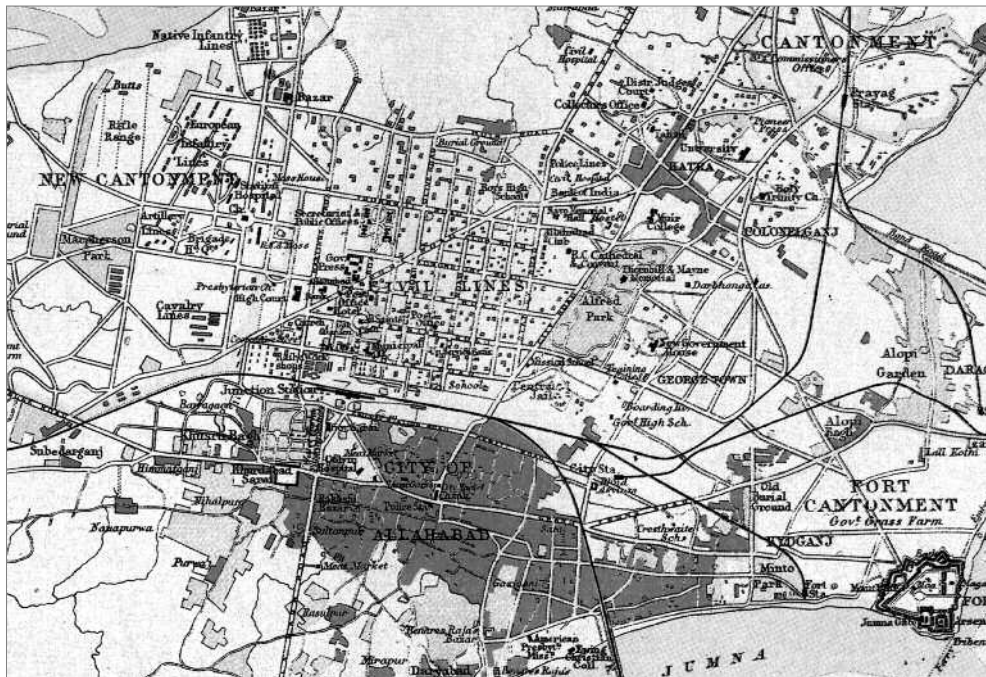
One of the implications of exploiting this new 'native' market for railway travel was the need to provide and incorporate extensive additional facilities in the design of railway buildings and carriages designated exclusively for this 'third class' of



Public waiting areas in an Indian railway station typical of the late 19th and early 20th centuries.

Colonial Allahabad,
planned in 1858
by Major Richard
Strachey, map c. 1931.

Major Richard Strachey's plan of 1858 for the new capital of the United Provinces of British India at Allahabad was a case in point. Then serving as the head of the Railway Branch of the PWD, Strachey was soon to be promoted to the top post as chief engineer of the overall department (1861–5). His rail-gear'd rationalization and reinforcement of the typical pattern of colonial urban development in northern India was particularly revealing.²³ Choosing a route for the new railway tracks that neatly circumscribed the perimeter of the old walled city of Allahabad, Strachey created a new moat of iron rails that simultaneously cleaved a clear and



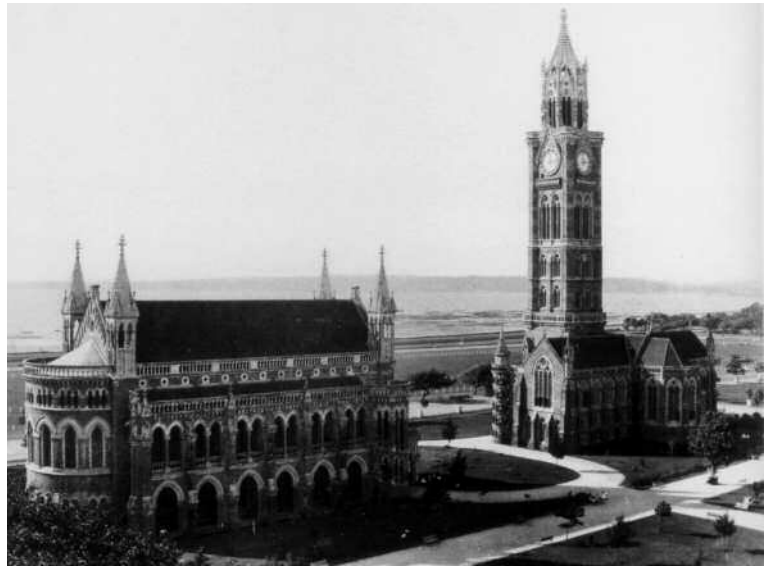
convenient spatial division between indigenous/traditional and European/modern settlement areas. To the north of this line the colonial administrators and, in due course, the modernized local elite would reside in an expansive but orderly suburb – the so-called civil lines – protected on its exposed flanks to the west and north by the still more expansive cantonments in which the army was based. Meanwhile, on the other side of the line, the recently rebellious ‘native’ populace was safely confined within the walls of the congested old ‘city’. The railway station became the primary point of intersection and control between the ‘right’ side and the ‘wrong’ side of the tracks, in this racially and culturally segregated space of colonial-modern urban life.²⁴

Roads and sewers were similar double-edged swords of technical progress. In Lahore, and the rebellion hotspots of Delhi, Lucknow and Allahabad, military considerations elided conveniently with such prosaic works of public improvement. The rationalization and upgrading of municipal infrastructure with piped water supplies and sewers justified the surgical excision of arterial avenues and public spaces on the grounds of safeguarding public health in the congested inner cities. But these so-called relief roads and sanitary cordons would also facilitate the swift movement of soldiers, horses and guns to flashpoints of dissent. As cities grew and became more complex and cosmopolitan organisms, the conventional strategy of spatial segregation and distancing as the first line of defence against potential threats to public health and civil order would henceforth be supplemented by more of such invasive provisions for tactical response and intervention.²⁵

Such technocratic operations on the larger cities of colonial-modern India resonated with contemporary urban redevelopment in Europe. Indeed, the draconian urban surgery of the PWD engineers was ‘comparable to the . . . sweeping operations of Haussmann in Paris’, as the maverick Scottish planner Patrick Geddes observed unapprovingly in his later appeal to the colonial authorities for a more conservative and sympathetic treatment of the distinctive urban fabric of Indian cities. Geddes decried such brutal operations, anticipating still later critiques of mid-twentieth-century modernist urbanism with his provocative choice of words. Predicated on what he regarded as the outmoded sanitary doctrines of the mid-nineteenth century, the PWD engineers’ rationalistic notion of modern urban design was ‘a matter of doing *puja* [prayer] to the straight lines of the drawing board and set squares’.²⁶

In rare instances where architects were involved, such urban transformations tended to be more aesthetically considered in design, but no less draconian in scope and impact. The redevelopment of the fort precinct in the fast-growing port of Bombay in the 1860s was an important

George Gilbert
Scott, Library and
Convocation Hall,
University of Bombay,
1878.



example. With the collapse of U.S. cotton exports during the American Civil War (1861–5), Bombay had suddenly become the primary port of supply for Britain's textile mills and was rapidly being transformed into a large and wealthy city. An ambitious scheme to remove the redundant fortifications of the original port area was central to the strategic plan for the development of the burgeoning metropolis prepared by James Trubshawe, a consulting architect who had been independently recruited for the project from England under the initiative of the ambitious governor of Bombay, Sir Henry Bartle Frere. Similar in strategy to Vienna's contemporary Ringstrasse development (begun in 1857), Trubshawe's Ramparts Removal scheme entailed the complete demolition, in 1864, of the seventeenth-century Portuguese-built fortifications of the original colonial outpost. The once barren parade grounds and field of fire that surrounded the old fort were transfigured into a broad sward of public parks and cricket grounds that would be bordered over the following two decades by a phalanx of monumental public buildings and cultural institutions. These grand new edifices and public spaces dramatically boosted the civic splendour of Bombay from the sleepy outpost of the early colonial era to its rapidly emerging status as the premier metropolis of modern India.²⁷

Bombay's new metropolitan status would be confirmed and further reinforced, at least in economic terms, with the opening of the Suez Canal in 1869, which made it the gateway to India on the shortest sea

route from Europe. But Bombay's longer established siblings, Madras and Calcutta, were equally intent on building their power and prestige as modern cities. Taking the lead, Madras had actually removed its own ramparts five years earlier (1859), and both Bombay and Calcutta were later to embark on further Haussmann-esque schemes of technocratic and formalistic urban surgery on a grand scale. Moreover, all three cities were to experiment in the 1860s and '70s with the services of in-house consulting architects. Such striving for metropolitan status, however, was not just a case of sibling rivalry. The dynamics of modernization in the urban building worlds of colonial India were regionally distinct and often dialogically complex. In Madras, for instance, such metropolitan representations of Indo-British modernity competed as much with the manifest progress in the modernizing independent princely states of South India such as Mysore, Hyderabad and Travancore as they did with the more distant rival metropolises of Calcutta and Bombay.²⁸ Development in Bombay was similarly emulated and rivalled to some extent by the progressive princely state of Baroda and the ambitious Gujarati industrialists of Ahmedabad, among other regional centres of progress under the colonial administrative aegis of the Government of Bombay. But with its booming economy, and the collaboration of its own indigenous business elite, Bombay was also motivated and financially able to acquire progressive architectural prestige through its relatively direct access to the metropolitan market of professional services back in Britain.²⁹ While the original consulting architect, James Trubshawe, designed a handful of the new public buildings anticipated in his re-development plan, including the medieval Italianate-style Post Office building, other important elements of the ensemble, such as the library and Senate House of the University of Bombay designed by George Gilbert Scott, were commissioned from some of the most eminent London architects of the day.³⁰ Nevertheless, the large majority of these buildings were still jealously retained as the proper architectural undertakings of the multitalented military engineers who dominated the PWD in Bombay as elsewhere.

The Buildings of the Modern Colonial State

The audacious urbanism and engineering feats of the PWD in its various technical branches tended to overshadow the output of the departmental engineers and their Indian subordinates as builders, but it was in this architectural vein that they were actually the most prodigious. The PWD designed and constructed buildings for every facet of the colonial administration and its wider realm of public responsibilities and services.



Typical Anglo-Indian bungalow, Benares, c. 1860s.

These included all military works and buildings; government and public buildings of all scales and degrees of architectural pretension, from High Court buildings to lowly police stations and jails; hospitals and lunatic asylums; public museums and libraries; educational and research institutions; and all mundane public service buildings such as post and telegraph offices and, as already noted, the stations and related buildings of the state railway system. Finally, and perhaps most significantly on account of sheer quantity and ubiquity, the PWD built a wide array of residential buildings to house the ever-growing ranks of meticulously graded and categorized government servants, both European and Indian.

By the mid-1860s the norms and forms of these modern, PWD-designed buildings, and the characteristic settlement patterns in which they were typically laid out, were already well established. As one contemporary commentator queried, critically, 'who does not know the sense of desolation that comes over one at first sight of one of our Indian cantonments[?]'. All too familiar were 'the straight and dusty roads, the rows of glaring white rectangular barracks . . . the houses, evidently built after the model of the barracks . . . [with their] high bare white-washed walls . . . and square holes cut in the walls doing duty as doors and windows'.³¹ Relative to the exquisitely carved architectures of the Muslim and Hindu empires that the British had superseded, these modern buildings were also strikingly chaste. Despite variations in arrangement and proportion, they comprised a monotonously homogeneous built environment in which each starkly rendered component was seemingly derived from the same generic prototype. For most colonial servants this 'second-tier public architecture', as it has been aptly characterized in later scholarship, had an identity that was almost palpable.³² The predictable sameness offered a reassuring sense of order that outweighed its aesthetic and technical banality. But the sense of desolation that this typical 'Anglo-Indian

architecture' instilled in its critics was not unlike the ambivalence with which the experience of modernity in the standardized, mass-produced housing and suburban developments of post-Second World War Europe and America would come to be assessed a century later. The critic in this case, Major Julius George Medley, was himself a former PWD engineer. As principal of the Thomason College of Engineering at Roorkee, and the editor of the self-consciously 'scientific' journal, the *Professional Papers on Indian Engineering*, in which these comments were published, Medley therefore directed his impatient critique of the status quo at his brother engineers, urging them to do better.

Imbued with the positivism and reforming zeal that multitalented and prodigiously industrious professionals like Medley brought to the PWD and the allied scientific branches of the colonial technocracy, his appeal was quintessentially modern in its drive to optimize. For him, the engineering of an 'improved' built environment for the functionaries of the colonial-modern state was a genuinely earnest and rational undertaking. Yet, qualitatively, these unaffected, utilitarian structures seemed to embody another rather contradictory ideal of temporary sacrifice for the sake of some greater future objective. At this basic level of everyday accommodation, at least, the effort and costs to resolve design problems completely could never be fully sanctioned. The colonization of India remained a calculated investment for all concerned. The mundane buildings that the PWD were required to construct were only provisional means towards that end.

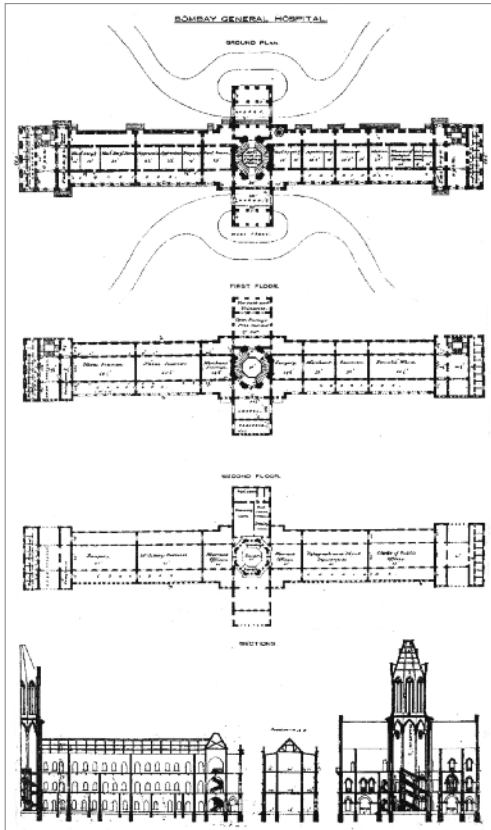
In this strictly limited field of colonial development, questions of technical optimization, let alone architectural design, rarely arose. The domination of the building scene by engineers had more to do with the paramilitary nature of the colonial state and the vested interest of military engineers in preserving their historically established control over works going back to the PWD's institutional precursor in the Military Boards of the former Company Army. While civil engineers would be recruited energetically through the 1860s and '70s, from Britain as well as Roorkee and other recently established Indian engineering colleges, to redress the shortage of military engineers available to meet the Public Works Department's rapidly expanding needs, demand for the professional services of their architectural peers was comparatively low, at least within the official building programme of the colonial administration.

As T. Roger Smith – one of the few fully qualified English architects to venture out to India before the twentieth century – reasoned to his colleagues back home, the inequitable state of professional opportunity in modern India seemed to arise from the provisional nature of the British Indian Empire. 'No Englishman is a settler in India', he observed.

'Looking upon the whole thing as temporary, we put up with that which in a real colony would soon be superseded.' To his contemptuous professional eye the buildings that did get erected were 'modern' in a 'motley' sense, having 'no pretension to architectural character'.³³

Smith could be dismissive of the bread and butter buildings of the cantonments and civil stations. But his claims belied the major architectural commissions that capable soldier-engineers in the PWD were also undertaking directly in Bombay and elsewhere, and completely overlooked the parallel building world of modern India outside official government patronage in which both British and Indian architects were engaged (and to which we will return later). Indeed, one of the most accomplished of Bombay's military engineer-architects, Captain Henry St Clair Wilkins RE, had been among the finalists in an anonymous competition held in 1863 for the design of a new European General Hospital for Bombay, for which Smith had ultimately won the commission.³⁴

Captain Henry
St Clair Wilkins,
design for a European
General Hospital,
Bombay, 1863, unbuilt
competition entry.



Wilkins, like Medley, was another exemplar of the exceptionally competent and prodigious soldier-engineers who dominated the executive ranks of the PWD system in its early years. Arriving in India in 1862 with the Corps of Royal Engineers (into which the previously autonomous Corps of Indian Engineers was subsequently absorbed), Wilkins had brought with him the elite academic training of the Royal Engineers in military engineering and civil architecture together with seventeen years of practical experience in a variety of different colonial arenas. His earlier commissions had included a waterworks and a prison in Aden, and a number of religious buildings and public institutions in other parts of British India. Wilkins's unbuilt hospital scheme was the precursor to several even more substantial public buildings that he and his colleagues in the Bombay PWD were to realize in subsequent years, most notably his massive Secretariat building for the government of the Bombay Presidency, built between 1867 and 1874.³⁵

The soaring neo-Gothic detailing of Wilkins's buildings indicated a talented

designer who could engage confidently with the metropolitan competition in the contemporary 'Battle of the Styles'. But Wilkins's forthright advocacy of the Venetian Gothic style in particular – which was subsequently adopted successfully by many others, including George Gilbert Scott in his Bombay University buildings – was justified on the grounds of climatologically rational design. Beneath their splendid confection, the spatial planning of Wilkins's larger buildings also reflected his engagement in ongoing efforts within the PWD system to rationalize the design norms and standards for modern institutional buildings in India on a more scientific footing. For Wilkins and the all-rounder engineer-architects of his generation such practical and functional considerations conveniently sidelined any deeper speculation on what an appropriately representative architecture for modern India might be.

Armed with the positivistic certainties and hubris of the modern engineering profession – then at the height of its powers and prestige as the technical vanguard of the Industrial Revolution – architecture was seamlessly subsumed under the larger ambit of modern works and buildings, as the departmental engineers perceived their mandate. This consisted in identifying and defining design problems and devising better solutions to these, if not solving them once and for all. To accomplish this in a logically consistent and efficient manner, however, a rationalized system of standards and procedures would also be devised in due course through which all public works and building projects would eventually be produced. It is no surprise that this 'paper system' was initiated and most rigorously adhered to in the military works branch of the PWD.

In the aftermath of the Indian Rebellion, with its origin in the Sepoy mutiny of 1857 within the East India Company Army, the British Indian military system was the focus of intense critical enquiry and subsequent restructuring. The buildings and physical environments in which it was accommodated were a major part of this wider review, not least because of the huge potential expense the government would have to approve to repair fully and reconstruct all the military facilities that had been damaged in the recent strife. From the point of view of the Public Works Department and its hierarchy of military engineers, this presented an excellent opportunity to take stock of all existing military buildings in India, and bring greater order and system to the established design principles, conventions and construction practices that determined how these were built. Under the new Crown regime, however, the PWD would also have to contend with the political authority and presumed superior professional advice of metropolitan experts.

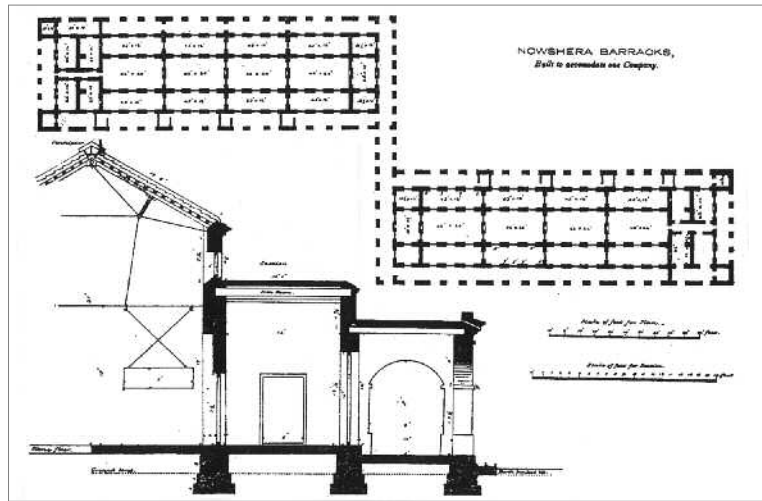
Back in the UK, following the disastrous debacle of the recent Crimean War (1853–6), the British Army was undergoing major reforms of its

own in this same period. The Crimean campaign had revealed not only the growing obsolescence of traditional military strategy and tactics, including conventional fortifications, in an age of increasingly mobile and mechanized warfare, but also the critical factors of basic sanitation and environmentally responsive design in maintaining the health and fighting fitness of the troops. Battle-front observations of the disastrous state of sanitary knowledge and practice in the British Army during the Crimean campaign had spearheaded major barrack and hospital design reforms back in Britain, the new sanitary doctrines of which were transferred almost directly to India in the form of a Royal Commission on the Sanitary State of the Army in India.³⁶ Both colonial and metropolitan experts agreed that the security of the British Indian regime would depend, to no small degree, upon the relative healthiness and comfort of the thousands of new buildings that the PWD would be required to build for the army in the subsequent few years.

Diseases endemic in India such as malaria, enteric fever, dysentery and cholera were a perennial threat to the health and vigour of the European community. To the extent that these had regularly killed and disabled an alarmingly high proportion of the European military force in India, disease constituted a very real security threat as well. Back to back with the Crimean scandal, the shocking mortality figures due to illness of the British troops sent out to quell the Indian Mutiny – many of whom had been transferred directly from the Crimea – raised serious concern in Britain and India over the evident inadequacy of existing knowledge on appropriate climatic and sanitary design for the tropics. The decision to maintain a much-augmented standing force in post-rebellion India of approximately 60,000 British soldiers precipitated, therefore, a vigorously renewed assault on the ignominious killers within the army's own house.³⁷

In a manner typical of the increasingly bureaucratic technocracy of the mature colonial-modern state, the initial product of this intensive enquiry was reams of paperwork and even more disagreement about the real issues in question. On the one hand a scientifically rational approach appeared to dictate a return to first principles. On the other hand the economic rationalism of the PWD system favoured the more heuristic approach familiar to design engineers in which the efficiency of a functional but sub-optimal prototype is improved. Not only would this enable the estimators of the department (who were paid more than four times the wages of their draughtsman colleagues)³⁸ to keep a tight grip on costs, it also recognized the cognitive economy of a system in which appropriately trained and experienced design professionals capable of the more abstract 'symbolic analysis' entailed in original design thinking and problem solving were always few and usually far between.³⁹

Lieutenant E. S. Taylor, European Infantry Barracks, Nowshera, plan and section, c. 1850s.

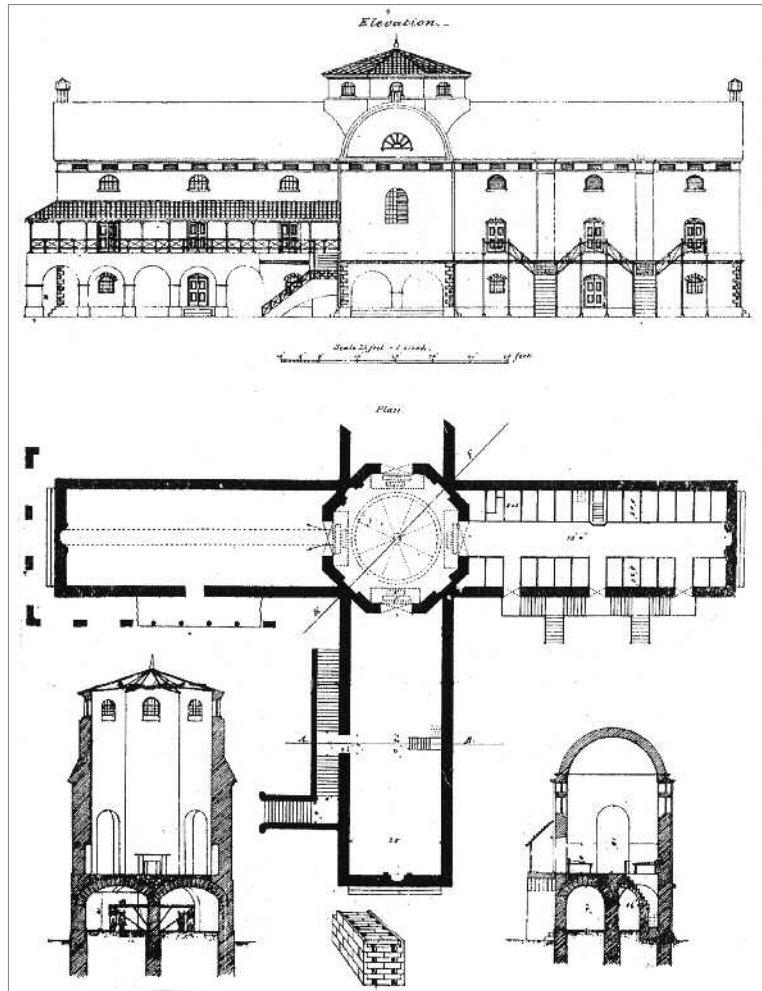


Within the pwd of the central, so-called supreme government of India that resided in Calcutta, the task of balancing these competing criteria was placed, in typical utilitarian fashion, upon the shoulders of a single executive engineer. Lieutenant Colonel W. A. Crommelin was supported by just a handful of subordinate staff, and his brief entailed rationalizing a corpus of standard designs for hundreds of typical military buildings of every description on which all future construction for the army in its network of cantonments throughout the Indian subcontinent was to be strictly based. Not surprisingly, his designs were highly uniform in their generic order and details, and far from revolutionary in their innovations. In most cases the new design standards were simply Crommelin's re-presentation of basic layouts and principles derived from precedent designs gathered in an initial survey of all existing military buildings in India that he considered current best practice.

In Lieutenant E. S. Taylor's design for standard company barracks built a few years earlier at Nowshera, for instance, modest technical improvements to the long-evolved conventions of British Indian buildings, including a staggered plan and section to improve cross-ventilation, and the introduction of a mechanical 'punkah' system (a precursor to the electric ceiling fan), had already arrived at a fairly robust architectural response to the intense, predominantly hot dry climate of North India.

A more radically reconsidered barrack design that largely rebuked precedent was proposed by the dependably contrary J. G. Medley.⁴⁰ Although he was a military engineer by training, Medley's pedagogical concerns with contemporary engineering theory and practice as principal

of the Thomason College of Engineering had heightened his awareness of innovative advances in the civil and mechanical branches of the profession in this era. Relative to convention, his proposition for an improved barrack prototype for the northern plains reflected a distinctly more mechanistic understanding of the design problem and its possible solution, a scheme that could be aptly described as a 'machine for surviving' the particular challenges of the local climate. The design was a rational synthesis of a variety of innovations in building technique and environmental control that Medley had gleaned from the *Professional Papers on Indian Engineering* and other technical publications that he



Julius George Medley,
hypothetical design
for a barrack in upper
India, 1865.

Public Works Department (Military Works), standard plans for upper and lower floors of multi-storey barracks for regiments of European cavalry, 1868.

block was to be a multi-storey structure with the principal dormitory spaces raised a full floor above ground, the lower storey intended only for daytime activities. Superficially, these blocks resembled the volume and multi-storey, ward-like configuration of the latest barrack and hospital designs that were then being built to the new sanitary guidelines for the army back home in Britain. But Crommelin's design was also a direct response to the paramount concern of sanitary reformers in India, as in other tropical parts of Britain's global empire, with malaria. Through the global professional network of the Royal Engineers Corps and its scientific publications, India-based engineers like Crommelin had access to the wider empirical experience and theoretical knowledge of their brother officers serving as far away as the British Caribbean.⁴²

According to the prevailing 'zymotic' theory of disease, 'malaria' was literally the pathogenic 'bad air' that was thought to rise from damp





Public Works
Department (Military
Works), multi-storey
barracks inside the
Red Fort, Delhi,
c. 1860s.

Clerks' quarters,
Ajmir, Rajputana,
c. 1870s.

soil or rotting organic matter.⁴³ Before the actual cause and vector of malaria were finally understood correctly, a generation later, the rational solution was therefore to raise sleeping spaces well above the ground.⁴⁴

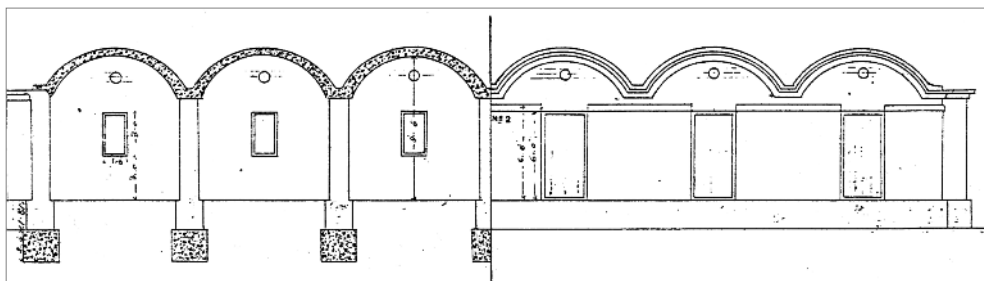
Large two- and three-storey blocks adapted from this template were constructed at many larger military stations across British India in the late 1860s and '70s. Although built for the accommodation of British soldiers, the colonial-modern operational considerations of these large, multifunctional buildings were relatively complex by comparison to metropolitan norms and purely mechanical notions of efficiency. Separate exterior stairs were provided for the 'untouchable' sweepers who maintained the latrines, and 'family' accommodation for married sergeants was integrated into each block with a further set of stairs for the exclusive use of their wives and children. The peculiar colonial logic of racially and

The architectural drawings consist of three sets of plans and elevations for Egyptian batteries:

- Battery No. 1 (Top):** Includes a plan view showing a rectangular building with multiple rooms and a central courtyard, and a half elevation/half section view showing the front facade with arched windows.
- Battery No. 2 (Middle):** Includes a plan view similar to Battery No. 1 but with different room layouts, and a half elevation/half section view showing the front facade.
- Battery No. 3 (Bottom):** Includes a plan view and a half elevation/half section view, showing a slightly different design from the others.

Each set of drawings includes descriptive labels such as "PLAN", "HALF ELEVATION AND HALF SECTION", and specific notes about the battery's location and features.

It was perhaps inevitable that the exceptional thought and resources committed to the rationalization of the design and production of military buildings in India, through the 1860s, would be reflected in the Public Works Department parallel building efforts in the civilian sector. With the departmental engineers' military predilection for order and system



Public Works Department (Railway Branch), menial workers' quarters for the Ahmedabad and Parantij Railway, Rakhial, 1897, section/elevation drawing.

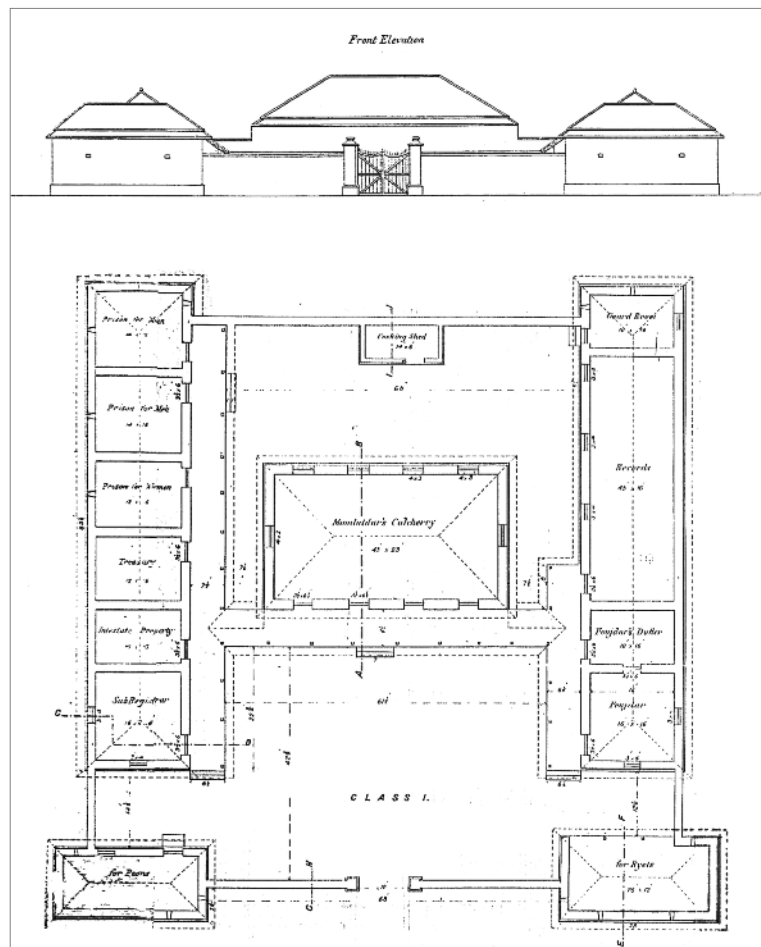
and a disciplined protocol for the design, approval and implementation of projects, standard configurations and details for typical military buildings, along with the fundamental notion of a system of 'standard plans', were methodically recycled with only minor modifications in the search for coherent and expedient design solutions for generically similar civil buildings.

The standard plans that the PWD developed for the thousands of typical bungalows and quarters the civil administration required to house its growing ranks of staff, with their hierarchically differentiated scales of pay and accommodation, were among the most obvious instances of the direct diffusion of military design norms to the civilian sector. Gazetted 'officers' of the civil service could expect to be housed in spacious bungalows equivalent in scale and amenities to higher ranking military officers; clerks got terraced cottages or quarters similar to the subordinate military cadre of non-commissioned officers; 'peons' and other 'menial' civilian staff got 'lines' and barracks like the enlisted men of the army. PWD-designed housing for railway workers and paramilitary arms of the administration, such as the police, was particularly regimented, but it could also be quite innovative as well in its multiple permutations on the problem of the efficient planning and clustering of low-rise medium-density housing, and the application of modern building materials and techniques such as reinforced concrete vaulting.

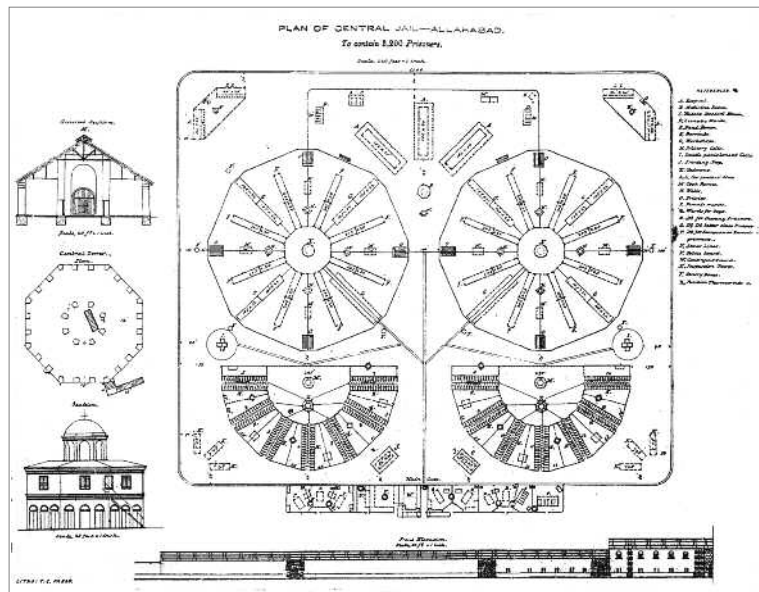
Away from the cantonments and railways, the typical minor public buildings designed by the PWD were the context in which the mundane machinery of the modern colonial bureaucracy was routinely encountered by everyday Indians residing in smaller towns and rural districts. The 'cutcherry' or 'collectorate' was the place of business of the head of the local district. In this capacity British officers of the Indian Civil Service (ICS) typically presided as both tax collector and magistrate, supported by a small staff of Indian clerks and peons. The local police post and lock-up was either incorporated in the same compound in the smallest administrative 'stations' or in modest, generically similar buildings nearby.

Bombay Public Works Department (Judicial), standard plan for a judicial office and courthouse, 1874.

Bombay Public Works Department (Judicial), Police Station, Mhow, c. 1870s.



Public Works
Department (Judicial),
Central Jail for 3,200
prisoners, Allahabad,
1861, plan and
elevation.



In important regional centres, larger self-standing courthouses and related judicial buildings including extensive jail complexes were among the more conspicuously modern of the institutional building types to be propagated by the PWD. The forbiddingly rationalistic panoptic design of a jail for 3,200 prisoners planned for Allahabad in 1861 was the first instantiation of a new standard plan for Central Jails in India, variations of which were subsequently built at Benares, Agra and Lucknow. Penal facilities in India were aggressively rationalized and significantly augmented in the aftermath of the Indian Rebellion to address official anxiety about the large numbers of former mutineers and rebels that now languished in prison. While the central jail design was derived from a progressive model jail that had been built at Lahore ten years earlier,⁴⁵ modifications to the prototype reflected further extensive research and debate within the Public Works and Judicial departments on the latest European and American penal technologies.⁴⁶

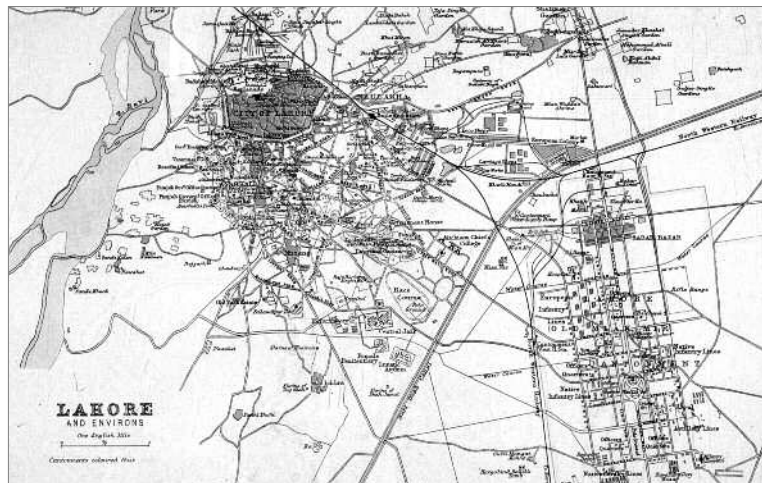
These expansive complexes occupied large tracts and were therefore built on available land just outside the civil lines, in the typical case, in reassuring proximity to the cantonment but well separated from the indigenous parts of the settlement. Following the same rationale, similar large institutional complexes such as hospitals and sanatoria were laid out on adjacent tracts of wasteland. The actual buildings that comprised the elaborate geometries of these functionally distinct but spatially similar

institution complexes were usually single-storey barrack-like structures relatively indistinguishable from those of the adjacent military cantonments.

Before reforms introduced in 1864, those suffering from mental illness had commonly been incarcerated in segregated compounds within general jail complexes. Thereafter, autonomous asylums for 'native lunatics' were to become another conspicuous institutional feature of the suburban fringes of larger civil and military stations. Since Europeans with severe physical or mental illness were generally repatriated, hospitals and asylums, like the jails, were also, in effect, devices for classifying and containing deviance in the indigenous population and safely proscribing it from the civilized spaces of both traditional and modern urban settlement.⁴⁷ Over time, however, with the growth and expansion of the typical larger urban centres, the heterotopic chaos of this penal-medical fringe was to be consolidated into a more substantial and respectable precinct composed of the cultural, religious and recreational institutions of the British colonial community and indigenous elites, including the campuses of elite colleges and other institutes of higher education and research.

Within their walls, these elaborately structured and partitioned complexes were conceived as self-contained worlds unto themselves wherein all essential activities, utilities and contingencies of the inmates, and their supervisory staff, were accommodated. In some cases asylums and hospitals were modelled closely on the panoptic layout of the neighbouring jails. But medical authorities tended to deprecate that oppressive approach. Alternatively, they encouraged the design of sheltering, therapeutic environments composed of informally distributed cottage-like wards among gardens and trees.⁴⁸

Enclaves of colonial institutional space situated between 'cantonment' and 'city', Lahore, map c. 1931.



Directly informed by the contemporary metropolitan discourses on penal and sanitary reform, the planning and design of such modern facilities in India clearly reflected the positivist convictions of the Victorian age in the instrumentality of environment, among other devices, as a tool for behavioural conditioning and control.⁴⁹ But these overtly coercive institutions of the colonial technocracy were also an early instance in the architecture and planning history of modern India of the recurring conception of autonomous institutional, industrial and agricultural complexes, and their contiguous residential enclaves, as what one study has called 'exemplary milieus'.⁵⁰

At the Benares Central Jail, for example, the reforming zeal of the designers extended even to the housing for native jail servants and their families in carefully planned 'jail colonies' adjacent to the main jail complex. The merits of such 'model villages' were stated in a PWD circular of 1869 on jail design practices. While 'prevent[ing] jail servants from residing in the city or bazaar in times of epidemic disease, and being the means of conveying the same to jail', they would also 'serve as a model for imitation by natives of the District for improvement of their villages as regards ventilation, drainage, arrangement of streets and conservancy'.⁵¹

In its various technical branches, or at the behest of other branches of the colonial technocracy including the Judicial Department and the Indian Medical Service, the PWD also laid out model villages for the reform of so-called criminal tribes, and salubrious new 'canal colonies' to house the transplanted farmers who would pioneer the arid wastelands now made arable by the new irrigation schemes it had built.⁵²

Railway colonies were another example of such self-contained exemplary milieus of modern order and productivity. Purpose-built and substantially autonomous, these residential enclaves for the management and operational staff of the new railways amounted to sizeable 'company towns' at some of the larger junctions and maintenance depots of the fast ramifying railway network. Like the railway stations themselves – the vocational domain, typically, of the 'Anglo-Indian', or mixed-race, stationmaster and his staff – the railway colonies were novel spaces of social alterity and modernity. Hugging the railway tracks as they threaded their way through the larger racially segregated space of colonial urban settlement, the railway colony defined a little world apart, sequestered between the 'white' and the 'brown' sides of the tracks, characterized by the fastidious propriety of its modern, mechanically minded residents.

As a roving newspaper correspondent in India in the 1890s, Rudyard Kipling described a quintessential example – the township for the main locomotive works of the East Indian Railway at Jamalpur, Bihar:

[The settlement] is laid out with military precision to each house its just share of garden, its red brick path, its growth of trees, and its neat little wicket gate. Its general aspect, in spite of the Dutch formality, is that of an English village, such a thing as enterprising stage-managers put on the theatres at home . . .

When it was laid out, in or before the Mutiny year, its designers allowed room for growth, and made the houses of one general design – some of brick, some of stone, some three, four, and six roomed, some single men's barracks and some two-storeyed – all for the use of the employés [sic] . . . There is a dreary village in the neighbourhood which is said to make the most of any cholera that may be going, but Jamalpur itself is specklessly and spotlessly neat . . . Everything has the air of having been cleaned up at ten that very morning and put under a glass case.⁵³

The bemused ambivalence of Kipling's caricature critically underscores the clinical banality of such rationally designed and managed microcosms of modern order and system in colonial India. It also reflects the particular architectural sensibility and biases of the celebrated author's upbringing in British India, to which we will return presently. While model settlements were engines of improvement in the imagination of the colonial modernizers, they remained antithetical to the organizing principles of their surroundings and almost completely detached.⁵⁴ This pattern (or pretence) of development in insular enclaves of idyllic modernity that emerged in these earnest early projects realized by the colonial PWD was to recur in many later township schemes for government institutions and independent industrial concerns developed after Independence. Although masked today behind varieties of superficially different postmodern facades and neo-modern formalisms, the pattern is probably more prevalent than ever in the early twenty-first century, in the gated communities and satellite cities of market-driven development for the aspirational new middle classes of India's globalized economy.

Resistance and Reaction to the PWD System

The stubborn obsession of the PWD engineers with 'practicality' as a value stemmed at least in part from the department's philosophical constitution as the technical arm of a colonial administration that had been directly and deeply imbued with the utilitarian creed of governance and accountability. The Oxbridge-educated members of the Indian Civil

Service (ICS) who now ruled India under the Crown Raj had gone some way to reinstate a more conservative, culture-sensitive style of government at the coalface of district administration. But the more rationalistic thread of utilitarian pragmatism had survived in the centralized departments of the colonial technocracy, such as the PWD, and had become even more tenacious. By the late nineteenth century it was evident that the standardized designs and systematic practices of the PWD, which had initially been employed as practical and merely provisional strategies to meet major building requirements in the short term, were becoming an enduring and increasingly rigid frame of design thinking. Efficiency in the process of design decision making, which precedent-based design standards had enabled, had assumed equal if not greater significance for the PWD engineers than the optimization of the actual functional efficiency of the buildings the department was responsible for producing. 'Efficiency', however, was not their only criterion. Since these standardized designs were actually constructed, and proceeded to frame and shape the practices that were performed within them, they were also progressively reinforcing the values and authority of 'precedent' and 'convention' in their own right. Embodied physically in the ubiquitously reproduced colonial built environment, the design norms and forms associated with the PWD had thereby become integral to the system of enduring behavioural and cognitive predispositions of the colonial society and its vested subcultures.⁵⁵

Dependent on native labour in the draughting office as well as the building site, the standardized PWD system also tended to make a 'practical' though crude distinction between two basic types of practitioners in the colonial building field: the (traditional/native) artisan on the one hand, and the (modern/professional) engineer on the other. There was no room in this technically rational hierarchy of 'routine producers' and 'symbolic analysts' for the notion of non-practical design, let alone the creative freedom to experiment and evolve as modern artists and architects.⁵⁶

The absurdity of this hierarchy, with its problematic implications for the emerging question of a modern Indian architecture, did not escape critical observation. William White, another of the handful of established British architects who had ventured out to India in the early 1870s to explore professional opportunities, had come up against this reductive and discriminatory distinction in a brief and evidently unsuccessful collaboration with the Bengal Public Works Department. White was entrusted with a talented Bengali engineering trainee as an assistant, but his efforts to develop his protégé's budding artistic skills as an architectural draughtsman had been censored in no uncertain terms:

The Recording Angel knows that my intentions were good; but so horrified was authority, so convinced was it that an artist, especially a brown one, in the Department of Public Works was an anomaly that precedent could not justify nor practice initiate, that means were instantly devised for driving the evil spirit out of him; and before I left India I was informed . . . that he had been sent to make bricks at one of the Government kilns!⁵⁷

Recounting this anecdote in a paper on 'Government Architects in Bengal' published by the Royal Institute of British Architects (RIBA) in 1874, White succinctly illustrated two interwoven but distinct issues. Beyond his concern for the just advancement of Indian subordinates who were manifestly capable of playing a more comprehensive and creative professional role in the PWD, White was especially critical of the department's methods. In his view the cult of the 'practical' had become an excuse for a narrow and increasingly unthinking approach to design constrained by rote practices rather than the innovative pragmatism that the notion might imply. During the earlier 'Company' era, the artistic talents of Indian draughtsmen in the employ of the colonial administration had been fostered indirectly through other outlets.⁵⁸ But the norms and routines of the now well-established department had effectively proscribed the consideration of architectural style and aesthetics – along with associated and potentially inconvenient issues of artistic freedom and individualism – in the everyday building efforts of the mature colonial regime. In the PWD system, the value of a draughtsman was measured not by his skill in creatively representing design knowledge, but by the efficiency with which he could simply reproduce it, uncritically.

White would not be the last to attempt to organize architectural training for native subordinates in the department, and his frustration with the methods of the hegemonic PWD system as an obstacle to the advancement of architectural quality and appreciation in the colonial context echoed other contemporary critiques.⁵⁹ The question of what architectural knowledge and skills should be promoted most appropriately in 'modern' India was also a passionate and persistent concern of British art educators and scholars in colonial service, particularly those associated with the Department of Science and Art (DSA).

An institutional legacy of Britain's Great Exhibition of 1851, the DSA was one of the far-reaching and influential components of the British imperial technocracy in its Victorian heyday. Based in London in the South Kensington Museum (the future Victoria & Albert Museum) and the adjoining Royal College of Art, it was the counterpart in the domain of aesthetics and the industrial arts to the various intertwining networks

of scholarship and technical exchange that converged in the imperial metropolis through their respective institutional hubs.⁶⁰ For its part the DSA determined the mode and practices through which both art and technical education were propagated throughout Britain and its colonial empire in the second half of the nineteenth century.⁶¹

Ideologically, the DSA had emerged from the same circle of radical utilitarian thinkers and social reformers that had so deeply influenced the initial phase of coordinated technical development and institutional reform in India prior to the rebellion. Notable members of the faculty included Owen Jones, Gottfried Semper and William Morris, who would subsequently be recognized as pioneers of modern design. In line with Morris's values in particular, as the seminal figure of what would later be called the Arts and Crafts movement, the overarching objective of DSA pedagogy and programmes was to heighten the aesthetic sensibilities and expectations of modern industrial culture, producers and consumers alike. The deeper moral aim was to raise, by the same token, the real value and sense of self worth of the individual industrial labourer, who was increasingly alienated from his or her work in an age of mechanical reproduction.⁶²

The exemplary new status accorded by the DSA to the inventiveness and handcrafted qualities of traditional artisanal craft was further heightened by the fact that that mode of production was relatively irretrievable, economically, in the aftermath of Britain's Industrial Revolution. But acolytes of the DSA in the colonial field could point to India's surviving crafts traditions of building and architectural sculpture as evidence of the aesthetic riches of an ostensibly pre-industrial society and building culture that was still 'living' – at least as long as the PWD could be dissuaded from meddling further with it. This was an idyllic and wilfully reductive view, of course, but a seductive stereotype to which the DSA's principal advocates in India, J. L. Kipling and E. B. Havell, would devote their own considerable labour as pedagogues and passionate polemicists in their attempts to compel the colonial building scene to conform.

John Lockwood Kipling – whose son, Rudyard, was to have a comparable, albeit much more broadly recognized impact upon the cultural legacy of British India – was a DSA-trained expert in architectural sculpture who initially taught at the government school of art and industry in Bombay (more often referred to as the 'J. J. School' after its Parsee benefactor, Sir Jamsethji Jijibhai) and later established the Mayo School of Art in Lahore. There Kipling also served simultaneously in a scientific capacity, DSA-style, as the curator of the Lahore Museum.

Ernest Binfield Havell was a later graduate of the DSA, more immediately associated with the Arts and Crafts movement by the turn of the twentieth

century, who initially taught at the government art school in Madras (1884–94) before his controversial but influential tenure as principal of the Government College of Art and Craft in Calcutta, beginning in 1896.

Working self-consciously as a form of moral resistance in the margins of the larger colonial enterprise, these critical aesthetes pursued a paradoxical, double-headed enterprise. On the one hand they sought to prove the claims of the Crafts movement to their detractors, both at home and in the colony. But they also needed to justify their engagement in the colonial project at the same time, as a prerogative of the more ‘civilized’ mission, as it were, that they aspired to be part of in which the colonizers would respect and even actively conserve the culture of the colonized for their mutual enrichment.⁶³ In this colonial context, however, the inherent contradictions of the Crafts movement’s radical atavism were particularly conspicuous. To counter the universalizing technical-rationalism of the PWD’s utilitarian architectural vision and routines, a comparably prescriptive and technically mediated approach to training in the traditional applied arts of building in India was advocated. Rejecting the norms of modern ‘studio’-based art education in Europe, creative freedom was tightly constrained in the curricula that Kipling and his colleagues developed in Bombay and Lahore, for example, in favour of studious copying and replication of traditional sculptural ornament and architectural details through the medium of precisely measured drawings.⁶⁴ Similarly paternalistic efforts by Havell at the Calcutta School to prescribe an exclusively indigenous canon of exemplary types for emulation in contemporary art and design provoked the outright rebellion and secession of a portion of the student body who promptly established an independent school on more overtly ‘progressive’ lines.⁶⁵

If such prescriptive efforts to ‘revive tradition’ through training and practice were received with ambivalence at best on the metropolitan frontline of cultural and political change under colonialism, the experience outside the direct purview of the colonial administration and its dependent subculture tended to be more sanguine and inventive on the whole. Indeed, far from declining – as the Crafts advocates argued in ideological unison with the chorus of other Orientalist interpreters of Indian art and architecture, such as James Fergusson, who had come before – Indian architecture was demonstrably alive, albeit as a result of change rather than in spite of it.

A significant example was the extensive new architecture and infrastructure required by modern religious tourism. The new mobility that came with the railways and colonial political hegemony had enabled mass pilgrimage in post-rebellion India of an unprecedented new order. By the end of the century the devotional landscapes of the main religious



Modern ghats at Benares constructed in the late 19th century, photographed by Gordon Sanderson of the Archaeological Survey of India and first published in 1913.

centres such as Benares and Hardwar on the sacred Ganges river had been all but transformed. Benares in particular had witnessed a quantum transposition in the scale and extent of its seemingly timeless architectural character with the reconstruction and expansion of extensive 'modern' ghats and pilgrims' hostels, the large majority of which had been erected by traditional craftsmen-builders as charitable works sponsored by wealthy devotees and princely benefactors.⁶⁶

Significant as such new undertakings were, however, they were not substantially

different from the nature and types of public works that had traditionally attracted the patronage of the indigenous elite. Such works were 'for the comforts only of the physical man', observed Bholanauth Chunder, a Bengali civil servant representative of the emerging educated urban middle class of the 1860s who championed a more progressive ideal of modern social stewardship. While the monumental irrigation works of earlier Hindu and Muslim dynasties were what had inspired the British PWD engineers in their most ambitious schemes for the development of modern India, it was the 'progress made by humanity towards the amelioration of its moral condition' that Chunder regarded as the most worthy achievements of the British and their public works: 'their schools and colleges, literary institutes, public libraries, museums, and botanic gardens, [which] are proofs of a greater intellectual state of the world than in any preceding age'.⁶⁷

Museums, libraries and other modern shrines of learning were therefore to feature prominently among the modern building types that progressive members of the new urban elite were increasingly keen to sponsor as well. Under such 'native' patronage, however, architects and builders were also experimenting with combinations of traditional and modern forms and techniques in unprecedented ways that the colonial officialdom could not control or, at first, condone, but which it would come to emulate itself by the end of the century in a distinctly more flamboyant mode of modern public architecture better tailored, as it was believed, to the Indian imagination.⁶⁸

In the emerging metropolises of modern India, as previously noted, it was ambitious philanthropists – predominantly representing affluent minorities such as Bombay's Parsee and Jewish communities, Calcutta's Marwari business elite, and the Chettiar financiers of Madras – who

Robert Fellowes
Chisholm, Senate
House, University
of Madras, 1869–73.



played crucial roles in counterpoint with government in driving the accelerating pace of architectural development from the 1860s onwards.⁶⁹

In Madras, for example, a sophisticated political and intellectual dialogue that had long been cultivated between the local indigenous and colonial ruling classes, ensuring in part the general loyalty of the southern regions of India in the 1857 rebellion, led to the commissioning of a number of path-breaking buildings in the post-rebellion era. Senate House, the distinctive yet enigmatically styled convocation hall for the University of Madras, was one of the most iconic of these. It had initially been designed in a French Renaissance style by an engineer-architect originally serving in the Bengal PWD, Robert Fellowes Chisholm, whose scheme had been selected in 1865 as the winner of a widely promoted design competition. But the final design that was eventually constructed between 1869 and 1873 was a major reworking of the scheme in almost every detail.⁷⁰ Championed by the Governor of Madras, Lord Napier – an outspoken advocate for a more culturally enlightened and social-minded imperial modernity that could transcend the constraining parochialism of the centralizing ‘supreme’ government based in Calcutta – Chisholm’s revised design was an original and quite remarkable response to the cosmopolitan ideals of the university’s multicultural senior hierarchy, who envisioned a worldly place of higher learning in which the native sons of the Indo-British imperial polity would form their views and values.⁷¹ Described variously from Byzantine and Moorish in inspiration to an ‘admirable’ emulation of the local Deccani style of

Muslim architecture, this much-interpreted building has also been compared with an ideal design for a pan-cultural ‘Temple of Memory’ by the French revolutionary architect Claude Nicolas Ledoux. Indeed, the latter precedent was one of a number of plausible sources of ideas for Chisholm – a Freemason, as was Ledoux, and a largely self-tutored architect who regarded himself free of the prejudices of those trained in the classical tradition. The final design for the Senate House eluded classification, alluding ‘to India and the international in the same breath’.⁷²

The Madras Senate House has generally been recognized as one of the earliest and most influential propositions of the modern hybrid style that was to be most commonly referred to in colonial India as the ‘Indo-Saracenic’.⁷³ The term had actually been coined earlier by James Fergusson in his description of the mature Mughal tradition, in which he could not help but acknowledge that a felicitous synthesis of Islamic architectural order and Hindu architectural craft had ultimately evolved from the violence of the previous most significant imperial conquest in the subcontinent. But bound by the prejudicial essentialism of his own architectural theories, Fergusson remained averse to the idea that anything comparable could arise from the imperial cultural miscegenation of Europe and India.⁷⁴ Napier, Chisholm and their circle of enlightened South Indian plutocrats took a very different view, however, as would other aristocratic patrons in the second half of the nineteenth century.

Robert Fellowes
Chisholm, Napier
Museum, Trivandrum,
c. 1872.



For ideologues like Napier, hybridity was the essence of the architectural art and innovation of the Indian subcontinent – the crucible in which great civilizations and their aesthetic cultures had been combining creatively for millennia – and the Indo-British cultural experiment was to be no less fruitful in their expectation.

But the virtues of a hybrid approach to style were practical as well as political. Pragmatism was the sister of progress in the regional byways and interior of colonial India, where new building types, and the modern institutions and services they embodied, could be realized and received more effectively in a conventionally constructed fabric of largely familiar architectural details adapted to local materials and environmental factors.⁷⁵ Here it was the patronage of India's ostensibly conservative and insular native states that fostered some of the most novel and influential architectural work in this hybrid modern idiom. Among the largest and richest of the 'princely states', Hyderabad and Mysore in South India were to build impressive public buildings and urban amenities in the early twentieth century, in addition to opulent modern palaces for their worldly rulers, that were to rival the architectural pomp and splendour of the British regime in its final decades. By the measure of architectural and institutional development, however, some of the smaller states were among the most progressive.⁷⁶ Major commissions in princely Travancore and Baroda, for instance, gave R. F. Chisholm unfettered further opportunities during and following his tenure in Madras, to explore and develop his radically hybrid approach to a modern architecture for India. It was the small Rajput state of Jaipur that was meanwhile nurturing the influential work and career of another redoubtable PWD engineer-architect 'gone-native', Colonel Samuel Swinton Jacob, and the stable of talented assistants, including Tujumoul Hoosein, Shankar Lal, Chiman Lal and Bhola Nath, who eventually emerged from their tutelage in his design office as some of India's first self-consciously 'modern' architectural professionals before accredited academic courses of training and qualification were established in the early twentieth century.⁷⁷

Jaipur had long been regarded as an exemplar of enlightened despotism going back to the reign of the astronomer-prince Maharaja Sawai Jai Singh II in the late Mughal period, who had commissioned the design and construction of its strikingly orderly capital city, founded in 1729. Under the subsequent imperial Raj of the British Crown, Sawai Jai Singh's descendants sought to uphold Jaipur's mantle as a model of design and planning-minded independent statecraft by being one of the first to set up its own public works department on modern lines. This was established in 1860, only five years after the British had done so themselves, primarily to attend to the further rationalization and modernization of

was in keeping with the promotional aims and didactic programming of that and other contemporary exhibitions elsewhere in the industrializing world that Jaipur's permanent exhibition-cum-museum clearly emulated the South Kensington Museum in London, if not the Great Exhibition of 1851 itself – for which the father of its namesake Prince Albert had been the main patron. Architecturally, on the other hand, there were no apparent parallels in form, let alone scale.

Yet, the new exhibition building was not as antithetical to the revolutionary Crystal Palace of 1851 as its seemingly whimsical Indic detailing would suggest. What Joseph Paxton and Colonel Jacob, the Jaipur PWD's British superintending engineer, had in common was the wisdom to empower the multiple agents in the making of a building with greater collective control over the ultimate design and execution of the work as a collaborative undertaking. Paxton, a gardener by training, had turned the conventional top-down wisdom of how architecture is first designed and then constructed, bottom up, by embracing the logic and economy of scale of industrial prefabrication to determine the design of an unprecedented new scale and type of building. In the very different context of regional India, Jacob, a British-trained military and civil engineer, had the humility to respect the fact that the native artisans (masons, carpenters and *mistris*, or traditional master builders/overseers), let alone his own Indian office staff (many of whom had been trained in the local art school), had much more expert knowledge of the architectural tradition and methods of their region than he. Jacob was content to lay down a basic spatial pattern for the building that could accommodate the modern programmatic requirements, while the individual forms and spirit of the architectural fabric and details could be developed with a free hand by the actual builders.

Drawing remained an important tool in this synthesis of modern and traditional Indian modes of design thinking, since Jacob occupied his growing staff of talented Indian draughtsmen in compiling an extensive graphic database of methodically measured drawings of details selected primarily from the architectural heritage of Jaipur and neighbouring Rajput states, as well as nearby Delhi and Agra. In this Jaipur method, however, these drawings were not intended to be used as prescriptive templates for rote reproduction but rather as a medium for capturing and conveying a wider range of relevant architectural precedent knowledge to the building site and thereby enriching the design possibilities. In exemplary projects such as the Albert Hall, at least, they served only to guide and inspire the production of an eclectic mosaic of conventional but original architectural details that were designed and developed *in situ* by the craftsmen themselves, but neatly framed within the three-

dimensional grid of Jacob's rather more prosaic planning. The building was, thus, a living museum of authentic contemporary architectural craft and sculpture.

It was only after this compendium was published in the 1890s as the so-called *Jeypore Portfolio*, and was thereby made available for wider reference, that its more obvious use to others as a pattern book for the simulation of typical styles and features of traditional Indian architecture could be exploited.⁸⁰ In the competent professional hands of some such as George S. T. Harris, another British engineer-architect embedded in princely India in the 1880s and '90s as the head of the Gwalior State PWD, Jacob's method could be emulated with equal assurance. Indeed, so seamless was the contextual integration of the corpus of modern buildings realized by Harris that their non-indigenous pedigree was soon forgotten after his return to service in British India in 1894.⁸¹

It is somewhat ironic, therefore, that over S. S. Jacob's long and increasingly prolific career as an independent consultant to many other patrons in British India as well as the princely states, in addition to his continuing duties with the Jaipur PWD (1867–1902), Jacob himself was to become one of the most ubiquitous perpetrators of a shallower pastiche form of this putative 'modern-Indian' style. Separated by distance from daily access to the construction sites and the font of local building knowledge and inspiration that had infused his initial more collaborative work with his Indian colleagues in Jaipur, many of these later purely paper-based designs also lacked the relative cohesion and authenticity of the Jaipur works, their detailing an increasingly idiosyncratic confection

George S. T. Harris
and Gwalior State
Public Works
Department, Police
Station, Gwalior,
c. 1890.



applied upon rather than arising from the spatial and functional order of their plans. In his earnest endeavour to counteract the depredations to the living tradition of Indian architecture that the regulation PWD system from which he had departed early in his career was allegedly perpetrating, it is arguable that Jacob's inadvertently disaggregating interventions within that tradition actually hastened its demise.⁸²

If the colonial-modern administrative system – which, directly or indirectly, had imposed its new order upon virtually the whole of India over the course of the nineteenth century – could be characterized by its rationalizing propensity to reduce and divide an ethnically and politically complex cultural landscape into a simpler array of distinct and putatively inviolable cultural categories and social divisions, the Public Works Department was the technical handmaid that had provided the necessary organizing action. By the end of its first half century of operation as the ubiquitous government agency for physical planning and construction in British India as well as many of the princely states, the PWD had gone a long way toward reorganizing the built fabric and spatial patterns in which a modern Indian society was already emerging. In the procedural and legal frameworks through which the departmental system operated, it had also begun to rationalize the cultural norms to which these new built forms and spaces were configured.

Yet, for the increasingly conflicted colonizers themselves, the earnest, almost naive positivism of their technical investment in the colonial arena served at least as much as a symbolic representation of the ideals of modernity for which they presumed to stand apart and above their colonial subjects as it did to engineer actual social change. As one eminent member of the engineering fraternity later defended the utilitarian approach to the design of the bread and butter buildings produced by the PWD:

If there are cheap and ugly box-like buildings, we have to remember that there is another aspect to the case. If the British had acted like the Moguls, they would have built great cathedrals and other monuments to their glory at the cost of the blood and tears of a conquered people; but they worshipped in cheap, barn-like churches, they lived in cheap houses, and worked in cheap offices, and for the benefit of the people they spent money in other ways . . .⁸³

Such claims for the selfless practicality of the colonial regime and its accommodation further illustrate the prevailing ethos in which the built environment of modern India had begun to be reframed over the course of the nineteenth century. But there was ample scope yet for the paradoxes

and contradictions of colonial-modernity to find expression in the turn to a more rhetorical approach to architectural and urban design that was to characterize the final decades of colonial rule in the early twentieth century.



chapter two

Complicity and Contradiction in the Colonial Twilight, 1901–1947

Before the beginning of the twentieth century, architects had rarely played more than a marginal role in the engineer-dominated official building efforts of the British Indian Empire. But the final decades of British rule would bring a felicitous change in fortune for the architectural profession. A distinct cognitive shift had occurred over the years since the suppression of the Indian Rebellion of 1858. The strategic mentality of military and technical conquest had gradually given way to the very different mindset of a permanent colonial administration that was set in its ways and increasingly resistant to change, even while many of its own officials were beginning to question the moral authority of their rule. By the turn of the new century, however, the inherent contradictions of colonial modernity could no longer be concealed behind the prosaic and now broadly institutionalized appearance of utilitarian rationalism with which the technical development of the second half of the nineteenth century had been undertaken. In lieu of the cool objectivity of the design problem solving and associated political and social engineering that had prevailed in the immediate post-rebellion era, a new romanticism was to characterize official policy and actions in the long autumn of British Indian rule. This included a conspicuous new degree of interest in ‘Architecture’, as distinguished from the design of merely practical buildings, as one of the more psychologically affective tools at the disposal of the colonial regime.

Beginning in 1901 with the appointment of the first consulting architect to the Government of Bombay, a vanguard of RIBA-qualified professionals was to join the service of the Indian Public Works Department system and set about diligently reclaiming and consolidating the professional turf of architecture, preparing the ground for the architectural apotheosis of Empire that Edwin Lutyens and Herbert Baker were presently to build in the form of the ‘New Delhi’.

These ‘salary men’, however, were to find themselves compromised by conflicting loyalties that constrained and contradicted their design

Arthur G. Shoosmith,
St Martin's Garrison
Church, New
Cantonment, Delhi,
1930.

thinking. One was the ethic of functionalist pragmatism that underscored the self-consciously 'modern' architectural thinking of the early twentieth century. The culturally and climatologically alien context of India encouraged European-trained architects to take an innovative, ad hoc approach to style and convention. This non-conformist stance also served the political need of architects to differentiate themselves as a professional body with an expert point of view autonomous from that of the colonial administrators and the well-entrenched profession of engineers, who still tended to presume competent authority in any matter concerning the design of the colonial built environment. But this ideal of professional autonomy, on the part of the official architectural consultants of the British Indian Empire, posed further conflicts of loyalty for those who had to defend that autonomy by simultaneously attempting to maintain common standards and an *esprit de corps* as a bureaucratically incorporated cadre of professionals. Yet, the political naivety of these putative 'imperial' architects was to be their ultimate undoing. In their workmanlike efforts to advance the cause of a 'modern Indian architecture' they found themselves increasingly at odds with a regime that had become obsessed with the representation of authority and tradition.

This shift from technical to aesthetic priorities was a particularly telling indicator of the increasingly fragile and irrational conceptual framework that underpinned the British imperial enterprise in India in its final years. Buildings were no longer required to transform and develop an unfamiliar environment. Rather, their primary function was now to represent and reproduce an inequitable colonial social order that appeared to have reached a steady state of suspended development. A self-consciously 'imperial' architecture was finally required that would give identity to the corporate whole and particularity to its subordinate parts.

Meanwhile, outside the bureaucratic field of colonial government service, the rhetorical turn in official imperial policies and practices would be countered by the increasingly sophisticated oppositional rhetoric of the maturing Indian nationalist movement and its artistic avant-garde. Despite official attestations of the permanence of the colonial-modern polity, the complex and contradictory dialectic of modernisms and atavisms explored in both the public and the privately commissioned architectures of this late colonial era reflected a struggle for control over the increasingly uncertain future of modern India. Paradoxically, the representation of profound differences in cultural values, practices and identities that seemingly reinforced Orientalist stereotypes of a timeless India rooted in its villages was to be exploited with extraordinary rhetorical effect in the pursuit of political freedom and the right to modernity itself. By this time colonial practices and development had significantly

advanced a process of social transformation in India in which its cities were already becoming modern urban settings that ‘increasingly constituted the very ground through which difference, resistance, incompleteness, paradox, or creativity could be recognized *as such*’.¹

The Call for Architecture

The year 1901 was a particularly auspicious one in the history of the British Empire. Not only did it mark the dawn of a new century in which it would shortly reach its zenith as a global power, but, almost uncannily, it also marked the passing of the aged queen empress in whose name so much of the empire had been conquered and brought under the ‘civilizing influence’ of British rule over the preceding century. Within a year of Queen Victoria’s death, amid a general flurry of projects for monuments and memorial halls in her honour, it was decided to appoint a fully qualified professional architect to the PWD to serve the Government of India as its own in-house architectural consultant. Over the course of the subsequent decade, with consulting architects to government already established in Madras and Bombay, similar appointments were made for the first time in each of the other provincial departments of public works throughout British India.

William Emerson,
Victoria Memorial
Hall, Calcutta,
1902–21.



This was a small but important victory for the architectural profession. Salaried employment in government service was frowned upon as professionally compromising.² But these appointments constituted the first general recognition of the integral role that architects might play in the building efforts of the Indian Public Works Department since its creation half a century before.³ Beyond the official sphere these architects would also prepare the ground in which the independent institutions of a modern architectural profession would eventually take root in India.

From the standpoint of the opportunity-seeking metropolitan architects who were recruited to these ostensibly powerful new positions in colonial India, imperial and professional agendas conveniently elided, though not necessarily with any concomitant ideologies. As the politics of representation superseded policies of social reform and technical development on the colonial agenda, the architectural design of the colonial built environment began to be perceived in the official mind not merely as a means of organizing space but also as a medium for selectively defining if not inventing the cultural identities of the colonial state and its indigenous subjects. Diverging tendencies in Edwardian architecture – from the enthusiastic quest for a modern imperial style to the neo-medievalist ideals of Arts and Crafts apologists – would be simultaneously and successfully promoted in the peripheral cultural context of colonial India, where the illusion of a timeless traditional Indian culture gratefully subjected to the worldly authority of its European overlords could be sustained only with ever more creative stagecraft.

Once the profession finally had its foot in the door of the Public Works Department it set to work securing its new niche: defining the boundaries of architectural expertise and thereby reclaiming the ground that had been co-opted by engineers, on the one hand, and by a highly opinionated officialdom, on the other, which presumed much the same despotic omniscience in matters of architectural design as it exercised in other areas of colonial policy.

The first appointed consulting architect to the Government of India, James Ransome (1903–7), was particularly unfortunate in this respect in that he had to contend with the unsympathetic architectural tastes of the exceptionally strong-willed and flamboyant imperialist viceroy, Lord Curzon (1899–1905). By all evidence, Ransome himself was a man of strong character and prejudice who arrived on the Indian scene determined to retain and protect his autonomy with regard to professional judgement and architectural taste. A staunch adherent to the ethic of a freestyle pragmatism, he was moreover determined to resist the formal conventions and any ‘exotic’ tendencies that the experience of Indian service might bring to bear upon his craft.

Within the first few months of his appointment Ransome made a point of visiting many of the principal cities and places of architectural interest in India. Eager as he was to learn what he could about the built heritage of the subcontinent, however, he evidently convinced himself that the mediocrity of the British building tradition in India stemmed from the softening of professional judgement that prolonged isolation from the progressive sophistication of the metropolitan building scene had brought upon PWD builders in the past. Wary of the same fate, he took an early opportunity to declare the principles with which he intended to develop a modern architecture suitable for India, 'rather than wait . . . until familiarity with the country shall have blunted the edge of [his] European proclivities'.⁴

In Ransome's view, the overriding problem that the builder faced in India was the extreme climate. This called for

utility, simplicity, and, as far as practicable, symmetry in design, boldness rather than prettiness, and restraint in the use of ornament which should always be the best of its kind. We do not want *repliquas* [sic] of buildings suited to other countries and conditions, but buildings which shall be as cool as possible and look their best under a blazing sun.⁵

The handful of buildings that Ransome managed to build in his problem-fraught five-year tenure in Indian service upheld his precepts of a freestyle pragmatism to the extent that they conspicuously rejected the grand manner of Renaissance-revival classicism of which the viceroy, Curzon – a champion of William Emerson's monumental neo-Palladian design for the Victoria Memorial, which had just started construction on the vast Maidan in Calcutta – was particularly fond.⁶

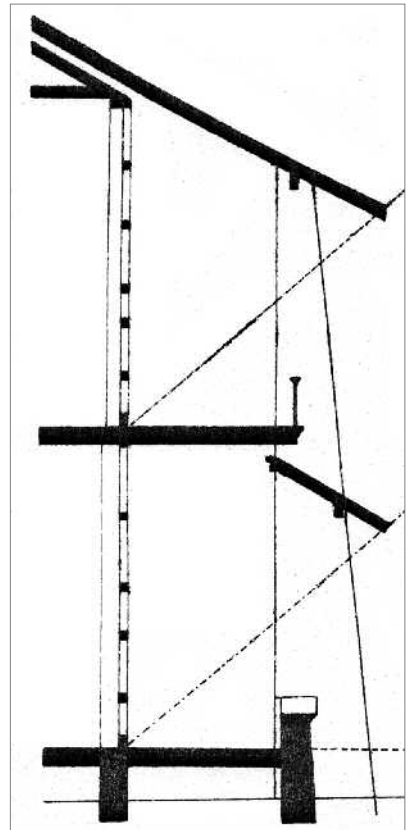
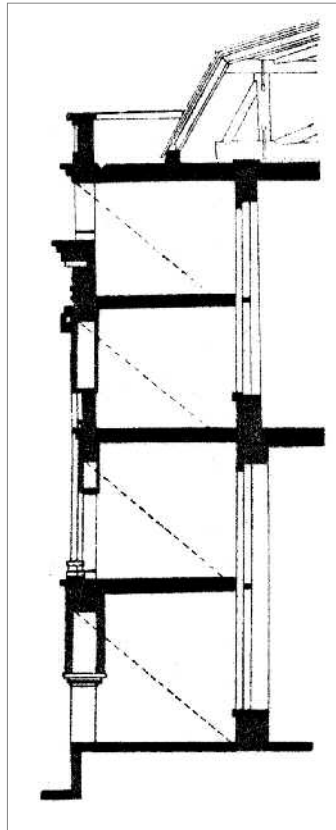
Ransome's 'European proclivities' got the better of his pragmatism, however, with his equally staunch resistance to any indexes from indigenous architectural prototypes and practices. The Taj Mahal was among the few Indian buildings for which he was willing to concede any admiration, and that on account of the transcendent beauty of its basic forms, independent of its ornamental detail. For lack of restraint in ornament, Ransome felt, there were virtually no other examples of native building that could provide precedents worthy of emulation.⁷

Unbending in his adherence to his functionalist principles, and his prejudices, Ransome stubbornly refused to adapt his designs to the grander architectural vision of the viceroy, and was very nearly relieved of his position before Curzon himself retired from the Indian scene.⁸ The colonial regime did not require modern architectural sermons on light,

James Ransome,
proposed Secretariat
for East Bengal,
Dhaka, designed
c. 1906.



Wall section details
from selected
submissions to a
design competition
for the Rangoon
Courthouse,
adjudicated and
published by James
Ransome in 1907,
illustrating his
concern for
'functional' responses
to tropical climatic
criteria.



space and air from its consulting architect. With the technocratic division of labour in the colonial administration, such technical aspects of environmental design and planning remained the responsibility of the PWD engineers. The doors of the department had been opened to architects in order to address the previously understated problem of representation. Those who succeeded Ransome would have to be more accepting of their effective role as salaried image consultants whose job was to tone up and consolidate the architectural identity of the British Indian regime as it moved beyond the roughshod utilitarianism of its nineteenth-century prime to the 'middling modernism' of imperial cultural production in the uncertain new century.⁹

Ransome's successor, John Begg, was better suited by both temperament and experience to exert and sustain a lasting impact on the system. While Ransome had been recruited directly from the UK, Begg was a veteran of imperial service, having already worked in India for six years as the consulting architect to the Government of Bombay (1901–7), with prior professional experience in South Africa as well. Begg was therefore wiser to the fact that his new role with the Government of India, beginning in 1907, would necessarily be that of a design educator and lobbyist, as much as an architectural designer. The common misconceptions he detected within the engineer-dominated PWD as to the nature and methods of architectural design were foremost among the problematic issues he set out to rectify upon assuming his office. To that end Begg used his official *Annual Report on Architectural Work in India* to articulate his professional views and the occasional tactful critique of the conventional design notions and methods of the PWD. 'To hand the architect a preconceived plan, however good,' he wrote, 'frequently gives his ideas a set in a certain direction that deters him from seeking a better [one] . . . while to tie him down to one is apt to be a hopeless handicap to his architectural treatment.'¹⁰

More than twenty qualified architects were to join the fledgling architectural branch of the Indian PWD during Begg's fourteen-year tenure at the helm. Most of these men functioned in a relatively independent capacity as heads themselves of the consulting architect's offices in each of the various provincial and territorial governments that comprised British India. Unlike the veteran Begg, however, these younger colleagues tended to be professional opportunists who evidently coveted their effective autonomy, demonstrating little loyalty to any standardized corporate vision of a modern British Indian architecture.

Through the medium of official correspondence and his annual reports Begg tried hard to exercise some influence on his colleagues' methods and standards of professional performance. 'In [the] struggle

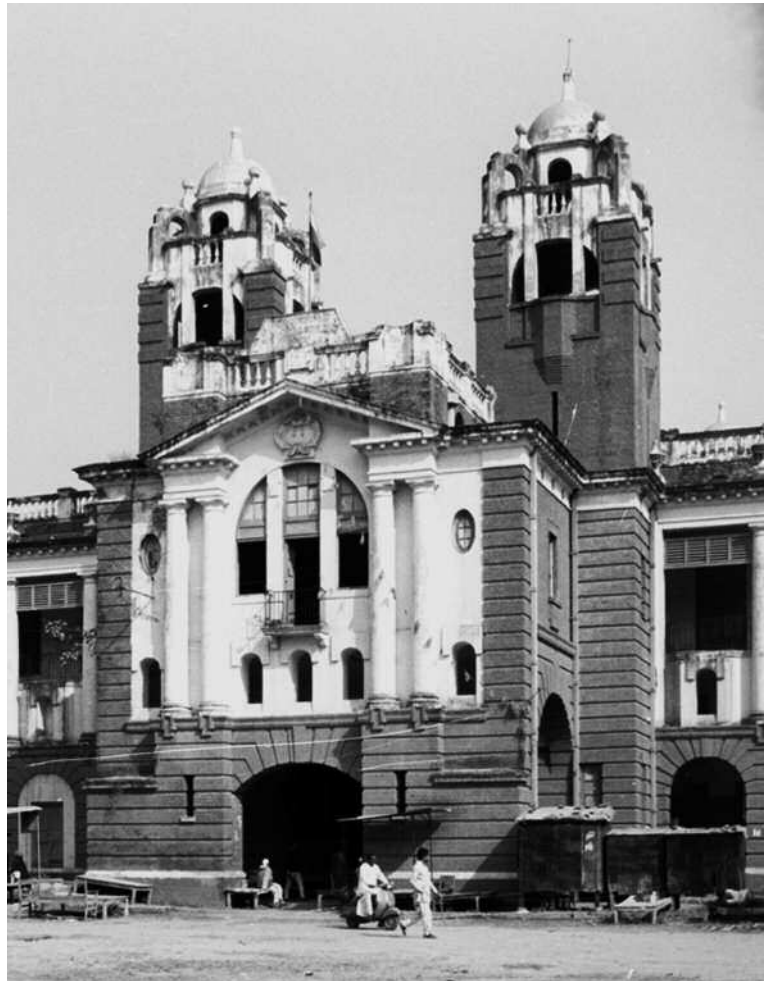
with conditions inherent in every problem', he argued, 'it is not the "free-hand" the architect requires so much as sympathy, confidence, appreciation and protection from non-professional and other irresponsible criticism'. While it was necessary to give each man a degree of individual expressive freedom, Begg still felt that there was something to be said for the old *esprit de corps* of the PWD engineers and the formal coherence of their built product. Recognition of the status and responsibilities of the architects within the PWD system depended in part on recognition and understanding of that system itself.¹¹

Begg and some of his junior colleagues – most notably his successor as the consulting architect to the Government of Bombay, George Wittet – were highly accomplished in the archaeologically correct representation of selected Indian architectural styles and details, their preferred approach to the design of important public buildings. They were, however, also adept at designing, when required, in the fashionable 'grand manner' of the Edwardian Baroque Revival. By the second decade of the twentieth century, however, the mature work of these official architects had gravitated towards a more demure freestyle derived from a broad palette of regional architectures that could provide rational solutions to the technical problems of building in a hot climate yet affirm the renewed convictions of the day in the universal applicability of the greater Graeco-Roman architectural heritage.¹²

Begg's Judges' Court at Benares and a stylistically related series of post and telegraph buildings he designed in the same period for various civil stations throughout British India and Burma illustrate his own affinity for the Byzantine branch of that heritage. As Chisholm and Emerson and their political patrons had argued previously in their pioneering experiments with a hybrid architectural expression for colonial-modern India, the Byzantine was a style that represented the pan-cultural imperial foundations of European civilization; at the same time it was the most 'Oriental' of the various branches that had grown directly from the seminal building principles and practices of the Roman Empire.¹³ But the government buildings and housing designed for the new provincial capital at Patna between 1912 and 1918 – not by Begg, but by one of his newest recruits, J. F. Munnings – were perhaps the most exemplary realizations in India of this broader tendency towards an understated 'International Style' of architecture for imperial purposes that was to find expression throughout the late colonial world of the early twentieth century, in the emerging twilight of European imperialism.

New Patna's planner and principal designer, Joseph Fearis Munnings, the consulting architect to the newly established province of Bihar and Orissa between 1912 and 1918, was a product of the British colonial

John Begg, Judges' Court, Benares, 1910–11.



empire himself. Brought up and initially trained in New Zealand, Munnings had been appointed to the British Indian pwp through the India Office in London, in 1909, after he had travelled to England to further his metropolitan work experience and sit the final examination for Associate membership in the RIBA.¹⁴ While deferential to the Indian climate and light in elegant yet practical features such as distinctively exaggerated classical cornices emulating the shadow-casting principle of the Mughal *chhajja* (overhanging awning or eave), Munnings's designs were no contextual pastiche, as much of the Indo-Saracenic architecture of the late Victorian Raj was now regarded by this new generation of



professionals and the more architecturally discerning senior colonial officialdom that followed in Curzon's wake. But neither, on the other hand, were they self-consciously monumental statements of the cultural alterity and authority of the colonial administration. Largely overlooked, with all the official attention and debates that surrounded the simultaneous design and construction of New Delhi, Munnings's New Patna was a confident, workmanlike product of the global diffusion of the contemporary design culture of the European imperial core, selectively and sensibly adapted to local materials and constraints.

Imperial Delhi

The building of the new imperial capital at Delhi was a project of unprecedented significance for the British colonial regime, in both political and architectural terms. First announced in 1911 in conjunction with the royal visit to India of the newly crowned king-emperor, George V, the decision to shift the Government of India from the urbane and cosmopolitan port of Calcutta – the original bridgehead for seafaring Britain's colonial economic domination of India – to the relative wilderness of Delhi was an extraordinary symbolic gesture intended to realign this almost accidental modern empire with India's 'glorious' legacy of previous imperial histories. At the same time, however, it was also a cynical political manoeuvre calculated to dodge and partially offset the political turmoil that had been instigated five years earlier by the ill-fated attempt to partition Bengal.

The decision of 1906 to divide the Bengal Presidency – the largest single fragment of the mosaic that comprised British India – had ostensibly been a pragmatic reform intended to rationalize the administration of the extensive and ethnographically diverse territory encompassed by the original presidency. But it was soon widely condemned by the emerging nationalist movement as a particularly blatant example of the colonial propensity to divide and rule. As agitation was growing in the new century for greater Indian representation in government and the executive ranks of the colonial public service, not only had the Bengal partition divided and consequently weakened one of the potentially most powerful political blocks, but it had also articulated diverging communal interests, in this case between the predominantly Muslim peasantry of eastern Bengal and the landed and increasingly urbanized Hindu elites of western Bengal. Such incitements to latent communalism were to have wider and profound implications across the whole of India in the ensuing freedom struggle. By 1911, however, confronted by increasingly radical and violent protest, it had been decided that Bengal itself would be reunited as a

Joseph Fearis
Munnings, Post and
Telegraph Building,
New Patna,
c. 1912–18.

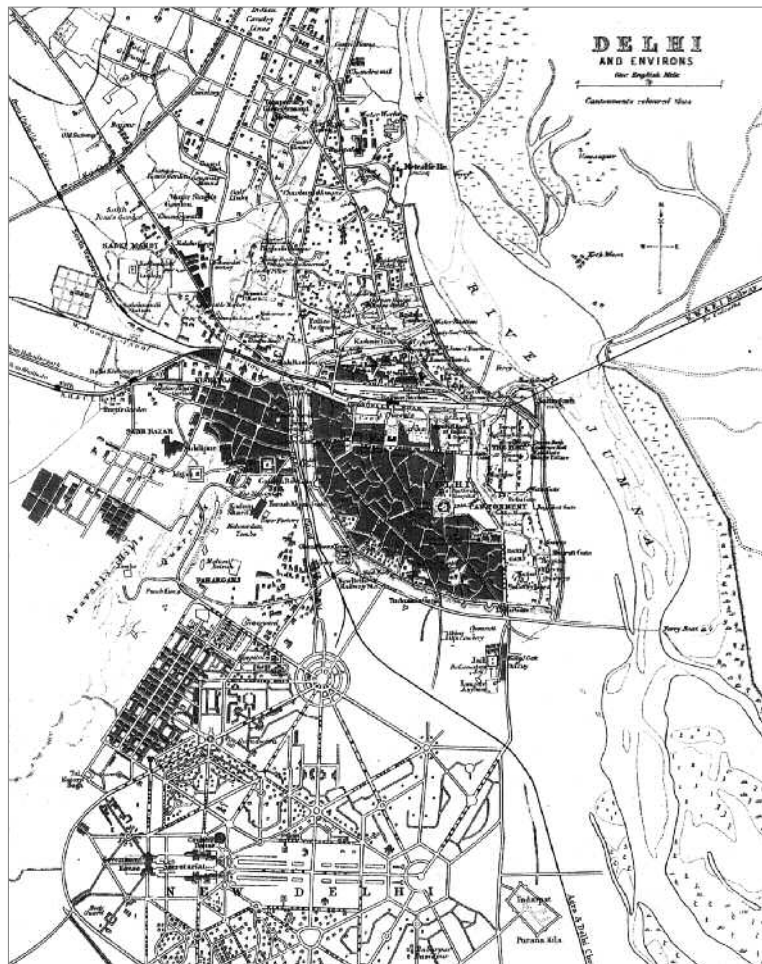
Joseph Fearis
Munnings, Senior
Government Official's
Residence, New
Patna, c. 1912–18.

self-governing province of British India, albeit without its former hinterland, which was now to become the autonomous provinces of Assam to its north and east, and Bihar and Orissa to its west.¹⁵ But the 'New Delhi' was the trump card in this apparent political backdown. The project for the new imperial capital effectively demoted Calcutta – erstwhile the imperial metropolis and the font of a cultural renaissance in modern Indian art, literature and spirituality, as well as radical political activism since the mid-nineteenth century – to a decidedly diminished provincial status. Simultaneously, it enabled the British regime to make a symbolically conspicuous new gesture of association with India's imperial past, and the loyal Muslim minority in particular, for whom the former Mughal capital had been the historic centre of power in the subcontinent and the apex of India's cultural as well its political glory during its long Islamic era.¹⁶

To measure up with that past Britain's Imperial Delhi would need, therefore, to be an undertaking of exceptional scale and grandeur relative to the colonial regime's usual parsimony, and it was hardly surprising that the question of how and by whom the new capital would be designed soon sparked heated debate not limited to the immediate professional circles concerned. Among the several accomplished architects already in government service in India, George Wittet, John Begg's able successor in the Bombay PWD, was mooted early on as a potential consultant with extensive local experience in realizing major public buildings. To Begg's considerable embarrassment as the official consulting architect to the Government of India, however, he himself was never even informed about the project by his superiors in Calcutta, who had soon arrived at the view of the India Office back in London that only the most highly regarded experts of metropolitan stature would be equal to the task.¹⁷

With the initial support of the disgruntled Begg, this assumption was passionately contested by E. B. Havell, the former principal of the Government College of Art and Craft in Calcutta (1896–1906) and a prolific promoter and historian of Indian art who had long championed the architectural art and 'paperless' mode of production of the traditional 'Indian craftsman-builder'. 'The question to be discussed is, not in what style, but by what method the new city should be built', Havell argued, 'the method of the modern architect . . . with pencil-trained mind and hands . . . or, the method that has given us Westminster Abbey, Saint Sofia . . . and in India the Taj . . . and the great public works of former times?' Havell articulated this view in the form of a petition that was submitted to the Secretary of State for India in London early in 1913, before any of the emerging plans for the new city had yet been set in stone. The petition was endorsed by an impressive list of literary luminaries and

elder statesmen of imperial Britain and India, including Thomas Hardy, George Bernard Shaw and Lord Napier of Magdala, son of the celebrated soldier-engineer Robert Napier, who had spearheaded the technical development of upper India in his early career.¹⁸ Evidently, however, such protests were never given serious consideration. By this time an official Delhi Town Planning Committee had already been dispatched to India and was well embarked on the master plan. After extensive consultation with relevant professional schools and associations in Britain, the final membership of the multidisciplinary team included Liverpool's chief municipal engineer and the chairman of the London County Council as the official committee head. But the effective leader quickly



Imperial Delhi, map c. 1931, showing the new British Indian capital laid out south of the old walled city.

proved to be the architect member, Edwin Lutyens, doubling in the role of town planner.

Emerging from the Arts and Crafts movement that had influenced his early work, Lutyens (1869–1944) had become an architect of choice among the British establishment by this middle stage of his career. This reputation rested almost exclusively on his distinctive designs for country homes and gardens in which he had begun to exhibit a decisive return to the order and mannerism of the English Renaissance tradition of Nicholas Hawksmoor and Inigo Jones as his formal inspiration. In the dawning era of radical internationalism in twentieth-century design and art in its various expressionist and functionalist manifestations, the emphatically conservative and nationalist propensities inherent in Lutyens's emerging mastery eminently qualified him to design the new imperial capital with the right sense of English pomp and certainty that the colonial regime imagined was required, in spite of the fact that he had no established town-planning expertise or prior experience in India or any other colonial context. Indeed, Lutyens's cultural chauvinism and his initial unapologetic disdain for India's architectural heritage echoed the uncompromising prejudices of the dyspeptic James Ransome a decade earlier. Ironically, however, it was the sophisticated synthesis of the Western classical canon with elements of Mughal, Buddhist and Jain architecture that Lutyens ultimately achieved in his monumental architectural commissions at Delhi over the subsequent two decades that was to secure his place in British architectural history as, probably, one of the most unorthodox and innovative masters of neo-classicism since John Soane.

Lutyens's master plan for New Delhi, laid out expansively immediately to the south of (Old) Mughal Delhi, was unequivocal – as a spectacular representation of British imperial power – in its formal juxtaposition of a classical sense of order and radiant space against the tightly packed insularity of the adjacent walled city. But, superimposed upon the familiar 'Garden City'-style apartness of leafy avenues and generously distributed residential compounds already long ingrained in colonial urban planning practice, Lutyens introduced the novel geometries and compositional principles of the contemporary Beaux-Arts-inspired 'City Beautiful' movement in European and American town planning. This drew him to align and elide the visual axes and symbolic scheme of the new city with the old, including the monumental ruins of its multiple earlier iterations, Afghan, Hindu and Buddhist, that were strewn across and beyond the site to the east and south.

In spite of Lutyens's avowed prejudices, his propensity towards a sophisticated synthesis of styles and symbolism was also manifested in the significant architectural commissions that he was subsequently to

Edwin Lutyens,
Viceroy's House,
New Delhi, 1912–31.



undertake in New Delhi, most notably the palatial ‘houses’ he designed, respectively, for the British viceroy and the Nizam of Hyderabad, the highest ranking of India’s princely rulers.

The notion of a Western architecture ‘imbued with a spirit of the East’ was a necessary compromise from the standpoint of the new capital’s political patrons, intent as they were on manifesting a certain ‘sympathy with Indian sentiment’.¹⁹ But Lutyens’s problem with this initially unwelcome constraint was exacerbated by the over-eagerness of his principal collaborator in the design of the major government complex, Herbert Baker, to give precedence to the symbolic function of the design over its artistic integrity. Not surprisingly, however, it was the latter’s approach that ultimately held sway. Baker’s more acute sense for the political art of compromise had been cultivated through extensive prior experience in British colonial Africa in the politically sensitive period of colonial reconciliation and expansion that followed the Boer War. This had culminated in his salutary design for the new seat of government for the Union of South Africa at Pretoria (1910–12) – an immediate precedent that had also secured him an equal seat at the drawing board as Lutyens’s unwanted co-consultant on the design of the capitol complex at New Delhi. Nevertheless, Baker’s bold, but clearly derivative designs for the north and south Secretariat Blocks were destined only to frame but never quite equal the degree of sculptural power and original stylistic fusion attained by Lutyens’s vice-regal palace.



Herbert Baker, Central Secretariat, North Block, New Delhi, 1913-31.

But equal, certainly, to the work of Baker if not the mastery of Lutyens himself was the individual work of the relatively unsung resident assistants in New Delhi to the two eminent metropolitan consultants. The Garrison Church of St Martin, for instance, designed in 1930 by A. G. Shoosmith for the New Cantonment southwest of the new capital, is an extraordinary essay in solid brick construction that could be described as a perfectly fused amalgam of Norman church and North Indian temple. Shoosmith was Lutyens's resident assistant from 1920 to 1931. Walter George and Henry Medd, respectively, were Herbert Baker's resident assistants over the same period. In such comparatively modest yet masterful individual commissions, including college buildings, travellers' hostels, multi-unit housing and St Martin's, along with several other of New Delhi's original church buildings and schools, Shoosmith, Medd and George worked architecturally to meld the monumental spectacle of New Delhi's capitol complex with the more normative building types for assembly, work and dwelling in which the new city would become an everyday lived reality

for its residents. Their work also served to extend and develop the attributes of the putative Lutyens-Baker style, and its echoes and affinities with contemporary work in the wider British colonial sphere of influence in Africa and the Middle East in the same period.²⁰

As a fellow old Africa hand resigned to his background role out of the design limelight at New Delhi, John Begg had fallen in behind the position of Baker by the time the substantive construction of the new capital was finally poised to begin in the early 1920s. In an address on recent architectural work in India that Begg delivered to the RIBA in 1920 while back in England on long service leave, he argued that the propensity to travel a sometimes difficult middle road in matters of architectural style and approach had gained a timely salience. In the aftermath of the First World War and the Russian Revolution it was the dawn of a new era, in his view, in which a global civilization was emerging that would necessarily oblige the existing imperial order to evolve. 'East and West are meeting', he declared, 'and to bring about that meeting is one of the chief justifications for our being in India. We may like it or not; . . . [b]ut . . . the tide of the world's history . . . is now turning towards all manner of unthinkable unifications, agreements and meetings . . . certainly so far as the domain

Walter S. George,
St Stephen's College,
University of Delhi,
c. 1938.



of architecture is concerned.' In the processes as in the forms that the architecture of modern India might follow, Begg argued, 'it was the day of . . . uncompromising middle positions, . . . not . . . for extremes'. The call to order that Curzon had tried to impose with his advocacy for the over-lording classical grandeur of monumental buildings such as the Victoria Memorial was one such extreme, which Begg equated with the 'autocracy [and] military imperialism' that had so recently led the world to war. But Begg had now come to regard the crafts lobby in India as the other prevailing extreme in the current discourse about a modern Indian architecture. The notion that the genius of future Indian architecture lay exclusively in the skills and artistry of the traditional Indian builder was, frankly, 'Bolshevistic', he charged, seizing another timely political analogy calculated to alarm his conservative professional audience. Begg pursued these analogies to align his own vision of the instrumental engagement of the discerning colonial professional between these extremes, 'on the lines of a sane democracy'.²¹

As Begg prepared to head back out to India to resume his duties, he predicted boldly 'a great future for architecture and architects out there', hopeful of recruiting new colleagues to join in the cause of colonial government service. But Begg had not anticipated fully the more direct implications of the ongoing political and administrative reforms in British India of which he spoke with such conviction, and presently he himself was to be retrenched.²² Indeed, Begg's post as consulting architect to the Government of India had already been substantially superseded by the successive appointments in 1914, 1917 and 1919 of three of his former subordinates, W. H. Nicholls, E. Montague Thomas and Robert Tor Russell, as the local architect members of the Imperial Delhi Committee and effective consulting architects to the special branch of the PWD (later to become the Central Public Works Department) that had been set up to expedite the construction of New Delhi. By contrast to Begg's all-India aegis, however, these men were only to be concerned with the fleshing out of the mundane building stock of the new capital. By the time that Lutyens's and Baker's imperial acropolis was complete, in 1931, the handful of qualified British architectural professionals remaining in the service of the colonial government were wanted only as conservators of these monuments and the leafy city that had been set out at their feet. As far as the British Empire was concerned, it had finally produced an architectural legacy that future historians could compare favourably with the remains of the Buddhist, Hindu and Muslim empires that had preceded it. It could now anticipate an honourable retirement from the stage.

Architecture, Art and the Nationalist Resistance

If the 'City Beautiful' planning of the new capital and its monumental architecture were the ultimate cultural statements of British imperialism in India, it is not particularly surprising that the emerging nationalist opposition chose to identify its cause with a distinctly more humble notion of practical building and settlement planning. But in this 'functionalist' sense, along with its inherent symbolic resistance to the status quo, it was arguably a more modern approach to design as well.

E. B. Havell's ill-fated attempt to enable a generative design process in the building of New Delhi that would be authentically indigenous in method, not just a stylistic pastiche, was one of the last significant instances in which the philosophical influence of the English Arts and Crafts movement had been expressed more or less directly in British India. These ideals, however, were to sustain their impact and polemical sense of urgency well into the new century through the publications and teaching of Havell, his fellow polemicist and scholar of Asian Art, Ananda Coomaraswamy, and other like-minded art and architectural educators across India who sought to instil in their Indian students a more comprehensive and critically discerning appreciation of their own heritage, one that would overcome conventional biases and offer lessons for contemporary creative work. These included some of Havell's own former students in the Calcutta art school, such as Nandalal Bose, who went on to become influential mentors and teachers themselves to the next generation of self-consciously 'modern' Indian artists and architects that began to emerge in the 1920s. Originally associated with the so-called Bengal School of painters, Nandalal was subsequently to play a crucial role in developing the environmental aesthetics and ethos of Rabindranath Tagore's experimental university at Santiniketan in rural Bengal, which was to become one of the most dynamic sites in late colonial India of aesthetic experimentation and engagement between the idea of an indigenous modernity in art and design and the broader intensifying movement for political self-determination.

The poet Rabindranath Tagore (1861–1941) was another of the extraordinary humanists and social reformers to emerge from the paradoxical modernity of colonial India in the early twentieth century. Comparable to his contemporary Mohandas Gandhi in terms of their many shared ideals as well as global stature, Rabindranath was awarded the Nobel Prize in literature in 1913 – the first non-European recipient in the history of the prize – and was also recognized as a radical educationist and environmentalist, and later in his long career as a notable artist as well. Through Tagore the self-consciously critical, non-Western stance

of the Bengal School – with which he and other members of his artistic family were closely associated – was to earn international attention. The latter movement had emerged from but rejected the academic realist tradition in the visual arts that had been taught in the colonial government schools of art established in the nineteenth century. Alternatively, they had turned to the wealth of other ways of seeing that were inherent in the artistic traditions not only of India but also of other great Asian civilizations as well, from the antiquities of Buddhist Ceylon to modern Japan. In the context of India's intensifying freedom movement, the emergence of the modern Japanese empire was particularly influential as an exemplar of the potential cultural and political potency of a resurgent Asia, especially after Japan's decisive military victory over European imperial expansion in the Sino-Russian War of 1905. In the sub-circle of artists including Nandalal Bose who became closest to Tagore, however, the work consciously eschewed a tendency towards a dogmatic neo-Orientalism. While it drew predominantly on the iconography of popular Indian religion and folklore for content and inspiration, vigorous formal experimentation with primitivism in graphic technique and media was equally and openly engaged with a more cosmopolitan artistic discourse and the analogous experiments of the European avant-garde. Tagore's own drawings and paintings, for instance, were characterized by an introspective primitivism that effectively inverted the formula, employing graphic ideas closer to the contemporary Expressionist and Surrealist art of western and central Europe to explore emotional and psychological intangibles that had eluded the literary formalisms of his earlier poetic efforts to translate the mystical wisdom of 'Eastern' thought into English. Indeed, strong affinities with the parallel search of avant-garde European artists such as Paul Klee, Wassily Kandinsky and Johannes Ittens associated with the radical integrated design curriculum of Walter Gropius's newly established Bauhaus design school at Weimar were to lead, significantly, to reciprocal exhibitions of the Bauhaus artists in Calcutta in 1922, and of Tagore and the Bengal School painters in Germany, for the first time, in 1924.²³

Despite the cosmopolitan idealism evoked by Tagore's artistic affinities, however, his pedagogical philosophy and associated ideas about environmental design were underpinned by a deep antipathy to what he regarded as the iniquitous mode of modernity inherent in the urban culture of colonial India. This was epitomized by the socially and racially segregated metropolis of Calcutta in which he had been brought up, albeit as a member of one of its most powerful and privileged indigenous business families.

Since the late nineteenth century (and before the rise of Mohandas Gandhi with his return to India from colonial South Africa in 1915)²⁴ the so-called Tagore Group had represented the ideological middle ground between moderate and more radical positions in the growing movement for cultural and political reform. As early as the 1870s the Tagores had been among the Bengali business elite who had begun to challenge economically exploitative colonial trading policies by preferentially producing and consuming only local crafts and goods. But by the turn of the twentieth century the neo-Orientalist aesthetics and cultural focus of the subsequent generations of artists and intellectuals associated with the wealthy Tagore clan had served to ennoble the notion of *swadeshi*, or home craft, as a broader, more holistic metaphor for self-help and autonomous development in spite of the continuing colonial presence.²⁵ Beyond the realms of economics and politics alone, as Coomaraswamy argued, *swadeshi* had become 'a religious and artistic ideal' that was contributing to the 'regeneration of India through art'.²⁶

This ideal was most emphatically pursued through a series of pedagogical experiments that Rabindranath Tagore conducted over the first two decades of the twentieth century in the Arcadian isolation of Santiniketan, a small Bengali village where his family owned an estate. Here Tagore was to develop the anti-urban ideal of a more holistic and environmentally engaged culture in which the mind and values of the autonomous modern Indian subject could best be formed. These experiments were ultimately to culminate in the alternative curriculum and learning environment of the Visva-Bharati University, formally established at Santiniketan in 1921. With its experimental school of art, the Kala Bhavan, led by Nandalal Bose, on the one hand, and its adjoining agricultural department and institute for rural reconstruction, on the other, the new university privileged the cultivation of a combination of aesthetic and practical knowledge in which students learned, not through bookish academicism, but by doing.²⁷ The approach had notable philosophical similarities with the applied curriculum of Gropius's Bauhaus, established in Weimar Germany in the same year. While these affinities were to be explored in the subsequent dialogue with the Bauhaus artists, however, the primitivist environmental aesthetics cultivated in the buildings and rustic village-style campus that began to be developed at Santiniketan in the 1920s were conspicuously opposed to the urbane machine-age style of functionalism espoused in the iconic buildings that Gropius designed in the same period for the new Bauhaus campus at Dessau.

At Santiniketan building was the primary responsibility of Surendranath Kar, an artist and cousin of the art school director, Nandalal Bose.²⁸ In his association with Tagore and the Bengal School, Kar had travelled



Surendranath Kar, campus for Rabindranath Tagore's Visva-Bharati University, Santiniketan, Bengal, 1919–39.

extensively to observe traditional arts and architecture throughout India as well as Java, Japan and Europe, and these pan-Asian influences, in particular, were reflected in Kar's work as an artist-builder. In the many modestly scaled but often playfully eclectic buildings he produced over the next three decades for the rambling, tree-shaded campus at Santiniketan, Kar experimented freely with a mix of forms, construction materials and details drawn from different regional and cultural building traditions.

An important cluster of these buildings by Kar was a series of five progressively more ascetic houses built between 1919 and 1939 for Rabindranath Tagore himself. One of the last of these houses, Shyamali (1935), was of mud construction and harked back to simpler, ephemeral structures associated with village life in ancient Vedic times, as these had been depicted in Buddhist carvings and cave temples. Intended as Tagore's final dwelling in old age, this coarse yet symbolically self-possessed little

structure spoke directly to the *swadeshi* ideals and practices that both Tagore and Mohandas Gandhi had come to stand for by this time, as doyens of the resistance to colonial rule. Appropriately, since it was ultimately little used by the poet himself, it came to serve alternatively as the designated guesthouse for Gandhi on his occasional visits to Santiniketan.

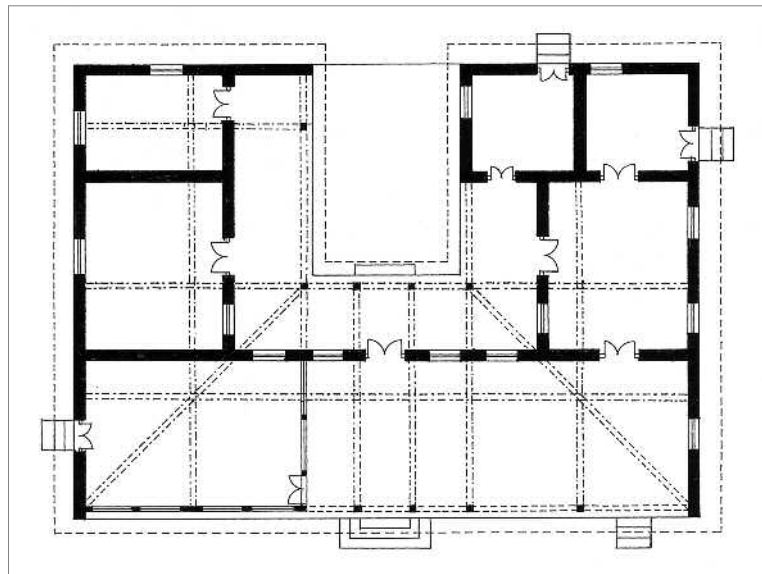
Clearly, there were strong parallels between the environmental primitivism that was pursued in the buildings and the decorative art and design practised in Tagore's rustic university, and the ascetic simplicity of means and needs that Gandhi and his followers were experimenting with, both practically and symbolically, in the communal life of their ashrams during the same period. But there were important differences as well. While the aristocratic Tagore had effectively led a proverbial 'retreat to the forest' at Santiniketan, where alternative aesthetic sensibilities and practices could be cultivated, Gandhi's commitment to both symbolic and direct political action was to have a much broader impact on Indian society as a whole in the final struggle for freedom from colonial rule. The Gandhian approach to building was, similarly, more engaged with and attentive to the actual cultural practices that built environments tended to frame and support, and the social change that could thereby be proactively compelled through critical attention to matters of design and construction. The unassuming buildings that were designed for Gandhi at his Sabarmati Ashram, established in Ahmedabad in 1918, and his later Sevagram Ashram (1936) at Wardha, Maharashtra, in the geographic heartland of rural India, had none of the whimsy of Kar's aristocratic folk idiom, whose primitive follies perhaps best served the conscience of their elite patrons rather than popular or strictly practical need. Indeed, in addition to the Tagores, Kar was subsequently to enjoy the patronage of other elite family and institutional clients across the country. These included the Theosophical Society, the influential pantheistic spiritual organization whose international headquarters were established in suburban Madras, and the powerful mill-owning Sarabhai family of Ahmedabad who were among Gandhi's staunchest patrons in Gujarat. In 1936, just a year after Kar had built Tagore's Shyamali, the Sarabhais commissioned Kar to build their joint family mansion, 'The Retreat', in their private family compound adjacent to Ahmedabad's leafy colonial cantonment.²⁹

By contrast, Gandhi's buildings were a purposeful and often innovative redeployment of the building materials, techniques and planning principles of the local vernacular to engineer social and behavioural reforms among the occupants while preserving sustainable ecologies and economies of scale. In Gandhi's quarters at the Sabarmati Ashram, for instance, practical spatial inefficiencies along with notions of privacy and



House for Mohandas
K. Gandhi, Sabarmati
Ashram, Ahmedabad,
c. 1918.

House for Mohandas
K. Gandhi, plan.



social privilege embodied in the conventional cellular pattern of enclosed rooms were simultaneously challenged by reducing the interior to simple partition walls and storage units between deeper front and back verandas, while sanitary arrangements intentionally broke caste taboos by obliging all members of the ashram, including Gandhi himself, to maintain their own toilets.³⁰

In this instrumental way the Gandhian sense of design was far closer to the most radical elements of contemporary socialist architectural and planning thought in Europe and the Soviet Union, which had consciously transcended the sentimental aestheticism latent in the various crafts and romantic nationalist movements of the late nineteenth century from which it had emerged. In this same genuinely functional sense – which can also be seen to have prefigured the deeper ecological stance of later post-functionalist approaches to more holistic and sustainable ways of building – these earliest experiments of the nascent Gandhian school within modern Indian architectural thought also contrasted dramatically with the urbane functionalist aesthetics with which the contemporary architectural profession, now formally established in India, had begun to expand and restyle the built fabric of late colonial India's cosmopolitan metropolises by the early 1930s.

Metropolitan Modernism

Before the transfer of the capital to Delhi, Calcutta had held first rank as India's most populous and politically powerful metropolis. But ever since its rapid rise as a commercial metropolis, beginning with the cotton boom of the 1860s, India's principal western port, Bombay, had distinguished itself as a leading centre of patronage, both public and private, for progressive architecture and urbanism. Although Madras had also been a focal point of some of the most remarkable patronage and stylistic innovation in the architecture of High Victorian India, by the early twentieth century the rate and scale of commercial and associated urban development in the south had fallen well behind the northern ports.³¹ Significantly, reflecting the particular concentration of demand, it was in Bombay that India's first fully accredited course of professional training in architecture was established, and following from that the institutional apparatus of an autonomous and formally organized profession.

It was Bombay's dynamic commercial sector, in which enterprising Indian businessmen had long been competitive trading partners and rivals to British commercial interests, that had been the most sustained and consistent driver of demand in Bombay for architecture worthy of an aspiring modern metropolis. Nevertheless, Bombay's role in the

establishment of the educational and institutional foundations of India's modern architectural profession was still essentially a government initiative. Spearheaded by the architectural branch of the Bombay PWD, these developments were a further reflection of the belated architectural turn of the colonial regime and its recognition of the increasingly acute need for a higher order of architectural skills and knowledge than had previously sufficed.

While formal engineering education had been available in India since the 1840s, what little additional architectural training aspiring aesthetes within the Public Works Department system had received had been imparted only on the job, without the benefit of official approval and the necessary time and resources. Even in Britain, the notion of an academically based architectural education had started to be accepted only after the redoubtable Professor Banister Fletcher had begun a three-year architectural course at King's College, London, in 1892, and it was almost another decade before the first full-time degree course in architecture was established at the University of Liverpool in 1901.³² Building on a more basic technical course in architectural draughting that had been launched by his predecessor, John Begg, the four-year architectural curriculum that George Wittet began to deliver at the Sir Jamsethji Jijibhai School of Art (J. J. School) in 1908 was therefore a relatively progressive venture by British imperial standards. Wittet was the consulting architect to the Government of Bombay, and his original course, largely taught by himself with the support of other qualified members of his staff, had been intended in particular to remedy the paucity of appropriately skilled architectural assistants available for service within the departmental system. Parallel demand, however, from the growing number of private architectural and engineering firms soon resulted in the further development of the course into a full five-year professional diploma programme. This had already been recognized by the Royal Institute of British Architects by 1920 with exemption from the intermediate RIBA examination, the first such programme outside Britain to earn this privilege, gaining full RIBA accreditation by 1929. J. J. School graduates were subsequently recognized to be fully qualified to sit the final RIBA examination by which Associate membership in the pan-imperial professional institute was secured, and which, from 1930 onwards, was offered in Bombay itself, no longer obliging candidates to make the long sea journey to England to complete their qualifications. Together with their teachers, including a growing proportion of lecturers and tutors from private firms, it was the first generation of graduates from the J. J. School who were to form the nucleus of the Indian Institute of Architects, which was formally established in Bombay in 1929.³³



John Begg (seated front centre), George Wittet (seated front right) and staff of the Public Works Department, c. 1904.

With its effective monopoly on architectural education in India in the final years of the colonial era,³⁴ the J. J. School course had far-reaching implications for the subsequent development of the new profession and the emerging debate about just what a 'modern Indian architecture' could or should be. Under Wittet's initial lead and example, the new art-school-based course had begun to set the discipline of architecture on an independent footing that would distinguish it, in the context of colonial India, from the technical priorities of the engineer, while subsuming relevant aspects of the latter within the broader professional ambit of the architect idealized as a master builder. But the latent Arts and Crafts values with which cognate skills in technical drawing and architectural sculpture had been taught to previous generations of students at the J. J. School had not yet been fully transcended in a curriculum that still had the primary aim to produce craftsmen-like architectural technicians rather than fully fledged autonomous architectural professionals, who could selflessly assist their British bosses in knitting together the synthesis

of Indian and European building traditions that colonial technocrats had come to favour as the appropriate style to represent Britain's fundamentally conservative interests as an imperial power in India.³⁵ While actual opportunities for highly coveted jobs in colonial government service (despite limitations to professional advancement) were still relatively few, most of the J. J. graduates were to find employment as the equivalent subordinate service corps of the growing number of private architectural firms. These were primarily British-owned and directed before the 1920s, but were thereafter to include a growing proportion of Indian associates and, eventually, fully qualified principals.³⁶ Under the subsequent direction of Robert Cable (1913–23), who was recruited directly from the Architectural Association School in London, and Claude Batley (from 1923–43), a principal of Gregson, Batley & King (GBK), one of the most prolific commercial firms practising in Bombay and India-wide in the first half of the twentieth century, the J. J. curriculum was to move progressively closer to the more comprehensive and universally applicable professional norms and aims espoused by the RIBA. Nevertheless, the ethos of corporate service that remained instilled in the colonial context in which the first generation of Bombay-educated architects completed their practical training was perhaps inevitably to mediate the imagination as much as the making of the architectural designs they produced, complicit or contradictory as they could appear to be in the ambiguous twilight of the colonial era relative to the competing criteria of their clients. The latter ranged from local government and public institutions, to multinational banks and corporations representing capitalism on an imperial scale, to enterprising Indian businesses and institutions aligned with the nationalist cause.

As the influential pedagogue that he became over the three decades that he led the J. J. curriculum, Claude Batley maintained a principled view that the architecture of modern India had to be rooted in its own context, not least the rich architectural legacies of India's past. But no more, in his view, should faddish modern styles be imported slavishly from elsewhere, or an authentic contemporary architecture be generated merely by mimicking traditional styles and historical precedents in an equally uncritical manner. Measured drawing and quasi-archaeological field studies of historic and vernacular buildings became a core element of Batley's curriculum, a practice that many later established Indian architectural schools were also to emulate. The purpose, however, of such documentation exercises was to develop skills of critical observation and rational analysis in interpreting what Batley called the 'design development of Indian Architecture', with the longer aim of cultivating architectural professionals who could extrapolate from the past and design

B. L. Dhama, plate showing traditional Indian architectural details, c. 1940s, typical of the measured drawing method that students of the J. J. School of Art were taught under Claude Batley between the 1920s and 1940s.

novel but appropriate responses to the changing contexts and needs of the modern Indian present. Such solutions would necessarily be derived from a discerning appreciation of the principles rather than just the patterns of past traditions.³⁷

But practice was cause for some inevitable compromise from such ideals, not least in the work of Batley's own firm, GBK, and its immediate Bombay-based competitors, in the employ of which many J. J. graduates were to gain their initial practical experience. The broad spectrum of work produced by GBK exemplified the pluralism and relativity of architectural taste in the metropolitan marketplace of colonial-modern India. The partnership was established in Bombay in 1917, and its early work, such as Gregson's Imperial Bank of India (completed in 1924), was aligned with the Renaissance revival freestyle that the PWD – still the primary competitor of the newly established private firms – had come to champion under Begg and Wittet in particular.

By the 1930s, however, works such as GBK's stripped and streamlined Electricity House office building in Ahmedabad were exhibiting distinctly more contemporary international influences, while the firm's competition-winning design for the nearby Ahmedabad Town Hall (c. 1938) was more ambiguous in style, albeit equally progressive in form and structure. Here a distinctive octagonal concrete dome was nested on a massive brick base stripped of conventional ornamental references to its underlying classical *parti*. With its bold massing and unadorned materiality, the proto-Brutalist expressionism of the building echoed a number of possible early modernist precedents from Wright to Berlage, Behrens and Poelzig that had now entered the mill of conventional architectural invention in the globe-spanning imperial field of architectural practice in the interwar years. But the somewhat tentative appliqué of delicate stone *chajjas* and brackets (in lieu of classical cornices) modelled on the climatically responsive detailing of the local Gujarati architectural heritage indicated a confluence with more immediate design precedents as well, including the hybrid vein of Anglo-Indian neoclassicism that had most recently been concocted at New Delhi by Lutyens, Baker and their collaborators.

If this local/global contest of form and detail was not yet fully resolved in the Ahmedabad Town Hall, later work by the firm offered a more straightforward and balanced compromise. In the Bank of India Building built in Bombay in 1944, a generic classical schema and planning rationale continued to provide syntax, but semantics were now given over almost entirely to Indian content and style. This project was primarily the work of the newer Indian partners in the firm – the first of whom, Kumar Ramsinh, had been admitted in 1936³⁸ – and seems to have reflected a

Gregson, Batley
& King, Town Hall,
Ahmedabad, 1938.



gentlemanly accord within the practice that their transparently hybrid and collaborative architectural output should represent the mutual interest and respect that was embodied in their professional partnership and the ideal that evidently they shared, that a modern ‘Anglo-Indian’ cultural fusion was both feasible and sustainable. Indeed, many of the Indian members of the firm had come to work for GBK having studied previously under Claude Batley, for whom these were core ideals.

Considered in the particular context of late colonial India, Batley’s ostensibly conservative notions about the proper education of the modern Indian practitioner had sought to transcend the limitations of the Indo-Saracenic design method of the amateur revivalist, Swinton Jacob, without resorting to the uncritical essentialism inherent in the more fundamentalist mode of Orientalism that had been espoused by Havell and the artistic avant-garde associated with the Government College of Art and Craft in Calcutta, the principal institutional rival of the J. J. School in Bombay.³⁹ Examined in the larger context of architectural education and practice in the global framework of the British Empire at its zenith, however, the J. J. School’s RIBA-accredited curriculum in which Batley’s ideals had been instilled was a model example of the ‘double-end’ at which formalized architectural training across the empire now aimed. Side-stepping the more fundamental debate between modernists and classicists in interwar Europe in a modified version of the dominant Beaux-Arts method in which elements of the independent English crafts tradition had been absorbed, it posited a universal system of spatial order

Gregson, Batley & King, Bank of India, Fort, Bombay, 1938, detail of street-level arcade.

and tectonics, 'classical' or 'modern' as the situation dictated, that was always to be adapted stylistically to local environmental and cultural parameters to achieve both practical and political utility.⁴⁰

If the Anglo-Indian firms were to hold, on the whole, to this tactical middle position, the growing number of independent Indian practitioners and firms tended to align themselves with one or another camp in an increasingly polarized spectrum of responses to the question of modern Indian architecture. On the one hand were the revivalists, on the other those who sought to don the new garb of modernity but without necessarily abandoning all the familiar values and practices that lent order and coherence to everyday life.



For those in the revivalist camp the only true path for Indian architecture was to make the same decisive return to indigenous aesthetics and method that had earlier allied the painters of the Bengal School with the nationalist cause. To be fully autonomous, they argued, a decolonized India would need to regain and revalue its own endogenous sense of the built forms and spatial order in which Indian society could be whole and fruitful again. A passionate and influential advocate for this cause was Sris Chandra Chatterjee, both an architect and an engineer as well as an active Congress Party member who served in the 1930s on the National Planning Committee chaired by a future prime minister, Jawaharlal Nehru. Chatterjee had cut his teeth professionally in the 1920s in the Bengal PWD, and subsequently in the service of the princely Rajput state of Bikaner, where Swinton Jacob's work and methods had been highly influential, and his revivalist rhetoric echoed the long line of paternalistic British advocates for a neo-traditional Indian architecture from John Lockwood Kipling, via Jacob, to Havell.⁴¹ But beyond the predilections of his early professional experience in Jacob's wake, Chatterjee's deeply felt convictions were also inspired by a series of important archaeological findings in the Indian subcontinent in the 1920s.⁴² Analogous to the excitement over concurrent new excavations in Egypt that had influenced the nascent Art Deco style in America and Europe (although Chatterjee was particularly critical of the impact of this fashionable foreign import

Sris Chandra Chatterjee, Lakshmi-Narayan Temple / Birla Mandir, New Delhi, 1933–8.



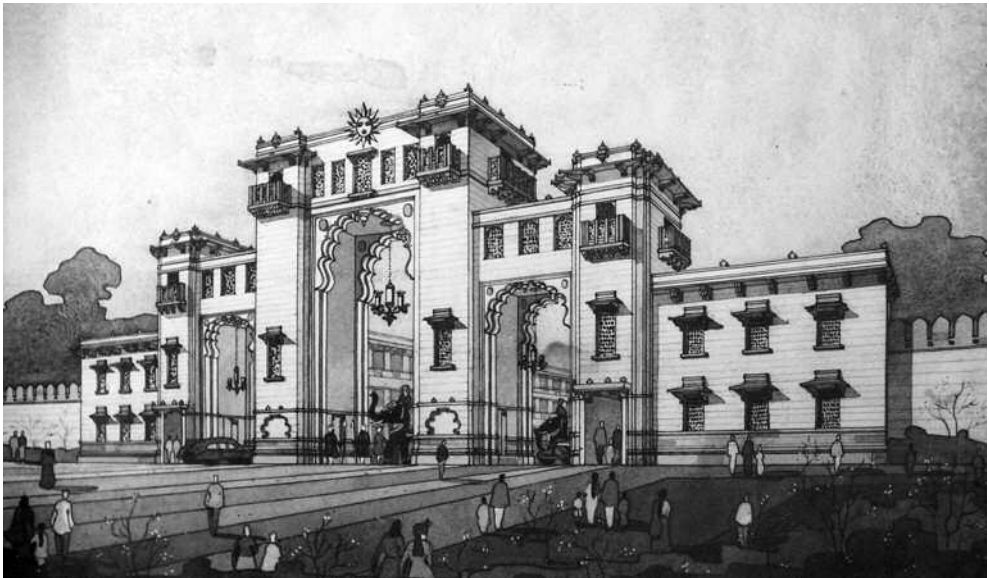
on India's evolving design scene of the 1930s), the celebrated Indus Valley digs at Harappa and Mohenjo-daro, among other locations, had provided empirical evidence to support the view that ancient India had also been one of the great original fonts of civilization. Not only had it profoundly influenced other later cultures, but it was also now clear from the archaeological record that original building and settlement planning practices, among other discernible traditions, had survived for millennia before the modern era of colonization (Muslim as well as European) in which they were at risk of eclipse. As Chatterjee argued in a series of passionate quasi-theoretical tracts published in the 1940s and 1950s, it was the almost sacred obligation of his generation of 'modern Indian architects' to revive those building traditions and their cultural meaning.⁴³ Beyond the romantic ad-hoc-ism of Surendranath Kar's

approach, Chatterjee called for a more thorough and canonically correct return to ‘Indian architectural composition and construction’. But ‘composition’ was the clear priority in representative works in this genre, such as Chatterjee’s own design for the Lakshmi-Narayan Mandir built in Delhi between 1933 and 1938, commissioned by the Marwari industrialist Raja Baldeo Das Birla. While the extensive veneer of intricately carved stonework was carried out by traditional artisans under the direction of a master *mistri*, the mass and structure of this monumental modern temple – one of many such progressive, caste-free Hindu temples endowed across the country by the wealthy Birla family in the following decades – were relatively quickly erected in conventional bricks and mortar. Nor was Chatterjee, the former PWD engineer, averse to using reinforced concrete in a number of his later designs.⁴⁴

With the empathetic backing of conservative elite, religious and institutional patrons and, at least initially, the non-committal blessing of Nehru and other senior nationalist politicians, the revivalist cause continued to have a significant influence on Indian architectural debate and production in the final years of colonial rule, and into the early post-Independence era. Yet relatively few within the profession were as ideologically committed as the Calcutta-based Sris Chatterjee.

Two relatively later revivalist designs (c. 1940s) by L. M. Chitale, one of the first RIBA-qualified Indian architects to establish an independent practice in Madras, suggest the growing ambivalence to tradition of the

L. M. Chitale,
proposal for Suraj
Pole Gate, Udaipur,
1948, rendered
perspective.



L. M. Chitale,
proposal for a
memorial shrine,
Varkala, Travancore
state, c. 1948,
rendered perspective.



generation of architects who were to lead the profession out of its inter-dependent relationship with the colonial status quo. A proposal for a monumental new gateway for the royal city of Udaipur in Rajasthan – still at that time an independent princely state – hints at an impending rupture.⁴⁵ In Chitale's skilful watercolour perspective, the bold shafts and beams of the trabeated structure seem to bear the regionalist appliqué of filigreed arches, *jharokkas* (bays) and *chajjas* (sun shades) grudgingly, and an exiting royal elephant competes for egress with a late model sports car and modishly clad pedestrians pressing in upon the gate to the city. In Chitale's contemporary proposal for a memorial shrine and adjoining monastery in the southernmost princely state of Travancore, this tension is not so much relieved as abated by drawing an unequivocal stylistic distinction between the traditionally composed and sculpted central memorial in canonical Dravidian style, and a pair of framing office or hostel blocks stripped bare of all ornament, if not overtly 'functionalist' in their starkly straightforward treatment. In later partnership with his son, S. L. Chitale – an early post-Independence graduate of the J. J. School – the Chitale firm was subsequently to be recognized as one of the pioneering modernist practices in the south.

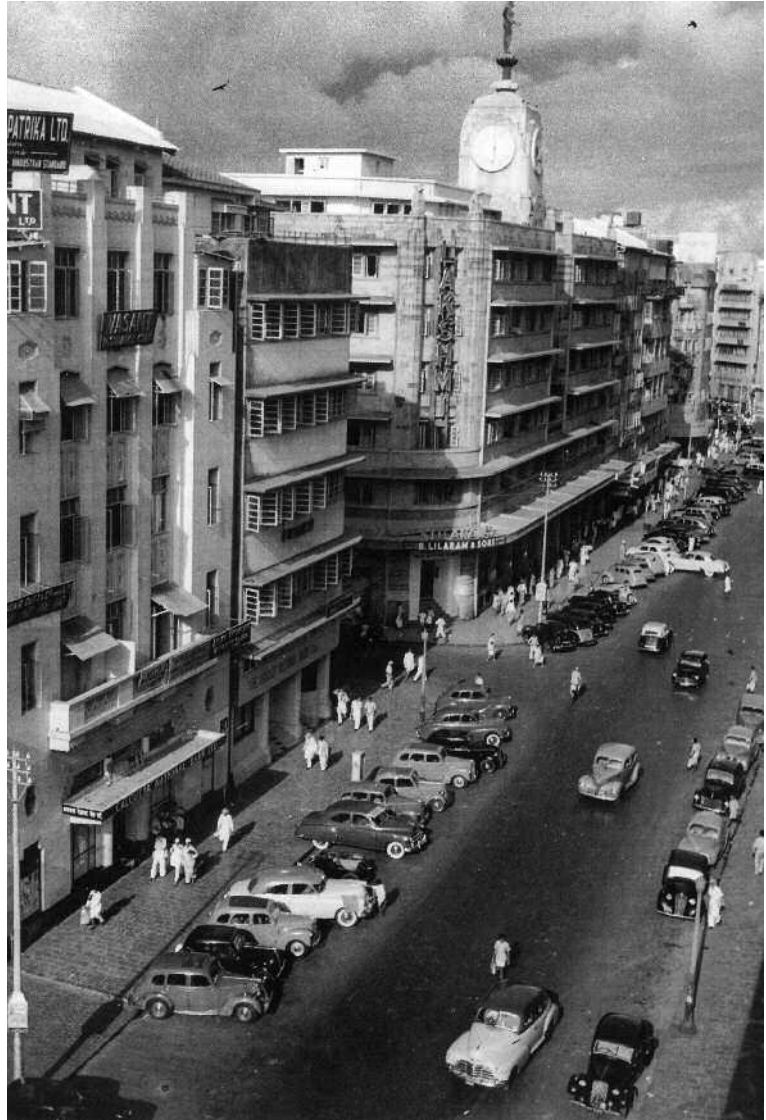
Back in Bombay the large majority of the growing number of qualified Indian architectural professionals now established in private practice had long since planted themselves unambiguously in the camp of a more forward-looking modernism, with no shortage of like-minded patrons. Progressive corporate clients recognized the potential of architecture to represent the growing power and respect that they confidently wielded in the changing economy and society of early twentieth-century India as



Master, Sathe & Bhuta, New India Assurance Building, Bombay, 1935, facade detail.

the awakening nation's self-made business elite. Foremost among these was the powerful Tata Group, whose founder, Jamshedji Tata, had circumvented colonial economic policy, with the help of consulting American experts, to spearhead the development of India's own home-grown steel industry.⁴⁶ By the 1930s the Tata Group was becoming an empire in its own right; it was keen to exploit the opportunity further to define and build its brand as a worldly and progressive business leader through the architecture of the increasingly diverse range of enterprises in which it was now engaged. Alongside the banks, the establishment of an Indian-owned insurance industry had been recognized, under the *swadeshi* ideology, as a crucial strategy by which the emerging urban middle classes of modern India could secure greater financial control and potential to pursue significant economic development and the inevitable social changes that would come with it, including the erosion of traditional cultural institutions such as the extended family system – the basis of social security in the past.⁴⁷ The New India Assurance Company was one of Tata's prestigious newer enterprises, for which they commissioned the firm of Master, Sathe and Bhuta to design them a landmark building in Bombay. Completed in 1935, this prominently sited office building was

limited to just nine storeys by the prevailing development controls within Bombay's commercial Fort district. Yet, with its handsome, deeply corrugated facade of grey Malad stone recalling the buttressed crowns of Manhattan's corporate Gothic towers, it had the elegance and gravitas of a building of considerably greater height. It was probably one of the finest of many commercial and residential buildings directly or indirectly



Master, Sathe
& Bhuta, Laxmi
Assurance Building,
Fort, Bombay, 1937.
The goddess Lakshmi
gazes down upon
the burgeoning
metropolis in this
photograph from
the 1940s.

indebted to the Art Deco style – in this case, clearly the American variant – that were added to Bombay's rapidly transforming and expanding urban fabric in this period. The possible indigenous inspiration for the Amazon-like caryatids that crown the central pilasters of the New India Assurance Building is not clear. In their design for the Bombay Mutual Insurance Company, however, also completed in 1935, the same architects took greater licence with the Deco fashion to incorporate Indian iconography and motifs more overtly in the stylized relief work and other architectural and ornamental details.

With its richly textured horizontality and commanding corner composition, this building set an equally high standard in both design and execution for this regional variant of the global Deco style which has appositely been called the 'Indo Deco'.⁴⁸ The symbolic and compositional possibilities of this hybrid genre were further exploited in the nearby Laxmi Building, completed in 1937, which was once again the work of the prolific all-Indian partnership of Master, Sathe and Bhuta. The client was yet another insurance company – in this case one that was particularly closely allied to the nationalist cause through its principal stakeholders, including Motilal Nehru, the father of the future prime minister. This streamlined seven-storey structure framed a central *shikara*-shaped clock tower upon which a large statue of the titular goddess of wealth stood beaming, radio beacon-like, over the bustling Bombay Fort business district.⁴⁹

The most conspicuous and spectacular architectural beacons of the worldly new modernity and lifestyles to which India's middle classes aspired, however, were the streamlined Deco cinemas that began in this same period to mark and mould the high streets of the commercial metropolises, and even the larger regional towns. Both the packaging and much of the content of the new cinema entertainment industry spoke directly to popular dreams and desires associated, in the 1930s and '40s, with an emerging international culture of modern metropolitanism and consumption, but the fruits of which were still fabulously exotic in late colonial India, and seemingly beyond the reach of most. Indeed, the designs for some of the most exclusive of these new movie palaces were produced abroad. The Lighthouse Cinema and adjoining Garden Theatre complex in Calcutta (1936–8), for example, was developed by a consortium of local British and Bengali businessmen who had commissioned the prominent Dutch modernist architect Willem Dudok to produce the plans, while the Metro Cinema in Bombay (1938) – for which the Metro-Goldwyn-Mayer studio of Hollywood was to be its exclusive client for more than three decades – was designed by Thomas W. Lamb architects of New York and technically outfitted directly from America as well.

Other equally magnificent luxury cinemas dedicated to so-called English films, however, were designed by local firms.

Sohrabji Bhedwar's iconic Eros Cinema, also completed in 1938 and situated prominently opposite the entrance to Churchgate Station in Bombay, was also an innovative mixed-use development. Exploiting the triangular geometry of its corner site, it combined and composed a large, elegantly decorated theatre with prestige retail and office accommodation. The distinctive ensemble worked on an urban scale to sculpt and punctuate the built fabric of the stylish new Back Bay residential extension that was rising just beyond it on an exclusive tract of reclaimed land between the central Maidan and the elegant new seafront bounded by Marine Drive.⁵⁰

Scores more of no less capacious cinema palaces were to be built over the following two decades to screen the celluloid dreams of India's own burgeoning film industry. Taking off with the popular success of India's first 'talking' song and dance films in the early 1930s, what was to become known as 'Bollywood' was soon to overtake the textile industry upon which Bombay's original commercial wealth and identity had been built, and by the early post-Independence years consisted of more than 60 studios producing an average of 150 films per year.⁵¹ Cinemas were to be among the essential commercial amenities – indeed, quasi-civic buildings – of the new suburbs through which the expanding commercial metropolises were extending and diffusing the tidy streamlines of the

Bhedwar & Bhedwar,
Eros Cinema,
Churchgate, Bombay,
1938, rendered
perspective and
newspaper
advertisement.



Modern flats
constructed in Back
Bay reclamation
scheme, Bombay,
c. 1930s–40s.



urbane new *modernisme* that was redefining their cores to the urban hinterland and the regional interior beyond.

But while the tide of new commercial and residential buildings that were developed in and around the city centres in the 1930s and '40s for the wealthy business and social elite exemplified, in their unbridled sculptural and decorative invention, an investment in architecture as a symbolic form of modernity, the new suburban developments in this period had a more technocratic impetus and 'middle-class' economy of means. Architecturally, in many of the larger cities, this was resulting in a leaner and more pragmatic vein of modern architecture that was closer to the formal if not the ideological mainstream of the 'International Style' functionalism that had begun to propagate globally in the 1930s. Sociologically, however, the new lines and patterns of town planning and urban development could not compel social change. Rather, they obliged further design ingenuity behind the flowing white surfaces to enable a more incremental process of socio-cultural adaptation to the changing prospects and realities of modern urban life.

Urban Renewal and Expansion

Suburbanization had begun in a relatively intentional and planned manner as a de-densification strategy promoted by the various civic improvement trusts that were established in each of the major cities between the 1890s and 1930s. Prompted by a catastrophic outbreak of

bubonic plague in Bombay in 1896, and still modelling its actions on the increasingly outmoded 'myasmatic' theories and moralism of the sanitary reform movements of Victorian Britain, the consortium of colonial bureaucrats and Indian business and political elites who had formed the Bombay City Improvement Trust in 1898 was typical of such technocratic philanthropy. The Trust had aimed first and foremost to secure the city from the threat of further epidemics through extensive demolition measures, reminiscent of earlier colonial 'sanitary cordons' and 'relief roads', which sought to eradicate overcrowding within the city core as the supposed cause for the rampant spread of disease.

A portion of the displaced, in particular those employed in the textile mills and adjacent railways, were to be rehoused in more salubrious newly constructed tenements. So-called *chawls* – multi-level residential blocks typically comprising hundreds of one-room units strung along single- or double-loaded corridors with little or no sanitary facilities – were already a distinctive feature of India's industrializing urban landscape by the later nineteenth century. But the ranges of breezy new Trust-built *chawls*, with their communal toilet blocks and solid brick or reinforced concrete construction, were a sufficient improvement on the norm that many were eventually turned over to other tenants capable of

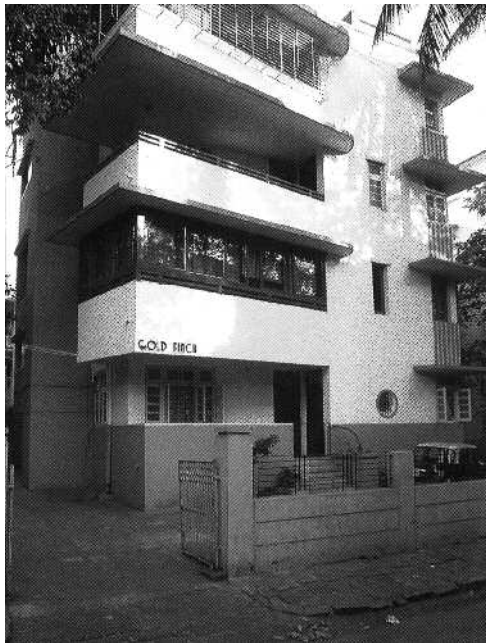
Bombay City
Improvement
Trust (BCIT), *chawls*
(tenements),
Bombay, 1904–8.



Sohrabji Bhedwar,
mixed-use
development at
Dadar tram terminus,
Bombay, 1934.



G. B. Mhatre, Gold
Finch Apartments,
Matunga, Bombay,
1937.



paying higher rents. Meanwhile, the large majority of the poor and lower economic classes of clerks and traders displaced by the inner-city renewal measures were encouraged to shift to new settlement schemes that the Trust sought to promote on the urban periphery, simultaneously addressing the growing anxiety of the colonial urban elite to articulate and secure their own socio-political space and privileges. However, initial schemes conceived along transplanted Garden City ideals of low-rise distributed development, in which privacy and individualism were crucial, had not proved to be viable alternatives, either economically or culturally, to the complex and tenacious nature of the prospective residents' communal and economic ties to their original urban localities. Alternatively, many of the displaced 'poor' were to opt for informal settlement on the margins of the inner city – as hundreds of thousands continue to do today – in order to sustain their integral role in the informal sector of the urban economy as the servants and service providers of the propertied classes and elite establishment. In their place it was a new, more mobile middle class of educated office workers dominated

by recent migrants to the commercial metropolises from regional India, the south in particular, who were most eager to put down new roots and embrace the spatial and architectural novelty of the new suburban life of the modern commuter.⁵²

By the 1930s extensive low-rise but medium-density residential developments had begun to take off north of Bombay around nodal interchanges between local and interurban transportation such as Dadar–Matunga and the salubrious seaside palm groves of Bandra and Vile Parle further to the north. Comparably dense but leafy developments were simultaneously coming up in areas such as Alipur, Balligunj and Tolligunj in Calcutta, and the southern suburbs of Madras. Completed in 1934 (the year before his Eros Cinema commission), Sohrabji Bhedwar’s design for a modest three-storey crescent of mixed-use commercial and residential buildings encircling the Dadar tram terminus epitomized the urbanity and deftness with which he and fellow first-generation Indian modernists were confidently drawing together and subordinating elements of ‘City Beautiful’ planning and international modernism in a subtly adapted new typology uniquely tailored to this new Indian suburbanism.

Gajanan Baburao (G. B.) Mhatre’s diminutive Rao House (1936) and Gold Finch Apartments (1937), both in Matunga, were further artful distillations of the type. Inside the playfully composed volumes and expressive fenestration of their modernist exteriors – with their smartly projecting sunshades and breeze-seeking balconies – culture-specific solutions to the internal planning had been devised to address the needs, not of vain and demanding individuals, but of the different culturally self-conscious caste and communal sub-groups that had aggregated in the form of cooperative building societies to commission and construct the increasingly cosmopolitan social mosaic of the expanding Indian metropolis.⁵³ Planning innovation came increasingly at the cost of privacy, however, in addressing the further challenge of accommodating both the extended Indian family and their household servants within the relative compactness of multi-dwelling apartment buildings. The accommodation of household religious shrines and supplementary bathing and cooking facilities for caste groups with particular dietary requirements and taboos were further dimensions of planning complexity, as well as rentable additional rooms that could provide short-term supplementary income while enabling the multi-generational growth and security of the extended family in the course of time.⁵⁴

In their inventive but workmanlike application to the task of problem solving, rather than polemical or mannerist approaches, Bhedwar, Mhatre and their contemporaries clearly identified themselves with both the progressive spirit and the functionalist tenets of international

G. B. Mhatre, C. M. Master of the firm Master, Sathe & Bhuta, and others, including Professor Claude Batley, in group photo of the current council members of the Indian Institute of Architects, 1936–7. Mhatre is standing top left, Master is seated second from left, and Batley at the far right.



modernism. Indeed, like many of his fellow classmates who had completed their initial training under Batley at the J. J. School, Mhatre had witnessed the burgeoning of the modernist movement in European architecture directly, having worked and studied in London between 1928 and 1931 to qualify for his RIBA Associate membership.⁵⁵ Yet few of this first generation of Indian architectural professionals appear to have been deeply committed, in a dogmatic sense, to any particular ideological position or agenda within the emerging spectrum of tendencies that the growing international discourse on modern architecture and planning had to offer.

International Expertise

A handful of commissions undertaken in India in the 1930s and '40s by eminent international consultants working outside both the colonial administration and the commercial world of the urban-based practices were perhaps some of the purest statements in the late colonial era of different possible directions that a more ideologically aligned and rigorous approach to the making of a modern architecture for India might have taken. Once again it was the aristocratic elite who were the principal patrons.

The building of 'modern' palaces had been a conspicuous passion of India's princely aristocracy since the beginning of European colonial hegemony in the subcontinent in the late eighteenth century. By the 1920s, however, the building of New Delhi had renewed the game of architectural one-upmanship for a new generation of Indian royals at the court of the

British viceroy who were becoming increasingly anxious – amid the escalating freedom struggle on one side and increasingly radical measures of appeasement and game-changing political reform on the other – to reassert and, at the same time, to legitimize their own limited independence as appropriately progressive rulers of autonomous princely states.

Some of the most powerful of the princes sought to match but, diplomatically, not to beat their British overlords at their own game. The Nizam of Hyderabad, who was by far the richest of the lot, was brazen enough to commission the viceroy's own architect, Edwin Lutyens, to design Hyderabad House, the Nizam's palatial new residence in the imperial capital. Meanwhile, the Maharaja of Jodhpur commissioned Henry Vaughan Lanchester, an earlier rival of Lutyens for the coveted Imperial Delhi commission, to design his new Umaid Bhavan Palace (1929–44). Lanchester's spectacular sandstone swansong to the age of princely power and privilege was what might be described as a Rajasthani-Baroque-revival retort to Lutyens's hybrid Mughal/Buddhist-classical palace for the viceroy, but stylishly sheared and honed to the smoother surfaces and crisper lines of the contemporary Indo-Deco.⁵⁶

For some of the lesser princely rulers with somewhat smaller coffers, purer strains of modernism could be cheaper to build and decorate while emphasizing the forward-looking worldliness of their patrons. The severely stripped Deco designs of the new palaces built for the Maharaja of Indore (1930–34) and the crown prince of Morvi (1931–44), for example, contrasted starkly with the humble regional and colonial building vernacular of their provincial environs, identifying their elite patrons with the cosmopolitan international culture of the jazz age and the streamlined ocean liners that connected these globe-trotting maharajas with it, and after which the decorative schemes and furnishings of their new palaces were modelled. Indeed, Morvi's private pleasure palace featured tubular steel furniture, an electric lift to a subterranean bedroom, and a bar decorated with erotic murals painted by the Polish artist Julius Stefan Norblin.⁵⁷ For Indore's austere new palace additional avant-garde cachet was sought by engaging the services of a German architect, Eckart Muthesius, whose father, Hermann, had been a crucial link between the English and Scottish Arts and Crafts movement and the *Deutscher Werkbund* from which the Bauhaus had eventually emerged.

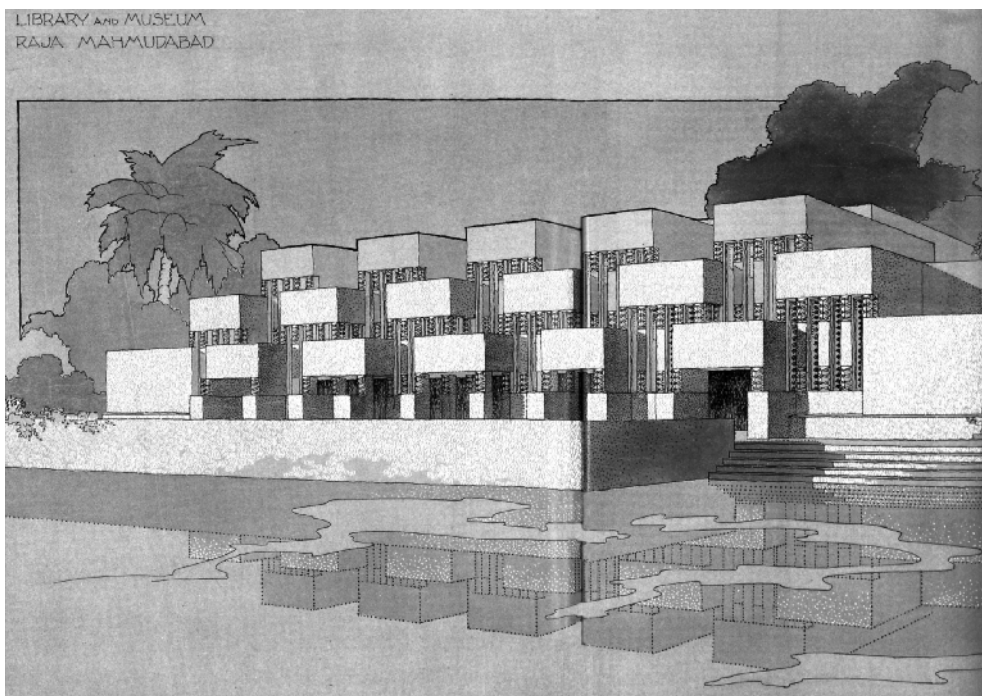
German design expertise was still in vogue almost a decade later when, in 1939, the German-Jewish architect and town planner Otto Koenigsberger (1908–1999) was offered a position in India, far from the persecution of the Third Reich, as the consulting architect to the government of the Maharaja of Mysore. Recognized as one of the most progressive of the princely states, Mysore was also fiercely proud in the context of

ongoing resistance to colonial rule of its relative autonomy from the oversight of British expertise in the development of its local industries and public amenities. Adherence to the strategies of non-cooperation and self-reliance, however, had not necessarily precluded access to other sources and measures of expertise, and Koenigsberger was actually the third in a series of German architects who had been recruited to Mysore over the preceding three decades.⁵⁸

A winner of the prestigious Schinkel Prize while still a student in Berlin, Koenigsberger had been privileged to train or apprentice under several of the most progressive German modernist architects of the first generation, including Bruno Taut, Heinrich Tessenow, Hans Poelzig and Ernst May, and both the expressionism and the functionalism associated with this collective of influential but widely diverging mentors found form in Koenigsberger's own work. Among several innovative buildings that he was commissioned to design for public and institutional clients during his appointment in Mysore, the distinctive Auditorium and Dining Hall (1945–6) for the Tata-endowed Indian Institute of Science at Bangalore was exemplary.⁵⁹

If Koenigsberger was the most direct link between the architectural scene in late colonial India and the formal and ideological mainstream of international modernism in the functionalist vein that had been emanating from continental Europe in the interwar years, the émigré Americans Walter and Marion Griffin, and Antonin Raymond, were the most immediate exponents of the other major stream of formal and philosophical thinking about modern architecture in the first half of the twentieth century that indirectly, and each in their own distinctive manners, emanated from the work of Frank Lloyd Wright.

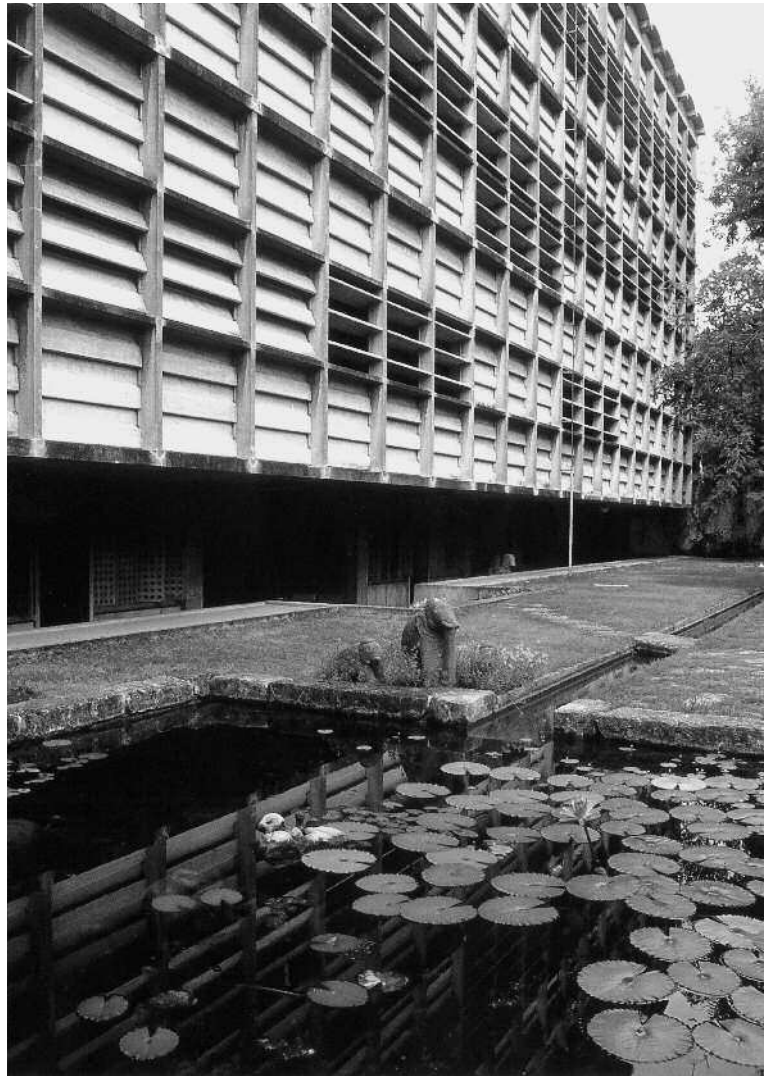
Walter Burley Griffin (1876–1937) and his wife Marion Mahony (1871–1961) had both been close associates of Wright in Chicago early in their careers before emigrating to Australia, where they had won the international competition of 1911–12 for the design of Canberra, the Australian national capital. While the British Indian administration had been aware of the Griffins and the Canberra project from the outset, as a significant contemporary precedent for the design of New Delhi, their opportunity to work in India came much later through independent channels associated ultimately with the political and institution-building interests of the landed aristocracy of upper India. In a brief but intensely productive period between his arrival in Lucknow in late 1935 to design a new library for the local university and his untimely death (from peritonitis) while still in India fifteen months later, Walter Griffin (eventually assisted by Marion) produced designs for a series of additional institutional, commercial and private residential commissions



Walter B. Griffin and Marion Mahony, project for the Husainiya Collection Library, Lucknow, 1935-6, rendered perspective drawing by Marion Mahony.

intended for sites in Lucknow and surrounding localities. Few of these projects, including the original university library commission, were to be realized following Griffin's death and the subsequently shifting priorities of his aristocratic patrons as India lurched towards the end of colonial rule. But preserved in Mahony's enigmatic perspective projections, these designs comprised a concise but intensive body of speculation on what a modern Indian architecture might have been that was remarkable for its boldness as well as its originality.⁶⁰ The Griffins' penchant for fusing surface and ornament has previously led their work to be categorized somewhat indiscriminately with other contemporary Indo-Deco work.⁶¹ But designs such as the Husainiya Collection Library – a further unbuilt library project conceived to house a private collection of sacred texts and related literature pertinent to the dominant Shiite sect of local Muslims – offered a strikingly abstract proposition for a modern Indian building that was at once a light-diffusing enclosure and a terraced garden, fusing landscape and structure in a form of projected volumetric ornament. Unclassifiable in its place and moment (although affinities with the evolving work of Wright in the same period attest to their shared pedigree), the Griffins' vision anticipated expressive possibilities for combining

Antonin Raymond and
George Nakashima,
Golconde House,
Pondicherry, 1936–48.



geometry, decorative patterns and textures in a contemporary Indian architecture that Indian architects as diverse as Uttam Jain, Revathi Kamath and Meena Mani would return to half a century later.

The Czech-American architect Antonin Raymond was another former associate of Frank Lloyd Wright who was to make a discrete but seminal contribution to India's modern architectural heritage in the twilight of the colonial era. As with the Griffins, who had arrived via Australia,

Raymond also found his way to India indirectly, in his case via Japan. Before his brief sojourn in India in 1939, on the cusp of the impending war in the Pacific, Raymond had lived and worked in Japan for the previous eighteen years, having initially assisted with Wright's Japanese commissions, later developing his own influential architectural practice in Tokyo. Raymond drew on this exceptional cross-cultural experience in his elegantly simple design for Golconde House, a residential hostel he had been commissioned to design for the Aurobindo Ashram in the quiet French colonial enclave of Pondicherry, south of Madras. In Raymond's outwardly rationalist/International style, the ashram represented the re-distillation of the original 'Oriental' germ in the pioneering early work of Wright, from which the radical new conception of space that had driven modern architectural experiment in the early twentieth century had probably been born. With its exquisitely finished concrete frame, louvred enclosure and sliding internal panels, the hostel block exhibited a rigorously disciplined, Zen-like sense of the fit that a technically rational yet phenomenologically well-attuned building should have with its immediate physical environment, as well as the palette of appropriate building materials and technologies that might be employed.

While Raymond remained in India only briefly, design development and execution were substantially overseen by George Nakashima, Raymond's Japanese-American architectural assistant, before he too was obliged by the war to return home to the USA.⁶² Golconde's exquisite sense of assembly, the hardwood joinery in particular, reflect the contribution of Nakashima, who went on after the war to become one of the most acclaimed modernist furniture designers in post-war America. Thanks in part to Nakashima's later professional connections, through Louis Kahn and Bernard Kahn, with the influential Ahmedabad-based architect and educator Balkrishna Doshi, the significance of this isolated, pioneering work of modernism in India would be imparted to later generations of Indian architectural students. Far removed from the limelight of progressive development in the metropolitan port cities, however, and designed for elite patrons who coveted their autonomy from imperialist and nationalist causes alike, the exceptional Indian works of the Griffins, and Raymond in particular, were to have almost no appreciable impact on wider practice or popular imagination before their reappraisal half a century later.

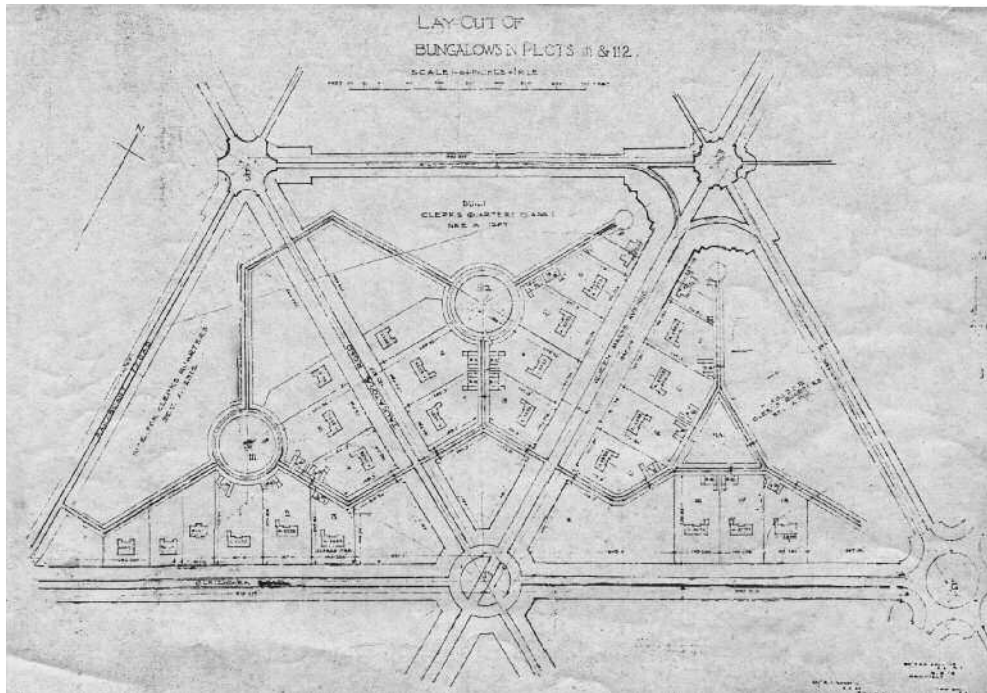
Town Planning

One imported expert whose impact in India was to be more immediately and broadly felt was the pioneering Scottish environmentalist and planner

Patrick Geddes. Arriving in India in 1914 at the outbreak of the First World War, Geddes spent the better part of a decade promoting the principles of enlightened town planning throughout India as an independent consultant. Geddes was critical of what he regarded as the heedlessly utilitarian approach to urban development that had become ingrained in the practices of the PWD and the various city improvement trusts, particularly their insensitivity to the traditional fabric of Indian cities, and his ideas were to be most eagerly adopted in the smaller cities and towns of regional India and the princely states, where the impact of accelerated urban growth had not yet been felt so acutely as in the major cities.⁶³

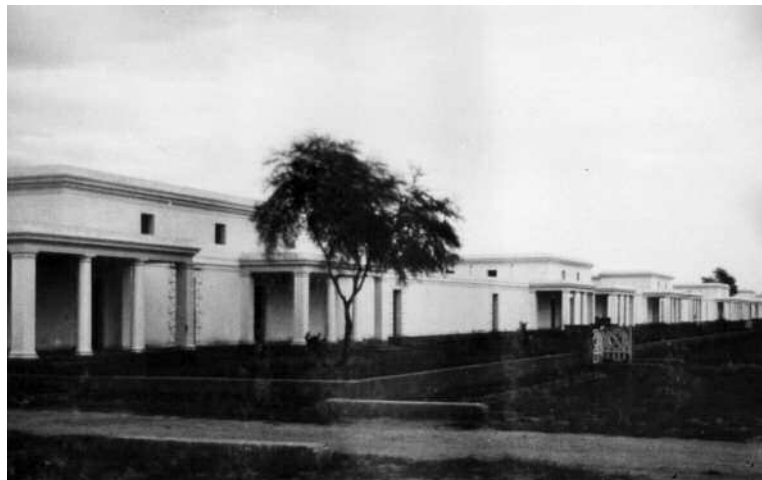
Model Town, a privately developed residential colony laid out in the early 1920s near the former capital of Punjab, Lahore (now in Pakistan), was an early example in British India of a self-consciously progressive, culture-sensitive exercise in modern town planning, which was directly indebted to Geddes. This was modelled almost literally on the diagrammatic schema and planning principles of Ebenezer Howard's *Garden Cities of Tomorrow* (1902) endorsed by Geddes in a planning report he had prepared for the municipal government of Lahore in 1917 in which he had recommended the development of 'garden villages' along very similar lines. Developed through private subscription as a cooperative housing society, the residents were primarily professionals and retired Indian civil servants representing a range of different religious and communal backgrounds. Public amenities of the self-sufficient modern township included a library, schools and two 'clubs' (one for the 'Gents', and one for the 'Ladies'), as well as a number of communal buildings including marriage halls, a mosque, a Sikh gurdwara and two Hindu temples. Public buildings ringed the perfectly circular garden common at the heart of the scheme, while the typical dwellings distributed along the radiating avenues and interstitial street grids were bungalows in the conventional British-Indian style with which most senior government servants were intimately familiar. In spite of outward appearances and the modernizing enthusiasm of the cooperative home builders, however, residents tended to sustain many of their more traditional dwelling practices, classifying and segregating the social use of spaces within these dwellings and their compounds according to culture-specific functional and gender criteria.⁶⁴

As has been seen, the urban design and planning issues in the major cities were not dissimilar, where conflicts between the modern norms and types that authorities sought to prescribe and the subtle persistence of traditional cultural practices and beliefs had compromised the efforts of the various civic trusts to 'improve' the living conditions of low-income urban working populations.



Robert T. Russell and Central Public Works Department, typical layout for senior civil servants' bungalow compounds, New Delhi, c. 1930s.

Robert T. Russell and Public Works Department, Delhi Branch, terraced row of gazetted officers' quarters, New Delhi, late 1920s.



For the more privileged classes of professionals and office workers for whom such idyllic suburban developments had been planned, Model Town was not, therefore, the template for a brave new world that would necessarily be cast in the mould of universal modernity, but a model of the richer, softer and inevitably messier compromise that the planners and managers of the cosmopolitan towns and cities of modern India would have positively to embrace and sustain in future.

New Delhi had been British India's grandest exercise in new town planning, but in many ways the least progressive. Here, if nowhere else, behaviour was expected to conform to the prescribed norms, and the familiar 'bungaloid' typology had served to reinforce rather than challenge the colonial social order that was so clearly mapped out by the leafy avenues and sectors of Lutyens's plan. By the mid-1930s, however, with the advent of limited democratic representation in government and the progressive Indianization of the civil service, the new government town was already reaching capacity and, together with the adjacent old 'city', was poised to become a greater metropolitan reality.

Over the preceding two decades, while Lutyens and Baker had been building the important monuments and buildings, the task of fleshing out the corpus of residential and lesser public buildings for New Delhi had belonged to the Delhi Branch of the PWD, subsequently reconstituted as the Central Public Works Department (CPWD) in 1930, under the chief architect, Robert Tor Russell. At its peak in the 1920s, Russell had led a sizeable staff, including three British assistant architects and as many as twenty Indian architectural draughtsmen, some of whom were fully trained and qualified architects themselves. Together, this team had produced the plans for literally thousands of buildings.⁶⁵ Significantly, these included almost all the official bungalows and other residential compounds and quarters that comprised the suburban fabric of the new capital.

It was a measure of the flagging political will of the colonial regime, however, that the task of planning and coordinating the major new phase of urban growth and development in greater Delhi in the mid-1930s was effectively devolved at this stage from the oversight of the CPWD to local government through the agency of the newly created Delhi Improvement Trust (DIT).

Established only in 1936, the DIT was still mandated, nevertheless, with the manner of draconian powers that colonial technocrats had taken for granted since the mid-nineteenth century. But while the propensity of DIT engineers and public health officers to demolish surgically and cleanse was undiminished relative to their earlier counterparts in Bombay and Calcutta, the role of architectural design and planning in the agency of the DIT was to be considerably enhanced by the rise of the functionalist



Ganesh B. Deolalikar and DIT, row of shop-flats, Karol Bagh, Delhi, c. 1940s.

ethic in modern architectural discourse since the 1920s, and the scientific claims that underpinned it.

Under the DIT's chief architect, G. B. Deolalikar – a veteran of almost two decades' prior service in the PWD as Russell's most senior Indian associate⁶⁶ – the stark new geometric order and antiseptic aesthetics of modernism were to be deployed as both models and instruments of social improvement, in much the same way that the Anglo-Indian bungalow had previously served to shape and sustain the colonial status quo. DIT schemes projected and partially realized during Deolalikar's tenure focused on controlling and shaping the relatively chaotic state of urban development in the zone between the sprawling new colonial capital and the old walled city. By filling the gaps in this marginal commercial and residential fabric, and by re-planning selected parcels of it, the DIT planners sought to prime a process of incremental redevelopment that might diminish some of the physical and cultural barriers to the further spontaneous development of greater Delhi as a 'modern' city. Despite these rationalizing intentions, however, implementation was heavily influenced by practical issues and contingencies. The DIT thereby contributed to an emerging landscape of hybrid colonial-modern urbanism that tended to complicate rather than simplify identities and oppositions while reconciling extremes.⁶⁷

Lingering Contradictions in the Colonial-Modern Twilight

After the rhetorical flourish of the building of New Delhi, the relative banality and ambiguity of the demi-official building efforts of local governmental agencies, such as the DIT two decades on, were indicative of an imperial project in which political conviction and associated architectural inspiration were clearly waning.

Indeed, even in its moment of triumph, the monumental propaganda of imperial New Delhi itself had been masterfully reversed and rendered impotent as a rhetorical weapon when, in 1929, a year after the Indian Congress had formally demanded independence from British rule, Mahatma Gandhi had paid his respects to the inaugural resident of the new Viceroy's House, Lord Irwin, as his first official visitor. The visual symbolism of the humble Congress leader clad in his home-spun dhoti taking tea with the all-powerful viceroy in his colossal faux-Indo-European palace could not have been more ironic or absurd.⁶⁸ Years earlier the young Oxford-educated barrister Mohandas Gandhi had found some of the inspiration for his lifelong campaign for social justice in an essay by the great Victorian aesthete John Ruskin, who wrote: 'see that your poor are healthily lodged before you try your hand at stately architecture'.⁶⁹ Gandhi's subsequent 'experiments with truth', as he had called them, in the series of humble ashrams he had built in South Africa and India had dispelled, by contrast, the megalomaniacal folly of imperial New Delhi and the inevitability, sooner or later, of the demise of the regime that had built it. Both Gandhi and Nehru abhorred the 'wasteful extravagance' of the new capital and its architecture, which, in Nehru's jaundiced view, was the 'visible symbol of British power, with all its pomp and circumstance and vulgar ostentation'.⁷⁰ Later, in his inaugural address as India's first prime minister in 1947, having perhaps already decided that such an exclusive residence as the vice-regal lodge was not the appropriate abode for a socialistically inclined leader of a democratic state, Nehru was to speak of the need 'to build the noble mansion of free India where all her children may dwell'.⁷¹

But it was Gandhi's most memorable architectural metaphor for modern India, as a storm-lashed house through which the winds of change must blow, that perhaps characterized the nascent Indian nation's perception of its modernity most appositely at the fateful juncture of Independence. On the one hand it still posited 'modernity' as an encounter with external forces, offering, on the other hand, a perception of an inherently sound and cohesive 'tradition' – that is, the structural framework of a way of life, not least India's own time-tested ways of building – in which its peoples were 'at home'.

Yet, despite the inspirational appeal of this simple but essentializing rhetoric, the future India could no more be authentically traditional in its actual physical architecture than it would be in its political and philosophical architecture as a modern nation-state. It would be a palimpsest of past and future in which its colonial-modern pedigree would remain an indelible substrate.



chapter three

Nation Building: Architecture in the Service of the Postcolonial State, 1947–1960s

India's independence from British rule was a bittersweet victory when it officially arrived, at long last, on 15 August 1947. The long freedom struggle had been a great unifier of the subcontinent's proverbial cultural diversities and differences. But that ever-tenuous solidarity had ultimately been shattered by the hastily brokered decision of the departing colonial regime to divide its empire along religious lines. In the months that followed the first public announcement of the 'Partition' of British India, in June 1947, and the official declaration of the new nationhood of its two successor states a few weeks later, the roads and railways of northern India became a quagmire of desperate refugees. On both sides of the new internal borders millions had suddenly become displaced persons on the basis of religious affiliation, with ensuing fears of communal detachment and persecution for those who stayed behind.

From the predominantly Muslim provinces of Punjab and Sind in the northwest of the subcontinent and the verdant delta region of East Bengal that were now reborn as the new bipartite Islamic state of Pakistan, Hindus, Sikhs and Jains decamped en masse to hastily organized refugee camps and the nearest metropolitan centres on the Indian side of the line.¹ In the opposite direction flowed their Muslim counterparts, the descendants and converts of the former Mughal Empire and independent Muslim kingdoms of the south that had dominated the subcontinent for centuries preceding the colonial incursions of Europe.

Violence almost inevitably ensued, but with a ferocity and carnage exceeding even the most cynical predictions of the colonial technocrats and nationalist politicians in their various factions who had struck this fateful compromise. Trainloads of refugees travelling in both directions were hacked to death or torched alive, provoking rampaging mobs to lay waste entire villages and urban neighbourhoods in revenge. By the time the carnage had finally subsided, an estimated 2 million people had died,

Prime Minister
Jawaharlal Nehru
and members of the
Chandigarh Capital
Project Office visiting
a recently constructed
project by junior staff
architect Aditya
Prakash, c. 1960.

countless more had been maimed or raped, and as many as 17 million people had been uprooted from their birthplaces, never to return.²

While ordinary people, both rural and urban, bore the brunt of the catastrophe, many of the elite were also compelled to abandon substantial properties and assets, with little hope of compensation. Nor were they immune from the violence. In September 1947 Mohandas Gandhi came close to death in a self-imposed fast that was widely credited for quelling the communal riots that were then consuming Calcutta. But, unforgiven by militant factions among the refugees and the Hindu Right for the complicity of the Congress leadership in the Partition agreement and for his proactive defence of Indian Muslims in the post-Partition violence, Gandhi himself became a target for violent attacks. Initially escaping harm from a failed bomb attack, he ultimately succumbed to an assassin's bullet at a public prayer meeting in New Delhi on 30 January 1948, fewer than six months after the formal declaration of India's freedom.

Although the official leadership of the new nation had been assumed from the start by Jawaharlal Nehru, as India's first prime minister, the demise of Gandhi inadvertently resolved the ideological impasse between the two *de facto* leaders, clearing the way for Nehru to pursue his preferred vision for the development of an emphatically modern India. After the complex and often seemingly contradictory rhetoric of colonial-modern resistance and differentiation that had characterized both the politics and the cultural production of India in the first half of the twentieth century, the Nehru years were to be marked by a return to a more straightforward paradigm of modernity as a techno-scientifically rational pursuit of planned progress that could be measured in quantifiable social and economic terms.

The industrialization of the economy and the development of major infrastructure would be the keystones of this new vision. The seemingly concomitant urbanization of what was still an overwhelmingly rural society, however, was an inescapable reality of the new India as much as a symbol of the modernization that the political leadership aspired to. In addition to reparations for the immediate human costs and physical damage instigated by Partition, policy makers and planners were confronted with the huge new logistical challenges posed by this demographic upheaval. Only a limited direct swapping of property had been manageable in regions such as the adjacent farming districts of the eastern (Indian) and western (Pakistani) Punjab. Consequently, the large majority of the Partition refugees had converged on the cities, catapulting the subsequent growth and development of the largest of these – Delhi, Bombay (Mumbai) and Calcutta (Kolkata) – into rapid overdrive. But the refugee crisis had put the cart before the horse, compelling heuristic

make-do solutions to pressing needs for shelter and infrastructure. Without the lead time and resources to undertake long-term, integrated planning and development along progressive new lines, decision makers would continue to rely on the familiar spatial norms and conventions of the immediate colonial-modern past.

New towns like Chandigarh and the new industrial townships of West Bengal and Orissa were conceived to be the exceptions – exemplary models of what a radically new urban India consistent with contemporary planning theory might be. But at the programmatic level, even these could be seen as palimpsests of the previous order. Beneath the artifice of style, the familiar spatial norms of colonial urban development prevailed – of which New Delhi was a prime exemplar among other planned colonial cities that we know had impressed Le Corbusier prior to his arrival in India.³ The new towns would therefore have only a mitigated influence on the established rules by which Indian towns and cities had already evolved significantly, since the mid-nineteenth century, in accordance with norms of colonial modernity. Indeed, for the long-serving Indian draughtsmen and assistant engineers of the former colonial-era PWD who had finally taken the helm of the rapidly expanding works bureaucracy – which now included an array of new technical agencies modelled on the ubiquitous system of central and state public works departments – the deterministic order and spatial logic of modernist planning, with its propensity for functional zoning and segregation, was received with more than a little sense of *déjà vu*. The seemingly radical symbolic statements of the new ‘International Style’ architecture and urbanism of the 1950s were perhaps just a scene change marking the official transfer of power from colonial authority to successor nation-state in the much longer epic of modernization since the mid-nineteenth century.

Throughout the 1950s and ’60s the socio-economic changes that came with urbanization, and the parallel push to industrialize (though largely dispersed from the main urban centres), were to compensate in part for the material and cultural losses of Partition by focusing attention on the construction of the new nation, its modern infrastructure and cultural outlook. But the deeper psychological wounds of Partition would take much longer to heal.

Representing the New India

With financial and technical resources already strained by military and humanitarian priorities, the new India was chastened by its traumatic birth, and its initial building efforts were, at best, less than certain expressions of the transcendental prospects of modernity that would

become synonymous with the architecture and planning of Chandigarh a few years later. The Gandhi Ghat memorial completed in January 1949 by the West Bengal Public Works Department on the bank of the Ganges just north of Calcutta was probably the first significant architectural statement of the new nation. Among the many monuments to the spiritual father of the independence struggle that would be erected subsequently throughout the country, the Gandhi Ghat was an appropriately humble gesture of reflection and remorse for the unanticipated tragedy that had just unfolded. Nevertheless, it is a particularly revealing work in the narrative of modern Indian architecture and related debates in the early years of Indian nationhood. Though dedicated to Gandhi, it would also be read through that unifying figure as a memorial to all who had been lost in the recent violence, and thereby as one of the first and most conspicuous attempts in the still glaring light of post-Independence self-consciousness, to embody the many-faceted notion of an 'Indian identity' in contemporary architectural form. The fact that it fell upon the local PWD to design and build this symbolically significant public monument was indicative of the inertia in the public sector of the practices and assumptions of the former colonial order. But this had the fortunate happenstance of passing this relatively modest undertaking, from a technical point of view, to the young Habib Rahman, an untested new recruit of the West Bengal Public Works Department.

Among the eventual leaders of the first generation of post-Independence Indian architects, Habib Rahman (1914–1996) was one of the first who had been directly immersed in the ethos and convictions of post-war modernism through elite architectural studies and work experience overseas. Rahman's career, however, would be unique in many respects for the early and sustained commitment he made to work as a government architect in the service of the postcolonial state. With poor prospects for developing a successful private practice under his Muslim family name in communally fractured Calcutta, Rahman made the ostensibly pragmatic decision to join the local PWD in 1947, but this was also imbued with high idealism.

Rahman had only recently returned to India from the USA, where a colonial government scholarship had enabled him to pursue graduate studies in both mechanical engineering and architecture, completed at the Massachusetts Institute of Technology (MIT) in the early 1940s. Obligated to remain in America through the final years of the Second World War, Rahman had subsequently had the chance to work professionally with a number of modernist luminaries. These included Walter Gropius, whose contemporary teaching and practice epitomized the social idealism and teamwork spirit of the Modern Movement for

Habib Rahman and
West Bengal Public
Works Department,
Gandhi Ghat,
Bankipore, West
Bengal, 1948–9.



young acolytes like Rahman from the wider post-war world of emerging ex-colonial nations.⁴

Given his training, Rahman might well have been inclined towards the transcending abstraction of a purely modernist expression for the Gandhi Ghat memorial. Political criteria, however, compelled him to take a much more iconographic approach to the symbolic function of the monument.⁵ Describing his proposal in a letter to the *Architectural Forum*, the dominant American architectural magazine of his student days, Rahman confessed his sense of isolation as a budding modernist confronting the paradoxical quandary of an appropriate architectural identity for a modern India that still remained, in his words, profoundly ‘traditional’ in its sentiments and practices:

When I was required to design the structure in traditional Indian ‘style’ (Hindu and Moslem), I realized the bankruptcy of our imagination to create a monumental architecture today. Being an admirer of Wright, Corbusier and Gropius . . . I could not blindly copy . . . On the other hand, if I attempted to create something imaginative . . . the design would never have been accepted by the authorities. A compromise was the result.⁶

Rahman took his cue from Gandhi’s effort to respect all religions as different pathways to common human values and understanding, and his

design was an undisguised hybrid in which stylized modernist representations of iconic architectural forms associated with the main religious communities of modern India were somewhat tenuously combined.⁷ Atop the *shikara* (spire-like tower) of a Hindu temple sat a vestigial Islamic dome, and an asymmetrical cantilevered canopy transected the reinforced concrete structure at its base, vaguely referring to a Christian cross. In its mannered composition and detailing, perched dovelike on the crest of the *ghats* (bathing steps) from which Gandhi's ashes had been scattered, it also evoked the organic expressionism of the later Frank Lloyd Wright and possibly Erich Mendelsohn as well (whom Rahman had encountered during his wartime work experience in New York).⁸

While Rahman was evidently keen to report his prestigious commission to his peers in the post-war American design scene, his letter to *Architectural Forum* also lamented a dearth of informed feedback from 'competent critics', as he put it. 'Architecture in India today is practically dead,' he confided, 'and I do not feel that a good modern architecture will be developed here in the near future.'⁹

The pessimism of the ambitious young modernist reflected a new stage of the long controversy within modern Indian architectural discourse between traditionalists and progressives. Previous debate had been prosecuted largely by British advocates for one camp or the other, with the typical building efforts of the colonial regime denigrated for their utilitarian disregard for Indian building tradition. Now that the tables had turned with the departure of the British, however, it seemed obvious to many of the new political leadership (including even Nehru at first) that the architecture of an independent India should clearly renew its connection to India's own architectural traditions. In this light it was fortunate for the young Rahman that his career as a government architect had begun in Calcutta, in the service of the local state government, rather than the political centre of the new nation. As the former commercial and political capital of the subcontinent in the Victorian heyday of the British Indian Empire, Calcutta's effective demotion to provincial status with the shift of the capital inland to Delhi had been a considerable blow to local Bengali esteem. In Rahman's next significant commission, the New Secretariat for the Government of West Bengal, he was therefore given much greater licence to exercise his modernist propensities in a way that would put the Bengali metropolis back on the map as the crucible in which many of the most progressive political, intellectual and artistic movements in modern Indian history had been born.

Rahman's design for the New Secretariat drew confidently on the functionalist rationalism of his American training in a bold composition that juxtaposed a sweeping curvilinear podium with a thirteen-storey



Habib Rahman examining models of the New Secretariat and Gandhi Ghat Memorial in his Calcutta studio at the West Bengal PWD, c. 1950.

Habib Rahman and West Bengal PWD, New Secretariat, Calcutta, 1954.



office slab that would be the tallest steel-framed building yet constructed in the subcontinent. Completed in 1954, the New Secretariat enjoyed a short-lived status as the most iconic example in the new India of an unfettered modernist approach to the design of public architecture, before the completion of the first major buildings at Chandigarh in the later 1950s.

From the Delhi-centric purview of the veteran government servants who now controlled the architectural wing of the Central Public Works Department (CPWD), however, such an abrupt rupture, both technical and stylistic, from the conventional modernisms of the Deco and stripped-classical styles that their generation of Bombay-trained architects had propagated throughout late colonial India was not yet on the agenda.

The Architects of the CPWD

The senior architects of the post-Independence CPWD were among the most powerful players in the field of colonial-modern planning and building, although subordinate still to the executive engineering hierarchy within the PWD system. Ironically, the CPWD had emerged as an after-thought of efforts to decentralize the PWD system as part of widespread colonial administrative reforms in the early 1920s. Established formally in 1930, it was to be the permanent institutional form of the original temporary branch of the PWD first set up in 1914 with the very specific mandate to complete and maintain the office and residential accommodation for the central government within the capital territory of New Delhi. In due course, however, the ambit of the CPWD had greatly increased to include all centrally financed civil works and buildings throughout British India and its subject territories.¹⁰ Within the still-expansive territorial domain of post-Partition India, the CPWD remained responsible for producing and maintaining all buildings and infrastructure under the direct control of the central government. Still dominated by budget-minded engineers, however, such extensive power and potential for change tended to be mediated by the inertia of convention.

G. B. Deolalikar, the former architectural head of the Delhi Improvement Trust, was the first Indian to rise to the top post of the architecture and town-planning wing of the CPWD with the departure of the British following Independence, and served as chief architect from 1947 to 1952. Deolalikar had long been qualified for the job, having been one of the first Indian-trained architects to earn full RIBA Associate membership nineteen years earlier, but choosing to remain in the continuous service of local and central government for almost three decades prior to Independence.¹¹ Along the way he had become a seasoned bureaucrat into the

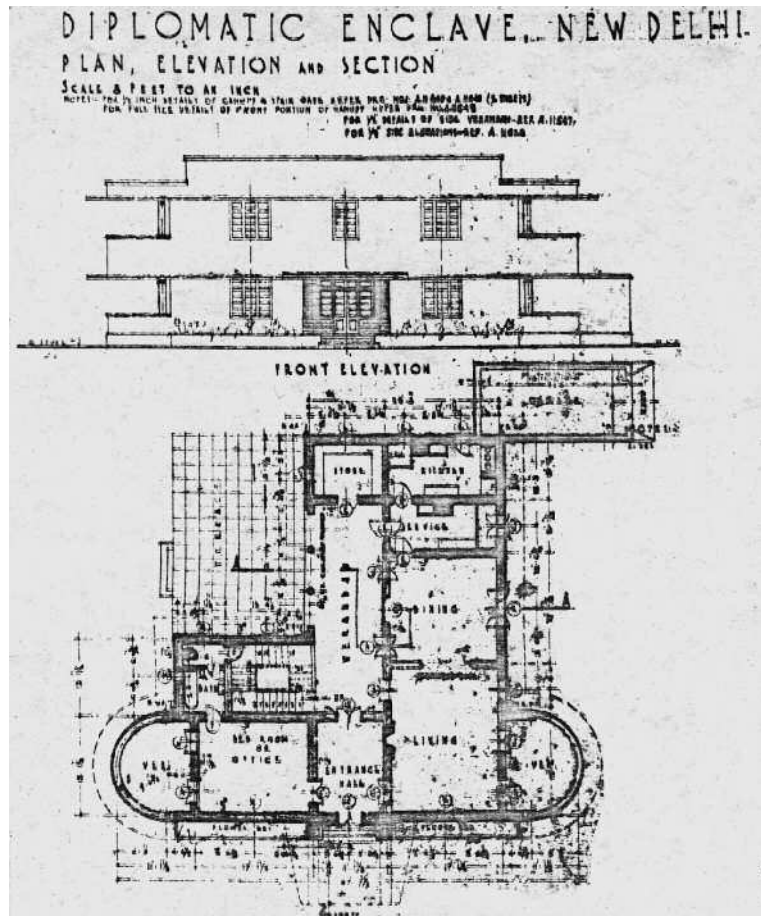


Central Public Works Department, Udyog Bhawan, office block for Ministry of Commerce and Industry, New Delhi, 1957.

bargain, ceaselessly advocating for better recognition and advancement of the architectural profession in the public service. Shridhar Krishna Joglekar, Deolalikar's immediate successor (chief architect, CPWD, 1952–68), was a fellow Maharashtrian and Anglophile 'survivor' of the late colonial era who was cut from much the same cloth.¹² While Deolalikar had emerged from initial training in provincial Baroda, via Bombay, to complete his architectural studies at University College in London, Joglekar was an early graduate of the RIBA-accredited diploma course at the J. J. School in Bombay who had later gained a post-professional qualification in Town Planning from the University of Liverpool. The relative interchangeability of the architectural and planning output of the CPWD attributed to these men between the late 1940s and mid-1960s suggests that they also shared much the same unapologetically conservative disposition with regard to the established norms and forms of departmental production. Design progress would be limited to the reworking of the now almost anachronistic brand of Deco-style modernism that had been fashionable in their early careers in Bombay into new lower density typologies more suited to the leafy suburban enclaves of New Delhi and other regional administrative centres in which the rapidly growing ranks of government servants, high and low, needed to be housed.

Central Public
Works Department,
Government Quarters,
Diplomatic Enclave,
New Delhi, c. 1950s,
plan and elevation.

Central Public
Works Department,
Central Government
Officers' Quarters,
Bhubaneswar,
c. 1950s.



Riding on his early successes in the Bengal PWD, it was not long before Habib Rahman too found his way to Delhi. Recruited to the CPWD as a senior architect in 1953, soon after Deolalikar's retirement, Rahman represented a sea change in design thinking and ideals that would progressively encourage many of his contemporaries and juniors to challenge the established colonial norms of the department that Joglekar continued to uphold well into the following decade. Rahman himself eventually rose to assume the largely managerial role of chief architect, CPWD, from 1970 to 1974. But it was the mature work that he accomplished in collaboration with his departmental colleagues in the later 1950s through the 1960s that would be the most influential.

Yet, mediating these manifest contrasts in style was the self-conscious sense of social agency that each of these senior government architects shared as public servants of a developing nation. They were products of the final years of British colonial rule and the emerging bourgeoisie of colonial-modern India, for whom professional education and careers in government service had been the way forward, and their work must be interpreted in the framework of the bureaucratic constraints, contingencies and substantially collective agency in which it was produced.¹³

While postcolonial political leaders vacillated dramatically between tradition and modernity in their architectural affinities, among other forms of nation-building symbolism, the CPWD and other 'All-India' infrastructure departments – such as Railways and Post and Telecommunications

B. R. Manickam and
Karnataka Public
Works Department,
Vidhana Soudha,
State Legislative
Assembly Building,
Bangalore, 1952–7.





Habib Rahman and
Central Public Works
Department, office
building for the
Central Government
Accountant General,
Bhubaneswar, c. 1960.

that had evolved from branches of the former colonial PWD system – were moderating constraints upon the excesses of political will. As the producers of the everyday public buildings and facilities in which the central government bureaucracy made its presence ubiquitous in the lives of ordinary Indians, these lumbering ‘technical departments’ were geared to a more measured and pragmatic pace of development and progress that effectively sustained many of the familiar design and planning norms, if not the forms, of the former colonial-modern technocracy well into the era of independent nationhood.

Contrasting not only to the purist rationalism of West Bengal’s New Secretariat, but also to the opposing revivalist tendency epitomized in the contemporary design and construction of the extraordinary new Mysore State Legislature and Secretariat in Bangalore, designs of the early 1950s by the CPWD for major office blocks and public buildings in New Delhi can be regarded as essentially pragmatic responses to formal context. In the subsequent regional dissemination of standardized designs for central government departments and agencies, however, the pragmatism of the CPWD was more functionally expressed, since building envelopes and details were adapted to address local climate and materials. In the recurring power struggle between Delhi and the regionally and culturally diverse states, the idea of modern India as a secular democracy of responsively cohering differences was realized, almost inadvertently, in this integrated fabric of understated CPWD-designed background buildings in which government conducted its mundane business.¹⁴

Infrastructure, New-Town Planning and Housing

If the central government remained indecisive, if not ambivalent about how it should represent modern India in architectural terms, it was unequivocal about the symbolic and substantive significance of big infrastructure in the building of the new nation. In Nehru's vision, the new 'temples' of India's modern age would be the foundries and factories of heavy industry with their tentacles of new road and rail connections and, above all, the monumental hydroelectric dams and power plants that would drive them.¹⁵

Economic independence in the production of power and one commodity in particular – steel – was to be the measure of success in the Nehru government's increasingly socialistic attempt through the 1950s and early 1960s to engineer a command economy through centralized planning.¹⁶ Indeed, by 1955, the Congress Party had formally adopted the view that the aim of such planning was to establish 'a socialistic pattern of society where the principal means of production are under social ownership or control'.¹⁷

In the first Five-Year Plan (1951–6) agricultural development (irrigation infrastructure, rural community development, etcetera), along with social services in general (housing, schools, clinics), were the primary objectives. Industrial and mineral development would be the priorities of the second plan (1957–61), with transport and communications accounting for a quarter of the entire government outlay and carrying equal weight in both plans.¹⁸ The net value of conventional building

Sabarmati Thermal
Power Station,
Ahmedabad, c. 1950.



Le Corbusier,
Legislative Assembly,
Chandigarh, 1955–60,
detail of hyperbolic
paraboloid structure
crowning the principal
legislative chamber.



Advertisement for
Sahu Cement from
Design magazine,
c. 1950s.

In the years ahead...

Whatever may be the building project—a large factory, commercial house, residential colony, roads, giant dams or bridges—Sahu Cement is a vital need and guarantees long life, in the years ahead.

SAHU CEMENT

Selling Agents:
ASHOKA MARKETING LTD.
Calcutta, Patna, New Delhi, Lucknow,
Chandigarh, Jaipur, Varanasi & Bhopal

Consult free
SAHU CEMENT SERVICE
in the use of Cements in construction

Available through a network of stockists.

activity arising from all this unprecedented infrastructure development was almost as great, as the envious private architectural profession was keenly aware, effectively making the central government the biggest builder in the country through the aegis of its various technical departments and construction agencies.¹⁹

In addition to the accommodation of all public services, government operations and associated personnel, government was increasingly conscious of the role that a modern welfare state was obliged to play in planning the orderly development of its rapidly growing towns and cities and in addressing the associated demand for affordable new housing. 'A house is not merely a place to take shelter', Nehru stated, in his prefatory remarks to the catalogue of the *International Exhibition on Low Cost Housing* organized by the CPWD in New Delhi in 1954. 'If human welfare is our objective, this is bound up with the house. Indeed, changes in housing in other parts of the world have affected social revolutions in the community.'²⁰

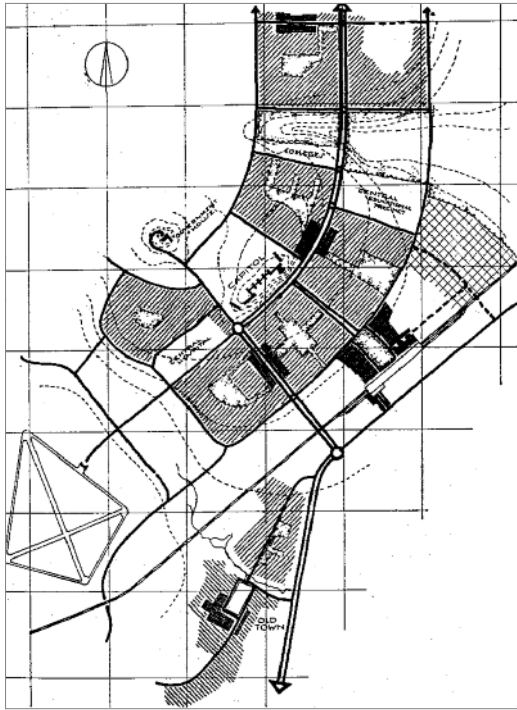
Nehru's broader understanding of modern architecture and urban planning was evolving rapidly by this time, through his personal engagement with Le Corbusier in the realization

of Chandigarh. But his sense of the instrumental agency of modern housing and town planning in broader projects of social engineering had also been informed by a number of other notable consultants whose contributions to India's experiments in planned development were less conspicuous than those of Le Corbusier and his collaborators at Chandigarh, but collectively much more extensive.

Between 1948 and 1951 policy for housing and new-town development under the authority of the Government of India had been guided by Otto Koenigsberger. As a stateless refugee from Nazism when he had first arrived in India a decade earlier, the émigré German architect and planner of Jewish descent was well disposed from personal experience to address the acute rehousing needs of post-Partition refugees. But it was also the personal and professional relationships that Koenigsberger had developed in the intervening years with members of the scientific and industrial elite of modern India that had brought his particular talents to the attention of the central government.²¹ Koenigsberger had received his first major town-planning commission in 1943, while still based in his initial Indian appointment as the Mysore State Architect. This was a scheme for the redevelopment and expansion of Jamshedpur, the original Tata Group town in the coalfields of Bihar, where the maverick industrial magnates and institution builders had spearheaded the development of India's steel industry four decades earlier.

Koenigsberger's Jamshedpur master plan and an earlier zoning plan he had produced for Bhadravati, a centre for metal production in Mysore, were the first of nine new towns across India that he had substantive responsibility for planning between 1941 and his eventual move to the UK a decade later. The next was his master plan for Bhubaneswar, the new capital for the state of Orissa, in 1948. It was through this politically significant new town project that Koenigsberger had first come to the attention of Nehru, who subsequently invited him to New Delhi to take up a new role in the Ministry of Works, Housing and Supply as national director of housing and new-town planning. Koenigsberger evidently had only nominal involvement in the project for the new capital for the eastern, Indian half of Punjab (Chandigarh), but took the lead in coordinating the planning of three other new towns specifically targeted at the rehabilitation of refugees – Nilokheri and Rajpura in Punjab, and Gandhidham in Kutch – as well as the new metropolitan satellite settlements of Faridabad outside Delhi and Kalyani near Calcutta.²²

Despite conflicts between the secular modernist ideals embodied in Koenigsberger's plan for Bhubaneswar, and the neo-traditionalist preferences for regional and religious associations that prevailed in its subsequent translation by others into architectural form and space, this was one of

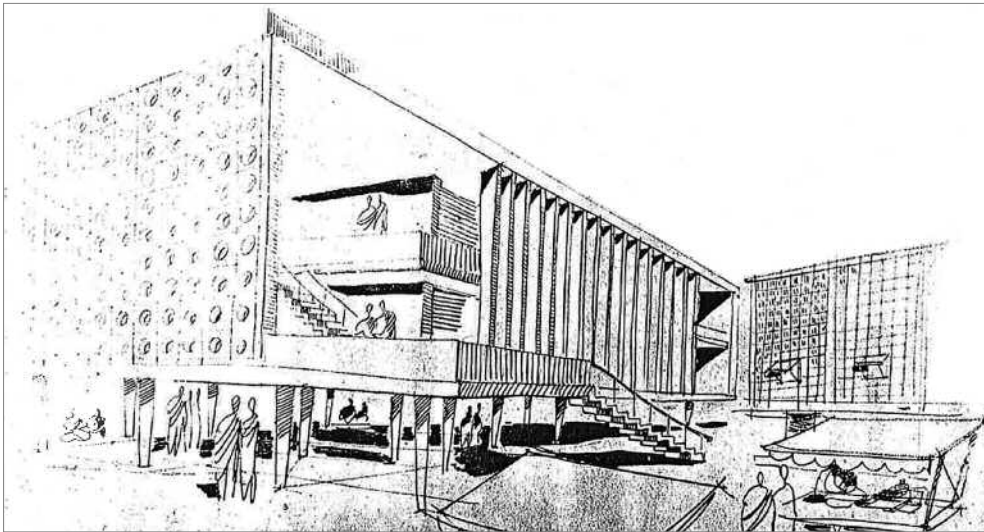


Otto Koenigsberger,
'Band-town' plan for
Bhubaneswar, Orissa,
c. 1948.

the earliest and clearest applications in India of the concept of the 'neighbourhood unit'. By the 1940s this concept had become a crucial building block in progressive modern town-planning practice, where each such 'unit' was conceived as a semi-autonomous microcosm of an urban community. Typically, this consisted of a pedestrian-accessible housing sector organized around a local school or equivalent facility as the communal centre of the layout, with supporting shops and services restricted to the periphery.²³ Aggregated along major transport corridors in what Koenigsberger called the 'Band-town' layout, the neighbourhood unit offered an instrumental spatial mechanism for engineering the rudiments of the Nehruvian vision of the modern, caste- and class-free urban society of India's future that could develop incrementally without limits to growth. At the same time, however, Koenigsberger argued that this linear

adaptation of the concept was equally suited to the alternative Gandhian prescription for India's development. This was predicated on the view that each unit retained both a direct spatial connection to the rural hinterland as well as an intrinsic sociological relationship with the Indian village as the ideal unit of self-governance and communal cohesion.²⁴

Among other international consultants working inconspicuously at the coalface of Indian rural and regional development under aid programmes such as the Truman-era 'Point-Four' programme and the Colombo Plan (1950) of the British Commonwealth, Chandigarh's initial planner, the American Albert Mayer, shared Koenigsberger's conviction that the neighbourhood unit model had a particularly good 'fit' with the 'traditional India of the villages' as a building block for the urban development of the modernizing new nation.²⁵ Mayer had served in India with the U.S. Army during the Second World War and, like Koenigsberger, had become active early on as a planning consultant in the newly independent India on the basis of his wartime experience and contacts. Already engaged in several projects in the neighbouring state of Uttar Pradesh, the planning project for the new Punjab capital had initially been awarded to Mayer, and a preliminary scheme for both the layout and



Matthew Nowicki,
proposed buildings
for Chandigarh,
1949–50, perspective
sketch.

the proposed architecture of the new city was developed in association with the talented young Polish architect Matthew Nowicki between 1949 and 1950.

After Nowicki's untimely death in a plane crash in 1950, however, Mayer was dropped from the project and the increasingly conspicuous commission from the political and ideological perspectives of the national government was eventually transferred to a larger international team comprised exclusively of architects that Le Corbusier, as one of the most challenging and internationally acknowledged masters of the modernist movement, had been persuaded to lead.

After many failed attempts in his earlier career to implement his urban design theories fully, Le Corbusier was initially reticent about accepting such a large but seemingly improbable undertaking in distant India, but this was evidently overcome by the special relationship he soon developed with Nehru as the de facto client for the new state capital at Chandigarh. With all the paradoxical political and cultural significance that had been invested in the design and building of New Delhi by the waning colonial regime as the bureaucratic centre and seat of the Government of India, Nehru had embraced the project for the new capital of the Partition-scarred Punjab as an opportunity to make a bold symbolic statement about the cathartic modernity of the new nation on a comparably monumental architectural and urban scale. The two men were both complex leaders in their respective vocations whose contradictions were complementary in significant ways. The struggle between urbane abstraction and rude

Le Corbusier, Capitol Complex, Chandigarh, 1951–65, view from Open Hand Monument.



primitiveness that Le Corbusier was so brazenly exploiting as his creative muse in his mature work of the post-Second World War era mirrored Nehru's struggle to create a modern secular democracy in which the scientific rationalism of his agenda for social and economic development was pitted against the ignorant brutality and inefficiencies of peasant society. What enabled Nehru to connect with Le Corbusier was the consummate modernity of their shared rationalist desire to transcend history for utopian solutions. Yet, paradoxically, both men were also profoundly anchored by a sense of history and the mark that their work would make upon it.²⁶

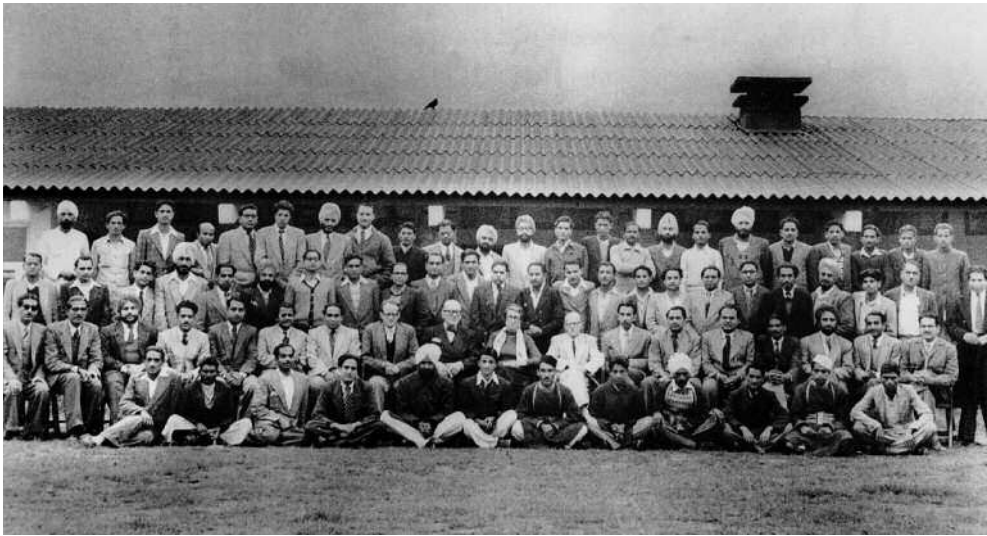
The three monumental structures and adjoining ceremonial spaces that Le Corbusier ultimately designed for the capitol complex at Chandigarh were extraordinary and appositely paradoxical responses to the context and this shared sense of historic unfolding in the epic of global modernization by a master at the height of his game. By any artistic measure, and despite their failure fully to be 'functional' answers to the routine environmental and operational exigencies of the government and judicial bureaucracies that were to occupy them, these buildings must be counted among the most important architectural works of the twentieth century.

While Le Corbusier took primary responsibility for the design of the final master plan and the capitol complex – most of which was conceived remotely in his Paris studio – the detailed design of the rest of the institutional, commercial and residential urban fabric of the new city fell to the resident international team of British and Swiss Congrès International

Le Corbusier,
Legislative Assembly,
Chandigarh, 1955–60,
detail of entrance
canopy.

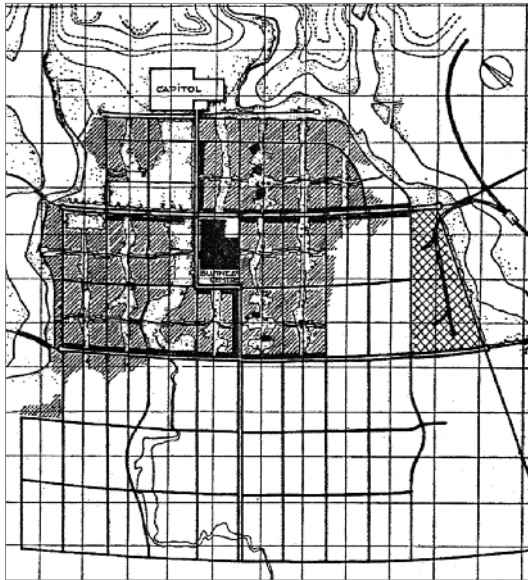


d'Architecture Moderne (CIAM) stalwarts and their junior Indian associates. Jane Drew and her husband, Maxwell Fry – a prominent member of the British MARS group and former associate of Lubetkin and Gropius – produced many of the various distinctive 'type' designs for government housing of different grades over their three-year residence at Chandigarh. Already engaged in major institutional design work in sub-Saharan West



Group photo of Chandigarh architectural design staff with Maxwell Fry, Le Corbusier, Jane Drew and Pierre Jeanneret seated in the centre of the second row, c. 1955.

Africa, Drew and Fry also brought considerable technical insight about designing for hot climates, as well as some cultural assumptions, that they were gathering in the late colonial context of the emerging British Commonwealth. But it was Le Corbusier's cousin and long-term collaborator Pierre Jeanneret who made the most sustained and substantive contribution to the architecture of the new city among the international members of the design team. Residing and working continuously at Chandigarh from 1951 until 1965, he acted initially as Le Corbusier's resident representative, and eventually as the official consulting architect to the Punjab Government. Jeanneret's legacy included many fine and relatively understated buildings (as distinguished from the self-consciously iconic monuments that his cousin designed for the capitol complex) designed for Chandigarh's other governmental and institutional campuses. Equally significant was the mentorship and collaboration that his many Indian associates, including Jeet Malhotra, Shivdatt Sharma, J. K. Chowdhury and Aditya Prakash, experienced over the years of his commitment to the realization of the new city. In his mature years, this quiet adjutant of the modernist pioneers came to regard the developing, socialistically inclined India of the 1950s and '60s as a privileged refuge from the increasingly commodified modern architecture and design of the industrialized West. Here the dual aims of both a functional and an aesthetic asceticism inherent in the revolutionary architectural propositions of the early modernist movement could continue to be pursued and developed with all honesty.²⁷



Le Corbusier, masterplan for Chandigarh, 1951, basic layout as represented in comparative sketch plan by Otto Koenigsberger.

Le Corbusier's plan for Chandigarh ironed out most of the softer geometry of Mayer and Nowicki's distinctly more romantic initial scheme. The neighbourhood unit principle, also used in Koenigsberger's plan for Bhubaneswar, had been intrinsic to Mayer's design thinking. This was substantially reconfigured in Le Corbusier's plan in which more overt emphasis was placed on the discrete rationalist tenets of the post-war planning paradigm promoted by CIAM.²⁸ At Chandigarh, at least, the 'fit' of the new modernity was never intended to be so seamless and comfortable that it would fail to make one think!²⁹

But by the mid-1950s even one of Le Corbusier's closest allies within the CIAM movement, the newly appointed Professor of Urban Design at the Harvard University Graduate School of Design, Jaqueline Tyrwhitt, had ostensibly been won over to the Gandhian ideal that the rural village, rather than any broad-scale urban planning, was the essential building block for sustainable development in India. Tyrwhitt represented the United Nations in an international housing exhibit and symposium that she helped convene together with the Indian Planning Commission in Delhi in 1954 in conjunction with the *International Exhibition on Low-cost Housing* organized by the CPWD. The illustrated 'international' component of the exhibit was composed of graphic displays on progressive social housing in a wide selection of nations. These included one of the most topical panels from the recent CIAM 9 congress at Aix-en-Provence (1953), featuring typologically innovative and culturally responsive recent public housing projects in French colonial North Africa by ATBAT Afrique, the Morocco-based consortium of former associates of Le Corbusier's atelier led by Vladimir Bodiansky, Georges Candilis and Shadrach Woods. It would be another decade before the impact of these images and the cultural turn – from the focus on infrastructure and process, to the notion of 'Habitat' and cultural practice – within the shifting international discourse on modern architecture urbanism of the early 1950s would be widely felt, though more directly and substantively in India than perhaps anywhere else. But the most immediately influential feature of the low-cost housing exhibition was the prototype 'village centre' that Tyrwhitt had erected at the core of the



Aditya Prakash,
Tagore Theatre,
Chandigarh, 1959–61.



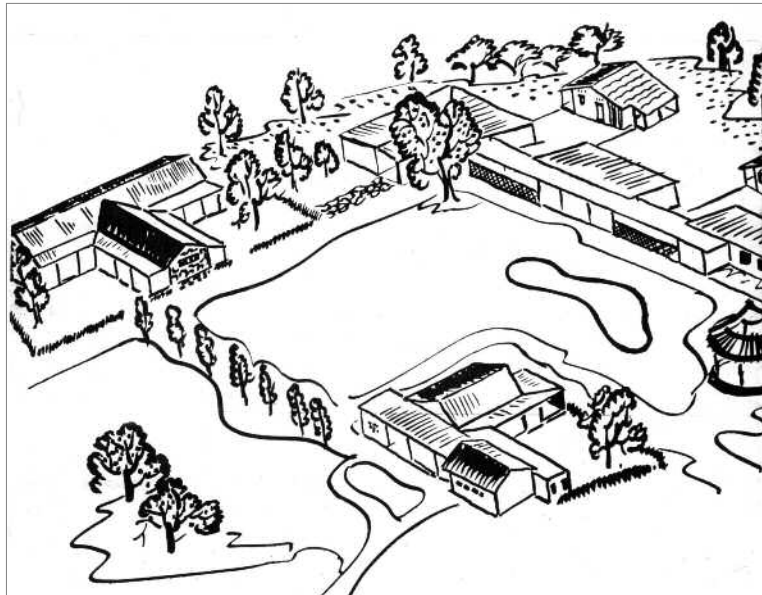
exhibit. This consisted of a simple cluster of pragmatically laid out community buildings constructed in conventional local materials. These included a school, a health clinic and a cluster of ancillary exhibits demonstrating appropriate low-cost building crafts and sanitary water and waste-management practices. In deference to prevailing popular fascination and respect for Gandhi, the village exhibit also included a full-scale replica of the simple hut in which he had lived and led by example for many years at the Sevagram Ashram near Wardha in Central India. Tyrwhitt was wary, nevertheless, of the cult-like and sycophantic manner in which she perceived that Gandhi's ascetic ideals and symbolic practices were being perpetuated uncritically by many of his followers. The exhibit was therefore conceived as an operative rather than an idealized interpretation of the social agency that such a 'village centre' might play in a modernizing India, analogous to current CIAM theories about the function of the 'Urban Core'. It sought to appropriate and moderate the utopianism of Gandhi's ideal of ascetic domesticity in a synthesized form that might still engage it directly with India's mid-twentieth-century venture into large-scale industrialization.³⁰

Pierre Jeanneret,
Gandhi Bhawan
auditorium, Panjab
University, Chandigarh,
1959–61.

Jane Drew, peons'
quarters, Chandigarh,
c. 1954–5.

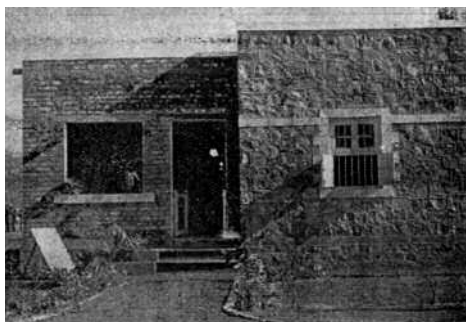
For the close to 300 million, or roughly 83 per cent of the overall population, who still lived in India's estimated 560,000 villages at the time of Independence,³¹ however, even the most rudimentary of the 'low-cost' housing prototypes that comprised the rest of the open-air exhibition surrounding the 'village centre' would remain well beyond reach. Innovation in these low-cost housing types was limited to a relatively small measure of regional variation in deference to climate and building materials, but had made little progress in employing new materials or techniques

Jaqueline Tyrwhitt's
'Village Centre' for
the International
Exhibition on Low-
cost Housing, New
Delhi, 1954, bird's-eye
sketch.



towards significantly cheaper shelter solutions or building costs. Indeed, a normative pattern of spatial layouts and detailing in the large majority of the 'model' designs exhibited reflected the origins of most in the prevailing planning and construction conventions of the PWD system, many of which had changed little, if at all, since the colonial era. Even such seemingly progressive designs as those by Jane Drew and her associates in the Punjab PWD for government peons' quarters at Chandigarh bore, in fact, very little distinction in plan or section from the comparable concrete-vaulted quarters built in the late nineteenth century by the colonial PWD for menial Indian railway employees and police constables.³²

Realistically, such humble architect- and engineer-designed dwellings were aimed at best at some of the 60 million urban dwellers in India's rapidly growing cities, new towns and industrial townships who were fortunate enough to be employed by one or other of the governmental departments, agencies, institutions and state corporations that comprised the 'formal sector' of India's planned development. But, there were many more of modern India's urban poor who remained unaccountable to the central planners, many of whom had been torn by Partition from their rural roots to become the slum dwellers and itinerants of the burgeoning informal sector of modern India's emerging hybrid economy, on which urban development and the construction industry in particular was becoming increasingly dependent.

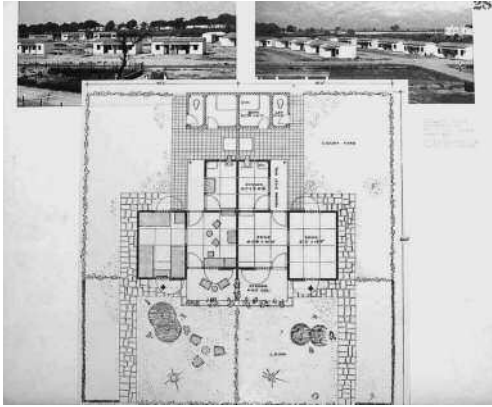


Low-cost housing prototypes, International Exhibition on Low-cost Housing, New Delhi, 1954: West Bengal entry by Joseph A. Stein and students of Bengal Engineering College; state entry by Punjab PWD; and state entry by Saurashtra PWD.

The dream that industrialization would transform India's building industry, seamlessly paving the way for a new architecture and affordable modern housing, had been short-lived. During his tenure with the Ministry of Reconstruction and Rehabilitation in the late 1940s, Otto Koenigsberger had attempted to spearhead the manufacture of prefabricated housing in India through a joint venture with the Hindoostan Housing Factory in Delhi. The enterprise had failed, however, with considerable embarrassment to both Koenigsberger and his political patrons, when the imported Swedish technology that he had specified proved inadequate for Indian application.³³

Although this setback had contributed to Koenigsberger's decision to leave India in 1951, he went on to establish the influential School of Tropical Architecture at the Architectural Association and, later, the Development Planning Unit at University College, London. Drawing on his years of experience in India in his subsequent teaching, Koenigsberger became increasingly convinced of the need to find a middle way between the techno-rationalist imperatives of the universally applicable modern architecture that his generation had attempted to disseminate worldwide and the practical constraints of contextually grounded building conventions.³⁴

Back in India, Koenigsberger's ill-fated prefabrication venture had prompted debate about the need for a more scientific and economically rational approach to the development of the building industry in the new nation and relevant planning norms. The evident lack of progress was emphasized four years later by the paucity of sophisticated industrially produced building materials and technologies in evidence in the low-cost housing exhibition of 1954, precipitating the establishment in the same year of the National Building Organisation (NBO) of India.³⁵ This semi-autonomous new 'scientific' branch of the Central Public Works Department was modelled closely on the system of Building Research Stations that were then being established throughout the new British Commonwealth in a bid to coordinate scientific



Otto Koenigsberger, prototype for pre-fabricated housing units produced with the Hindoostan Housing Factory, Delhi, 1949–50.

research on building technologies and performance, and the development of modern tropical architecture in particular.³⁶

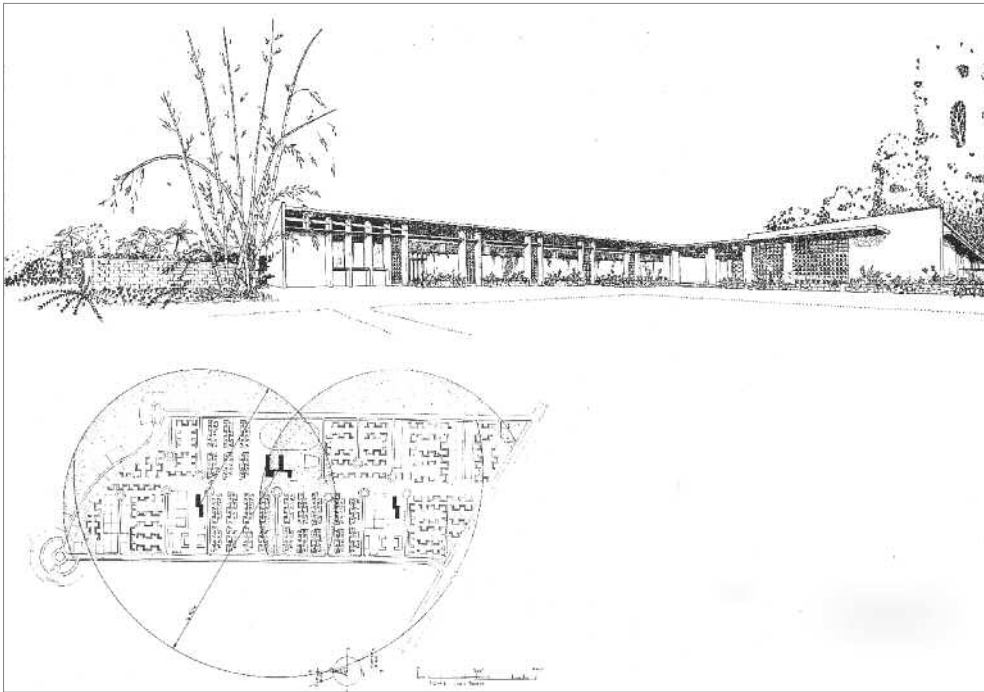
Within the science and technology sector itself, ironically, architectural progress in modern India was much more readily apparent. Here, the central government had been convinced from early on of the need to design and construct a new type of infrastructure in India composed of modern, architecturally sophisticated facilities in which advanced research could be conducted. Exemplary of this commitment was the substantial body of strikingly clean-lined and

proficiently detailed work that the young Achyut Kanvinde produced between 1947 and 1955 as the chief architect of the central government-funded Council for Scientific and Industrial Research (CSIR). Kanvinde's designs for extensive campus-scale projects such as his early scheme, with engineer and future partner Shaukat Rai, for a large hospital and medical research complex at Ranchi in Bihar, reflected the profound influence of Walter Gropius. This was a pedigree Kanvinde shared with his good friend Habib Rahman, both of whom had briefly worked with Gropius professionally in the USA in the mid-1940s. Kanvinde had also trained directly under Gropius as a master's student at the Harvard Graduate School of Design.

Other early Kanvinde designs for influential commissions such as the Ahmedabad Textile Industry's Research Association (ATIRA) and Physical Research Laboratories (PRL), also in Ahmedabad, represented significant investments, both substantive and symbolic, in research fields



Achyut Kanvinde, proposed hospital and medical research complex, Ranchi, c. 1955, rendered perspective.

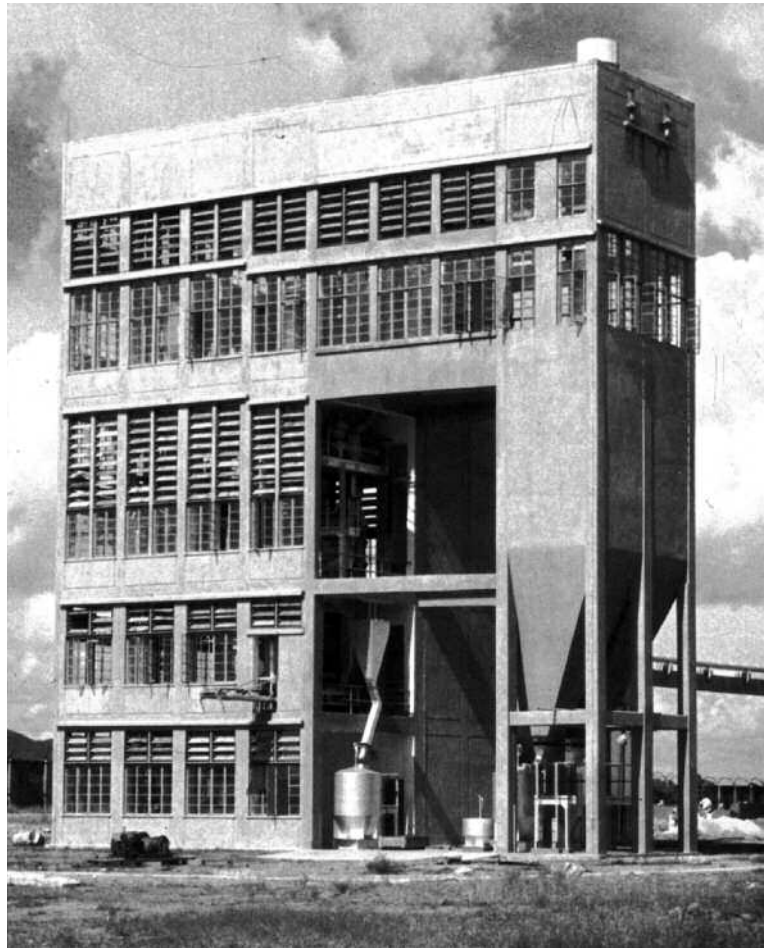


Joseph A. Stein,
elementary school
and plan for
neighbourhood unit,
Durgapur, West
Bengal, 1955–9,
perspective drawing
and plan.

crucial not only to the industrial development of the new nation, but also in cutting-edge areas of pure science and higher technology, including atomic physics (and, later, in aerospace technology and IT), in which India would eventually exercise strategically important leverage as an emerging political and economic power in the Asian arena.

For the time being, however, development policy under the second Five-Year Plan (1957–61) continued to encourage the simultaneous expansion of the economy and of government enterprise in the heavy industrial sector. Primary stimulus in this area was provided by the development, with foreign aid and technical collaboration, of a number of major new state-owned steel plants along with their supporting infrastructure. The new steel town of Durgapur in bucolic West Bengal, for example, was developed with British technical assistance, while the wilder frontier towns of Bhilai and Rourkela in the interior uplands and jungles of Chhattisgarh and Orissa, respectively, were built with Russian collaboration. Indeed, these major public undertakings were analogous in significant respects to Soviet industrialization ventures in Siberia in the 1930s, as well as the major infrastructure development and social engineering schemes that were pursued by the American Public Works Administration (PWA) and

Benjamin Polk and
Binoy Chatterjee,
Causticization Plant,
Rourkela, Orissa,
1957.



Tennessee Valley Authority (TVA) in the same era, from which further consulting experts had been recruited for Nehru's various mega-projects.³⁷

For all the rhetoric with which the new 'temples' of the dawning industrial age had been anticipated, however, architects had little opportunity to engage directly in the design of the colossal new factories and foundries that the government engineers were realizing together with their consulting foreign experts. A partial exception was the industrial housing work by two émigré American architects, Joseph Stein and Benjamin Polk, who had each independently established practices in India in association with local partners in the mid-1950s. Stein himself was a product of Depression-era America and a passionate advocate for

rethinking the design of housing and community on more equitable and environmentally sustainable principles. At Durgapur, following his recent experiments with low-cost housing at the Bengal Engineering College, where he had been the visiting director of the architectural programme in the early 1950s, Stein was commissioned to plan the new industrial township for several thousand workers and managers, for which he designed a range of type quarters and clusters to house them. In partnership with Polk and the Bengali engineer Binoy Chatterjee, Stein also developed township plans, housing and other building designs for Rourkela and several other industrial new towns in the region where Polk and Chatterjee were also later to realize a number of distinctive industrial buildings.

Housing in the 'city of *babus*'

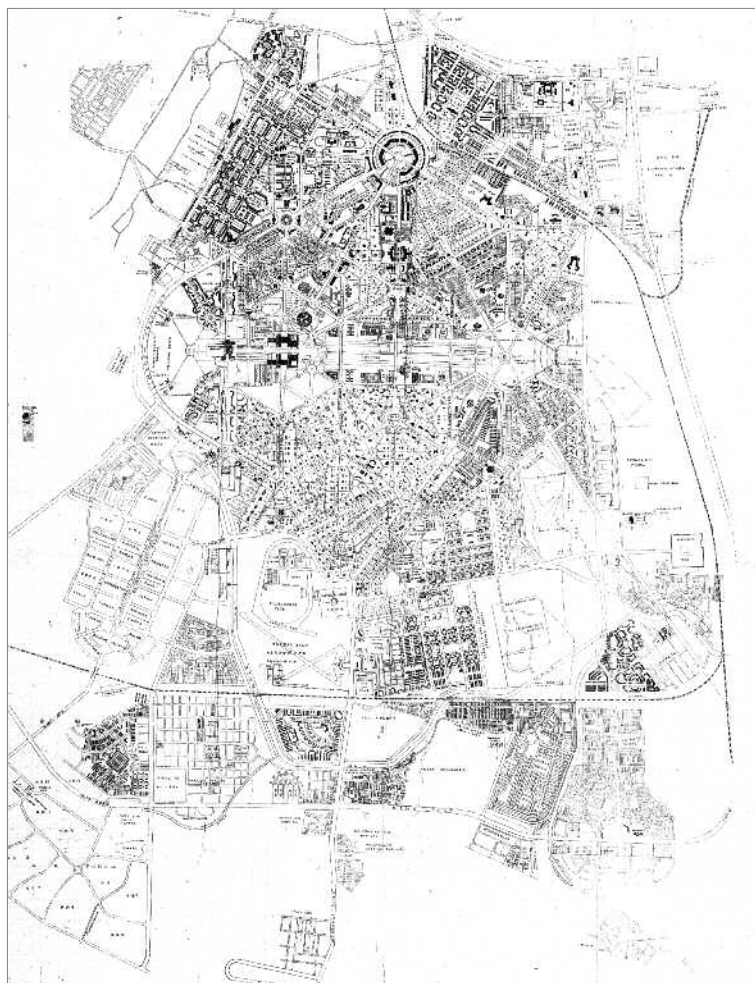
While the scope of architectural work undertaken by the CPWD in the post-Independence era had rapidly expanded to include central government buildings and facilities throughout the country, the greatest volume of work in the early years was housing and related town-planning considerations in the national capital. Indeed, as the home base of the most powerful building agency in the country, Delhi was the crucible in which virtually all its typologies were devised and developed for replication elsewhere.

In the domain of housing alone the CPWD was responsible not only for scores of extensive new housing 'colonies' for central government employees, but a major parallel focus as well on devising solutions to the unanticipated housing crisis of the half a million refugees who had converged on Delhi after Partition in 1947.

The scope of the CPWD's engagement in the post-Independence development of the capital through these combined undertakings remained extraordinary by non-colonial norms. Between 1951 and 1958, for instance, the CPWD built more than 80,000 housing units, and had projected to build at least half again as many.³⁸ But, the increasingly contingent, at best semi-planned metropolis that began to emerge, at an ever-accelerating pace from the early 1950s onwards, would eventually bear little resemblance to the formally perfected set piece of imperial New Delhi.³⁹

What the chief architect Deolalikar imagined he and his colleagues were mandated to design and manage was no typical Indian city, but a highly specialized and necessarily planned city of elite white-collar civil servants, or *babus* in the colloquial Anglo-Indian jargon.⁴⁰ This new New Delhi would embody the quasi-socialistic ideal of the secular modern

Map of all buildings and developments under Central Public Works Department superintendence in Greater Delhi, c. 1955.



technocracy that Nehru envisioned. To the political and administrative 'centre' of the new republic, the cream of the nation's professional technocrats and managers would be drawn from every corner of the culturally and linguistically diverse subcontinent. Privileged to live in the capital only for the sake of government service, the residents (politicians and bureaucrats alike) were itinerants who typically progressed through a succession of different rented quarters with proportions and amenities appropriate to their rising status and seniority. In Deolalikar's conception, however, they would never settle permanently in this city of *babus*, but ultimately retire in their native places.⁴¹

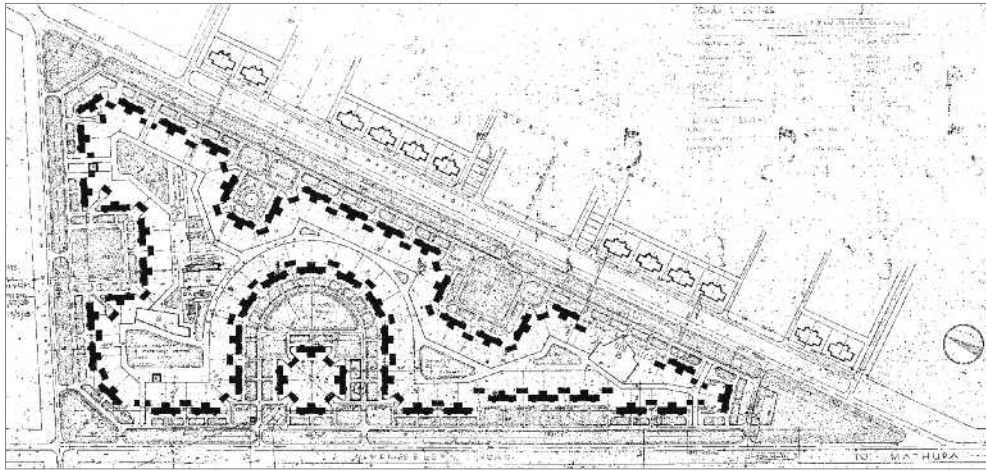
Central Public Works Department, typical *babu* housing at Sarojini Nagar, New Delhi, late 1950s.



The social-democratic idealism of this vision, however, could hardly disguise the neo-colonial elitism that underpinned it. While Deolalikar had insisted that permanent refugee housing be integrated in most of the new government colonies, the compromise that transpired in reality was a substantially segregated pattern of development undertaken by the CPWD under the aegis of separate ministries.⁴² The so-called rehabilitation colonies, built for the temporary Ministry of Rehabilitation established in 1947 to deal with the Partition refugee crisis, were implemented as catalysts for major extension schemes on agricultural land on the outer northwest and southeast fringes of the city. Meanwhile, the new diplomatic enclave and initial series of new central government residential colonies, built for the Ministry of Works, Housing and Supply, were woven into the interstitial spaces defined by the radiating geometry of Lutyens's original plan, along its southern edges, the most exclusive residential zone of imperial New Delhi. As further, more expansive government housing sectors were built subsequently to the south and west, adjacent tracts of prime land were laid out and subdivided by the CPWD and then sold for private development, setting the trend for the exponential sprawl of middle- and high-income residential and commercial development in South Delhi through the second half of the twentieth century.⁴³

Planning and compositional strategies first explored in Deolalikar's Delhi Improvement Trust (DIT) projects of the late 1930s and early 1940s were starting points for the standardized new government-'type' quarters and related planning patterns that Deolalikar and his CPWD colleagues were to propagate and institutionalize in Delhi and in housing colonies for central government employees throughout India over the following





Central Public Works Department, Senior Government Officers' Flats at Kaka Nagar, neighbourhood unit plan.

two decades. Although the leafy southern verges of Imperial Delhi posed little of the contingencies and complexities that the DIT had faced in its inner-city urban renewal projects, the bungalow paradigm of Lutyens's Delhi was clearly transcended by a new typology of semi-detached walk-up flats that significantly increased the urban density of these new developments while still retaining some scope to emulate the genteel grace and formalisms of the comparatively huge bungalow compounds of the original New Delhi, in the layout and landscaping of the clusters in particular.

Among the earliest of these post-Independence colonies, the pocket enclaves of Man Nagar and Kaka Nagar are revealing illustrations. Apart from the pedigree of the DIT projects, the CPWD-designed housing schemes of the 1950s clearly exhibited the modish Deco-inspired modernism of the Bombay-trained clique of Maharashtrians who dominated the architectural and town-planning branch in its early years, not least Deolalikar and Joglekar themselves.⁴⁴ But the most significant local precedent was the extensive Lodi Colony, the last of the major residential developments in New Delhi planned by the CPWD under the colonial administration.

The Lodi flats were the clearest indication of a possible further development of New Delhi in the spirit of the original grand plan and its neo-classical formalisms, but in a distinctly denser, more urban configuration. The tartan grid clustering and inward focus of the Lodi blocks on semi-public communal commons, however, had a precedent in the layout of the simple *serai*-like single-storey quarters for 'native clerks' and other subordinates of the colonial government bureaucracy that

Private housing in Sunder Nagar, New Delhi, 1950s.

Central Public Works Department, Senior Government Officers' Flats at Kaka Nagar, New Delhi, 1950s.



Central Public
Works Department,
Government Officers'
Flats at Lodi Colony,
New Delhi, late 1940s.

had been among the earliest sectors of New Delhi to be constructed by the PWD.⁴⁵

Possibly because of the too-familiar association of this distinctly communal pattern of housing with the effectively racial segregation under colonial planning practices, of the Indian rank and file from their British senior civil servants, the Lodi colony typology was not emulated as closely as it might have been in subsequent developments. Sewa Nagar (literally, 'service' town) – a housing colony designated for peons and similar low-ranking government servants constructed in 1948–9 just across the railway tracks from Lodi Colony – had a strong family resemblance to the neighbouring middle-class colony but a much more utilitarian layout.

The break from the Lodi precedent was particularly apparent in those enclaves, such as Man Nagar and Kaka Nagar, designated for senior cadres of the post-Independence bureaucracy, in which more progressive international models of contemporary town planning were emulated. Having studied Town and Country Planning at Liverpool, S. K. Joglekar in particular was an advocate of contemporary British and American 'New Town' planning principles and precedents, especially the 'neighbourhood unit' concept. The latter was demonstrably applied in the designs of most of the new CPWD housing schemes laid out in the 1950s, which typically featured networks of communal green spaces interleaved with road access and parking.⁴⁶ Such communal variations on earlier British Garden City models had limited direct applicability to the particular realities of everyday life in post-Independence India. While ostensibly a progressive alternative to the status quo, however, these tidy new

‘neighbourhoods’ were sufficiently similar to the orderly patterns and qualities of elite colonial space, especially for those raised in civil or military lines, to redress the colonial-modern elite’s ‘fear of the unplanned’.⁴⁷ Moreover, the leafy porosity that the neighbourhood unit model lent to these outwardly exclusive and autonomous CPWD-designed colonies enabled them to remain intricately interwoven into the larger fabric of informal settlements, economies and services that knit the greater urban phenomenon of Delhi into a functioning whole. Continuity from the colonial past of complex hierarchies of caste and class ensured that the residential spaces of these enclaves would continue to be inhabited simultaneously and symbiotically by servants as well as those they served.⁴⁸

Central Public Works
Department, housing
for low-ranking
government servants
at Sewa Nagar, New
Delhi, 1948–9.

By other fundamental measures of sustainable development, however, the inherent problems of the infrastructure, automobile and, hence, social wealth-dependent ‘garden city’ and ‘new town’ models were acutely apparent as applied in 1950s Delhi, where public transport, let alone private car ownership, remained minimal.⁴⁹



Towards the 'Modernist City'

Although the seminal housing exhibition of 1954 in Delhi had been officially curated as a retirement project by G. B. Deolalikar, much of the actual logistics and some of the significant designs featured were the work of Habib Rahman.⁵⁰ It would be another sixteen years before Rahman officially assumed the post of chief architect in the CPWD (1970–74), but the lucid rationalism and economy of even such humble early designs as his exhibition prototype for a standard peon's quarter – subsequently replicated by local PWDs and housing authorities throughout India – progressively established Rahman's effective leadership by the early 1960s in skilfully resisting and ultimately changing the unstated rules and style of design and planning within the CPWD. Countering the empiricist stances of his superiors with their receptive if not reproductive responses to past models and present contingencies, Rahman took a precociously rationalist stance. This was clearly manifested in the distinctly more regimented geometry of the designs and planning solutions that the CPWD proposed for subsequent government housing developments, such as the vast new sectors of Rama Krishna Puram that began to be built in the late 1950s with various permutations of the so-called 'Rahman-type' two-bedroom flats.

Habib Rahman and Central Public Works Department, Middle-ranking Government Servants' Housing at Rama Krishna Puram, New Delhi, c. 1960s.





Habib Rahman discussing his designs with Prime Minister Jawaharlal Nehru, 1960.

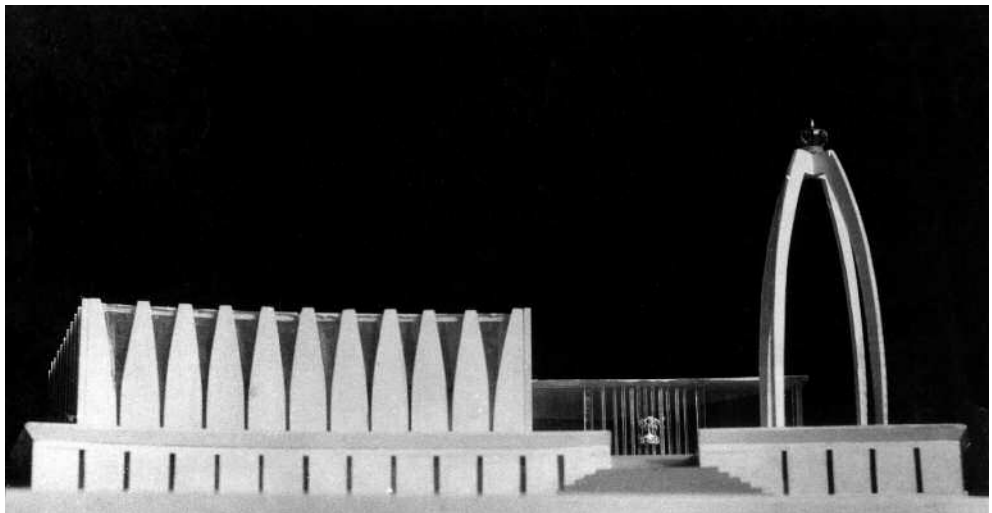
Habib Rahman and CPWD, high-rise government flats at Rama Krishna Puram Sector 13, New Delhi, 1965.

But it was not until the publication in 1962 of the first post-Independence master plan for the development of Delhi that the way forward to much higher densities of urban housing, including high-rise apartment dwellings, was opened up.⁵¹ The innovative high-rise flats built to Rahman's designs in Sector 13 of Rama Krishna Puram in 1965 anticipated a potentially much more extensive array of such breeze-and-view-seeking dwellings set in parkland as the rational extension of the Garden City ethos of New Delhi into its southern urban hinterland. Paradoxically, how-

ever, it was in the very heart of the now, to some, almost sacred original precinct of 'Lutyens's Delhi' that the full impact of Rahman's high-rise housing designs would be felt.

The new rationalist-modernist hubris of the CPWD work produced under Rahman from the late 1950s through the 1960s, with its relative freedom from the paradigm of other contemporary CPWD designs, let alone colonial precedents, was evidently enabled in no small part by the combination of cross-disciplinary skills and cross-cultural cosmopolitanism that Rahman embodied as an individual and design leader within the department. As both an architect and an engineer, Rahman could





confidently explore a bold new mode of functional and structural exhibitionism that positioned him in between the engineering hierarchy of the public works bureaucracy and the still-emerging institution of the architectural profession in India. With the benefit of the self-confidence and enhanced social status he had gathered through his graduate studies in the USA, Rahman had also forged strong friendships within the Delhi-based international set of expatriate experts and agencies attracted to participate in the development of post-Independence India. These connections afforded Rahman unusual access for a middle-ranking government servant to the favoured circle of both indigenous and expatriate pundits that constituted the Camelot of the new nation under Nehru.

Thus the keen, cool, yet expressive rationalism of Rahman's modernity was ultimately deployed most conspicuously as a form of 'symbolic' capital. Major interventions in the sylvan reserve of Lutyens's Delhi, such as Rahman's External Affairs Hostels of 1965 and his massive Curzon Road Hostel complex – built for initial use as the temporary accommodation for international delegates to the UNCTAD conference of 1969 hosted in Delhi – were clearly the outcomes of planning and design in which the political functions of these developments were at least as important as the pragmatic functions they addressed.

Peripheral to the symbolic space of New Delhi's leafy heart, the design and planning prerogatives of the CPWD-built housing colonies remained more prosaic than political. While the standardized type designs continued to evolve in the functionalist-modernist direction that Rahman's work had initiated, there was no clean, iconoclastic break from the norms and forms of previous developments under Joglekar and Deolalikar. With the exception of Rahman's R. K. Puram Sector 13 Flats of the mid-1960s, the planning of virtually all these developments continued to be structured on the neo-colonial notion of enclaves. While the CPWD planners of the 1950s had appropriated the planning principle of the neighbourhood unit from progressive British and American sources, it is probable that this simply enabled the reaffirmation on modern theoretical lines of the colonial assumption that the social fabric of urban India should be conceived as a loose matrix of segregated subcultural enclaves. Deolalikar's conception of a 'city of Babus' as a constellation of quasi-socialistic sub-worlds in which similarly graded government officers – the new bureaucratic upper castes of modern India – could live in selfless service to the state was grounded paradoxically in the intimate and indelible relationship between modernity and colonialism. But this subdivision into tidy 'colonies' was hardly absolute. Indeed, it was no more sustainable than it had been even at the height of colonial segregation with the necessarily blurred boundaries between servant and served in actual everyday life.⁵²

Habib Rahman and
CPWD, External Affairs
Hostel, New Delhi, 1965.

Habib Rahman,
proposed Indian
Pavilion for the New
York World's Fair of
1964, model.

Meanwhile, the sheer volume and consistency of the new government-built housing and other minor public buildings that now comprised the domestic and working environments of Indian cities had impressed this evolving yet still strangely familiar mode of modernity into every facet of the mundane urban environment. The banality of many of these middling-modern buildings and town plans can hardly be denied.⁵³ But precisely because they did not stand out they soon came to define what was (and for many still is) the 'normal' fabric of everyday urban life in modern India.

The Question of a National Style

As the new India embarked on its second decade questions of identity and monumentality in the search for a modern Indian architecture within the government works bureaucracy remained unresolved. This was apparent, for instance, in an ultimately unbuilt design that Rahman projected for the Indian Pavilion at the New York World's Fair of 1964.

While clearly rejecting any notion that the idiosyncratic abstraction and expressionism of Chandigarh might be the germ of an official new style for the architecture of the modern state, it was evident in such self-consciously symbolic works that Rahman was no closer than he had been in his early design for the Gandhi Ghat memorial to resolving the struggle between the contending propositions of rationalism and nationalism that confounded his own attempts at monumentality, and which continued to divide the rationalists from the revivalists within the architectural ranks of the PWD system.

Yet, the significance that architecture continued to be accorded in the nation-building efforts of the postcolonial state was underscored in the inaugural address that Prime Minister Nehru himself delivered to an unprecedented national seminar on architecture convened in New Delhi in 1959. Well into his second decade in office, the experience-worn national leader was careful to acknowledge the 'solid thought' inherent in the huge burden of public and government-sector building needs that were routinely shouldered by the PWD, 'which had its own specification, its own ways'. But what was needed, he countered, was to build for the present, not to reproduce the past by hanging on to outdated rules and regulations and, notably, the assumption that 'normal buildings' should be built to last. 'We cannot . . . build Taj Mahals now,' he declared, '[they don't] fit in with the society today.'⁵⁴

It was on this opportune occasion, when many of the leaders of the Indian architectural profession from both the government and the private sectors had assembled for the first time, that Nehru offered his most

unequivocal declaration of faith in the 'great experiment' in architecture and urbanism that was unfolding at Chandigarh and, above all, the 'powerful creative type of mind' that had conceived it. But perhaps conceding that the old dogs of his generation could not, realistically, be expected to change their deep-seated practices and principles, Nehru's closing remarks were clearly directed at the next generation of India's modern architects, and those within the CPWD system who needed to make way for them to develop:

The main thing today is that a tremendous amount of building is taking place in India and an attempt should be made to give it a right direction and to encourage creative minds to function with a measure of freedom so that new types may come out, new designs, [and] new ideas.⁵⁵

The political context of Nehru's remarks was passionately and somewhat less diplomatically revealed in a series of papers that were subsequently presented in response to one of the main issues that the symposium had been organized to address. This was the question of a national policy on architectural expression, which had recently been mooted in Parliament. As Achyut Kanvinde, the official convener of the seminar, politely explained, in deference to the event's political patrons, the question of a 'national style' simply did not occur to a committed modernist of the rationalist school, to which he, as an acolyte of Gropius, still adhered unequivocally at this early stage of his career.⁵⁶ The point was argued more bluntly by Piloo Mody, another putative leader of the profession who would later enter national politics himself as a radical member of the parliamentary opposition. Architecture was a self-governing discipline that would not be dictated by some false ideal of a national style. A government policy 'on' architecture was therefore to be resisted on principle, Mody argued. A policy 'towards' architecture, on the other hand, could serve to cultivate a better understanding in government and society at large about what good design could deliver, unfettered by ignorant or arbitrary tastes. Indeed, if the Government was serious about improving the standard of architecture, Mody quipped, 'it should begin by immediately doing away with the Public Works Department'.⁵⁷

S. K. Joglekar, chief architect of the CPWD, declined to respond directly to such provocative assaults by offering a somewhat pompous defence of the discipline and its integrity, which needed to command the respect of its members in refraining from unprofessional slagging and infighting. As the most senior representative of all the government architects in the room, this was an oblique way of dodging the mounting criticism of the

PWD system and the all too 'typical' architectural outcomes it was broadly perceived to produce.⁵⁸

Cyrus Jhabvala, a future Head of Architecture (1966–78) at Delhi's newly established School of Planning and Architecture, reiterated a familiar criticism about the divorce of the architect under this paper system from any direct and knowledgeable connection with the actual site. In lieu of the superficial copyism of imported modernist forms and styles that passed for modern architecture it was essential to re-think contemporary Indian architecture from the bottom up to exploit fully the inverted economic reality of the Indian building context, where over-abundant labour was still far cheaper than the scarce supply of modern building materials.⁵⁹

But perhaps the most thought-provoking of the speakers at the symposium was also one of the youngest and newest voices on the scene, Charles Correa. Like Habib Rahman a decade earlier, Correa's insight and convictions about modern architecture reflected extensive architectural studies and work experience in the USA, from which he had only recently returned. But, already manifesting the articulate and precociously outspoken sense of critical certainty that was to make him one of the most influential interlocutors of contemporary Indian architecture, both at home and abroad, over the next five decades, this new champion was batting for the other side. Standing firmly in the camp of his fellow independent practitioners, Correa took command of the podium as if Nehru had just passed him the baton to ensure that the artistic and rhetorical functions of architecture would not be eclipsed by the crushing utilitarian prerogatives of the developing postcolonial state. 'I am completely against any directive, government or otherwise, which in any way interferes with the working of the architect', declared Correa in a clear retort to the central proposition of the symposium.⁶⁰ 'Can there be such a thing as an Indian Architecture?' he asked rhetorically. 'Architecture is temperament . . . [But] is there any reason to believe that we have an Indian temperament?' Correa answered his own question in the affirmative:

There is a great lyricism in the Indian temperament; in the songs, in the poetry. Lyrical – meaning the ability to sing, to make continuous patterns around a theme. Perhaps Indian architecture will be like Mozart – a great lyricism and in the centre a clear concise idea, as clean and hard as a theorem. The house around the courtyard; the clear statement. The tree, the shadows, the texture, providing rhythm, and patterns, and counterpoint.⁶¹

Succinctly and memorably phrased, these were some of the main ideas that were to drive the typological and formal investigations characteristic of Correa's own work in the decades ahead, and that of a growing number of others in the next two generations who, directly or indirectly, were to follow his lead. With increasing professional confidence and independence from the nation-building agenda of the state, these architects were to strive to discern the particular regional patterns and cultural qualities of dwelling and building in India that could inspire and inform the design of modern architectures that were more distinctly their own.



chapter four

Regionalism, Institution Building and the Modern Indian Elite, 1950s–1970s

By the late 1950s modern architecture and planning had been embraced unequivocally by post-colonial India as the spatial mould in which new development in its fast-growing towns and cities, and even its erstwhile ‘timeless’ villages, was being cast. Distinguished from the earnest though rather prosaic mode of functionalist modernism that was already becoming widely standardized throughout the burgeoning Public Works Department system, however, a self-consciously more rhetorical and formalistically engaged counterpoint was beginning to emerge in the work of the first generation of post-Independence trained architects who were now entering into private practice.

This distinction was somewhat ironic. On the one hand, Prime Minister Nehru continued to champion the extraordinary architectural hubris of Chandigarh as both a symbol and example of the transformative and universal social progress that the modernizing nation-state was determined to realize through centralized planning and public agency. On the other hand, it was already apparent that this symbolic function of modern architecture was being expressed and exploited at least as effectively on the behalf of a private sector of autonomous individual and institutional clients with quite different stakes in shaping and representing Indian modernity. Specifically, it was the patronage provided to these emerging independent practitioners by powerful regional elites in their push for greater political, economic and cultural autonomy from the centralized nation-state that was to foster diversity and increasing distinctiveness in approaches to the possibilities of mid-twentieth-century modernism (as distinguished from mere ‘off-the shelf’ importation or mimicry of canonical precedents) from an early point in India’s post-Independence architectural history.

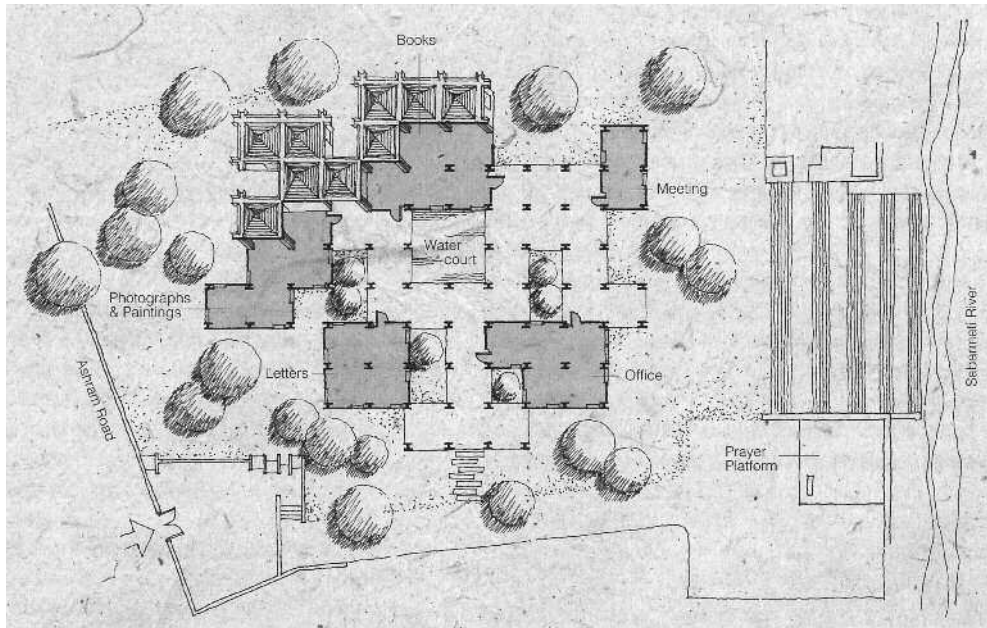
A prime example was Charles Correa’s earliest significant commission, the Gandhi Smarak Sanghralaya (Gandhi Memorial Museum) in Ahmedabad, begun in 1958. The project for a contemporary museum about Gandhi and the freedom struggle was designed to complement and

Air India Building and
Oberoi Hotel, Bombay,
c. 1969–74, viewed
from Marine Drive.

Charles Correa, Gandhi Smarak Sangrahalaya (Memorial Museum), Ahmedabad, 1958-63.



interpret the humble buildings and riverside compound of the adjacent Sabarmati Ashram in suburban Ahmedabad where Gandhi and his followers had lived between 1917 and 1930. It was here that the original Gujarati base for Gandhi's nationwide campaign of non-violent resistance to British rule had been mobilized with the support of the local elite. Correa's *parti* for the museum was a chequer-board cluster of simple, elegantly proportioned pavilions, open loggias and open-to-sky courtyards. The scheme had clear affinities with concurrent experiments by Louis Kahn, Aldo van Eyck and Shadrach Woods, among others, with matrices of cellular forms and interstitial spaces as a form of grammar for



Charles Correa, Gandhi Smarak Sangrahalaya (Memorial Museum), Ahmedabad, 1958–63, plan showing interleaving courtyards and pavilions.

composing non-hierarchical communal and social structures in built form. But these reflected the engagement with current debate and discourse of the worldly young architect – who had only recently returned from his architectural studies in the USA – and his intention to embody the grass-roots socialism of Gandhi and his movement in appropriate contemporary form. This was reinforced by Correa's unadorned approach to the building materials and the inherent though consciously understated monumentality of the scheme. With its platonic volumes rendered in a hybrid palette of off-form concrete, bricks and local ceramic tiles, it posited an aesthetic and ethical parity between the Gujarati vernacular of the original ashram buildings and the distinctive contemporary Brutalist idiom that was emerging locally, particularly in Ahmedabad itself, in the immediate afterglow of Le Corbusier's seminal contributions to the new architecture of that city earlier in the same decade.

Symbolically important institutional projects such as this local memorial museum for Gandhi were thus a product of particular regional factors. Closely related to the changing culture of building were the local culture of patronage and the changing political climate of the region, which, by the time the building was finished in 1963, had transformed Ahmedabad from a regional mill town to an emerging new cultural and economic centre of national importance.

Regionalism in Political Context and the Role of the Elite

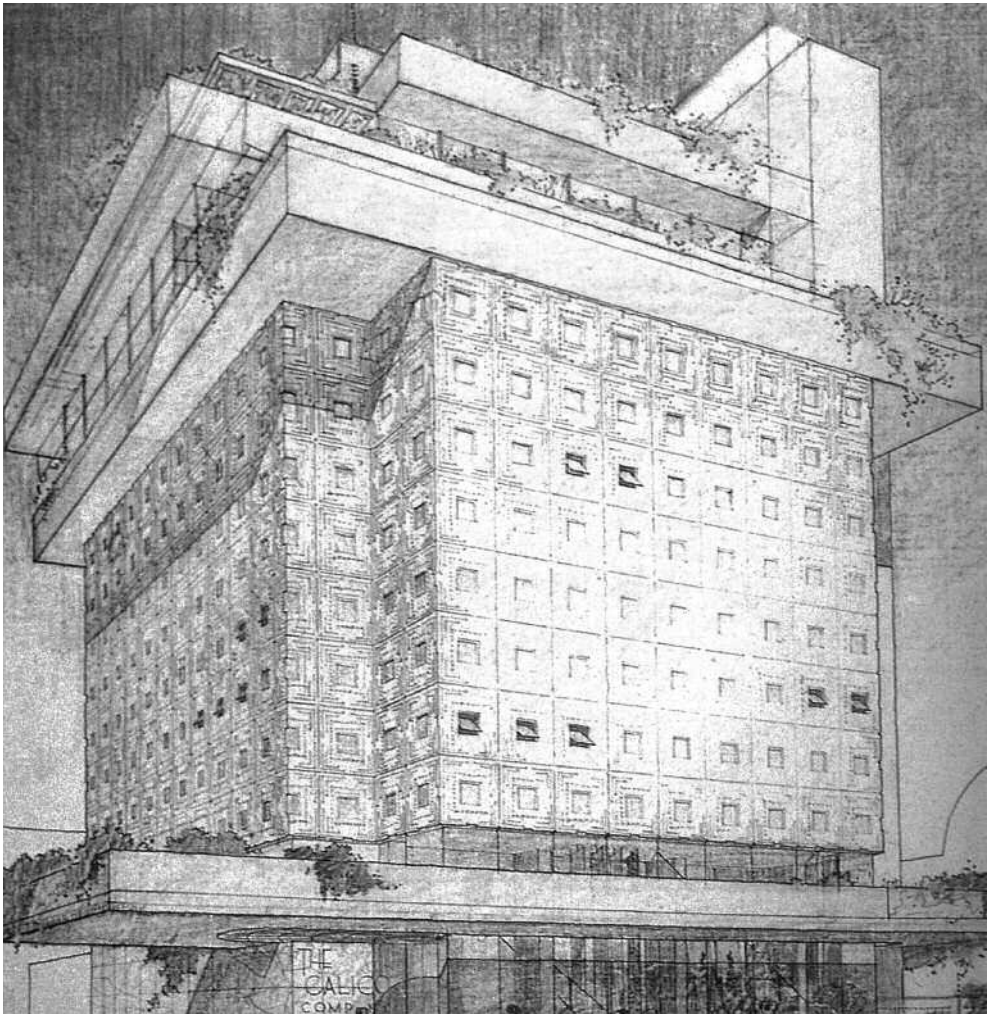
Even before Independence had been granted formally in 1947, regional forces had begun to alter the political climate of the subcontinent. India had always been a collection of provinces – geographically, culturally and more often than not even linguistically distinct from each other – that had been more or less forcibly conjoined under previous imperial administrations, and only tenuously, but never seamlessly, united politically through the common struggle for freedom from colonial rule. Once the British had finally committed, in 1945, to a time frame for their withdrawal from India, solidarity soon began to erode, enabling provincial loyalties pre-dating British intervention to come back into play. Indeed, other parts of India might have met the same fate as the catastrophic Indo-Pak partitions of the Punjab and Bengal in 1947, but Nehru's unifying determination and actions, first with the accession of the princely states to India in 1948, followed in 1950 with the reframing of the new nation-state as a republic with its own constitution, was to keep these provincial voices muffled for a while longer. By 1953, however, regional discord had become too strong to ignore, compelling the central government to form a States Reorganisation Commission. This was to convert the anomalous received order, with its three different types of states – gubernatorial, princely and union – into a more homogeneous set, with the States Reorganisation Act of 1956.

A major area of contention in this reorganization process was the state of Bombay, one of the former colonial presidencies, which was composed of a predominantly Marathi-speaking population in its southern districts, surrounding the port of Bombay, and a significant though proportionately smaller Gujarati-speaking population in the north, with Ahmedabad as its primary urban node. While the Gujarati-speaking sections with their cosmopolitan minority of Jain Bania businessmen and industrialists had little cause for change, Marathi nationalists in the south voiced an increasingly passionate desire for a partition on linguistic grounds.¹ This was a particularly problematic proposition because the multilingual port of Bombay served as a major economic centre for both these entrepreneurial communities. Initial tactics by the States Reorganisation Commission, however, to sustain but bolster the status quo more equitably, with Bombay city as the state capital, by expanding the existing state borders to include the additional Gujarati-speaking regions of Kutch and Saurashtra ultimately backfired. Bowing to mounting popular pressure and increasingly violent protests, the dual state was finally divided in 1960. While the new Marathi-speaking state of Maharashtra in the south was to retain Bombay city as its capital, the new Gujarati-speaking state

of Gujarat in the north was left to determine a new capital for itself, a void that would be filled provisionally by the city of Ahmedabad. Local architectural developments of the early 1960s therefore need to be seen in the light of this bid for regional identity where the local entrepreneurs fought to make Ahmedabad a regional centre in competition with the city of Bombay.

The core group of Ahmedabad's industrialists were a close-knit caste of Jain Banias (caste of businessmen) who had profited greatly from the patriotic zeal for homespun cloth that followed from the earlier *swadeshi* movement and the coincidental interruption to British imports during the First World War. But, as we began to explore in the previous chapter, through their subsequent contact with Gandhi during the formative stages of his anti-colonial campaign these wealthy mill owners had been encouraged to align their considerable economic and political power behind the Indian nationalist movement, thereby becoming some of the most influential members of India's business elite by the time of Independence. Beyond mere financial clout, this influence resided in part in their efforts to be both enlightened entrepreneurs and philanthropic institution-builders who could marry dynamic economic development to Gandhi's competing ideal of a modernity that would overcome ignorance and oppression without abandoning the values and social cohesion inherent in sustainable cultural practices. The mill-owner families of Ahmedabad were intimately involved in almost all manifestations of the changing intellectual and cultural life of post-Independence Ahmedabad, as a distinctively bucolic urban microcosm of such an 'Indian modernity', including the enthusiastic patronage of modern architecture. But recognition of the prospective cultural capital latent in this new commodity, along with the modern furnishings and lifestyle that came with the package, was particularly acute on the part of this business-savvy elite.

Indeed, some, such as the powerful Sarabhai family of Ahmedabad, were astonishingly precocious in their entrepreneurial efforts to lead this new fashion. Already closely aligned with Gandhi and the freedom struggle, and clearly anticipating their membership in the plutocratic circle of post-colonial India's progressive industrialists, the Sarabhais had led the move to modernism as early as 1945. Simultaneously, they had also shifted the focus, as cosmopolitan aesthetes, from Britain and Europe to America as the source for the most progressive contemporary ideas and practice, commissioning no less than Frank Lloyd Wright to design a new office building in Ahmedabad for the administration of their Calico Mills. While Wright had no prior involvement in India and never managed to visit the site, a scheme for the building was designed and



Frank Lloyd Wright,
proposed office
building for Calico
Mills, Ahmedabad,
1945, rendered
perspective.

substantially developed by 1946 before the project was shelved with the advent of Independence a year later. The commission had evidently been arranged at least a couple of years earlier, and thus well before the British had formally declared their intention to quit India, through two of the younger generation of the Sarabhai family. Gira Sarabhai and her brother Gautam had been attracted to Wright and his architecture in their wide-ranging higher education and travels overseas, both having served ultimately as student apprentices in Wright's Taliesin West fellowship in Scottsdale, Arizona, in the early 1940s. Although the Calico

Building was never realized, Gira Sarabhai's own design built a few years later for the Ahmedabad villa of another brother, Vikram Sarabhai, echoed some of the distinctive cantilevers and rhythmic fenestration featured in the earlier Calico scheme, which were also characteristic of other residential schemes produced in Wright's later career with his Taliesin staff and apprentices. The spare and spacious interior of the house flowed graciously to the surrounding landscaped garden, which overlooked the steep, tree-topped banks of the Sabarmati River. The bold line and simplicity of contemporary rough-hewn wooden furniture – designed by George Nakashima, the Japanese-American architect and furniture builder who had recently completed work with Antonin Raymond (another former alumnus of Wright's atelier) on the exquisite Golconde Hostel in Pondicherry – was complemented in this seamless 'inside-outside' landscape by a picturesque assemblage of rustic Gujarati textiles and terracotta crockery.² This manner of studied naturalism, with its counterpoint of modernist and traditional craftwork, would soon be de rigueur in the furnishing of the modernist interiors of Ahmedabad's emerging avant-garde. By the early 1950s, however, this nascent school of Ahmedabadi modernism had also been stamped with the indelible impress of Le Corbusier.

Even before he had completed his first visit to India in 1951 to start the Chandigarh commission, the celebrated Swiss-French modernist had been invited to make a side trip to Ahmedabad with the proposition to design a new cultural centre for the city, as well as a private residence for his official host, Chinubhai Chimanbhai, the presiding mayor. Chimanbhai was one of the city's mill-owning oligarchy and a nephew of one of its most influential senior members, Sheth Kasturbhai Lalbhai, who, like the Sarabhais, had long been a champion of progressive architecture. Lalbhai had previously promoted the school of Anglo-Indian rationalist design emanating from the J. J. School in Bombay, including the work of its principal teacher and professional exponent, Claude Batley. Batley had designed the Lalbhai's Bombay residence and various commercial and public buildings in Ahmedabad including the Town Hall (1938), the commission for which he had won in competition over an equally innovative design by Walter Burley Griffin.³ Seeking to uphold the Lalbhai family's reputation as enlightened patrons of architecture, other members of the clan were quick to take the initiative, upon Le Corbusier's arrival in Ahmedabad, to engage him in a variety of additional commissions. Four of these were actually realized, and with exceptional speed, temporarily making Ahmedabad by the late 1950s almost comparable with Chandigarh, if not Paris itself, in the quantity and variety of built works by the idiosyncratic Swiss-French master that it could claim.

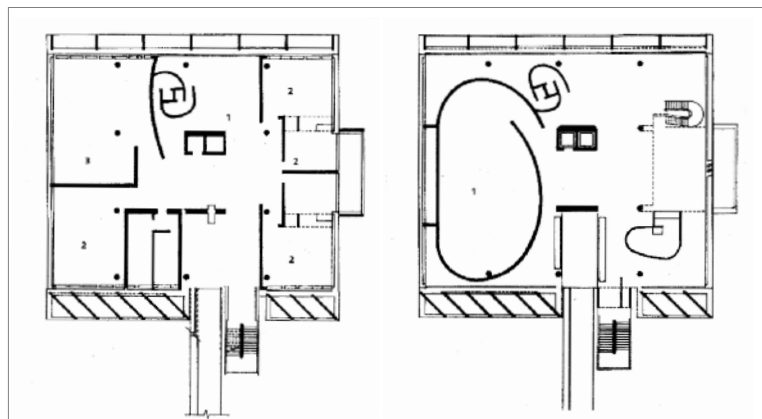
Le Corbusier, City
Museum / Sanskar
Kendra, Ahmedabad,
1957, detail of interior
court.



Somewhat ironically, Le Corbusier's original Ahmedabad commission for a civic cultural centre was never fully realized. The only completed building of the ensemble, Sanskar Kendra (the City Museum, 1957), was never to have the critical recognition and consequent impact of the other Ahmedabad projects that were built, opportunistically, on the side. Relative to the City Museum, the headquarters for the Ahmedabad Textile Mill Owners' Association (ATMA) Building (1954–6) was the more assured of the two institutional commissions. Indeed, along with the Hutheesing-Shodhan Villa, it was one of Le Corbusier's most masterfully resolved essays in the sculptural juxtaposition of the cube, the ramp and the brise-soleil – a recurring compositional problem throughout Le

Corbusier's mature works to which he returned for the final time a few years later, but perhaps less successfully, in his better-known Carpenter Center for the Visual Arts at Harvard University.

The ATMA building was commissioned by Lalbhai's cousin Surottam Hutheesing, the president of the Mill Owners' Association, who followed Chimanbhai's example and also invited Le Corbusier to design his own private residence. Conceived in parallel with the Mill Owners' building, the design for the Hutheesing residence was a further distinctive variation on the cube as the ideal type for the rich man's villa, here laid bare



Le Corbusier,
Ahmedabad Textile
Mill Owners'
Association (ATMA)
building, Ahmedabad,
1954-6.

ATMA building, upper
level plans.

of its enclosing fabric to embrace the warm subtropical breezes and views to the lush gardens surrounding the house and its iconic kidney-shaped swimming pool. Although the playboy bachelor, Hutheesing, for whom this sybaritic design had been personally tailored, did not proceed with the project, the plans were acquired by yet another member of the Ahmedabad elite, Shyamubhai Shodhan, who ensured that the house that he and his family ultimately occupied was built in strict accordance with the original design.

Together with the ATMA building and the monumental High Court and Legislature at Chandigarh, the Hutheesing-Shodhan Villa, completed in 1954, was a paradigmatic statement at residential scale of Le Corbusier's own brutally pragmatic yet unquestionably potent and original architectural aesthetic of raw, unadorned concrete suited to the effectively still proto-industrial building industries of India and post-war Europe alike. But if the Hutheesing-Shodhan Villa – with its clear lineage to the avant-garde villas of Le Corbusier's earlier career – also marked an apparent rupture from the original functionalist ideals and 'purist' aesthetics with which his work had been so closely associated before the Second World War, Le Corbusier's other completed residential commission in Ahmedabad, the Sarabhai Villa (1953–5), was a reminder that a more primal engagement with Nature and the nature of building materials had also been a perennial theme in his architecture going back at least as far as his *'petite maison de weekend'* of 1935.

The latter Ahmedabad villa was commissioned by Kasturbhai Lalbhai's niece, Manorama, who had become a member, through marriage, of the

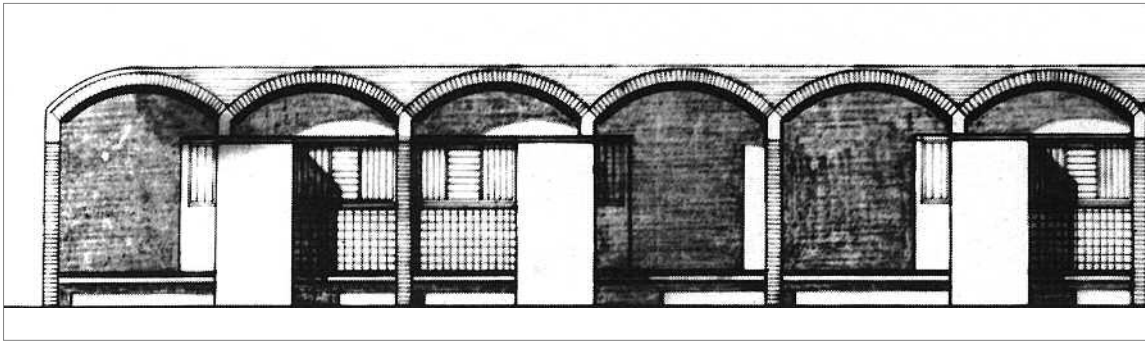


Le Corbusier,
Hutheesing-Shodhan
Villa, Ahmedabad,
1954.



Le Corbusier, Sarabhai Villa, Ahmedabad, 1953–5, interior view.

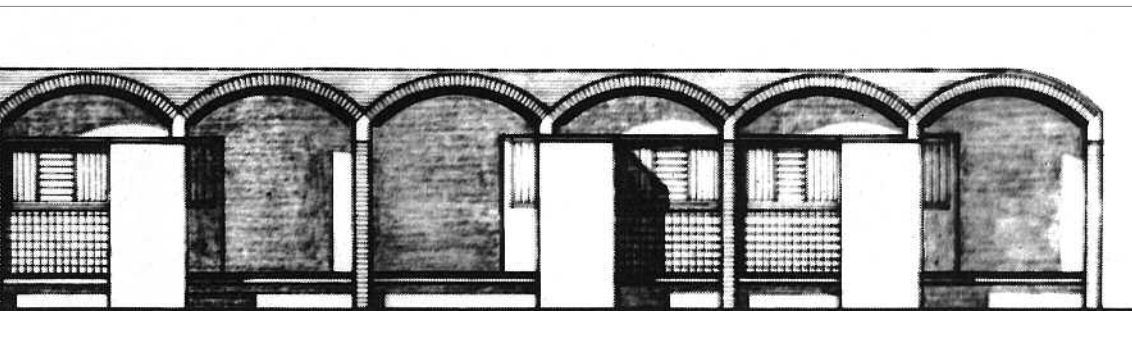
rival Sarabhai clan. It is tempting therefore, to interpret Le Corbusier's ground-hugging conception of this house – by contrast to the raised villas originally designed for members of the Lalbhai family – as a nod to the Sarabhai's previously declared affinities for the rustic naturalism of Wright's architecture, though certainly not Wright's actual formal language. Buried deep in the shady grove of the Sarabhai family's private compound in suburban Ahmedabad, the house reverted to an atavistic, cave-like quality of space – a series of parallel, open-ended chambers flowing directly into the garden with exposed brick walls and stone floors as the dominant materials. Here the emancipating nature of reinforced concrete technology – the plastic and tectonic potential of which was so fully exploited in Le Corbusier's other more idiosyncratic Indian projects – was subordinated to a series of simple barrel vaults recalling the nineteenth-century colonial building technology of the textile mills and workers' 'lines' in which Ahmedabad's industrial wealth had been created. Realized more or less



Balkrishna V. Doshi, housing for Ahmedabad Textile Industry's Research Association (ATIRA), Ahmedabad, 1957–60, elevation drawing.

simultaneously as Le Corbusier's closely related design for the Maisons Jaoul in Paris (1956), this was a more normative, less idiosyncratic proposition of a modern architecture at home with the ready-at-hand materials and brutal straightforwardness of the proto-modern building vernacular, with respect to which Ahmedabad could be compared with Manchester and other mill towns of Britain's industrial heartlands. As with the subsequent impact of the Maisons Jaoul and this nascent 'Brutalist' tendency on the emerging new generation of contemporary British architects, from James Stirling to Colin St John Wilson, the fusion of Brutalist ethic and aesthetics embodied in the Sarabhai Villa was to have perhaps the most profound and defining impact of all Le Corbusier's Indian works on the new architecture that was to emerge in and around Ahmedabad over the next couple of decades.⁴

Transcending the exclusivity of Le Corbusier's private commissions for the elite, a series of humble standardized designs for the residential quarters of professional and menial staff designed by Indian architect Balkrishna V. Doshi in the late 1950s for various new institutional campuses in Ahmedabad – notably ATIRA (Ahmedabad Textile Industry's Research Association) and PRL (Physical Research Laboratories), both begun in 1957 – clearly echoed the Sarabhai/Jaoul prototype with their clustered arrays of concrete vaults and simple exposed-brick bearing walls. Doshi's command of this typology was not merely deft mimicry, however. Indeed, he had worked directly for Le Corbusier as an architectural apprentice in his Paris atelier, from 1951 to 1955. As the sole Indian member of the Paris office during that particularly remarkable and intensive period of creative production (which also produced the Ronchamp chapel and the monastery of La Tourette), he had therefore collaborated in the design development and documentation of most of the Indian commissions. In addition to the Ahmedabad projects – which he, as a native Gujarati speaker, had ultimately been sent to oversee the construction of –



Doshi had had significant involvement in the design of several facets of Chandigarh, including the extensive ranges of residential quarters that were designated for peons, the lowest-paid and most numerous of the thousands of government servants that needed to be housed in the new state capital. These were further obvious formal precedents for Doshi's ATIRA and PRL housing clusters, but, more importantly, it was a formative exercise in applying architectural skill and insight to the design of basic domestic and communal space for the underprivileged which would inform a continuous and significant commitment to design and research in the field of housing and human settlements throughout his subsequent career.⁵

Doshi's decision to settle and establish his own practice permanently in Ahmedabad, in 1955, was a reflection of the extraordinary culture of institution-building philanthropy and associated patronage for modern architecture sustained by the city's elite business families. Doshi's patron for the early housing projects, along with his first prestigious institutional building – the Institute of Indology in Ahmedabad (1957) – was, once again, the philanthropist Sheth Kasturbhai Lalbhai. As another major benefactor of Gandhi and his followers during the freedom struggle, Lalbhai had looked forward to an independent India that would develop along the lines of Gandhian modernism. Through these institutional projects, therefore, he endeavoured to develop a view of India that, while engaged with modern technology, would still be steeped in the endogenous cultural knowledge and skills of the subcontinent. This desire of Lalbhai, the patron, to wed modernist practices with the wealth of the past, and place, enabled Doshi, the emerging architect, to embark consciously and confidently on what would become a career-long quest for cultural centredness as a modernist. Doshi's design for the Institute of Indology is an early and strikingly overt essay in architectural hybridity (his later work would be more subtle), experimenting simultaneously

Balkrishna V. Doshi,
Lalbhai Dalpatbhai
Institute of Indology,
Ahmedabad, 1957–62.



with the Brutalist/expressionist language of exposed concrete that he had received from Le Corbusier and formal elements derived from the distinctive traditional *haveli* (urban mansion or townhouse) typology typical of the old inner city of Ahmedabad.

Charles Correa's concurrent project for the Gandhi Samarak Sanghralaya (1958–63), for which both Lalbhai and the Sarabhais were patrons, was, as can now be seen, a response to much the same opportunities and intentions. Correa's Gandhian palette of local bricks, stone and handmade terracotta tiles appropriated the platonic forms and order of an imported modernist vocabulary to the local building culture. In the changing political climate of post-colonial India, such a boldly situated approach to contemporary architecture was lending Ahmedabad a distinctive modernist character as a regional centre of rapidly growing consequence on the national stage. Underpinned by its ostensible Gandhian ethics, this represented a compelling alternative to the agenda of rote modernization of the more universal variety that Nehru's socialistically inclined nation-state had sought to foster.

International Engagement and Regional Development

While the creation of the new state of Gujarat gave a conspicuous local political context and impetus for the emergent regionalism of Ahmedabad's modernist architects and their institution-building patrons, a constellation of similar institutional developments in other regions of the country in the same period indicated other more general factors that were shifting the focus and forms of opportunity for innovative architectural design away from the political centre. A particularly significant factor was the souring of India's foreign relations since its benighted early years of independence and nation-building. Among other consequences, this had

contributed to a gradual redirection of the flow of international aid away from large infrastructure projects championed by the political centre.

By the early 1960s the initial prestige and influence that the new nation and its eloquent prime minister had enjoyed on the global political stage had eroded considerably. Nehru himself had precipitated a cooling of relations with the United States and its Western allies, including India's former colonial rulers, the British, with whom Nehru had so skilfully sustained respect and cooperation throughout the traumatic ordeal and aftermath of Partition. In 1955 he had joined with the controversial nationalist leaders and former anti-imperialist revolutionaries, Gamal Abdel Nasser of Egypt and Sukarno of Indonesia, among others, as founding members of what became known as the Non-Aligned Movement of nations committed to neutrality in the ongoing Cold War. But India's integrity as a putative non-aggressor and leader among the new nations of the post-colonial world had subsequently been compromised in the eyes of a growing chorus of critics in both the 'Third World' and the 'First' by a series of military misadventures. In December 1961 Nehru had decided to send the Indian Army into Goa, the largest of the remaining European imperial enclaves in the Indian subcontinent, to compel Portugal to grant her colonial subjects their independence. The intervention had quickly accomplished its political objective with few casualties on either side, but India's 'hypocrisy' as the supposed paragon of non-violent statecraft in the modern democratic world, in this unprovoked use of military force, was vigorously criticized by the international community.⁶ Consequently, support for India's claims in its military resistance to Chinese encroachment on its high Himalayan frontier with Tibet that followed a few months later in 1962 had been ambivalent. Moreover, India's humiliating defeat in this instance had shown Nehru's faith in the policy of 'brotherhood' that his government had attempted to foster with post-revolutionary China to be patently naive. Nehru was disillusioned and increasingly enmeshed in the web of Cold War geopolitics despite all efforts to evade it, and his death in 1964 was to mark the official end of India's initial golden era of post-Independence development policy and posture which, to most astute observers, had already passed in practice several years earlier.

The flow and pattern of international aid to India had initially been generous and unfettered, but this too had altered markedly with the changing political climate. From a primary focus in the early 1950s on 'top-down' centrally planned and controlled development programmes and infrastructure mega-projects, Western donors, and the USA in particular, had shifted to an alternative 'bottom-up' strategy of development funding by the following decade, focusing primarily on education and cultural

change as the keys to modernization. Tactically, this new strategy would also be more distributed and diffuse, working indirectly through semi-autonomous development agencies and non-governmental organizations, and focusing in particular on the building and development of self-standing institutions.

The evolving approach of the Ford Foundation was a significant case in point. Beginning in the early 1950s, the powerful American philanthropic trust was an agent of increasing significance and impact in the infusion of foreign technical and cultural aid in India over this period, including architectural expertise. Built upon the fortunes of the Ford Motor Company and originally focused on American social welfare issues in the aftermath of the Great Depression, the Ford Foundation had become one of the largest and wealthiest philanthropies in the world by the 1950s. By this time it had also greatly expanded the scope of its programmes, with gradual divestment from Ford family and corporate interests, to include a major new focus on international aid. Modern India's long and influential relationship with the Ford Foundation was cemented in 1952 when New Delhi was selected as the base for the foundation's first international field office. Significantly, the Ford Foundation's president in this initial period of strategic international growth and transition, Paul G. Hoffman (1950–53), had served immediately beforehand as a senior administrator

Joseph A. Stein, Ford Foundation office complex, New Delhi, 1968.



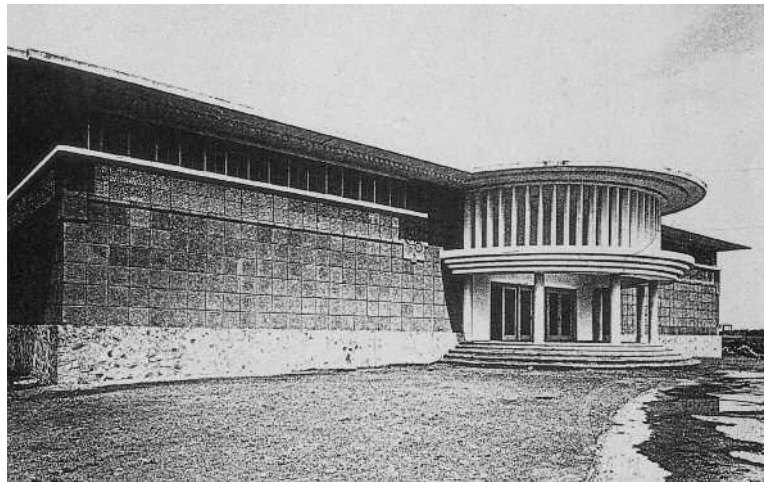
of the Marshall Plan for the reconstruction of Europe. By firmly installing the Ford Foundation in India, the largest of the new democracies of the post-war world, Hoffman had sought to spearhead this turn to the international aid arena as an extension of both private and public sector interests in the West to strengthen peace and democracy, in the context of the emerging Cold War, in the turbulent new field of post-colonial nation building.⁷ Working closely with Nehru and his administration during Hoffman's era, the Ford Foundation directed its funding initially toward welfare projects proposed by the political centre that focused primarily on the agricultural and rural development priorities of the first Five-Year Plan.⁸ By the later 1950s, however, leadership change within the Ford Foundation, together with the cooling diplomatic climate, had begun to alter its activities in India considerably.

Under Henry Heald, Ford Foundation president from 1956 to 1965, the foundation became more directly and deeply dedicated to the strategy of autonomous institution-building. Formerly the president of New York University, Heald was to cultivate a new focus on facilities for higher education in particular, as well as teacher training, distance learning and fellowships for the arts and the humanities. His institution-building convictions also reflected an uncommon appreciation for the value of investing in good architecture and planning that he had formed earlier in his career when he had overseen the development of the Illinois Institute of Technology in Chicago in the 1940s, including the commissioning of Mies van der Rohe to design its landmark campus. And it was under Heald's presidency that the Ford Foundation commissioned comprehensive studies on educational issues and need in India in specific professional fields, including a seminal report of 1958 on 'Design', to which we will return later.⁹

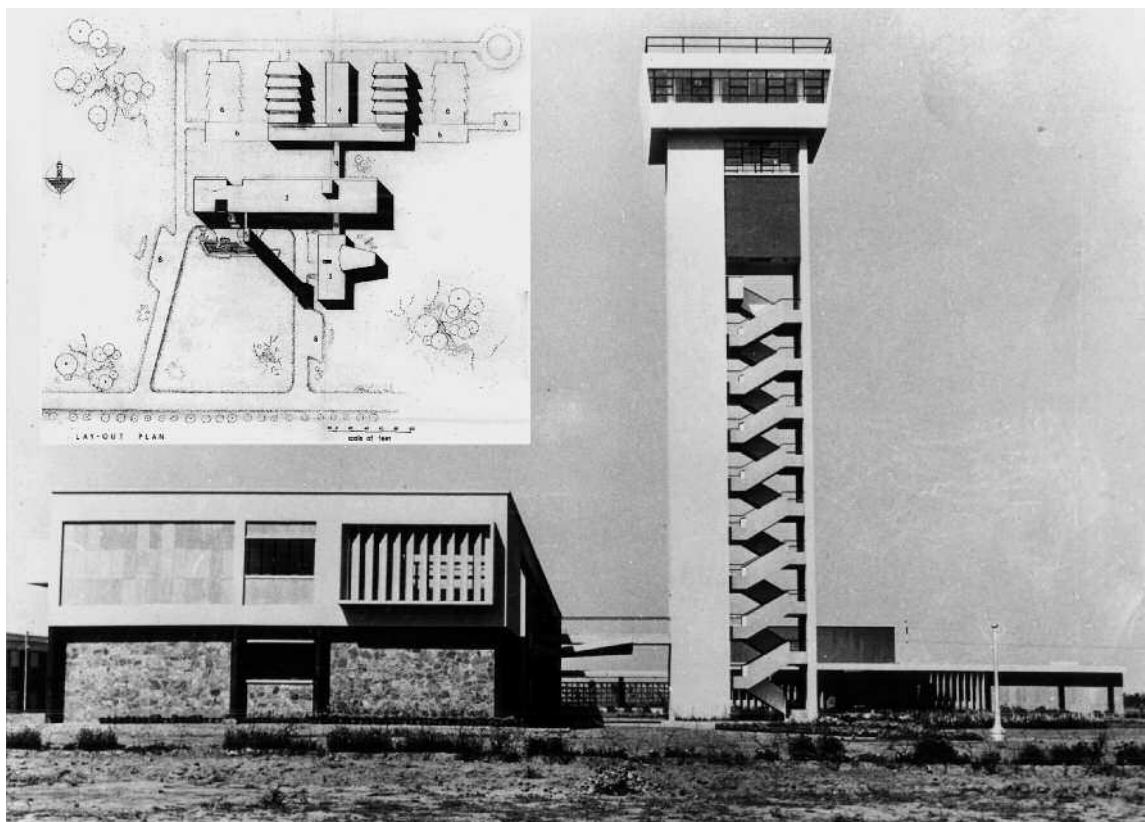
It was no surprise, perhaps, that the Ford Foundation also undertook to build itself a permanent institutional address in India during Heald's tenure. Initially accommodated, provisionally, in the Deco-era Ambassador Hotel in Connaught Place, the capital's central business district, the Ford Foundation offices were subsequently housed more visibly and prestigiously in a purpose-designed building by Joseph Allen Stein, an émigré American architect who had established a respected practice in New Delhi in the mid-1950s. This meticulously crafted stone and concrete essay in regionalist modernism, which was completed in 1968 on a prominent site in the Lodi institutional estate near to the international diplomatic enclave, drew clearly in its proportions and elements of its construction and landscape detailing from the architect's early career experience in California, where he had worked with Richard Neutra and Erich Mendelsohn, among other influential modernists of the first and second generations.¹⁰

Outside the national capital, and the symbolic and necessary bureaucratic representation that buildings such as the Ford Foundation office complex performed for major international aid agencies and NGOs in India, the redirected focus of funding on independent projects and institution-building in the regions had further complementary implications for cultural and associated architectural development in India in this period. By significantly enhancing the capacities and autonomy of regional institutions, a climate of direct exchange was fostered between the leaders and local champions of these new institutions among the regional elite, on the one hand, and their international donors and consulting experts on the other. These developments encouraged and empowered the associated elites to extend themselves beyond their entrepreneurial self-interests to act as unofficial ambassadors of cultural as well as technical exchange, opening up India to the possibility of confident bilateral relationships of exchange with the outside world that would become increasingly normative and more clearly expressed in architectural terms later in the century.

The Birla Institute of Technology and Science (BITS) in Pilani, Rajasthan, co-sponsored by the Ford Foundation, was one such example of a felicitous conjunction of local and international agendas. The namesake of the project, G. D. Birla, was one of India's richest industrialists but a pious philanthropist as well, whose surplus wealth had largely been devoted previously, as has been seen, to the building of modern temples. A northern counterpart to the institution-building mill owners of Ahmedabad, Birla's diversified banking and industrial enterprises, including the Hindustan Motors works where the iconic 'Ambassador' automobile was produced, were primarily concentrated in the northeast of the



Chatterjee & Polk,
Industrial Museum,
Birla Institute, Pilani,
Rajasthan, c. 1955.



Achyut Kanvinde,
Central Electronics
Engineering Research
Institute (CEERI), Pilani,
Rajasthan, 1950s,
photo and site plan.

country, in and around Calcutta. As one of the elite circle of wealthy patrons who had been aligned with the Independence movement in the interwar years, Birla had also been a particularly close associate of Gandhi with whom the Mahatma frequently resided during his visits to Calcutta and New Delhi.¹¹ In the years after Gandhi's death, Birla had adopted a middle path between Gandhian economics and the industrial utopianism of Nehru, and the development of the Birla Institute clearly reflected this. The project to transform a small regional engineering college that Birla had previously established in his birthplace of Pilani in provincial Rajasthan – a relatively backward locality far from the big smoke of Calcutta – into a technical institute of national stature was clearly motivated in part by the Gandhian ideal of focusing on the local to nurture economic and cultural development from the bottom up. But the Birla Institute, which was formally re-chartered as a fully fledged university for teaching and research in engineering and science in 1964

with major technical support brokered by the Ford Foundation from the Massachusetts Institute of Technology (MIT),¹² was also clearly an ambitious counter-venture from the private and non-governmental sectors to the ongoing institution-building efforts of the central government. Through the aegis of the Council for Scientific and Industrial Research (CSIR), as we know, the government had been building its own network of new institutions and infrastructure for the promotion of science and technology since the late 1940s. These included the Indian Institutes of Technology (IIT) and the Central Electronics Engineering Research Institute (CEERI), which had recently been built in Pilani itself to the designs of Achyut Kanvinde.

Although centrally instigated, the regionally distributed array of IIT campuses were each to be realized through different collaborating consortia of local agents and international sponsors that were ultimately to lend each institute its own distinctive regional identity. The original IIT, established at Kharagpur near Calcutta in 1951–2, covered the eastern region. This had been followed by a Western counterpart at Bombay, established with support from the Soviets in 1958, and then IIT Madras in the south with support from the West Germans. In the north two additional IITs had also been established by the early 1960s: the American-backed IIT at Kanpur (1959) and, finally, IIT Delhi, established with British support in 1961. Located fewer than 200 kilometres from Delhi, the Birla Institute at Pilani was therefore conceived as a regional centre

Achyut Kanvinde,
Indian Institute of
Technology Kanpur,
1959.





J. K. Chowdhury,
Indian Institute of
Technology Delhi,
New Delhi, 1961.

of scientific training and research that would stand in direct contrast to IIT Delhi's ostensible 'All-India' focus and emphasized the comparable institution-building power of the elite in regional India, as well as their ability to wield equivalent international support.

If the regional distribution of the IITs and associated technical expertise was part of the strategy of the central government planners to appease and counterbalance regional rivalry, the architecture of these campuses further articulated the diverging affinities and emergent modern architectural identities of their immediate regions. Realized under the Kanpur Indo-American Programme (KIAP) of technical assistance, which included support from a consortium of nine elite American universities including MIT,¹³ Achyut Kanvinde's design for the IIT Kanpur campus and core buildings reflected a variety of influences from contemporary American collegiate architecture and planning. In addition to the already well-established and prevailing pedigree in Kanvinde's work of his former mentor, Walter Gropius, the expressively articulated integration of structure, enclosure and interconnecting circulation systems reflected the increasingly delicate and ornamental vein of Brutalist expressionism associated, in particular, with the work of Paul Rudolph among Kanvinde's post-war American contemporaries. It differed from the distinctly rawer Corbusian vein of Brutalism emulated in J. K. Chowdhury's



Shivnath Prasad,
Shri Ram Centre,
Delhi, 1966.

design for the IIT campus in Delhi. The latter had clear affinities with the architecture and campus planning of Punjab University and other institutional buildings in Chandigarh on which Chowdhury had worked previously with Pierre Jeanneret. It was one of the first major projects to appropriate the institutional architecture of greater Delhi to the celebrated Chandigarh idiom, but not as a national style in the sense that Nehru had intimated so much as the most distinctive contemporary architectural expression of the immediate region.

Further significant instances of this direct regional impact of nearby Chandigarh on the development of Delhi over the following decade was the realization within the exclusive green belt of 'Lutyens's New Delhi' of a high-rise hotel complex and a series of smaller cultural and institutional buildings of distinctly Corbusian inspiration. These were designed by Shivnath Prasad, one of the most precociously talented members of the emerging next generation of Delhi-based architects. Prasad's designs were



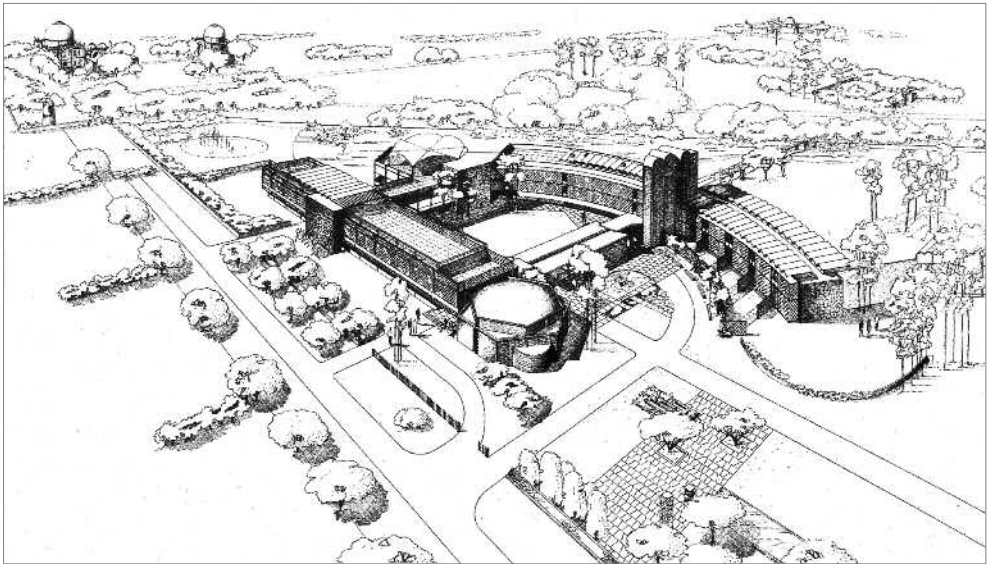
Rajinder Kumar,
Inter-state Bus
Terminal, Delhi,
1969–71.

both masterful in their command of the late Corbusian language and innovative in how he deployed the vocabulary in unprecedented briefs such as the Unité d'Habitation-inspired Akbar Hotel (1965) and the Shri Ram Centre (1966), a strikingly sculptural composition consisting of a small dramatic theatre and ancillary gallery spaces perched tree-like upon a massive four-storey concrete trunk. But apart from occasional private residential commissions, such dogmatic, formalist exercises in correct Corbusian mannerisms were never to become a dominant trend in the public and institutional architecture of the national capital. Rajinder Kumar's monumental Inter-state Bus Terminal (1969–71) was a notable exception. Much broader and deeper was the impact on the contemporary building culture of the greater Delhi region of the basic construction methods and materials with which Chandigarh was being built. Cast *in-situ* reinforced concrete would now, almost without question, provide the structural backbone for any new construction, paving the way for a new wave of structural expressionism that began to be manifested by the mid-1960s in the early work of Kuldip Singh, Raj Rewal, Ajoy Choudhury and Ranjit Sabhiki, among others. Brick and stone masonry, typically unadorned, would be subordinated almost exclusively to the purposes of space modulation and infill. The distinctive quality and character of the still-abundant building stone of the neighbouring Rajasthani desert

region, however, would remain a source of both practical and ornamental innovation within this generic Brutalist lexicon.

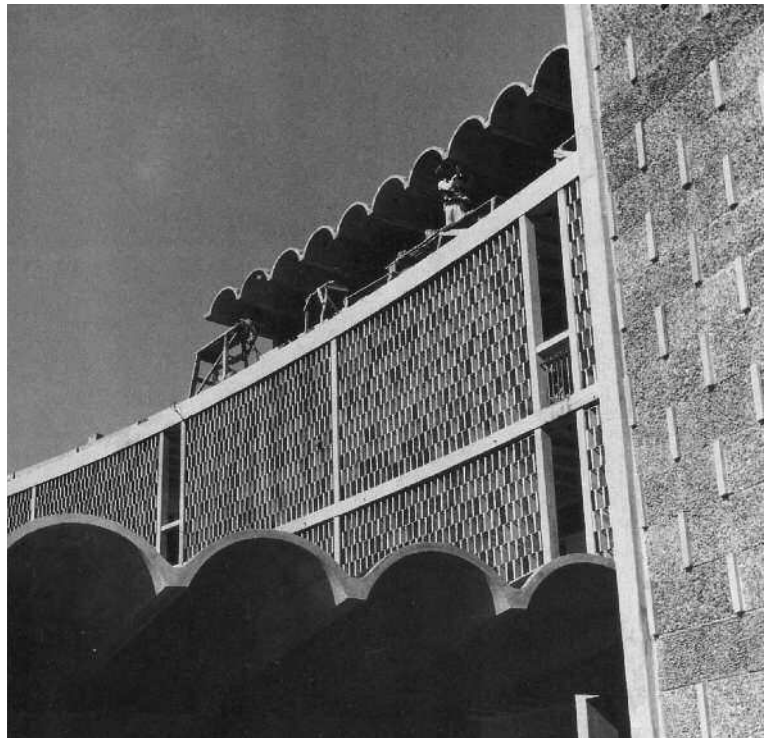
The rich legacy of semi-ruinous stone tombs, ramparts and other monumental buildings that dot Delhi's sprawling landscape of planned and informal urban development furnished the backdrop and muse for another distinctive regionalist tradition within modern Indian architecture, specifically associated with Delhi. This was most richly represented by the architecture of the institutional enclave adjacent to the picturesque landscaped gardens and parkland surrounding the historic Lodi Tombs on the southern edge of Lutyens's original New Delhi plan. Beginning with the India International Centre (IIC, 1959–62), most of the important buildings in this enclave – which primarily accommodated local and international development agencies in the national capital, and associated venues for cultural exchange – were to be designed over the following two decades by the local Delhi-based practice of Joseph Allen Stein. The IIC was a small international meeting facility and social club with adjoining guest rooms. With its gently scalloped guest wings, its delicate aluminium and ceramic *jali* (sun screen), and tasteful detailing and landscaping in local stone, the picturesque composition was a consummate example of how successfully the tenets of mid-twentieth-century modern architectural rationalism could be universally diffused when responsively applied and adapted to regional constraints. Designed and constructed in close collaboration with local building contractors and Stein's in-house engineer and professional partner, Binoy K. Chatterjee, the IIC was also one of the most exquisitely well-cast concrete structures to be erected in India since Antonin Raymond had built his Golconde Hostel in Pondicherry two decades earlier. Still essentially hand-built, despite the precision and modularity of its delicate vaults and thoroughly crafted detailing, it belied the myth already being generated by the ongoing works at Chandigarh that the architecture of modern India should necessarily be a 'brut' affair. These qualities were further expressed in Stein's subsequent designs for the adjacent Ford Foundation, and the Triveni Kala Sangam (1963), a dance academy and performing arts centre that formed part of the cluster of national cultural institutions, including Rahman's Rabindra Bhawan and Prasad's Shri Ram Centre, that were sited around the Mandi House intersection in Connaught Place.

Stein's transplanted Indian career was another outcome of the decentralized, bottom-up strategy for social and cultural development that the Ford Foundation had been supporting in India since the early 1950s. He had originally arrived in India in 1952 on the recommendation of Richard Neutra, a former employer and mentor, on a three-year Ford Foundation-sponsored contract to develop an architectural curriculum

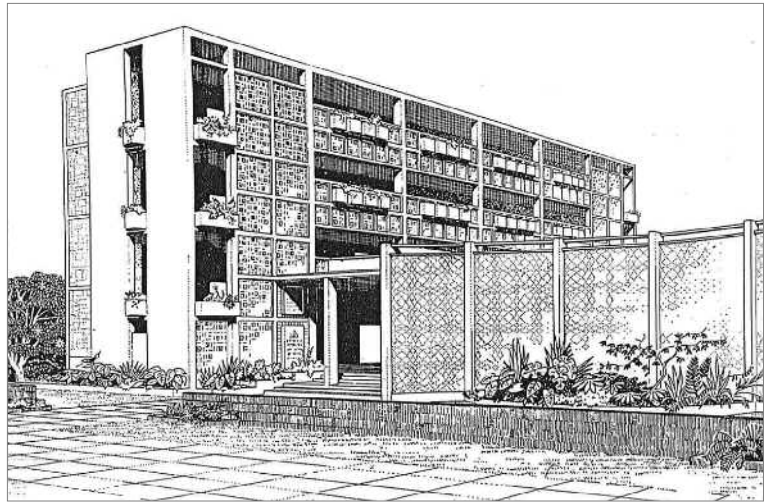


Joseph A. Stein,
India International
Centre, New Delhi,
1959–62, bird's-eye
perspective drawing.

India International
Centre, detail of
vaults under
construction.



Joseph A. Stein,
Triveni Kala Sangam,
New Delhi, 1957–63,
perspective drawing.

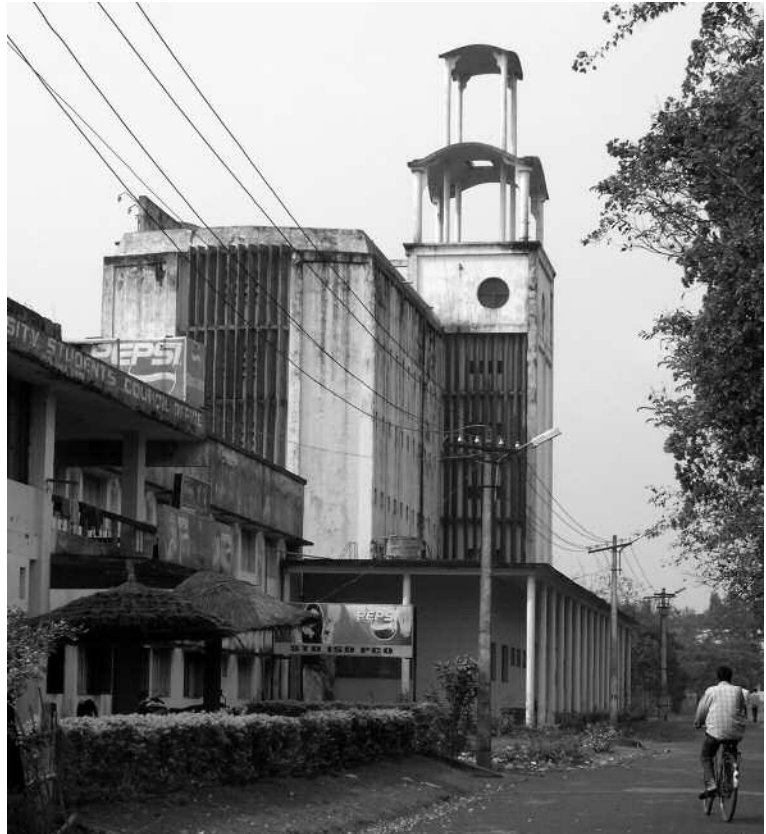


for the Bengal Engineering College in Sibpur, just outside Calcutta. Stein had previously taught at the University of California, Berkeley, and was himself a student of the esteemed Finnish-American regionalist and early modernist architect Eliel Saarinen. As a young graduate in the late 1930s, Stein had worked with Neutra in southern California and was later associated with Erich Mendelsohn and other members of the informal school of post-war regionalist architects and landscape architects working in the San Francisco Bay Area, where he had lived and practised since 1945. Stein already held deep convictions, therefore, about context-responsive approaches to modern architecture and town planning when he arrived in subtropical Bengal to teach, and these had imbued his lectures and studio projects at Sibpur with a strong sense of mission. An opportunity to stay on in India and establish a practice in New Delhi had followed from a subsequent central government commission to consult for Nehru's government on the design of industrial new towns. Stein's particular Californian sensibility for climate- and landscape-responsive design, however, had found renewed inspiration and a more familiar sense of fit with the semi-arid climate and Garden City verdure of the capital, which, little more than two decades since the formal inauguration of Lutyens's Imperial Delhi, was still very much a 'new town' itself.

Beyond the substantial body of institutional, industrial and diplomatic commissions realized in and around the Delhi capital region, the influence of Joseph Stein's practice eventually extended indirectly to other regions as a sought-after training ground for graduate architects from all parts of the country, and through various strategic professional collaborations.

Between 1955 and 1961 Stein had worked in partnership with the Bengali civil engineer Binoy Chatterjee and Benjamin Polk, another American architect who had become engaged in U.S.-sponsored development projects in India and neighbouring South Asian countries. Stein was subsequently to form a long-standing partnership with Jai Rattan Bhalla, a crucial player through his advocacy and various leadership roles in national professional bodies and international counterparts such as the Union Internationale des Architectes (UIA), in efforts to consolidate the legal status and education of the modern architectural profession in India. Stein and Bhalla were later to form a strategic inter-regional association with Balkrishna Doshi's practice in Ahmedabad.¹⁴

Meanwhile, in 1961 Stein's initial partners, Chatterjee and Polk, had moved back to Calcutta, where their combined technical and artistic penchants for expressive concrete design led to a wide range of institutional, residential and industrial commissions in the Bengali metropolis and its



Chatterjee & Polk,
Utkal University
Library, Bhubaneswar,
Orissa, late 1950s.

extensive northeastern regional hinterland. These included iconic high-rise apartment towers in Calcutta itself, a modern palace for the king of Nepal in Kathmandu, a new university campus in Bhubaneswar and factories in Rourkella, deep in the interior of the neighbouring state of Orissa.

Based in Calcutta, Polk was also simultaneously engaged as a design consultant on u.s.-supported institutional building projects in West Pakistan and Burma.¹⁵ This was a further illustration of the distributed regional approach through catalytic local projects and development, as opposed to top-down centralized planning schemes, that international development aid programmes had increasingly favoured throughout this period, compelling the central government to moderate its own strategies as well.

Although it was no longer the political centre, Calcutta was still one of the two most important commercial ports and industrial centres of India in the post-Independence era, and had been a magnet for population growth with the influx of post-Partition refugees from East Pakistan. Despite their increasingly vital role within the developing economy, however, many of these new urban migrants still remained homeless by the early 1960s, posing an increasingly critical strain on inadequate existing infrastructure. Major industrial and institutional development projects of the late 1950s, such as the Durgapur steel works and IIT Kharagpur, had attempted to relieve the impending urban crisis by stimulating the development of the greater urban region and its integration into the modernizing national economy. Future urban development under the Ford Foundation-sponsored plan for the binodal expansion of Calcutta, published in 1966 by the Calcutta Metropolitan Planning Organisation, was further to discourage the concentration of population and resources in the metropolis.

Nevertheless, Calcutta was to remain the main centre for the progressive artistic and intellectual life of modern India. Opposed to the commercial populism of 'Bollywood', Calcutta was where the internationally acclaimed film director Satyajit Ray helped establish the so-called parallel cinema of India – an extension in new media of the still-thriving intellectual and artistic traditions of Bengal's literary avant-garde.¹⁶ In the context of decidedly unilateral technical and economic exchange with foreign-aid donors, this cultural scene had a more reciprocal impact on contemporary Western cultural and artistic movements. The Beat generation poet Allen Ginsberg's exchange with poets in Calcutta during an extended sojourn in India in 1962–3, for example, was a seminal influence behind the subsequent rise of the counterculture in America in the 1960s.¹⁷

Better known is the more overtly alternative tradition of yogic asceticism, largely rooted in South India, which imbued the philosophy and

Roger Anger, Sanskrit
School, Auroville,
Tamil Nadu, 1976.



aesthetics of the British and European counterculture. Following in the footsteps of the Beatles and other proponents of alternative political and cultural experimentation that the psychedelic, sitar-infused music of the iconoclastic British pop group had inspired, so-called hippies had flocked to India in the thousands, as backpacking nomads, from the later 1960s through the 1970s. But some were to stay indefinitely.¹⁸

The design and building of the experimental international settlement of Auroville in rural Tamil Nadu was a direct architectural manifestation of this countercultural diaspora. It was an offshoot of the Aurobindo Ashram in nearby Pondicherry, which had been established in the early twentieth century by the revolutionary-turned-mystic Sri Aurobindo Bose, and for which Antonin Raymond had built his elegantly ascetic hostel block three decades before. The Aurovillians sought to build a spiritually principled new community from scratch, starting in the late 1960s on a bucolic 20-square-kilometre site that the ashram had acquired a short distance outside the former French colonial enclave. The buildings of Auroville, communal as well as residential, reflected a variety of experiments with different building forms and techniques attentive to the climatic and contextual parameters of tropical South India. These ranged from primal to futuristic in inspiration, drawing on the broader architectural vocabulary of its predominantly expatriate settler/builders, including a number of qualified architects. The eclectic and somewhat other-worldly habitat that had begun to emerge from the fields and jungles of Auroville by the late 1970s was, thus, not just a retreat into a neo-vernacular fantasy of idealized village life, but a self-consciously progressive experiment in environmental design and determinism pursuing

an alternative modernity that might be lived more sustainably in harmony with site and place, albeit with the privilege of its relative isolation from the grittier realities of urban life and subsistence in the everyday world of modern India. For these reasons, not least, the inspiration and impact of Auroville as a model for sustainable design and planning, beyond its immediate environs, would be much greater overseas than in India itself.

Spiritually, linguistically and increasingly politically as well by the mid-1960s, India's south had remained largely disengaged from the north and the modern nation-building project. While this ethos of relative autonomy was attractive to alternative cultural and associated architectural experimentation, it also encouraged a certain independence in approach to the design of mainstream modern architecture relative to the particular design tendencies that had been championed by Nehru and thereby associated with the ideal of the unified Indian nation-state. This independent approach was illustrated in the work of two of the most long-established architectural practices in Madras and their particular efforts in the 1950s and early 1960s to introduce a new generation of modern office buildings to the south that were international in outlook yet tailored to the regional parameters of a humid-tropical climate.

L. M. Chitale, who appeared briefly in chapter Two, had been practising since the early 1930s. Initially consulting widely in both North and South India as a talented revivalist architect, he had also built a number of substantial commercial and residential buildings in Madras in the stripped classical style of the late colonial era. The admission of his son, S. L. Chitale, to the partnership in 1952 had precipitated a transition to modernism, but the conversion was marked most decisively with the completion in 1959 of the fourteen-storey glass and aluminium-clad slab for the Life Insurance Corporation of India (LIC) – at that point the tallest building in Madras, if not the whole of India.¹⁹ The client had been enamoured of the recently completed United Nations building in New York and the 'global vision' that it represented – features that were emulated generically in the LIC slab, but considerably refined in the proportions and detailing of the TIAM House office slab completed four years later. Delicate sun-screening elements introduced in the latter project were both a technical and an aesthetic feature. This was even more accomplished in the contemporary Kothari Buildings (1961–3).²⁰

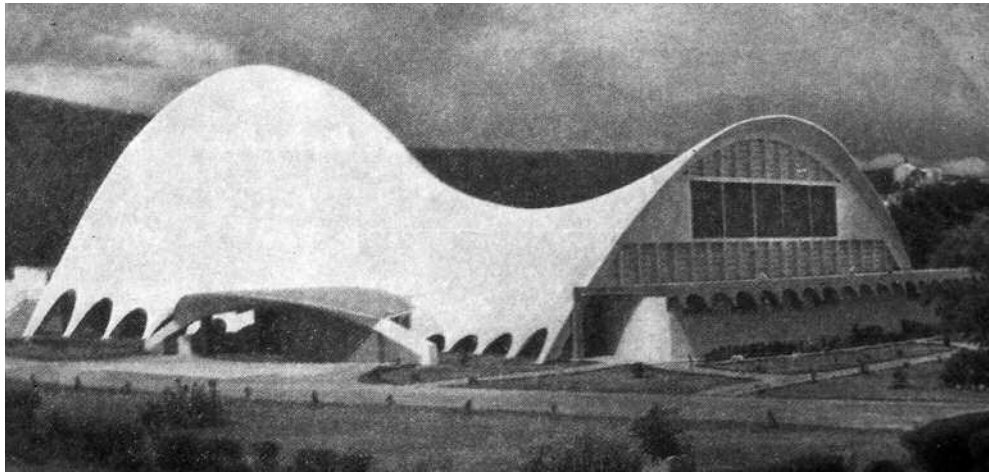
A similar focus on the detailing and actual performance of the facade as an environmental modulator as well as the formal dress of a landmark building distinguishes the particularly delicate elegance of the new office block designed at roughly the same time by Bennett Pithavadian for the Indian Overseas Bank (IOB), completed in 1962. Pithavadian's direct and

rigorous approach to functionality in design and building performance reflected an initial training in engineering. But it was as an overseas-trained graduate architect that he had been taken on as the Indian partner of Prynne, Abbot and Davis, a long-established Indo-British firm in Madras, after completing further architectural studies in Canada at McGill University in the early 1950s.²¹ While removed from the most dynamic design and building scenes in post-war North America, McGill had recently revamped its architectural curriculum along the lines of Gropius's graduate programme at Harvard with its strong functionalist emphasis on modern design and planning as, above all, a problem-solving vocation sharing fundamental principles and employing universally applicable methods.

Pithavadian's and Chitale's finely tooled facades owed no debt, stylistically, to the new tradition of the *brise-soleil* as it was being deployed in the hot, arid conditions of North India, with its origins in Le Corbusier's earlier Mediterranean work. Precedents, if any, were drawn from the range of other rationalist and expressionist possibilities for the design of

S. L. Chitale, Kothari Buildings, Madras, 1961–3.





S. L. Chitale,
Auditorium at
Sri Venkateswara
University, Tirupati,
Andhra Pradesh,
1970–75.

a modern tropical architecture that had been posited by the emerging architectural heroes of modern Latin and South America, such as Oscar Niemeyer and Félix Candela, and promoted widely by globe-trotting consultants, such as Richard Neutra, for the UN and other international agencies for technical aid and development in the post-war years. Indeed, it was the pedigree of Oscar Niemeyer in the original UN building design, rather than that of Le Corbusier, that appears to have been most inspirational in the evolving work of the Chitale firm in this period. The debt, directly or indirectly, to the flamboyant Brazilian master of tropical modern expressionism seems clear in the voluptuous thin-shell concrete-vaulted auditorium designed by S. L. Chitale and his associates in the early 1970s for the Sri Venkateswara University in Tirupati, Andhra Pradesh.

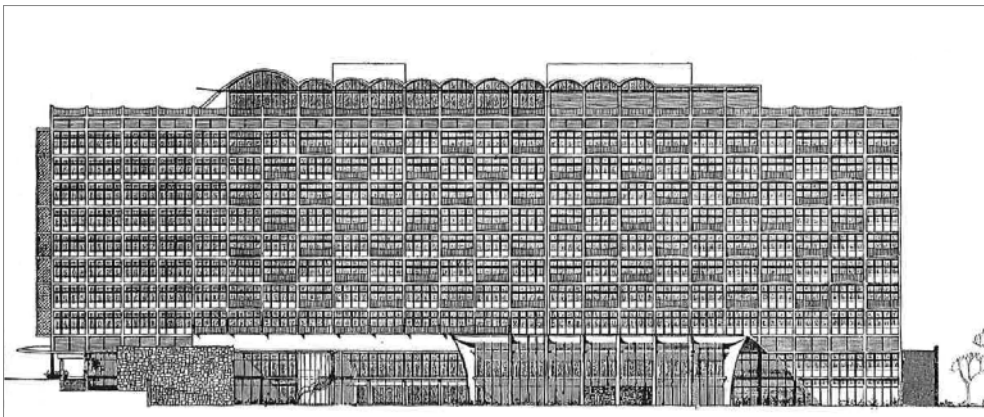
Niemeyer's mark was undisputable, meanwhile, back in the Bombay home of the booming Bollywood film industry by the later 1960s. The Apsara Cinema designed by Yahya Merchant (1968) was a crafty but undisguised transposition of the nave and steeple of Niemeyer's revolutionary and widely published church of São Francisco de Assis in Pampulha, Brazil (1943), into the main vault and marquee of a large urban cinema.²² The Bombay architects Durga Bajpai and Piloo Mody's design of 1958 for the Oberoi Intercontinental Hotel in New Delhi, India's first five-star international hotel, drew far more subtle but elegant references from the same precedent and Niemeyer's tropical functionalism in general.²³ In the same period work had also begun work on the master planning and design of the new campus of the Indian Institute of Technology at Bombay (first phase completed *circa* 1962).²⁴ Sited in a paradisiacal jungle reserve bounding Powai Lake north of the city, the

salubrious weave of concrete, stone and planting that comprised their campus architecture was less derivative in terms of obvious formal quotations, but comparable in approach and character to the syncretism of modernist building elements and tropical landscape that Niemeyer and the equally legendary South American landscape architect Alberto Burle Marx had so seductively and influentially demonstrated in their residential and institutional works of the 1940s and '50s.

Parallels have often been drawn between Bombay and Miami with respect to their mutual profusion of Deco-inspired architecture and its good 'fit' with the subtropical climate.²⁵ But the growing and changing consumer and leisure culture of modernizing India that was experienced most visibly and seductively in the largest cities, particularly Bombay, between the 1950s and 1970s had only superficial similarities to post-war American models. Bombay, with its sweeping urban beaches and hilly jungle-cloaked tropical hinterland that bounded its seething millions of housed and homeless residents together, perhaps had much more affinity with the tropical postcolonial metropolis of Rio de Janeiro. For Bajpai and Merchant, certainly, as well as other aspiring debutantes on the local architectural scene such as I. M. Kadri, whose whimsically sybaritic Islam Gymkhana was built on Bombay's fashionable Chowpatty Beach in 1963, the architectural progress and sheer panache of 'Modern Brazil' since the early 1940s was a revelation, largely because the rest of the world had been caught up in war and the ensuing struggles for independence from colonial rule.

Post-war European modernism, particularly that of Italy, was another source of style and inspiration in the Bombay-modelled new urban lifestyles of modern India in the 1950s and '60s, which was broadly marketable to the emerging new middle class of consumers and architectural

Durga Bajpai and
Piloo Mody, Oberoi
(Intercontinental)
Hotel, New Delhi,
1958, elevation
drawing.





6 NEW FEATURES

Glove compartment has been moved to rear mud-guard. The Spare Wheel is fitted on adjustable brackets to allow easy access to the larger Glove Compartment.

Speedometer is built into the metal panel on the Steering Handle—illuminated dial facilitates night driving.

Improved appearance—streamlined metal cover hides protruding cables on Steering Handle.

Controlled beam arrangement of head light focuses lights upwards or downwards. Larger tail light matches improved design.

Epileptic 'kick' starter unit for smooth, 'feather-touch' operation and greater robustness.

Re-designed air intake assembly reduces noise, filters the air more effectively preventing dust from reaching interior of engine. Saves wear of the piston and cylinder.

THE NEW Lambretta

Manufactured by AUTOMOBILE PRODUCTS OF INDIA LIMITED, BOMBAY, BOLSHAT-48

Advertisement for Lambretta scooters in *Design* magazine, September 1957.

J. M. Benjamin, H. R. Laroia and Bijit Ghosh, with Central Public Works Department, Indian Institute of Technology Bombay, 1958–62, detail of sun breakers on main building.

Iftikhar M. Kadri, Islam Gymkhana, Bombay, 1963.

clients. Moving on from the calamity of Partition and the parochial aesthetics of the colonial past, aspiring urbanites looked to the industrial design and production of post-war Italy – which by the mid-1950s had dynamically rebounded from military defeat as a renewed font of modern design and manufacturing – as one of the more compelling and seemingly apposite models on which they could refashion their own material culture and lifestyles as modern Indians. Modelled and propagated in the cinematic fantasies of the modern *dolce vita* that Bollywood, like its counterpart, Cinecittà in Rome, was serving up for mass-consumption, Parle-Bisleri fizzy-drinks, Premier-Fiat cars, Bajaj-Piaggio and Lambretta scooters, and other branded consumer items developed by enterprising Indian industrialists under joint-venture collaborations with Italian and other major European and British manufacturers, were early hedonistic harbingers of the global mode of market-based modernization that was to

return and take hold much more profoundly by the end of the century.²⁶

Architecture, in the meantime, was rather slower on the uptake. As Mulk Raj Anand, the Bombay-based editor of the stridently avant-garde art and architecture magazine *Marg*, lamented, this pseudo-modern life in mid-twentieth-century India was analogous to the hybrid simulacra that these Indo-European manufacturing ventures were producing: 'chassis may be Tata-Mercedes-Benz, but the body work is made in Deodar timber, with hard seats for rough peasants'.²⁷ Apart from the work of a handful of urbane fellow travellers such as Charles Correa, a regular contributor to *Marg*, whose small atelier-style Bombay practice was largely engaged in commissions elsewhere, Anand saw little evidence of what he regarded as authentic modern architecture happening in this most self-consciously modern metropolis from which he published.

Established in Bombay in 1946 with the patronage of the Tata Group, *Marg*, or 'path' in Sanskrit, was also an acronym for the Modern Architecture Research Group, a circle of South Asian-based modern architects and

planners including Otto Koenigsberger and the pioneering Ceylonese architectural modernist and feminist Minette de Silva, who had been inspired by the eponymous British branch of CIAM, the so-called MARS group, to propagate modernism in the region.²⁸ But biased by his particular enthusiasm for the heroic sense of artistic and social purpose embodied in the work that Le Corbusier and his MARS-associated collaborators Maxwell Fry and Jane Drew had accomplished at Chandigarh, Anand and *Marg* perhaps wilfully overlooked the technical progress and stylistic innovation that was being driven in his own backyard by Bombay's more commercially oriented architects and construction firms.

Prominent among these, even from a very early stage of his career, was Iftikhar M. Kadri, a professional engineer by training whose confident and often strikingly distinctive work as an architect-developer had realized several substantial projects in Bombay by the end of the 1960s of landmark status in popular opinion, if not that of his professional peers and critics. Kadri's Shivsagar Estates (1967) in Worli, on Bombay's upper west side, was a prime example. This was a phalanx of five small office towers, each screened in delicately striated white marble and neatly tailored in a manner comparable to the dapper urban blocks designed by Luigi Moretti in Rome in the 1950s. Kadri's urban-scale composition was resolved with a sixth office block configured as a lower-rise horizontal slab that provided a street face and an address in which a glazed foyer showroom for Tata Industries displayed the jewels of the principal tenant's automotive collaboration with Mercedes-Benz. Completed in 1967, on the main arterial road into the city from the airport and newer suburbs to the north, the complex – later complemented on the opposite side of the road by Kadri's distinct but equally iconic Nehru Centre (1982) – would

Iftikhar M. Kadri,
Shivsagar Estates,
Bombay, 1967.



Iftikhar M. Kadri,
Jivan Manek
apartment tower,
Bombay, 1968.



serve effectively thereafter as the commercial metropolis's new 'Gateway to India'.²⁹

Kadri and even Charles Correa were also notable contributors to a new generation of modernist apartment blocks and towers that were dramatically transforming the shape and scale of the Bombay skyline from the late 1950s onwards. The Brighton Apartments, designed by Kadri as the in-house engineer for his employer, the established Indo-British construction company Anderson and Dawn, and built in 1959 on the Nepean sea road north of Worli, was a trend-setting prototype for breezy residential developments on Bombay's exclusive Arabian Sea face in which terrace gardens and private swimming pools were to become a new norm. And Kadri's later Jivan Manek apartment tower (1968), along with Correa's contemporary Sonmarg Apartments (1966) in the premium



Air India Building and other high-rise office buildings under construction at Nariman Point, Bombay, mid-1970s.

Malabar Hill precinct, made a strong case for the value-adding economics of investing in architectural style and ingenuity in the planning of dense high-rise residential developments.³⁰

Relative to Bombay's earlier flourish of Indo-Deco commercial and residential development in the interwar years, however, critical ambivalence in regard to high-rise construction in postcolonial Bombay before the 1980s was largely justified. A rare exception among the forest of nondescript commercial buildings that was rising in Bombay's central business district was the office tower for Air India, yet another Tata enterprise, completed at Nariman Point in 1974. This landmark building signified the rising aspiration of India's corporate elite by the 1970s for membership in the jet set of international business and tourism. Realized by Pheroze Kudianavala, a local UK-trained Parsi architect, the prominent podium and slab composition was planted billboard-like, crowned by a neon Air India logo, at the cusp of the elegant crescent of lower-rise Art Deco buildings that had been constructed along the Marine Drive sea

face in the 1930s and '40s.³¹ Specific features of the 22-storey tower slab, such as the cloven treatment of the narrower end walls and the floating roof canopy, the general proportions and relative delicacy in the expression of structure and external detailing, suggest understated affinities with Gio Ponti's design for the widely influential Pirelli building in Milan (1959). More transparent were the branding parallels, if not the further formal affinities with Walter Gropius and Pietro Belluschi's Pan Am Building in New York (1963) – which too had echoed and amplified some of the distinctive qualities of Ponti's tower, but at a much bigger and brasher New York scale. A cluster of adjacent developments initiated at the same time as the Air India Building aspired to similar architectural standards. These included the neighbouring towers of the *Indian Express* newspaper offices – a one-off venture in high-rise commercial design by the Delhi-based practice of Joseph Stein – and the Oberoi Sheraton Hotel. The architect of record for the sturdy bones of the 24-storey Oberoi tower slab was the local Bombay firm of P. G. Patki, but the spectacular interiors – which included a major mural by the contemporary Delhi-based artist Satish Gujral, later to be recognized as a significant architectural designer as well – were the work of Alan Gilbert, an Australian architect then engaged as the senior designer for the Hong Kong-based firm Dale Keller & Associates. The same firm was also commissioned subsequently to design the interiors for the adjacent National Centre for the Performing Arts, the first phase of which was to be realized in the later 1970s by Rustom Patell in association with the consulting architect, Philip Johnson.³² These overtly International Styled buildings, however, remained isolated attempts to lend higher design status to what was otherwise becoming a lacklustre agglomeration of commercial and government high-rise development at the apex of Bombay's central business district, with little if any architectural pretensions, let alone ambition for critical acclaim.

While the direct influence of modern Italian architecture on the Indian building scene was relatively nominal compared to the penetration of Italian industrial design on the broader consumer imagination and market, it is notable that the reciprocal impact of Italy's encounter with Indian design culture in this period was comparatively significant. The reappraisal of traditional arts and crafts that characterized the extension of 'neo-realist' tendencies in film to Italian design in the 1960s was clearly influenced by India. Roberto Rossellini's film *India: Matri Bhumi* (1959) had offered Italian aesthetes, along with popular cinema-goers, a rich and heartfelt impression of a vital symbiosis between tradition and modernity in contemporary Indian culture, and this sense of empathy between the European 'south' and India was to affect deeply the work of several Italian

designers who subsequently turned to Indian crafts and materials for inspiration in the development of their original designs. Among these was the architect-designer Ettore Sottsass – one of the more notorious iconoclasts of the later postmodern design movement of the 1980s – whose travels to India in the early 1960s were strongly to influence his early work with ceramics. But the impact of Indian crafts on Italian design was most clearly expressed in the use of Indian textiles by major Italian fashion houses.³³

This felicitous meeting of design cultures had not happened entirely unaided, however. Indeed, the perception of a uniquely spiritual dimension of creative investment in Indian textile art that had attracted the gaze of the Italian neo-realists, among others, had been strategically orchestrated over a number of years by the doyenne of the Indian crafts industries in postcolonial India, Pupul Jayakar. The daughter of an affluent North Indian family who had been close to the Nehru family and future prime minister from childhood, Jayakar had a privileged and cosmopolitan upbringing and education culminating in a degree from the London School of Economics. She had, therefore, been well equipped to undertake the task she was handed by Nehru in 1950, to assess and rethink the economic future of Indian handicrafts in the context of his postcolonial industrialization policies, the first outcome of which had been the establishment of the All India Handloom Board in the following year. Jayakar's bid to popularize and thereby promote international trade in Indian textile arts with the West led her to work with the American designer Alexander Girard on an exhibition entitled *Textiles and Ornamental Arts of India* for the Museum of Modern Art in New York in 1954–5. It was there in America in the mid-1950s that she also met the multi-disciplinary architect-designer couple Charles and Ray Eames. Jayakar subsequently recommended the Eames as consulting experts to undertake the major Ford Foundation-sponsored study for the Government of India in 1957, intended to examine how to renew 'design' as a vital industry in modern India and further develop it as a professional discipline.

Architectural Education and the Regional Discourse

Under the terms of their commission, the Eames were invited to explore the existing condition of 'design' in India and offer their recommendations for a training programme in this newly evolving field. Upon their arrival in India the couple proceeded to tour the country for a period of three months before drafting their recommendations. In their final and, presently, seminal 'India Report' (1958), the Eames called for an institute

of design to be established under the central government Ministry of Commerce and Industry. This was to have been established ideally, they thought, at the inspirational historic site of the abandoned Mughal city of Fatehpur Sikri, a short journey from the national capital and the Taj Mahal at Agra. In the wake of the split of the Bombay state in 1960, however, and an ensuing bid by Ahmedabad to enhance its new autonomous stature as a regional centre of national importance, Jayakar ultimately favoured an alternative proposal by the new Chief Minister of Gujarat and Gautam Sarabhai, one of the architecturally trained members of the perennially influential family of mill owners and institution builders, to shift the proposed institute to Ahmedabad. Accordingly, in 1961 the National Institute of Industrial Design (the name and acronym subsequently shortened to just National Institute of Design, or NID) was officially established in Ahmedabad, with Gautam Sarabhai as its inaugural director. As the only national centre for professional design education, the establishment of NID was an early victory at institutional scale in Gujarat's bid for respect and recognition of its effective regional autonomy as a new power player on the national political scene. As far as the design disciplines were concerned, the new institution would confidently deal directly with the international scene of contemporary design pedagogy and practice, and at the same time with the rest of the nation as an official all-India institute of higher education. Through the cosmopolitan networks of its elite patrons in both industry and government, not least Jayakar herself, a heady climate of international contact and exchange was to be established at NID from the outset, with visiting faculty and consultants from progressive design schools in Ulm in Germany, Basel and Zurich in Switzerland and the Royal College of Art in London, as well as Scandinavia, France and America, regularly invited to formulate and evaluate its various courses in product design and graphics.

While NID was conceived as a general design school, which was very much in line with the global post-war trend towards industrialized design, its investment in architecture was more than incidental. In their 'India Report', the Eames had clearly privileged architecture in their proposals for the projected NID as the discipline that could best synthesize and implement its pedagogical aims. They had, therefore, anticipated that graduate architects would be engaged, at least initially, as the core faculty. The presence of these architecture graduates on the teaching staff, and the service-cum-training format of professional education that they had recommended encouraged a particular interest in the early years of NID in Scandinavian debate and developments in the industrialized production of architecture. This was evident not only in an early course proposed at NID on industrialized architecture, but was also extended through

hands-on experience by taking up actual architecture commissions in collaboration with foreign consultants.

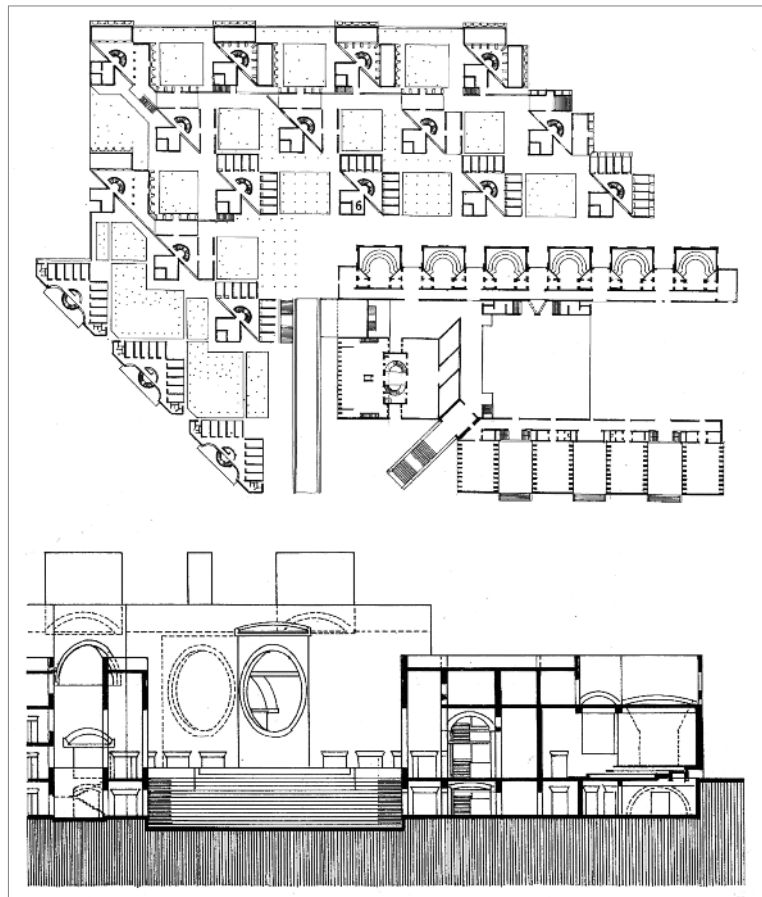
From its inception in 1961 until 1969, when architecture was ultimately dropped from the curriculum, NID itself was therefore to function effectively as the architect of record for a number of significant projects ranging from staff housing for Air India in Bombay, undertaken with the Chicago-based architect Harry Weese as the visiting teacher/consultant, and a further Bombay office and residential complex with Enrico Peressutti of Milan, as well as unbuilt studies for Palam Airport in Delhi with Heinrich Kosina of Munich, and student housing at NID with the Stuttgart-based architect and engineer Frei Otto. Some of these collaborations also offered opportunities for those at NID to travel overseas to work in the offices of the international consultants concerned, and thereby to learn and assimilate processes that would define their later work.³⁴

The most well known and certainly the most overtly influential of these NID-initiated collaborations was with the American architect Louis Kahn, who was invited in 1962 to advise on the design of the new Ahmedabad campus for the Indian Institute of Management (IIM). Under the unconventional arrangement with NID, Kahn had not in fact been engaged as the principal architectural consultant for the IIM project but, rather, as an expert mentor to the team of NID students and junior faculty to whom the project had initially been entrusted.³⁵ His effective design leadership of the IIM project, however, was ultimately established and sustained through his association with the office of the official collaborating architect, B. V. Doshi. Over the following decade, Kahn's complicated relationship with the intertwining professional and institution-building ambitions of Ahmedabad was to have a profound and lasting impact on the contemporary architectural identity of that city, and on a new generation of architects who came to study, practise and eventually to become teachers themselves in this increasingly influential centre of modern design. Among these were the NID members of the IIM project team with whom Kahn worked closely during his periodic visits to Ahmedabad, and a select few of whom, including Chandrasen Kapadia and M. S. Satsangi, were also to have the opportunity to travel to Philadelphia and work in Kahn's office for brief periods of time. Anant Raje was another Ahmedabad-based architect, initially associated with Kahn through Doshi's practice, who was subsequently to work for a number of years in Philadelphia, ultimately returning to Ahmedabad to complete and extend the work at IIM after Kahn's untimely death in 1974. Kahn's influence on Raje's own mature work as both an architectural practitioner and teacher would be profound.



Louis I. Kahn and
National Institute
of Design, Indian
Institute of
Management,
Ahmedabad, 1962-74.

Indian Institute
of Management,
Ahmedabad, campus
plan and partial
section of main
teaching block.



In addition to the many other cases of such personal contact and influence on individual members of the modern architectural profession in Ahmedabad, Kahn's rhetorical and substantive privileging of brick in the making of the IIM project was to have a broader industrial and cultural impact on the region as well, since new kilns sprang up all around the city and the nobly unadorned material quickly came to dominate the local modernist architectural vocabulary. Finally, Kahn's extended engagement with IIM was also to play a catalytic role in the dynamic further development of Ahmedabad as a centre of architectural education.

In 1962, soon after Kahn's first trip to Ahmedabad, B.V. Doshi opened the doors to a new School of Architecture in which Kahn and other eminent international visitors were regularly to supplement Doshi and his staff as adjunct faculty members. Wholly independent of NID, Doshi's new school directly challenged the broader ambitions of the neighbouring institution, which was subsequently to abandon its innovative initial attempt to ground a holistic design education in architecture as the core integrating discipline. The rival institutions epitomized an emerging tendency that was most apparent, perhaps, among the particularly ambitious and proactive cultural elite of the new Gujarat in this period. This was to balkanize power and potential in a constellation of autonomous institution-building projects, the exclusive architect-designed campuses of which served further to articulate the charmed apartness of these privileged enclaves from the banalizing norms and systems associated with central authority and the architecture of the welfare state. Formally and theoretically, at least, Doshi's intentions for the alternative architectural curriculum that his school sought to deliver was reflected in the unbounded and gently embracing landscape setting and open planning of the campus, for which the first studio block was completed in 1968. This was to be augmented incrementally, and rebranded from 1972 onwards as the Centre for Environmental Planning and Technology (CEPT), with additional Doshi-designed buildings for planning, art and interior design.

Drawing on Doshi's own formative experiences working with two of the most highly revered masters of modern architecture, and the international network of other leading architecture and design gurus that this had enabled him to build, CEPT students were both to be inspired and critically emboldened through direct and frequent exposure to this wider world of design mastery and ideas. Indeed, the original school had emerged, as has been seen, out of opportunities for direct involvement in studio with Kahn and other luminaries attracted to Ahmedabad through Doshi's networks. Doshi skilfully managed to retain the respect of the older guard of pioneering MARS- and CIAM-connected modernists, such as Drew, Fry and Jeanneret, with whom he had worked on Chandigarh.



Balkrishna V.
Doshi with students
at School of
Architecture, CEPT,
Ahmedabad,
c. 1970s.

His developed curriculum, however, was to reflect the critical ethos and growing cultural turn in the thinking and inspiration of the international avant-garde of second- and third-generation modernists, with whom he and his growing faculty identified most directly. Doshi was associated in particular with the critique of the received modernist doctrine launched by the so-called Team 10 group of younger activists within the CIAM movement, including Aldo van Eyck and Alison and Peter Smithson, whom Doshi had first encountered when he had represented India at the eighth CIAM congress at Hoddesdon in 1951, the same year he had begun working for Le Corbusier in Paris.³⁶ Early in the life of the new school these ties were to be renewed when Doshi became directly engaged again with Team 10 as an official member of that international collective from 1967 to 1971.³⁷

The Ahmedabad school was a relative latecomer among the new schools of architecture that had been established across India in the first wave of post-Independence institution-building. With its ideological tilt towards the sociological and ecological concerns of the 1970s, it should perhaps be recognized more correctly as the precursor of a second wave of new schools that were to be established in the 1980s, rather than the last of the first.

By the early 1960s the architectural profession in India was still relatively tiny, with approximately only one qualified architect per million

inhabitants. That ratio was changing, however, since the exceptional symbolic capital that modern architecture and urban planning had come to embody in the nation-building efforts of the new country had begun to drive demand for new professional degree courses.³⁸ Sustained subscription to the RIBA accreditation and examination system had continued to define the institutional profile and perceived pre-eminence of the J. J. School within the new framework of the ex-colonial British Commonwealth. The old Bombay school, however, would eventually have more in common with the architectural curricula in the new universities of Sri Lanka and Southeast Asia, which also remained voluntarily tied by the RIBA system to the former imperial core, along with its settler dominions in Australasia, than it did with the newer Indian schools, which generally sought to establish alternative orientations and networks of affiliation.³⁹

Part and parcel with the push of the Nehru regime for the rapid expansion and dissemination of technical education India-wide, four new schools of architecture with fully fledged five-year professional degree courses had been established by the end of the 1950s, respectively, at IIT Kharagpur, the Bengal Engineering College in Calcutta, Anna University in Madras, and the autonomous new School of Planning and Architecture (SPA) in Delhi. Significantly, the first of these, IIT Kharagpur in West Bengal, was to set the dominant technical focus of this first generation of post-Independence schools. Developed with American technical assistance, it was to be modelled in major part on the architectural curriculum at MIT.⁴⁰ The latter was not only the longest-established school of architecture in the USA but also the paragon of the technical school tradition in the American system, as opposed to the Beaux-Arts tradition associated with schools such as the University of Pennsylvania where Louis Kahn had become an influential teacher by the mid-1950s, and with which, through Kahn, Doshi and other Ahmedabad associates, were also to form significant institutional ties.⁴¹

Through a number of channels including the Ford Foundation, the Fulbright Scholarships programme and, later, the Aga Khan Program for Islamic Architecture, the School of Planning and Architecture (SPA) in Delhi was to become the most obvious rival of the Centre for Environmental Planning and Technology (CEPT) in Ahmedabad from the 1970s onwards, as the two most exclusive and effectively 'All-Indian' of these new schools of the post-Independence era. As training grounds for the next generation of teachers as well as leading practitioners, CEPT and SPA were also to become significant forums of academic debate and research in which compelling alternatives to the rote modernisms of the orthodox imported variety, which had begun to redefine the streets and skylines of the major commercial cities in the first two decades after Independence,

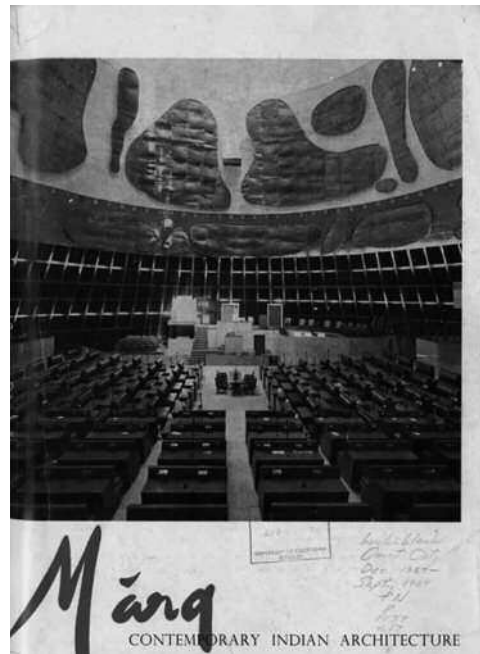
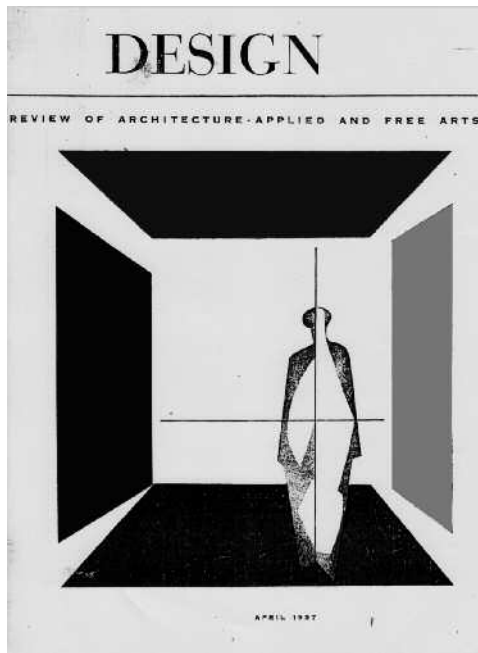
would be actively explored. Somewhat ironically, for what were otherwise the most cosmopolitan and internationally engaged of the Indian schools of architecture, both CEPT and SPA were to take a lead pedagogically in earnestly re-exploring the architectural and urban-design riches of their own regional localities, thereby redirecting the eyes and the hearts of the next generation of students to the wellspring of Indian architectural tradition.

The two rival schools each had their regional purviews, sharing the traditional desert urbanism of Rajasthan as their overlapping common ground: CEPT tended to focus on the western coastal conurbation that linked Ahmedabad with Bombay, while SPA was predominantly Delhi-centric. This tended to reinforce a certain polarity of perception along the dominant axis defined by Delhi and Bombay regarding the future direction and prerogatives of architecture and planning in modern India.

This inter-urban rivalry was further reflected in the discourse on modern Indian architecture as it was played out in the pages of *Marg* and *Design*, the two leading architectural magazines in India of the day, which were published, respectively, in Bombay and Delhi. Comparable to other members of the cultural and entrepreneurial elites who had enlisted the architectural profession in their regionally entrenched institution-building endeavours, it was the founding editors of these two periodicals, and their



School of Planning
and Architecture,
Delhi, c. 1959,
photo 2008.



Cover images for *Design* and *Marg*, the leading Indian architectural journals of the 1950s and '60s.

personal networks of protégés and regular contributors, that defined the specific regional perspectives and agendas of the two magazines, as well as the particular stamp that they were to make on the changing discourses about architecture and design in modern India.

The Bombay-based *Marg* was published for more than two decades under the editorship of Mulk Raj Anand. While passionately committed to architecture, Anand – a novelist and cultural critic by primary vocation who had just returned from an early career of literary and social activism in the UK when he established the journal in 1946 – was an advocate for the advancement of architectural art and heritage conservation with little experience of the more technical and professional issues of the discipline. *Design*, on the other hand, was launched in Delhi a decade later (1957) by an experienced publisher of trade journals, Patwant Singh, with a family background in construction, who saw a market for a new journal that would combine the fields of architecture, urban planning, visual arts, graphics and industrial design into a single discourse. The younger magazine, therefore, had a clear ambition to bridge the putative gap between the artistic and the mundane.

Viewing Indian architecture from the peripheral coastal perspective of Bombay, India's most cosmopolitan threshold to the West, *Marg* tended

to foster a discourse that essentialized the contrast between the village-based traditional cultures of the Indian interior and the universal modernity of mid-twentieth-century humanism. In his passionate editorial contributions to the magazine, Anand played a crucial role in promoting the grand narrative of Le Corbusier's creative encounter at Chandigarh with this primal India of the interior as a transcendent modernist response to the brief from first principles. In Anand's view, this was essential to address the changing needs of the new era in the absence of a contemporary local architectural tradition that was sufficiently vital and relevant.⁴²

Singh's 'interior' view from the capital, on the other hand, was less pessimistic in outlook, and more pragmatic and tactical in critical thrust. New Delhi in the 1950s was still a big, semi-urban country town for the most part, but booming with new construction dominated by the central government and its proliferating works departments. Singh did not hesitate to criticize the unreflective assumptions and certainties of both government architects and the increasing number of private practitioners undertaking public sector commissions. Frequently highlighting the work of Delhi-based contemporaries such as Habib Rahman and Achyut Kanvinde, as exemplary exceptions to the rule, however, his aim was to raise the game of modern architectural design in India to an international standard.

In their heyday, *Marg* and *Design* ultimately converged in both their methods and their aims. They drew equally on local, regional and international opportunities for critical exchange to develop strong networks of advisers and contributors who could assist in defining and debating the limits of discourse relevant to the professional and artistic advancement of architecture in modern India.

Regional Fragmentation and the Need for Renewal

Between the 1950s and early 1960s the rising volume of different voices and varieties of architectural visions for a modern India that had begun to emerge from the regions had already soundly pre-empted any notion of a national architecture, at least along the lines of any narrow expression of the Nehruvian-Corbusian pedigree that had only just been demonstrated at Chandigarh. But the shifting political and cultural affinities that had encouraged such region-centric developments in architecture had also begun to unravel the structures and the certainties of the nation-state that the Nehruvian regime had so earnestly strived to construct and reinforce in the immediate post-Independence years. Plummeting national morale and uncertainty about the future following Nehru's death

in 1964 was rapidly compounded by the outbreak of war with Pakistan in 1965 and the untimely death of Nehru's chosen successor, Lal Bahadur Shastri, in the following year.

The most critical fissures in the faltering national political structure were the effect of two specific causes. On the one hand, the fifteen-year waiting period for the establishment of Hindi as the official national language was scheduled to end in 1965, and this led to escalating anti-Hindi agitations across the nation in the preceding years and months. On the other hand, increasing intolerance for the relatively undiminished disparities in wealth between rich and poor had sparked increasingly organized communist-led revolts in regions such as the vast traditional domain of the Nizam of Hyderabad where the princely privies had still been maintained. This also led to the peasant uprising of 1967 in Naxalbari where the so-called Naxalites were subsequently to assist the (Marxist) Communist Party of India (CPI[M]) to win considerable political support against the Congress. The rise of the communists also had a profound impact on the power and autonomy of the regional institution-building elites, whose American funding alliances the communists mistrusted as anti-communist propaganda.

The impact of these political developments on the architectural legacy of modernism in India is most palpably and symbolically illustrated by the case of the separation, on linguistic grounds, of the states of Punjab and Haryana in 1966. Another cynically pragmatic compromise to regional pressures, this led with strange irony to the actual partitioning of the government complex at Chandigarh – the veritable architectural icon that Nehru and his architects had conceived as the symbol of the democratic unity and secular modernity of the postcolonial nation-state that had emerged from but transcended the communal schism of the tragic 1947 Partition. Just as coolly and pragmatically as the pencils of the colonial bureaucrats had divided the subcontinent fewer than two decades earlier, the public and political spaces of Le Corbusier's heroic Legislative Assembly were now cloven in two. To the predominantly Sikh, Punjabi-speaking western half of the state went the lower house, while the new Hindi-speaking Hindu majority state of Haryana would now make its own laws in the separate smaller chamber in which the upper house of the former Punjab legislature had presided previously.

If the geography, culture and ethos of 'region' were the grit that had given both colour and perspective to the aspirational modernist architectural discourse in India in the 1950s and '60s, the political realities of regionalism in the increasingly fraught and fragile democratic polity of India in the years that followed Nehru's death were quite another

factor that was to have a profound effect, directly and indirectly, on the architectural thinking and building efforts of Indian architects in the era of socialist and nationalist renewal that came next.



chapter five

Development and Dissent: The Critical Turn, 1960s–1980s

Through the first two decades of India's independence modern architecture had provided a formal mask both for the technocratic development model of the political centre and for the regional elites who saw it as a means to a more equitable global identity. By the 1970s, however, divisions were deepening between the modern 'idea of India' envisioned by the centre and the socio-political realities of an increasingly regionalized nation. It was probably the ensuing political events of the 1970s that led to the eventual decline of the modernist project in the architecture of the subcontinent, at least as far as the formalism of the earliest postcolonial work in the functionalist idiom was concerned.

In the political sphere, this impending rift between the centre and the regions was most identifiably put into motion with the split of the Congress Party itself, which had long been divided between an accommodating ideology that sought to include traditional regional social structures in governance, and that of renewing the agenda of social transformation that had been laid aside after Nehru's death. The split that came in November 1969 posited the newly formed Congress (R, Requisition) led by Nehru's daughter, Indira Gandhi, against the Congress (O, Organisation) under the leadership of the octogenarian Morarji Desai, one of the last members of the freedom fighter's generation to remain politically active. Desai's faction stood for an idea of national unity based on compromise and accommodation of divergent regional viewpoints. Efforts to define ideological divergences that would warrant a split within the Congress Party – the very ideal of national unity for independent India – pushed both factions into greater extremes of their chosen political stance. Consequently, the new face of Congress – the Congress (R) – was to adopt an emphatically Marxist rhetoric of 'commitment to socialism'.

Mrs Gandhi's commitment to revive the socialist agenda of governance envisioned by her father was so great that within a year she had managed to cross the traditional boundaries of caste and religion and convert herself into a symbol of radical social change. For the common man, the chant of *garibi hatao* ('eliminate poverty') that reverberated during the

Congress election campaign of 1971 was a promise that the dream of socio-economic reform was back on the agenda. The landslide victory achieved by her party in the fifth Lok Sabha (Lower House) elections stood witness to the immense popular appeal that this new pathway to democratic socialism – framed in Indira's promise of 'radical change without the bloodshed of revolution' – had achieved. Just months after Indira's election to a powerful majority, her ideological position was further strengthened by India's decisive victory in its latest military conflict with Pakistan. Lasting barely two weeks, the latest war with Pakistan in December 1971 had been instigated by India's covert support for the popular struggle of Pakistan's Bengali-speaking eastern wing to separate from its politically and militarily dominant western half. Provoked by unilateral diversionary attacks on its border with West Pakistan, Indira had decided to send a major force of Indian troops into East Pakistan to support the rebels, which had swiftly resulted in the unconditional surrender of more than 90,000 Pakistani troops and the formal secession of the independent new nation of Bangladesh. As her biographer Masani noted, many Indians saw Indira Gandhi as an incarnation of Shakti, 'an omnipotent Mother Goddess who had protected her people and liberated another from the forces of evil'.¹

The events of 1971 not only reaffirmed Mrs Gandhi's commitment to socialism but also took it to another level beyond her father's imaginings. For one, the decisive intervention in the Bangladesh Liberation War indirectly contested American strategic interests in the region, in Pakistan and China respectively, and consequently did much to reposition India in the global political arena of the Cold War. Diverging, however, from the efforts of her father, who had sought to define India's position as an independent regional power through his role as an important leader and apologist for the Non-Aligned Movement, Indira courted a growing political, military and economic exchange with the socialist bloc, culminating in 1971 with the signing of a twenty-year treaty of 'Peace and Friendship' with the Soviet Union. This outward diplomatic expression of alliance to socialist ideals also reflected the growing internal alliances that the new Congress was developing within the nation with the Communist Party of India (CPI) and the powerful new faction that was emerging within the Congress (R) under the banner of the Congress Forum of Socialist Action (CFSa).

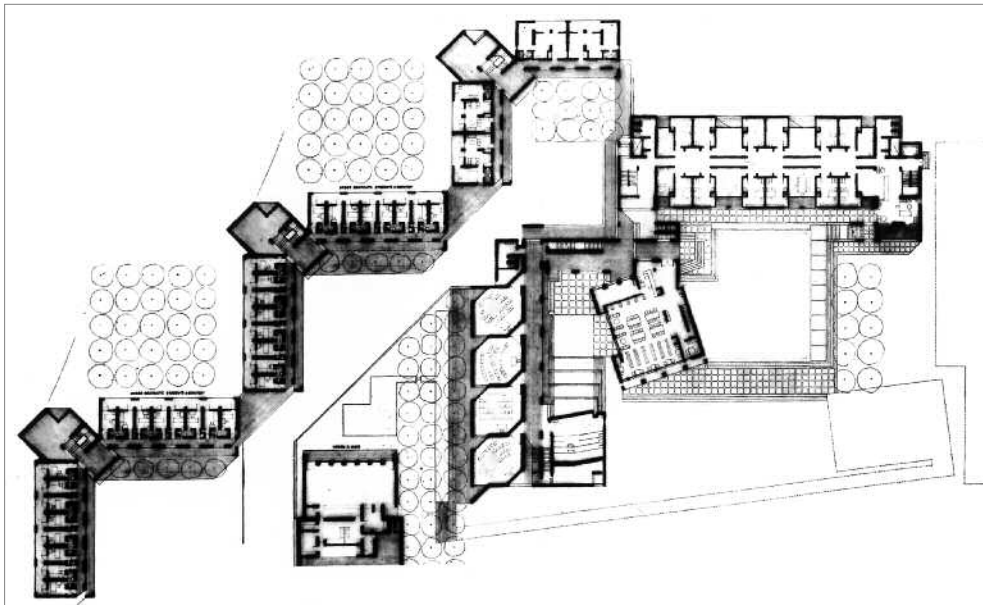
In terms of government policy, the initial years of Indira Gandhi's regime witnessed a range of reforms directed consistently towards the nationalization of infrastructure and the mounting of ever-larger public sector plans. Most areas deemed to be core sectors of the economy were set for immediate government takeover, while others were scheduled for

incremental nationalization. Even some non-essential industries were earmarked for 'selective' appropriation by the state.²

Closer to the disciplinary concerns of architectural professionals and the building industry were revisions to property laws. Under attack, in particular, were the privy purses and privileges of the former rulers of princely India who still commanded great vertical organizational power within the regions. These changes went further to claim more drastic constitutional amendments towards such property rights, putting the centre's socialist visions in sharp contrast to the regional compromises reflected in the agenda of the now seemingly impotent Congress (o). These patterns reflected a new, revised idea of India developing at the centre – Indira's India – which had, in its promise of radical social change, abandoned the Nehruvian mythology of a lost nation of past greatness re-'discovering' itself in favour of a new politics of confrontation with traditional values.³

In the context of this resurgent socio-political progressivism, architects were not immediately compelled to deviate from the progressive modernist stances they had developed in their pioneering work of the 1950s and '60s. The first generation of modernists, the most prominent of whom were now established along the Bombay–Ahmedabad–Delhi axis, continued to produce designs inspired by their tryst with eminent contemporary architects in Europe and America. Yet, slowly but surely, the work was also evolving. The joint commission undertaken by Achyut

Anant Raje and
Achyut Kanvinde,
Indian Statistical
Institute, New Delhi,
1970–76, plan.



Kanvinde and Anant Raje for the Indian Statistical Institute (ISI) in Delhi (1970–76), for example, enabled an unlikely but successful marriage of design tendencies arising from their respective formative experiences with very different modernist mentors overseas. While Kanvinde was indebted to his post-war Harvard training under Gropius for the where-withal and recognition he had earned from the outset of his career as a collaborative team leader with a strong track record in campus planning, the exposed brick and concrete fabric and distinctively mannered tectonics of the ISI buildings spoke directly of Raje's ongoing engagement with Kahn on the Indian Institute of Management project in Ahmedabad. Such exposure to Kahn, albeit indirect, was evidently influential as well in the design of Kanvinde's next and perhaps most significant project of this period, the Dudhsagar Dairy complex (1971–4) in Mehsana, Gujarat. Here the deeply articulated ramparts of the towering milk-powder plant at the core of the facility, composed of soaring ventilation shafts, echoed Kahn's influential Richards Medical Research Laboratories for the University of Pennsylvania of a decade earlier. But, far from slavish mimicry, the work emerging from Kanvinde's prolific office had long arrived at a recognizable character of its own, which, by this time, was also becoming increasingly well defined in at least two distinct categories of buildings. The fine-boned Brutalism first declared in the IIT Kanpur campus (1959–66) and concurrent residential commissions such as the Harivallabhdas House in Ahmedabad (1964) had continued to be refined in subsequent institutional commissions, such as Kanvinde's design for the Administration Building for the Atomic Power Project Township at Kota, Rajasthan (1967), and the Gujarat state guesthouse in New Delhi (1969). The Dudhsagar Dairy represented another distinctly coarser and bigger-boned body of work that the Kanvinde office had begun to develop by the 1970s, primarily for such larger-scale industrial commissions. The latter strain also reflected another more general tendency in the Brutalist aesthetics of late modern architecture that was reintroduced to India in the 1960s (having been inspired not insubstantially by the seminal earlier work by Le Corbusier and his collaborators in India) by the next generation of contemporary Indian architects, many of whom were then returning from overseas studies and work experience in Britain and Europe. On the Delhi scene these included UK-trained Morad Chowdhury, Ajoy Choudhury and Ranjit Sabhiki, each of whom had initially worked for Kanvinde before forming an influential joint practice of their own; Chowdhury eventually returning to Kanvinde's firm permanently as a senior designer in the early 1970s.

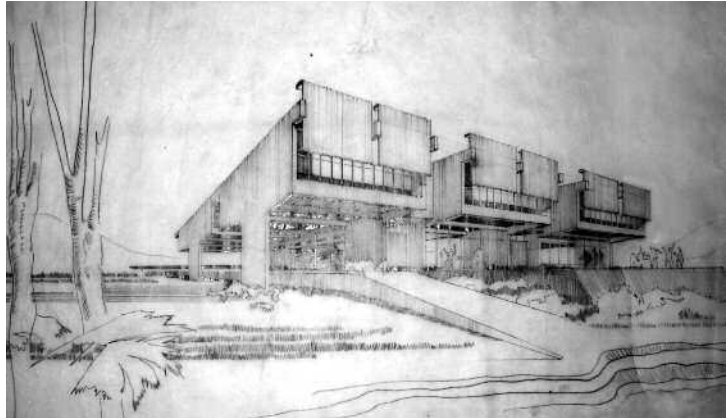
Another emerging practice on the Delhi scene in this period was that of Raj Rewal, who had worked in Paris with Michel Ecochard, one of the



Achyut Kanvinde,
Gujarat State
Guesthouse,
New Delhi, 1969.

Achyut Kanvinde,
Administration
Building for the
Atomic Power Project
Township, Kota,
Rajasthan, 1967,
perspective drawing.

Achyut Kanvinde (rear
left) in a meeting with
other members of
the Delhi Urban Art
Commission, 1970s.



pioneering modernists whose large-scale social housing projects in French-colonial North Africa in the 1950s had been influential in the nascent CIAM discourse of the 1950s on architecture, culture and the urban habitat.⁴ It was Rewal's particularly muscular brand of Brutalism that was to make some of the most conspicuous and defining marks on the architecture of the national capital beginning in this period, largely through his success in winning a series of design competitions for major public buildings and urban complexes associated with the swelling ambitions and bureaucracy of the central government and its growing portfolio of new state-owned corporations.

The Dudhsagar Dairy complex, however, designed by Kanvinde's Delhi-based practice, but located deep in the regional heartland of Gujarat, was perhaps a more profoundly representative exemplar of a contemporary Indian architecture that could be understood and interpreted broadly as an embodiment of the competing political ideals and social realities that were shaping Indira's India in its brief heyday in the early 1970s. Commissioned in 1970 by the Co-operative Milk Producers' Union, the plant formed part of a network of similar co-operatives that were coordinated on a national basis, under what was known as 'Operation Flood', to modernize and thereby improve the hygiene, productivity and distribution of the dairy industry. Simultaneously, the programme sought to protect and sustain the livelihood of the simple farmers and milkmen who produced and procured the actual milk – a fundamental staple of the Indian diet – by eliminating the profit-taking of the usual middle men.⁵

The heroic building that Kanvinde and his team designed for the Dudhsagar plant could surely be described as a 'temple' of industry, but one that was much more literally akin to the metaphor in its monumental scale and profile than any factory that Nehru might have imagined in his vision of the industrialized India of the future. Abandoning the tectonically precise style that the firm was noted for in their previous designs for other more high-tech industries and research institutions, the coarsened and simplified Brutalism of the dairy plant was a distinctly 'lower-tech', more totemic response to function. The bovine zoomorphism of the main tower with its canted, horn-like ventilation shafts even appeared to flirt with a manner of postmodern architectural semiotics – only just beginning to be explored elsewhere in the world – that hovered between a superficial symbolism and a deeper sense of empathy with the modernizing cowherds, milkmaids and the very cows themselves that underpinned the production processes within. In this sense of a formal/functional entente (rather than a merely servo-mechanical solution to practical requirement), the structure embodied the post-Nehruvian state of progress of the Indian labour movement, which had been working



Charles Correa
and Pravina Mehta,
Kanchanjunga
Apartments,
Bombay, 1970–83.

for decades to valorize the position of the individual worker and an overabundant labour force in the context of industrialization.⁶

Whether the Brutalist fashion in late modern architecture worldwide, in the 1960s and '70s, was more genuinely embraced and expressed in India than elsewhere, however, was perhaps more a measure of degree and skill than it was a question of authenticity. Outside the arena of government projects and programmes, and the possible double coding with which a scheme such as the Dudhsagar Dairy could be interpreted, other architects such as Charles Correa and Balkrishna Doshi – among the handful of accomplished modernists in India who had begun to attract international attention – continued to produce progressively bolder work, building unrepentantly on earlier influences. In Correa's Kanchanjunga Apartments, designed with Pravina Mehta in the early 1970s (though not fully constructed for another decade), the stacking and ventilation principles with which Le Corbusier had previously defined the idea of the multi-unit residential slab block in his *Unité*

d'Habitation were confidently, even brashly, redeployed in a Corbusian tower of unprecedented height and unmistakable character.

Doshi's Premabhai Hall in Ahmedabad (1972) was a comparably bold though rather unforgiving insertion of a massive Brutalist concrete order into the delicate urban fabric of the old city. Reiterating earlier experiments deploying recognizable Corbusian motifs as referents to elements of traditional indigenous architecture, Doshi's approach to the design of this multi-purpose hall also reflected his close, concurrent relationship with Louis Kahn, whose ongoing parliamentary project for Dhaka was a strong precedent for Doshi's unbuilt competition scheme of 1972 for the Kuwait Assembly Building. Relative to Doshi's early Institute of Indology, however, the simplified, almost completely abstracted reference in the Premabhai Hall to the overhanging wooden *gharokas* (balconies) of neighbouring shops and *havelis* (townhouses) was indicative of an emerging new strain or shift in the work – not yet entirely clear, but evidently similar in impetus to that of Kanvinde's – towards a more elemental if not simpler, but also more meaningful language of form and space.

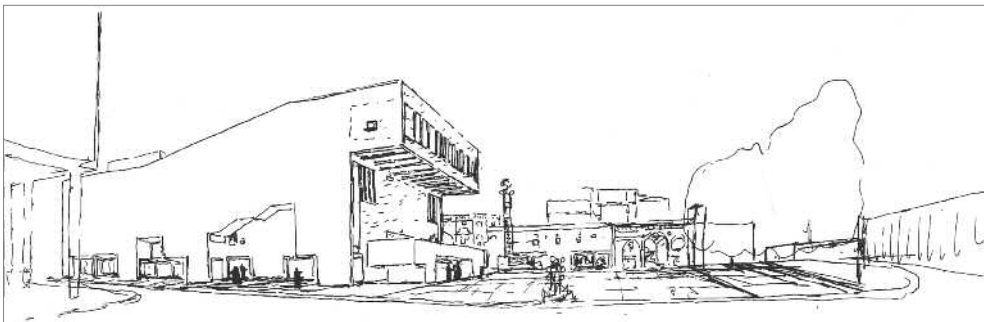
Critical Awakening

Brutalism as a style was clearly not an end in itself. But the aesthetic born of a starkly honest approach to elementary building materials and methods was to enjoy a sustained currency for some years yet as a legitimate and compelling means by which to produce a relevant contemporary architecture for India. In the context of the resurgent socialist agenda of the national government in the early 1970s, however, it was the ethic of building and planning realistically and independently, albeit inventively, within the developing nation's means that was to be championed by professional and political leaders alike. While a decade earlier, the aspiring young avant-garde and their elite patrons had seized Nehru's invitation to pursue radical aesthetics in architecture that might wake the new nation into its modernity, many of the same were now arriving at a new sense of their professional maturity, and the broader ethical and social responsibilities as environmental designers and problem solvers that they were both obliged and now motivated to embrace.

Once again it was Charles Correa, in a polemical article published in the *Architectural Review* in 1971, who sought to steward a timely critical turn in the thinking of his professional peers. As Correa put it, with his dependable rhetorical sense, 'Chandigarh is perhaps just one more in a series of monumental, cruel and wasteful happenings.' 'Cruel and wasteful,' he emphasized, extending his critique to historical examples of palatial follies such as Mandu and Fatehpur Sikri (which, paradoxically, he would offer as inspirations for his own designs in the future), 'because the solutions proffered are irrelevant to the problems of India's starving millions.'⁷

This abrupt shift in priorities, and associated loyalties, was also a timely reflection of the rapidly changing realities of urban India as rampant commercial development on one hand and unchecked urban migration on the other were threatening to split the swelling metropolises apart at the seams. Cities like Delhi and Bombay had become major centres for

B. V. Doshi, Premabhai Hall, Ahmedabad, 1956-72, perspective sketch of final (built) scheme with adjacent urban spaces.





High-rise housing development on reclaimed land, Cuffe Parade, Bombay.

commercial growth over the previous two decades and this had also affected the way modernist forms were employed in commercial architectural works. From a market perspective, the modernist idiom had stimulated a predictable demand for the development of high-rise office blocks and other commercial enterprises, and the planners of major cities could no longer stem the supply. In the case of Delhi these pressures were constrained somewhat due to the protectionist attitude towards the ceremonial central vistas of New Delhi, the seat of the government and its bureaucracy. But even so, high-rise developments were proposed by Raj Rewal, Kuldip Singh and others, in various schemes of the late 1960s for sites in the Connaught Place business district, and by the beginning of the 1970s almost 50 'skyscrapers' were planned or under construction within this area of the city alone.⁸ On the other hand, in Bombay the linear growth along the

north-south axis of the peninsular city had led to a distorted development pattern focused on the business district at its southernmost tip. Here, the uncontrolled growth of office buildings and upper-class apartments was transforming the area into a dense jungle of concrete slab and glass infill towers, which one magazine would later describe as 'a new hell for the nouveau riche to stew in, in their own juices'.⁹ In contrast was the burgeoning population of urban migrants, which over the two decades of rapid industrialization had continued to increase at unprecedented rates and was now inhabiting the unplanned fringes and interstices of these cities.¹⁰ Shifts in attitude were desperately needed across the board and, as the title of Correa's article urged, architects would have to rethink both 'programmes and priorities'.

In keeping with the socialist ethos of the times, the focus was now to shift from the questions of architectural style and representation that had occupied the national leadership and institution-builders of the previous generation, to the increasingly critical issue of planning and providing sufficient housing for the swelling ranks of ordinary Indians who now made the city their home. In addition to the legions of government servants whose standardized housing colonies already defined large segments

of the central and state capitals, these included the even faster growing middle and lower income groups (MIG and LIG) of salaried and wage-earning urban dwellers working in the commercial and industrial sectors of the economy who comprised the new official middle class, but for whom access to affordable housing of a decent standard was increasingly beyond reach. To address this need, a substantially new apparatus of powerful agencies was established by the early 1970s, at both the central and local government levels, to supplement the already extensive aegis of the Public Works Department system in the domains of urban infrastructure and housing.

An influential preamble to this technocratic initiative had been a variety of innovative middle-income housing developments that the Delhi Development Authority (DDA) had begun to commission from previously untested members of the emerging first generation of post-Independence-trained architects in the mid-1960s. Early DDA projects designed by Kuldip Singh were among the most avant-garde relative to the new norms of modernist slab- and point-block-type multi-unit housing that Habib Rahman and the CPWD were only just beginning to build in neighbouring housing sectors for government employees. At Usha Niketan (1964), and his subsequent much larger MIG development at Malviya Nagar, Singh – who had recently returned from postgraduate training and work experience in the UK – was one of the first in India, indeed anywhere, to apply and realize the three-dimensional planning and compositional possibilities for low-rise medium-density urban housing ‘clusters’. These possibilities were latent in the seemingly outlandish and more overtly futuristic propositions of the British ‘megastructuralists’ and Japanese Metabolists of the early 1960s, but had remained largely in the realm of theoretical debate and academic speculation at the time. With its boldly ordered yet human-scale weave of cellular volumes, infrastructure and circulation, Singh’s extensive scheme at Malviya Nagar in particular arrived at formal and functional solutions that compared with Moshe Safdie’s influential Habitat ’67 housing project for the Montreal World’s Fair of 1967, as well as the North African housing schemes of Ecochard, Woods and others that had influenced the important CIAM/Team 10 debate of the 1950s about ‘Habitat’ and urban structure, from which both Singh’s and Safdie’s schemes had descended indirectly.¹¹ Affinities between traditional North Indian urbanism and the rhythmic play of light and space exhibited in contemporary forms such as Singh’s intricately interwoven cluster ‘fabric’ would begin to be explored more overtly in other contemporary and later housing schemes by some of Singh’s professional peers on the Delhi scene, including Ranjit Sabhiki, Ajoy Choudhury and Raj Rewal. Meanwhile, more pragmatic arguments

Kuldip Singh, DDA housing at Malviya Nagar, New Delhi, 1971–6.



for the efficiency and social suitability of a low-rise cluster approach to mass urban housing on the DDA model would be embraced broadly by its counterpart agencies across the country.¹²

Overseeing the operations of the growing number of these various urban development authorities from the early 1970s was the new Housing and Urban Development Corporation (HUDCO). Established by the Government of India in 1970, HUDCO's over-arching mandate was to accelerate the pace of housing and urban development nationwide. Towards that aim, the agency was primarily responsible for initiating and managing financing and associated policy and guidelines to enable major public and public/private ventures in urban development. Architects also worked within HUDCO, however, as in-house design and planning consultants who frequently intervened to develop projects directly in the jurisdictions of other authorities, and were thereby responsible for the design of thousands of housing units themselves. As with the ubiquitous residential and institutional architecture produced by the CPWD, this approach tended to propagate de facto national standards for the clustering and layout of low-rise medium-to-high-density urban housing originally developed, more often than not, in pilot projects in and around the national capital region. In the following decade, HUDCO was to counter the creeping utilitarianism that had come by then to characterize much of this in-house work, by shifting to a much-lauded new policy of commissioning external consultants to design the large majority of its projects. They thereby focused, through design competitions and other tactics, on engaging many of the most accomplished architectural designers in the country to play a larger role in mass urban housing.¹³

Another essential part of HUDCO's mandate from its inception was to address the housing needs of the 'deprived'. In this domain, the efforts of architects to promote the use of local building materials and cost-effective and innovative construction technologies formed part of the possible solution. Yet, there was only so much that architectural designers could prescribe directly. For the lowest wage earners, or economically weaker sectors (EWS), therefore, HUDCO was to lead in championing the self-build concept of so-called 'sites and services' housing projects across the country, beginning in the early 1970s. This alternative strategy reflected the growing recognition at this time across the international field of human settlements development advocacy that local building cultures could potentially offer both the agency and the know-how to bridge the financial feasibility gap between the provision of basic infrastructure and the procurement of fully designed and constructed housing. Such a strategy could address the actual needs and means of the economically weaker sections of society, if not the further millions of homeless who were truly



Example of a sites and services housing project with as-built infrastructure in place.

destitute. Within these schemes, professional design consultants, including architects and engineers, were responsible for planning and laying out basic infrastructure such as road access, and water and sewage networks, while the actual construction of the dwelling itself was left to the owner-occupants. Reflecting the government's primary aim to alleviate 'poverty' as its central concern, these designs were mostly focused on the cost-effectiveness and maximization of resources. As a result, although the users were free to fashion their own dwellings, the planning process itself

carried the rational patterns learnt from modernist models. In many cases, the pioneers in this area were the now well-established senior generation of modernist architects in India, and references to foreign models were likely. The further involvement of the government meant that the planning solutions were frequently standardized in an effort to generate a pattern of equality across the nation. This renewed focus on aspects of planning and resource management within the modernist idiom, then, further informed the development of other related projects.

While commercial development was the major driver for urban migration stresses and associated homelessness in Delhi and Bombay, the situation of the urban poor was worse still in the other major cities. Calcutta, like Delhi, had managed for several decades already with the additional pressure of refugees from Partition in 1947, which had forced a migration of some 700,000 people from the neighbouring state of East Pakistan, and the city's resources were already on the brink of collapse. But this situation was further compounded by the influx of a further wave of refugees preceding the Bangladesh Liberation War of 1971. As a result, the city was in desperate need of planning solutions that would address its various needs for clean water, adequate sewage, housing and transport, among others.¹⁴

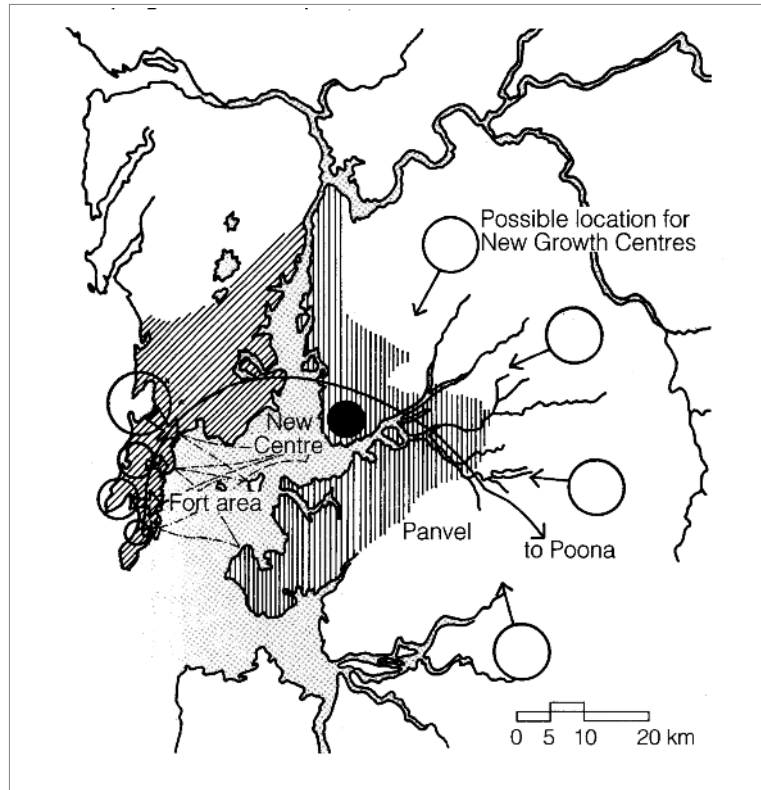
Madras had a different problem to contend with. Although it had not faced comparably intense and uncontrolled urban migration, it had not yet benefited from significant industrialization either. With a per capita income less than half those of the other major cities, Madras was little more than an overgrown village with an accordingly inadequate infrastructure that was in urgent need of reassessment.

The beginning of the 1970s, therefore, was marked by a concerted effort to plan and implement solutions in each of the major cities, and the concomitant establishment of numerous new professional bodies that would define the future development of the country's major metropolitan centres.

The planning of metropolitan Calcutta had long been a matter of concern, and since the early 1960s several major studies had already been conducted with the help of international organizations, including the World Health Organization and the Ford Foundation. Among the recommendations that were put forward in the plan developed with Ford Foundation-supported consultants by the Calcutta Metropolitan Planning Organisation (CMPO) were proposals for modular prefabricated housing, a rapid transit system and an alternate urban centre at Kalyani-Bansberia, intended to alleviate the stress on Calcutta.¹⁵ Many of these recommendations were put into action in the early 1970s, including the construction of a subway train system begun in 1972 with Soviet technical assistance. Regardless of different aid sources and the political allegiances of a local state government that was increasingly dominated by its communist factions, however, these interventions were still essentially top-down solutions to urban growth and development based on the conventional modernization theories and models of the West. They did not address the structural problems of poverty at the grassroots where the socialist policies of the central government were seeking to focus.

Another scheme that found new life in the early 1970s, which had greater traction with the prevailing social planning and development trends at the national level, was the ambitious proposal for 'New Bombay', initially conceived and published almost a decade earlier, in 1964.¹⁶ The original scheme by Charles Correa and collaborating architects Pravina Mehta and Shrish Patel had proposed a multi-nodal strategy for development that intended to generate new urban centres across the bay from Bombay's business district, and connect these through new railway and motor routes. The development of these twenty-odd nodes would offer an open-ended system for future expansion and resolve the crisis posed by the linear development of the peninsular land mass of Bombay. With the establishment of a necessary and sufficiently powerful new development authority – the City and Industrial Development Corporation (CIDCO) – in 1970, the plan for New Bombay was finally put into action in 1971. From 1971 to 1974 Correa himself took on the position of chief architect for New Bombay and a sustained and coordinated development effort for resolving the problems of the greater Bombay metropolitan region as a whole began to unfold in parallel, with strong government support. The New Bombay project was, as Correa explained in an interview

Charles Correa,
Pravina Mehta and
Shrish Patel, proposal
for New Bombay,
1964, schematic plan.



in *Architectural Review*, ‘an instructive example of the necessary close integration between political and financial management and social and territorial planning’.¹⁷ In addition to major intervention and investment in land acquisition, and the development of new transport infrastructure, relevant government authorities also embarked on a land reclamation project from the Back Bay at the crowded southern end of the Bombay peninsula, eventually generating 200 acres of new land for development adjacent to the exclusive residential and financial districts, respectively, of Cuffe Parade and Nariman Point. But the primary focus of the multi-nodal development strategy was New Bombay itself, which sought to redirect future tides of urban migration and the associated forces of change arising from massive urban development away from the already defined and distinctive townscape of the established metropolis.

While Bombay’s geography and the strategy to address its present and future planning challenges were, in many ways, unique, the robustness and clarity of the multi-nodal planning concept quickly became the



Back Bay land reclamation work in progress, Bombay, 1970s.

benchmark and reference model on which urban development authorities in other major cities were to recalibrate their planning strategies and mechanisms. A new twenty-year plan for the development of Metropolitan Madras was framed and adopted accordingly in 1971, with the creation of a new Madras Metropolitan Development Authority the following year to put it into action.¹⁸ Even Calcutta was prompted to reassess. Rejecting the bi-nodal proposal of the CMPO, a new Development Perspective Plan was published in 1976 that now opted for a multi-nodal strategy of its own for future development.¹⁹

Empowered by the political will and the socialist agenda of the new Congress government, such major undertakings in coordinated urban planning and development had enabled the architectural profession to demonstrate once again its broader expertise and capacity to visualize and plan for major spatial and social changes at the metropolitan and even regional scale. Beyond the narrower symbolic purposes of earlier town-planning projects, such as Chandigarh and Bhubaneswar, in which architects had been recognized for their design leadership, Correa, among others, sensed that they were entering a new phase of professional engagement and responsibility in nation-building in which their services would be more pertinent than ever to the developing nation's broader needs and wants. In a later account of the ideas he had formed and

experimented with in the framework of the New Bombay scheme, Correa reflected on the architect's prerogatives as an environmental design professional:

[The] architect must have the courage to face very disturbing issues. For what is your moral right to decide for a thousand, for a hundred thousand, for two million people? But then what is the moral advantage in not acting, in merely watching passively the slow degradation of life around you . . . ?²⁰

Somewhat ironically in the context of such circumstantial technocratic power that certain architect-planners were then in positions to exercise, the architectural discipline itself was only just in the process of gaining proper legal recognition as an autonomous profession. In 1972, soon after Indira Gandhi's government was installed in Delhi, the Architect's Act was passed in the Parliament, legislating at a national level for the first time the legal entitlements and ethical obligations of the discipline as a self-governing profession.²¹ This was doubly ironic because the proponent of this independent member's bill, Piloo Mody, was an architect-turned-parliamentarian who, as a member of the opposition and a committed libertarian, was ideologically sceptical of the socialist agenda in government agency. He was, therefore, especially concerned to secure the legal independence of the profession to govern its own conduct.²²

Subsequently, the Council of Architecture (COA) was formulated to allow for the national registration of architects. This national-level recognition of the profession further strengthened the role of architectural professionals in the field of local government and urban development. The following years saw the rise of further para-governmental bodies including Urban Arts Commissions established in several of the major cities in which architectural members would play influential roles. The Delhi Urban Arts Commission was established in 1974, while Bangalore's was incorporated in 1976. Collectively, these nationwide developments in the early 1970s effected the final transformation of the original British-colonial frameworks of governance, in which the modern architectural profession had been established in India, into one that was now wholly of its own making.

With its rising status combined with the new focus on social engagement, the modern architectural profession, which had once ridiculed the call of the revivalists within its ranks for a more autonomous and self-informed architecture for India, but which was now dominated by a growing majority of locally trained members, was also emboldened with a new confidence and sense of conviction to begin breaking away from

imported models and norms. The New Bombay development strategy, which sought to stimulate and incorporate local patterns of growth and infrastructure, was illustrative of this trend in the realm of urban design and planning. This new readiness, however, to embrace alternate, indigenous paradigms was perhaps most widely demonstrated in practice by the shift to the bottom-up 'sites and services' strategy. This was being promoted by HUDCO in the 1970s across the various public and non-governmental sectors of the Indian building industry engaged in low-cost housing for the economically weaker sections (EWS) of society. While most of these projects were focused on maximization of resources and thereby led to rational patterns of planning inherited from international modernism, they also brought many architects closer to the realities of the problems specific to designing for the Indian household.

Key players in raising this new attention to the cultural specifics of dwelling and settlement in modern India in this period were B. V. Doshi and his Ahmedabad-based atelier, Vastu-Shilpa Architects, whose explorations in the design of innovative new patterns and typologies for middle-income and low-cost housing dominated their architectural output during this period. Gujarat was now the richest state in the country and its already well-established industrial base was expanding further. In Ahmedabad and other important industrial centres like Baroda, housing the fast-growing population of rural-urban migrants was, therefore, a perennial challenge with which this and other local practices were deeply engaged. Doshi's career in Ahmedabad had begun with small institutional housing projects and the growing practice had continued to be involved through the 1960s in the design of housing developments of progressively increasing size, eventually on the scale of entire industrial townships. Completed in 1969, the large township that Doshi and Vastu Shilpa designed for the Gujarat State Fertilizer Company (GSFC) outside Baroda was to serve as their prototype and datum for the other company towns and housing colonies for various government and privately owned concerns that soon followed. These included a township for the Indian Farmers Fertiliser Cooperative (IFFCO) in Kalol (1971-3) and a large housing colony in Ahmedabad for the Life Insurance Corporation (LIC, 1973-6). Another township designed for the Electronics Corporation of India Ltd (ECIL) in Hyderabad and completed in 1971 would be home to some of the earliest pioneers of South India's future stake in the global IT industry.

Neatly clustered, and idyllically self-contained in the case of the cantonment-like townships, these schemes did not yet challenge neo-colonial assumptions about social space and classification which were inherent in their programming – as Doshi's later and more radical work on low-cost



housing and urban design would do. Nevertheless, they made some of the boldest moves yet in postcolonial Indian architecture towards a contemporary architectural typology that could embrace the distinctive materiality and construction methods of the immediate regions in which they were built, and anticipate the inevitable growth and changes to which they would be subjected over time. At the same time, they experimented with patterns and permutations of deeper, more universal notions of community form and structure. These concerns reflected Doshi's continuing dialogue with the parallel work of European colleagues associated with the 'Team 10' collective, with whom he had first connected in the early 1950s and was actively re-engaged with in this period. The sustained investment in design thinking and questioning about the problem of designing and building effective social communities within large-scale housing developments, which was enabled by these successive township commissions, also compelled the practice to examine and learn from local cultural patterns and practices. These would inflect the increasingly distinctive modernist work of Doshi and his collaborators and, by now, the independent agency in the human settlements field of some of his first students as well, with an appreciably deeper level of cultural insight and specificity than many of their peers.²³

While contemporary Indian architects in the 1970s had thus begun to explore local needs and differences more discerningly and sympathetically than they had previously, it is important to note that this partial inward turning was not yet perceived by most as a critique of modernism itself. Outside the subcontinent, in European and American architectural practice and debates of the 1970s, and the 'international' architectural



B. V. Doshi and Vastu Shilpa, Electronics Corporation of India Ltd township, Hyderabad, 1968–71.

discourse in which intrinsic Eurocentric biases and priorities had yet to be seriously questioned, a mood of scepticism if not discontent with regard to the modernist project and its universalist claims was increasingly widespread. Indeed, some of the many digressive tendencies and critical counterpoints to orthodox modernist design principles and form that had begun to arise as early as the 1950s had become outright critiques or even self-consciously independent traditions by the 1970s. Exposure to these debates and alternatives inevitably informed the work and ideals of some of the many overseas-trained architects who returned home to India over the next decade to establish practices and, in some cases, to teach. Unlike their colleagues in the West, however, most practitioners in India had never been sufficiently free from the material imperatives and technological constraints of building in the context of underdevelopment to engage earnestly in the distant and seemingly esoteric debates of the postmodern avant-garde. In the socio-political context of India in the 1970s, concerns about the loss of meaning in

architecture, or the autonomy of the discipline as an art form, were indulgent at best, and simply irrelevant to most.

Increasingly engaged, as Indian architects were, in a conscious struggle to build the physical infrastructure of a modern society with limited technical means, it was the opposite paradigm-saving tendencies of 'late modernism' manifested internationally in the techno-rationalist architecture of the 1970s that were more directly and emphatically influential in India. This was most clearly perceivable in the conspicuous structural exhibitionism that characterized the work of several of the leading Indian modernists in this period.

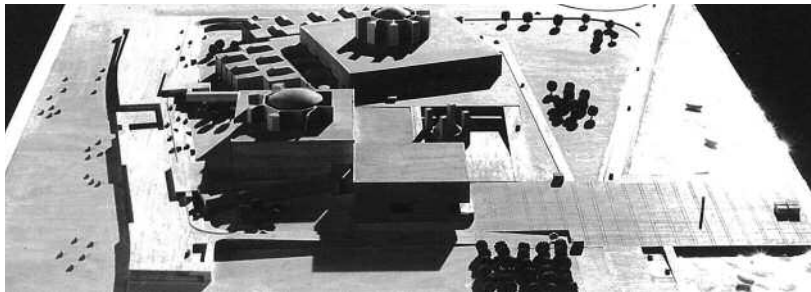
Doshi and Correa had developed effective professional relationships with various structural consultants in their earlier projects, but their respective collaborations, beginning in the late 1960s, with the Delhi-based structural engineer Mahendra Raj would be altogether more adventurous. Raj's drive and quiet confidence to innovate inspired an equal creative partnership with his architectural colleagues that went well beyond mere technical consultation. This encouraged both Doshi and Correa, and a long list of other collaborators, to experiment with considerably more challenging structural principles and forms in their next few years of practice. The walls of Doshi's Tagore Memorial Hall, completed in 1967, were 17-metre-high folded plates of cast *in-situ* reinforced concrete, while the even more solid Premabhai Hall (1972) experimented with the sculptural mass and profiles of long-span beams and stark naked cast *in-situ* concrete bearing walls. These features would also characterize Doshi's unbuilt scheme of the same year for the invited international competition for the new National Assembly of Kuwait.

Correa also experimented with the sculptural power of exposed concrete structures in the boldly rhythmic design of his early Ahmedabad Cricket Stands (1959–66), the Our Lady of Salvation church in Bombay (1974–7), with its crown of monumental conical light shafts in thin-shell concrete, and in his various built and projected tower projects of the 1970s. Other architects who contributed to this nascent tendency towards more rhetorical expressions of structure included Morad Chowdhury, now a permanent design partner in Kanvinde's practice, who employed a boldly profiled post-tensioned box-grid space frame for the roof system of the Hindon River plant of the Delhi Cloth Mills (DCM) of 1970. Kanvinde's and Chowdhury's efforts here, as in the Mehsana dairy complex, to bring architectural panache and character to the realm of industrial structures was a distinct but complementary counterpoint to the finer-boned structural detailing of shells and vaults that Joseph Stein's New Delhi practice had begun contributing to India's industrial landscape in the previous decade.

B. V. Doshi, Premabhai
Hall, Ahmedabad,
1956-72, foyer
interior.



B. V. Doshi,
competition entry
for Kuwait National
Assembly, 1971-2,
model.



Morad Chowdhury,
Kanvinde, Rai &
Chowdhury, Delhi
Cloth Mills, Ghaziabad,
1969–70.



Raj Rewal and Kuldip Singh were two other Delhi-based architects whose mutual fascination with structural engineering found expression in a new generation of bold new urban architecture and infrastructure that they began to design and build in the 1970s. Singh's competition-winning high-rise office tower complex for the New Delhi Municipal Corporation (NDMC, 1973–83) and National Cooperative Development Corporation (NCDC) offices in Delhi (1978–80), also designed in collaboration with Mahendra Raj, allowed him to declare and at least begin to realize the mega-structural ambitions intimated in his earlier low-rise housing complexes for the DDA at a truly 'mega' scale.

While the engineering prowess of Mahendra Raj was the common denominator behind many of these structurally precocious buildings realized on the Bombay–Ahmedabad–Delhi axis in this period, another influential structural engineer was G. S. Ramaswamy, who helped popularize the use of funicular shell roofs in other parts of the country. Ramaswamy had published an important book on the subject in 1968, as the founder of the Structural Engineering Research Centre (SERC) at the University of Roorkee. Significantly, this was the institution that had emerged after Independence from the original Thomason College of Engineering at Roorkee, where much of the most innovative technical research and expertise of the original PWD system had also been concentrated during the colonial era. But Ramaswamy's decision to shift the headquarters of the SERC to Madras in 1974 helped extend and diffuse such technical know-how to contemporary architectural work in southern India as well, and during the 1970s some of the most established firms in



Joseph A. Stein & Associates, Escorts Industrial Campus, Faridabad, Uttar Pradesh, 1960–88, concrete shells for storage facilities and interior view, 1965.



Madras produced ambitious new structures quite unprecedented in their earlier work.²⁴ These included the funicular shell roofs of the new Cricket Stadium that Bennett Pithavadian and Partners designed for Madras in this period, and S. L. Chitale's saddle-shaped parabolic shell structure for the Sri Venkateswara University Auditorium in Tirupati.

Kuldip Singh, National Cooperative Development Corporation building, New Delhi, 1978–80.

High-rise commercial construction in Bombay remained unremarkable structurally in this period. But the relatively smaller-scale Nehru Centre complex designed and built in Worli in the late 1970s by the engineer-turned-architect I. M. Kadri was a quite striking exception. This





S. L. Chitale,
Auditorium at
Sri Venkateswara
University, Tirupati,
Andhra Pradesh,
1970–75, hyperbolic
paraboloid roof under
construction.

was a highly original, even futuristic concept for a small convention facility that was literally pried up from the ground plane in a manner that anticipated later and better-known schemes of the late 1990s by radical Dutch firms such as OMA, MVRDV and Meccanoo. Erupting through the sloping turf-covered podium, the now seemingly diminutive complex (by the measure of surrounding developments today) was crowned by a cylindrical office tower with its diagonally braced structure strongly expressed on the exterior.

But what emerged to be the most iconic example of this tendency towards structural expressionism in the architecture of the 1970s were the permanent exhibition halls designed in 1972 by Raj Rewal, in collaboration with Mahendra Raj, for Pragati Maidan. This was the official national fairground in New Delhi where major international trade shows and cultural exhibitions were mounted regularly, and the bold cluster of voluminous exhibition halls that Rewal and his engineer conceived – monumental both in scale and their pyramidal allusions – clearly emulated the architecture and technophilia of recent World's Fairs at Osaka

and Montreal with their structural system of octahedral lattice space frames. The principal function of the exhibition complex, apart from sheltering the exhibited contents, was to represent the modernity and productivity of the country in the most progressive light. But the predictable symbolism and derivative style were somewhat inadvertently given renewed meaning and vitality, as later commentators were to observe, by the sheer monumentality of the way in which these structures were ultimately built.²⁵ Contrary to the logic of the structural system employed, which called for lightweight, factory-produced modular assemblies in steel or aluminium, the structures were necessarily constructed by the labour-intensive technique of cast *in-situ* concrete, which remained the considerably cheaper option in the still only semi-industrialized state of the Indian building industry. Successfully accomplished on time and within budget through this improvised and effectively 'handmade' approach, this was an example of what has more recently been celebrated among the entrepreneurial elite of Indian business today as the heuristic principle of *jugaad* or 'frugal engineering'.²⁶ The visceral structure that resulted was a monument to the marriage of ambition and pragmatism that emphasized the prevailing drive for a self-reliant mode

Iftikhar M. Kadri,
Nehru Centre,
Bombay, completed
1982.

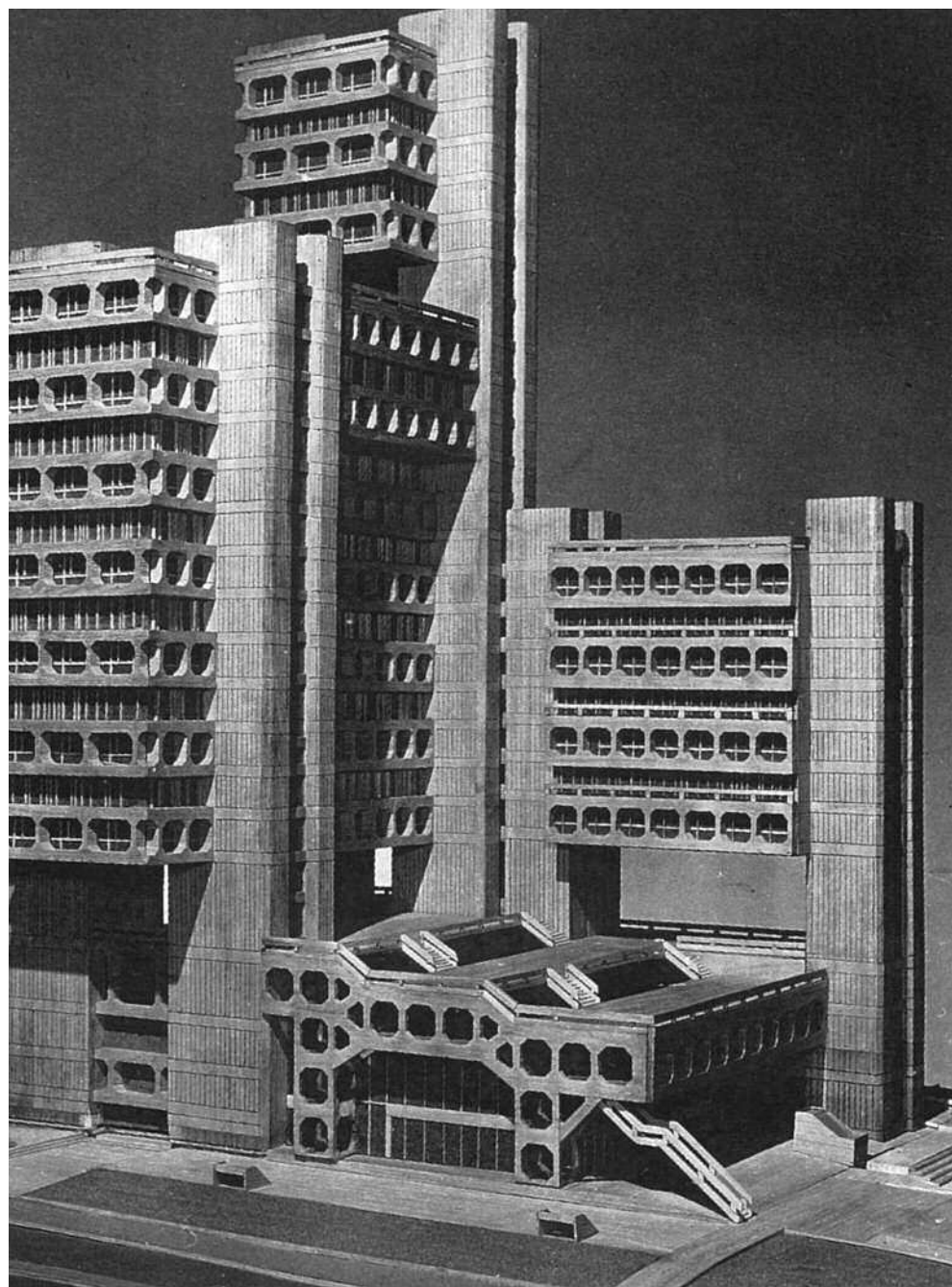




above and right:
Raj Rewal, permanent
exhibition structures
at Pragati Maidan,
New Delhi, 1971–2,
under construction
in late 1972, and
interior view.

opposite: Raj Rewal,
proposal for State
Trading Corporation
building, New Delhi,
c. 1976, model
showing striated
external finish.





of technological progress and social development in the context of the socialist nationalism of the early 1970s. Like Kanvinde and Chowdhury's Mehsana Dairy, it brokered a compromise between the old Nehruvian idealism of universal modernist ambition and the weight of a socio-economic reality in which an abundance of labour, however poor in technical skills and resources, had to be redressed. But there is no reason to believe that Rewal and Raj's solution was therefore any less triumphant an expression of the, as yet, unquestioned modernist ideals that underpinned it. Indeed, such works of this period by increasingly prominent and influential architects like Rewal and Correa betrayed little evidence of, or empathy for, the postmodern tendencies for which they would be even more widely regarded and praised within the next decade.

Architecture and the 'Emergency'

In spite of the euphoric start to the decade, all was not well politically with Indira's India. And it was indeed Indira's India, for as the Congress Party president D. K. Barooah noted, by 1974 'Indira [was] India and India [was] Indira'. The populist appeal of Indira Gandhi's promised 'revolution' had cut through traditional caste and religious boundaries and had paved the path for the fulfilment of those democratic and socialist ideals envisioned by Nehru. The very decision to split the Congress Party, however, which had allowed Indira Gandhi this opportunity, had also lost her new reformist faction the implementation arm that it required to realize its particular nationalist vision. Having alienated the upper-caste elite and disturbed the traditional social hierarchies, which were an integral part of the organizational structure of the Nehru government, Indira Gandhi's government was forced to rely on unorthodox political practices. In order to keep the regions on side, for instance, state political machinery was bypassed to install individuals loyal to Indira Gandhi in important positions within the state legislative bodies. This wilful and manipulative strategy gave the central government an increasingly autocratic character and there was much resentment not only from the opposition but also from a growing segment of the public at large. In Ahmedabad in 1974, consequently, a student agitation had developed into a state-wide uprising as various student groups united as a single body, the Nav Nirman Yuvak Samiti (Youth for Re-Invention), to demand the dissolution of the current Congress-led government in the Gujarat Legislative Assembly. With the support of the opposition parties, this student agitation gained greater political momentum, inspiring similar movements in other parts of the country, including the state of Bihar, where it attracted the support of the veteran Gandhian freedom fighter Jai Prakash

Narayan. Representing this pattern of regional protest as the groundswell of a 'revolution from below' against the centrist practices of Indira Gandhi's government, Narayan issued a call for Sampurna Kranti (Total Revolution) and, under his guidance, soon transformed it into what became known nationwide as the JP Movement directed at the removal of all 'central government machinery' and, consequently, the resignation of the prime minister herself.²⁷

Following a decision by the Allahabad court in June 1975 in which Indira Gandhi was found guilty of an earlier 'election malpractice', the demand for her removal became even more intense. Distressed by the attacks of the JP Movement in particular, which was intent on demonizing her personally, Gandhi sought the support of her son, Sanjay Gandhi, and it was on his advice that she decided to declare a state of national emergency. Officially implemented on 26 June 1975, this was a fateful decision that was to enhance further, ostensibly temporarily, her already unbridled executive powers while positioning Sanjay Gandhi as her main adjutant to 'set things right'.²⁸

The next two 'emergency' years were, therefore, to be marked by the draconian policies of Indira's eldest son, whose relationship of unquestioned trust with the prime minister gave him unparalleled technocratic powers. Sanjay Gandhi was an unelected appointee, and his authority and convictions were also unchecked by the wisdom of political experience and accountability, further exacerbating the impression of an arrogant and wilful central government insensitive to the voting public. Policies intended to better the social condition of a rapidly urbanizing nation, but which were often directed only at the symptoms rather than the causes of social inequity, only led to further alienation of the people. While reforms in the nascent public health system, for instance, focused on a highly controversial programme of compulsory sterilization for parents with more than two children, the police and public works authorities were directed to eradicate the 'menace' of beggars and the 'unauthorized' hutments of the homeless on city streets. In the burgeoning national capital itself, a particularly salient instance of this anomalous political situation and its impact in the realm of architecture and urbanism was the decision in 1976 to bulldoze an expansive informal settlement comprising close to 7 acres of illicit buildings in a section near Turkman Gate in Old Delhi, forcibly relocating the inhabitants across the river.²⁹

Draconian restrictions imposed upon the national press did not allow for these technocratic assaults to be scrutinized or debated openly within the country, but damning comparisons between the social-engineering efforts of the emergency regime and National Socialist Germany under Hitler's dictatorship did not escape the international press.³⁰

In the context of modern India's socialist nationalist struggle between development and statehood, the emergency was the final blow that would cleave the centre from the regions, seemingly for good. Much of this centre/region division, then, was also reflected in the attitude of India's architectural community. On one hand were those practitioners of modernism who were encouraged by the central government's commitment to socialist ideals, and found in these practices a method that would save the nation from the impending destruction induced by the political demands of the revolutionaries. Within this faction were architects like Charles Correa, who questioned 'the moral advantage of not acting' in justifying his decision to work from within the government technocracy finally to initiate and begin realizing the environmental and social benefits of the New Bombay scheme.

This approach to social development was also evident in the profession's continuing commitment to the principles of the 'sites and services' housing development strategy, consistent as this was with the socialist vision of the centre, but without necessarily assessing the actual performance of the theory in practice. Despite noble intentions, many such projects were compromised in reality by the dearth of resources and the sheer expanse of typical schemes, which too often led to standardized layouts and designs that left little scope or inspiration for the development of common communal spaces or the need to express individual identity. Failure to understand and thereby appreciate the complexity of the communal structures inherent in traditional settlements, and even in established urban slums, had also resulted in the simplistic ghetto-like segregation of housing developments based on bureaucratic definitions of 'income-group' levels. This artificial separation of the service sector from those being served made the projects ineffectual. Furthermore, in spite of subsidization and low production costs, such housing still remained out of the reach of many of the actual homeless population. For those marginally better off, however, who were at least able to afford some basic materials and tools with which to build, the difference in quality of life attained was not necessarily better, after all, than a squatter settlement closer to their sources of livelihood and other urban amenities.

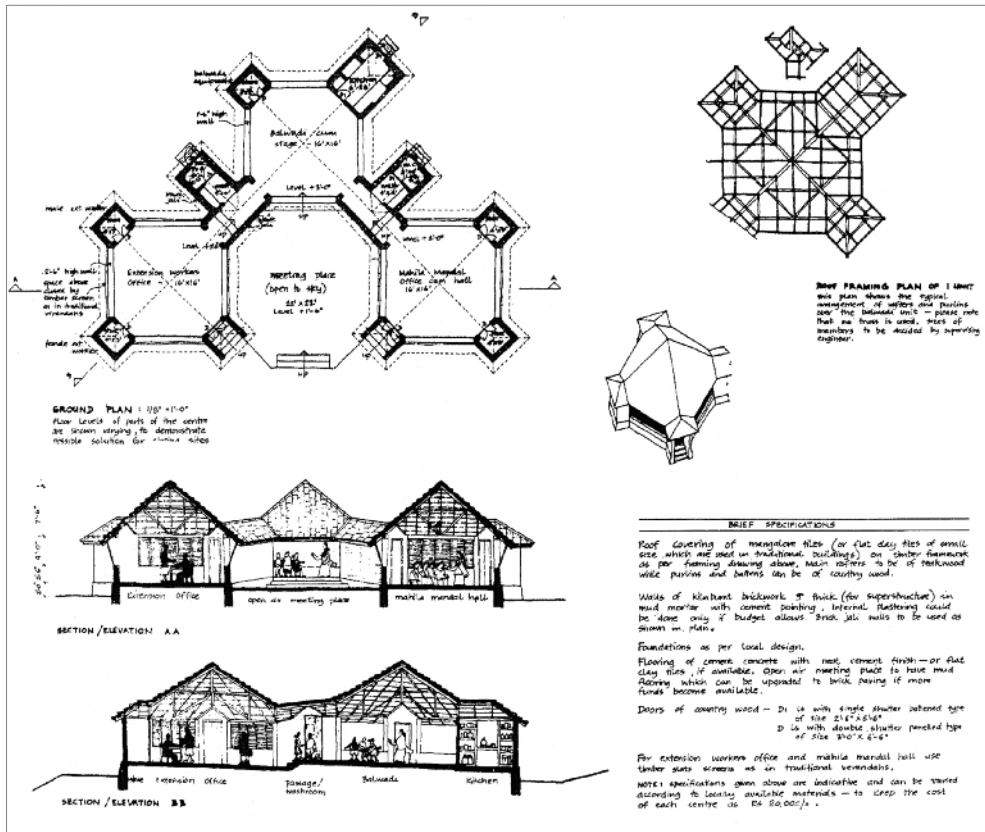
This lamentable situation had not escaped the attention of thinking members of the architectural profession, however, and some of its younger members were sufficiently motivated to write a joint memorandum to the Prime Minister in August 1975, shortly after the declaration of the state of emergency, in which they articulated a list of main concerns:

We feel that a trend has been firmly established where the housing authorities have taken upon themselves so much work

that no dialogue is being held with the slum dweller, no individual attention is being paid to the variety of communities, no attention is being paid to general environmental factors and no attention is being paid to the creative aspects of making human habitations enjoyable places to live.³¹

M. N. Ashish Ganju,
extract from report
on 'Construction of
Low-cost Community
Centres' for UNICEF,
c. 1978.

Despite the breadth and forcefulness of their discontent with existing design thinking and procurement practices in the housing field, the signatories – H. D. Chhaya, Satish Dabral, Vinod Gupta, Vasant Kamath, Romesh Khosla, Narendra Dengle and M. N. Ashish Ganju – did not associate these issues with the ongoing political crisis. Indeed, they, like Correa, took a practical view that this was a time for action to address endemic problems that this extraordinary state of executive and technocratic authority could facilitate, focused as the government was on social development as the first priority.



This emerging collective of younger architects engaged in low-cost housing had become active recently in public debate, and most had also participated in a topical symposium the previous year on the state of the profession, organized by another activist group with which some were more directly involved called Greha (House). Their approach to rethinking low-cost housing sought ways to understand better the 'collective spirit' inherent in traditional dwellings. Embracing contemporary international debates in housing theory and policy, they emphasized the need for a holistic analysis of the house as the core component of more complex systems of dwelling and community. They also recognized the need to understand better the social cohesion and dwelling practices that were, evidently, sustained in the *bastees* (slums, or 'informal settlements' in the politically correct housing terminology of the 1970s) that the urban homeless spontaneously built for themselves. These could even be models, they maintained, to achieve a more varied distribution of user/dweller groups in the design of new housing developments. Observing, furthermore, how spatial hierarchies fostered communal life in traditional and informal settlements, they argued for an inversion of the professional expert's assumed role in the design of housing, where, as architect-facilitators, their responsibility would reside in future in designing the unbuilt spaces of community in such a way as to stimulate the physical making and development of the built spaces by the inhabitants themselves.

This vision called for fundamental changes in the very role and working methods of the profession, from prescriptive designers to patient stewards of a dialogical process of user-centred development. If this was the strategic aim of these activist-professionals in the long term, however, their appeal to the prime minister was more tactical and timely. In the central government's twenty-point programme for implementing its new economic policy the activists saw an immediate opportunity to begin pursuing their vision more dynamically. Clearly outlined were the government's intentions to leverage aggressively new housing possibilities for the economically weaker sections of society through the 'socialisation of urban and urbanisable land, ceiling on ownership and possession of vacant land and on plinth areas of new dwelling units'.³² Seeing such game-changing measures as a potentially significant opportunity for the now formally recognized profession, and the newest generation of architects within it, to take a more responsible lead in the housing area, they asked only that the government enable this better by limiting the competing authority of the engineer-dominated housing boards. Further recommendations for a national committee to develop a nationwide framework for planning, on which architects, sociologists and social workers would have equal seats with the existing housing authorities,

underscored a vision of professional power and prerogatives that extended seemingly unproblematically from the socialist policies of the emergency government.

While the centre seemed to have the support of important architectural practitioners from both the established and the emerging younger generations, there were others who remained wary of the unnegotiable force and potentially unchecked arrogance of the expert means that were being deployed in some sectors to address Indira Gandhi's centrist agenda. In sympathy with many of the general public, these dissenting architects were hopeful, alternatively, of addressing the needs of India's homeless from the bottom up, and with a more regionally grounded sense of fit, and diversity of solutions.

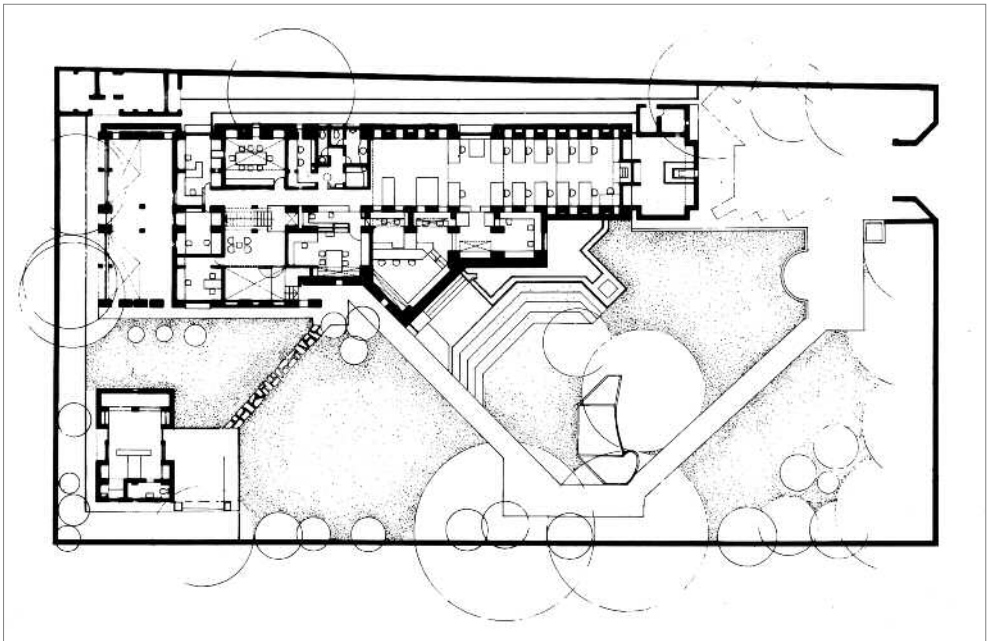
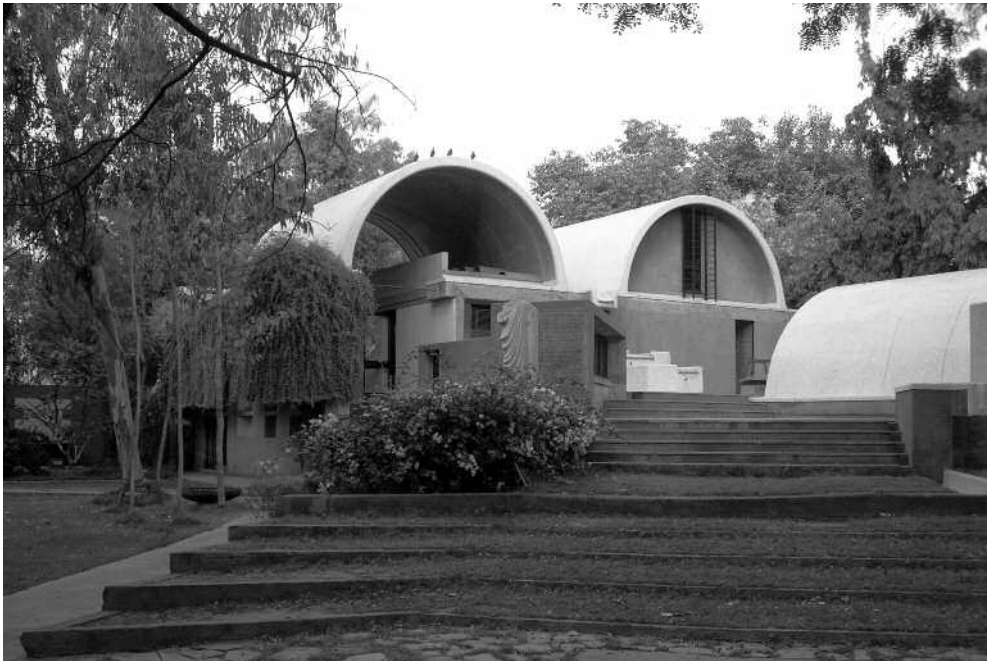
Extensive engagement in issues of settlement and community design over the previous decade had given B. V. Doshi and his Ahmedabad-based practice considerable insight into the particular problems and opportunities of producing successful housing in localities they knew well. Their experience had shown that the manner of national standards and solutions towards which the socialist policies and programmes of the centre were now geared were not always practicable. In the context of Gujarat's regional politics, and Doshi's personal connections with the revolutionary factions within the political stream represented by Congress (o) and Jan Sangh that had been instrumental in instigating the state of emergency in the first place, Doshi's work exhibited an increasingly apparent tendency, from the mid-1970s onwards, to explore regional ideas. While the principles and strategies by which he and his practice were approaching the design of housing had much in common with those that were now being espoused by other aspiring activists in the field, such as Greha, the work produced reflected a more defined and distinctive stance of resistance to the rote rationalist solutions that were by now synonymous with the initiatives of the centre.

In this same eventful period in India's internal affairs, Doshi's international connections presented an opportunity to develop and express his increasingly critical views and insights in a much broader policy framework. Together with Moshe Safdie and the Iranian architect Nader Ardalan, Doshi was a co-author of the Habitat Bill of Rights submitted by the Government of Iran to the seminal Vancouver conference of the UN in 1976, in which the authors emphasized the importance of 'human scale and modest, vernacular architecture as opposed to the often abstract quality of much modern design, particularly as expressed in government-built housing'.³³ It is relevant to note this particular network of international practitioners, and the exchange with pre-Revolutionary Iran, since these would have a more significant impact in the near future.

In 1976 Doshi also began work on a new purpose-built studio and office for his growing practice in Ahmedabad. While primarily intended to accommodate the design and research activities of the atelier, given the political climate of Gujarat, Doshi also envisioned it as a safe haven for political discussions among friends. As the idea took form, the centre, appropriately named Sangath (Congregation), expanded in scope and came to serve as a forum for participation of various design professionals and other important members of the public who wished to debate the nature of the built environment in relation to the socio-political context.³⁴ In launching this project, which brought architectural debate to the centre of the regional political discourse, Doshi found a new pathway to those ideas of civic community that would further serve as the basis for the establishment in 1978 of the Vastu-Shilpa Foundation for Studies and Research in Environmental Design, a not-for-profit research cell attached to the architectural practice. Sangath was not only important in facilitating a community debate on art and politics, but also a significant step in Doshi's personal development, enabling him to bring the regional sensibilities acquired through the township projects into his personal design language.

Theoretically, Doshi's work had always attempted a marriage of the modern with the Indian traditional. But early attempts such as the Institute of Indology had been limited to the exploration of abstract notions of traditional form, which betrayed his rationalist training. With the design of Sangath, Doshi was finally able to realize a design process that acknowledged the social and cultural embeddedness of architectural practice and was thus truly responsive to the local traditional context. His quest for combining judicious use of resources with the need for personal expression and identity in the township projects had helped him formulate a deeper understanding for the situated nature of the process of production. He thus came to recognize that the use of building components that allowed for the engagement of multiple skills further fed into the local ritual and social activities binding the design project to the identity of the community. Accordingly, the design and construction of the building posited and explored a number of potential innovations in local building technique that would later be recognized as highly sustainable in principle, including the use of recycled ceramic tiles in the heat-reflecting, watertight mosaic that was applied to the exterior of the distinctive vaults. And the vaults themselves were made of a self-insulating hybrid of concrete and hollow-tile arches constructed of local handmade pottery. The project was a fitting culmination to the long search for a more assured and centred sense of place and time within the unfolding experience of Indian modernity that Doshi had been leading his architectural colleagues

B. V. Doshi, Sangath
office and studio,
Ahmedabad, 1979–81,
image and plan.



and students to undertake with him over the previous two decades of practice and experiment. As one of those fellow travellers was later to observe, even the vault form had ultimately outgrown its initial application in Doshi's early institutional housing projects, as a repetitive series reflecting an earnestly rational planning logic, into the more complex axial arrangements of Sangath that were sensitive to place.³⁵

By the time that the construction of Sangath had actually begun, in 1979, the project had been in design gestation for several years. Over this period it had also been greatly influenced by the continuing political changes that were unfolding in Gujarat, where some of the most significant popular and political opposition to Indira Gandhi's government had been based throughout the state of emergency. Meanwhile, the political crisis itself had officially come to an end as political parties across the nation united to find an alternative to Indira Gandhi's centrist policies. From this perspective, the ideals of regionalism embodied in the Sangath project can be seen as more than just a formal and tectonic resolution of an individual architect's struggle to balance the competing calls of modernity and tradition. It was a proposition of a possible answer, in the terms of architecture and environmental design more broadly speaking, to a society struggling to find appropriate alternative models in the light of recently shaken notions of socialism and nation.

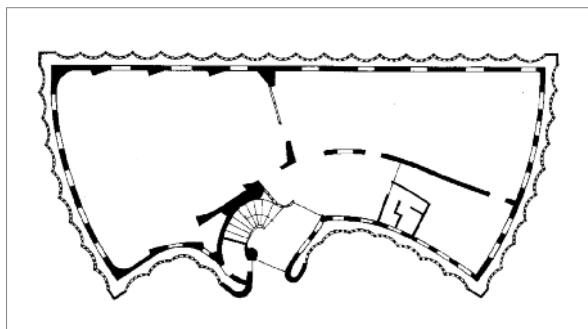
When the state of emergency came to an end in 1977, it was with a surprise announcement by Indira Gandhi to hold democratic elections and gauge public opinion on the values of her government's achievements over the last couple of years. Opposition leaders who had been languishing in prison were released just months before the election and were not expected to be able to raise any serious threat to Indira's re-election. Ultimately, however, the various opposition parties did manage to organize themselves in a sufficiently united coalition to win a majority of support nationwide and depose the prime minister and her government. J. P. Narayan had been individually instrumental in galvanizing and bringing together all the various factions under a single banner, but what is of greater significance is the rhetoric that the opposition had employed to garner popular support against Indira Gandhi's centrist regime.

Since the student revolution of 1974 had begun in the city that was the home of Mahatma Gandhi for almost twenty years, the references to Gandhian principles of non-violence were already present in the development of the Nav Nirman Yuvak Samiti. This Gandhian rhetoric was further reinforced through the involvement of the Congress (o) leader Morarji Desai in Gujarat, whose announcement of a 'fast unto death' in support of the students' demand invoked memories of Mahatma Gandhi's *satyagraha* ('truth insistence'), and by J. P. Narayan in Bihar, whose work

for the Sarvodaya ('Universal Uplift') movement and more intensely for the Bhoodan ('Land Gift') movement had kept alive the Gandhian dream for a decentralized party-less development of India. The involvement of both Gujarat and Bihar revealed the scale of discontent across the nation, since the two states respectively formed the richest and the poorest state in the country. More importantly, it demonstrated the appeal of the Gandhian ideology within the general populace, or, at least, the saintly figure of the Mahatma (Gandhi) himself, whose birth centenary in 1969 had recently prompted much moral stocktaking among policy makers and the greater public alike about the uncertain progress of the nation in its first two decades of development. More specifically, those aspects of Gandhian thought that displayed the Ruskinian 'fear of the machine' and rejected the model of industrial progress as a social 'evil' took on greater appeal, since for the common man the extreme position adopted by Indira Gandhi's technocratic government regime seemed to justify many such claims about the pernicious nature of Western progress. For veteran Gandhians like J. P. Narayan, then, the simultaneous agitation across the nation heralded the 'revolution from below' that he had awaited since Gandhi's death some 30 years earlier.

Architecture from Below

Among the many varieties of social focus and activism in which India's architectural community was engaged in the 1970s, the work of the émigré British architect Laurie Baker began to come to professional and wider public recognition and respect in this period as a model of a consciously Gandhian approach to the architect's vocation in contemporary India. Baker was another of the small number of expatriate architects of the generation that had come to early maturity through the experience of the Second World War, including Otto Koenigsberger and Joseph Stein, who found a compelling attraction and sense of vocation to work and live in postcolonial India. Baker had initially been engaged in medical missionary work in the mountainous north of India, where the Gandhian ideals of 'self-help' and 'village economy' had been his guide to practical solutions to the building requirements of a remote field hospital. He had subsequently continued his experiments with low-cost building techniques and principles in tropical South India, where he and his physician wife had moved in the early 1960s to establish a medical practice in her home town of Trivandrum. The initial South Indian work had been confined to small-scale residential projects, but by the 1970s larger institutional commissions enabled greater public exposure to the already clearly marked character and qualities of Baker's low-cost approach. The first



such institutional commission was the Loyola Graduate Women's Hostel in Trivandrum, begun in 1970, which was soon followed by the distinctively unconventional campus of porous brick structures – almost fairy-castle-like with their sculptural whimsy and petite scale, and hand-made patina – that Baker began to design and build for the Centre for Development Studies, also in Trivandrum, beginning in 1971. Both these projects were completed in the mid-1970s, along with a number of similarly constructed churches and ancillary buildings, and came to serve as exemplars for the new return to Gandhian ideals that was sweeping the country. Baker's hands-on method, much like Gandhi's himself, required a lifestyle commitment by both the designer builder and the user residents of his houses and institutional buildings that was calculated to make an appreciable impact on the values and practices of the small numbers of elite but potentially influential clients with whom he engaged. While Baker's working methods, let alone his regionally specific style, could hardly be expected to be emulated widely as a viable alternative to conventional 'paper-based' modes of professional practice, the distinctive brick idiom of his South Indian work nevertheless prompted the architectural community to acknowledge the importance of engaging local building materials through traditional manual methods of construction.³⁶

While India was struggling with the challenge of reviving Gandhian ideas from within, this phenomenon coincided with developments in the Western world where the oil crisis of the mid-1970s had prompted the need for a more sustainable alternative for development. This concern for the frailty of the environment in an exceedingly machine-dominated world had led to a desire for rethinking the existing model of mechanization, and resulted in the rise of a demand for 'appropriate technology' (AT). The rapid rise of AT as a movement among many socially aware younger architects worldwide in this moment was inspired in part by the timely publication of a little book called *Small is Beautiful: Economics as if People Mattered* in 1973. This was the same year that the artificially orchestrated oil shortage by the Organization of the Petroleum Exporting Countries (OPEC) had prompted the first widespread acknowledgement of possible global limits to growth. In this unlikely bestseller, the economist E. F. Schumacher put forward hopeful arguments for an alternative to conventional economic development models that could be more sensitive to the energy needs of a world that was rapidly depleting its resources. Accordingly, the ecological impact of urban and industrial development and associated technologies was becoming a growing concern. Increasingly apparent at the same time was the need to rethink the design of the built environment and the role of lifestyle in everyday dwelling, to be more sensitive to the consumption of energy and other limited resources.

Laurie Baker, Centre for Development Studies, Trivandrum, 1972–4.

Centre for Development Studies, Trivandrum, plan of computer centre.

In India, the AT movement was to have the most significant impact on product design relevant to rural development. Here, internationally connected institutions such as the IITs and the NID were involved in the development of systems for renewable and sustainable energy production.³⁷ The direct impact of AT on architectural design and production was relatively limited by comparison. Principles of passive climatic control and energy conservation were already inherent in many of India's traditional building practices and materials. Criticism of the modern technologies that had begun to eclipse such traditional methods in India, by the criteria of AT, however, had also begun to raise the status of the latter as models of 'appropriate'/'alternative' technologies in their own right. As Schumacher claimed himself, much of his thoughts had been influenced by the model of development suggested by Mahatma Gandhi.³⁸ While AT might have thereby laid claim to the same point of origin, however, the way it was implemented differed significantly. In making the Gandhian model more practicable, AT projects viewed the problems of development through an economic lens rather than one of morality, which was central to the Gandhian conception. This process of 'contamination', as one author calls it, had put the movement on the same path to modernization that Gandhi had worked passionately to oppose, and which seemed impossible to divert from, let alone retrace. As the head of the India AT organization wrote in the first newsletter of 1977: 'disaster may follow if multinational organisations take up to produce small machines in stainless steel packages for the rural areas of developing countries. This would be the end of appropriate technology.'³⁹ Recounting a visit to the National Institute of Design, another keen observer of the social situation, novelist and travel writer V. S. Naipaul, commented on the paradoxical compulsion to design new technology as a symbol of progress, while desiring to return to a romantic idea of the simplicity of a pre-industrial age. Regarding attempts by NID students to develop new AT tools for rural India, he quipped: 'But it is an imported idea, an imported institution, and it has been imported whole, just like that.'⁴⁰

Yet another attempt to challenge the cultural patterns of modernism, which was bringing Indians together with Westerners through the media of experimental architecture and settlement planning in the 1970s, was the ongoing development of Auroville. Founded in 1968, this alternative satellite settlement of the Aurobindo Ashram in nearby Pondicherry was being developed in its early years primarily by European devotees who were seeking to realize the vision for the experimental community of Sri Aurobindo's spiritual heir, a French disciple known as 'The Mother.' The countercultural attractions of the alternative community had also

encouraged a number of interesting building experiments with non-conventional materials and structural systems. These had found form by the late 1970s in an eclectic array of self-built houses and small community buildings, many of which were also vernacular-inspired, reflecting ideas that had been popularized in the 1960s by the publication of Bernard Rudofsky's *Architecture without Architects*.

Beyond the novelty of these experiments, the emerging settlement at Auroville was significant in the sense that it provided a testing ground for a novel contemporary community-based model of development, close to the Gandhian idea of 'village economy', but which went well beyond a mere economic basis for cohesion. The sanctuary at the centre of the settlement was meant to embody a place that could serve as a model of human unity. Co-designed by The Mother with the French architect and devotee Roger Anger, the Matrimandir (Mother Temple) was to be the spiritual heart of Auroville. Shaped as a slightly ovoid sphere that would be clad in due course with a panoply of gold-plated stainless-steel discs, the structural bones of the futuristic orb had been constructed, by the late 1970s, in a manner similar to Rewal's exhibition structures, as a cast *in-situ* concrete geodesic space frame in which triangular ferrocement panels would eventually be fixed to hold the golden discs in place. Combining

Roger Anger,
Matrimandir,
Auroville, Tamil Nadu,
1970–2008, concrete
superstructure under
construction in 1985.





Uttam Jain,
University of Jodhpur,
Jodhpur, Rajasthan,
1970–85.

the utopian geodesics of Buckminster Fuller, on the one hand, with the spiritual mysticism accorded to the spherical shape of Brahman's primeval egg, on the other, the radically unconventional temple was an architectural synthesis of the various threads of progressive and alternative thinking about society and materialism that this New Age spiritual community sought to unite and even to transcend.

By the later 1970s the range of alternatives to mainstream modernist architectural and planning thought that had been posited in India was growing ever larger. But, limited in impact as the work of both Baker and the Aurovillians was by their relative isolation and idiosyncrasies, notions of responsiveness to local materials and vernacular technologies were more effectively popularized in this period by those architects who continued to incorporate these in a still recognizably modernist dialect of contemporary architectural language. Of particular note was the work of Uttam Jain on a series of buildings designed for the University of Jodhpur beginning in 1969. Jain had a somewhat unusual training for Indian architects of his generation, having studied first at IIT Kharagpur and then in Argentina as a postgraduate before returning to set up his own practice in Bombay in the early 1960s. While some of his contemporary modernist architects were busy making grand socialist utopian statements through their object-oriented approach to architecture, Jain was more sensitive than many were yet prepared to be to the implications of building methods on the form and character of a building, and to the use of local materials and craft traditions. His Jodhpur university was, thus, built in local sandstone using local craftsmen. But while Jain's claim to critical note was his response to local tradition, it was rightly observed by a later critic that the strength of the project lay more in 'innovation than in integration'.⁴¹ The stone was recognizably local, both in texture and in the typical modules that Rajput stoneworkers had standardized traditionally, but Jain's treatment was novel in his design of boldly contrasting planes that set up sharp shadows. Whether or not this was a merely pragmatic decision, it would help develop into a vocabulary that Jain would continue to use in his later career, and which would become highly influential in the 1980s for a number of new-generation architects.

These seemingly disconnected arguments for an alternative model of development found a common ideal in the Gandhian rhetoric put forward by the opposition coalition during its brief but highly effective campaign in 1977. The Gandhian model of development, however, that the new coalition government had promised to deliver was far from becoming a reality. The 'revolution from below', which had at least started to shape up after the events of 1974, had been thwarted by a political discourse that became obsessed with the individual figure of Indira Gandhi. By the time of the 1977 elections a majority of the people were united in their retaliation against the incumbent regime, but the opposition had no real mandate at the grass-roots level to pursue its alternative vision of development.

To understand the peculiar nature of this revolution in India a useful parallel can be traced in the case of Iran. Similarities between Indira

Gandhi's regime and that of the Shah in Iran had already been noted in a newspaper article published in the *Tribune* in March 1976. Although the author did little more than bring out the similarities of the emergency state to the 'one party Bonapartist' regime of the Shah in Iran, the comparison has more to offer in retrospect. The Shah's vision for Iran in the early 1970s has been described as an 'Anglophilic' view to progress or, in other terms, the bid for the Westernization of the developing world. The corresponding erosion of cultural structures and fear of the intellectual imperialism of the West, which became the basis of the discontent of the Iranian public, were not substantially different in nature from the arguments of the Indian public. Indeed, critical outrage at the authoritarian nature of the Shah's rule and the corruption within his ranks was echoed in contemporary criticism of Indira Gandhi's emergency politics.

What makes this comparison particularly relevant is the political situation that followed the overthrow of the existing governments in both nations. Similar to the Iranian Revolution's obsession with the removal of the Shah from power, the revolution in India was resolutely focused on deposing Indira Gandhi and never really considered the question of the alternative in great detail. Therefore, while Ayatollah Khomeini led the rise of the Islamist Republic in Iran, Indian politics too fell into a pattern of right-wing religious growth. In India the late release of the opposition leaders from imprisonment had left them little time to garner proper support based on grass-roots developments, at least as the Gandhian alternative they were offering would have required. As a result J. P. Narayan led a coalition of all opposition parties called the Janata Dal into power based on the popular anti-Indira sentiment. This coalition was mostly composed of right-wing parties such as Jan Sangh, and Rashtriya Swayamsevak Sangh (RSS), which allowed, consequently, for a marginal though significant claim to win by the Hindu right. The Janata Dal government itself barely managed to stay in office for two years, but the impact that this victory would have on the rise of the Hindu right in Indian politics was significant. Indeed, the architectural works of the 1980s, to be discussed in the next chapter, would be deeply affected by this transformation of the political scene.

This coming together of certain international interests and the local political experience seemed to put India in the same space of theoretical discourse that architects in the West had reached through completely different socio-political experiences. It may even be argued that the histories of the 'West' and the 'East' had become so entangled in the ideological exchange of the post-war era that it was hard to determine which was leading which. As a result, by the beginning of the 1980s the problems of regionalism, with which India was struggling through its own political

transformation, became identifiable with the wider, internationally expressed desire for greater regional responsiveness and sensitivity in architecture, and a new era of architectural thinking was established.



chapter six

Identity and Difference: The Cultural Turn, 1980s–1990s

In 1984 the Royal Institute of British Architects (RIBA) celebrated its 150th anniversary. For the professional institution that had overseen the establishment of the modern architectural profession in India and closely vetted its training, as it had elsewhere throughout the former British colonial empire, it was of no small significance that it decided to award its most prestigious honour in this significant anniversary year to a colonial, Charles Correa. For many observers Correa's Gold Medal marked a watershed in the history of modern architecture in India. Finally, an Indian architect had emerged from the shadows of previous colonial and modernist masters to receive due recognition in the international spotlight. Indeed, 1984 was a significant year in many ways. Outside the subcontinent, the RIBA honour reflected other recent developments with broad implications for the future of modern architecture in 'the West' as well.

The annual award ceremony of the RIBA in 1984 was equally notable, and more widely remembered, for the infamous keynote speech in which the institute's royal patron, Prince Charles, likened a particular modern architectural scheme to a 'monstrous carbuncle on the face of an old friend'.¹ In the view of the Prince of Wales, if not the silent majority for whom he presumed to speak, a chasm had emerged by the 1980s between the aesthetic tastes of the architectural elite and the public at large. While the outspoken royal's articulation of this divide would be the cause for much ruffling of feathers within the British professional establishment, the unprecedented decision it had taken at this major milestone in its history to award the institute's Gold Medal to an architect from the 'third world' was a calculated acknowledgement of another previously unspoken divide – between the challenges faced by architects practising in the post-industrial West and those of their colleagues in other still modernizing contexts. The award praised Correa's eloquent advocacy for the agency of architectural professionals as problem solvers in the struggle for decent human shelter in a rapidly urbanizing world, as well as his own distinctive, climatically and culturally tempered vein of modernist architecture. In so doing it offered a defence of the profession's increasingly beleaguered

Charles Correa,
Jawahar Kala Kendra,
Jaipur, Rajasthan,
1986–92, detail
of mural.

modernist convictions as well as an approving nod at the recurring notion of regionalism within the modernist tradition, among the many other formalist and theoretical propositions that were competing for attention in the European and American architectural discourse of the early 1980s.² Relative to what many of the British professional establishment perceived as the degenerative tendencies of postmodernism burgeoning in the affluent West, the increasingly overt regionalist tendencies that were beginning to be explored in the modern architectures of the developing world by the 1980s seemed to offer a compelling counterpoint. From that perspective, it was perceived that the creativity of these 'third-world architects' resided in their pragmatic responses to the limited resources and still substantially traditional technologies of economically developing contexts. Correa's work was lauded as an exemplary case in point, indicating a possible middle path between rationalism and inspiration from local culture which, as Prince Charles's remarks had emphasized, was no less acutely needed in the 'first world' as it was in the 'third'.³ In this sense, the RIBA event was truly a crossing of paths between the increasingly outmoded notions of the 'East' and the 'West'.

While this new Western interest in Indian modernism was legitimized by what contemporary commentators championed as the latter's continuing rationalist tradition, it is apparent in retrospect that these developments in India reflected a variety of other concerns with identity that were emerging in parallel within India and its wider 'developing' region through the early 1980s.

Already by the late 1970s conviction had been growing across this wider developing region, from Africa and the Middle East to Southeast Asia, about the need to counter what was perceived as the mindless imitation of the architectural forms and textures of modern Western cities. Indeed, the question of losing local identity through uncritical borrowings from the West had pricked the consciences of many architects across the region since the earliest years of postcolonial independence. But general aspiration for social and technological development to close the yawning gaps in the economic and political power of the developing nations relative to their post-industrial counterparts had initially prevailed, privileging the universalist values inherent in dominant received theories and models of modernization over what had hereto been dismissed as merely backward-looking nostalgia for the retention of ostensibly obsolete, culturally different forms and values.

Moral leadership and substantive support to sanction a different way of thinking about 'difference' in the modernizing world came, at this time, from a somewhat unexpected quarter in the persona and institutional agency of the fabulously wealthy Westernized leader of a traditional

religious sect with significant ties to the Indian subcontinent. Launched in 1977, the Aga Khan Award for Architecture (AKAA) was prominent among a suite of generously funded development programmes spearheaded by Prince Karim Aga Khan IV, the hereditary Imam of the worldwide Nizari Ismaili community of Shia Muslims, which were somewhat exceptional at the time for targeting cultural development, education and social welfare as their strategic priorities over mere material and technical progress.⁴ Anticipating and even prompting the expanded purview of other prestigious architectural awards such as the RIBA Gold Medal in the next decade, the generous but rigorously peer-reviewed international awards programme of the AKAA was unprecedented in its global and substantially non-Western focus. It had a specific yet inclusive aim to identify architectural concepts that successfully addressed the needs and aspirations of contemporary Islamic societies. The disciplinary scope of this new awards programme was unusually broad as well, considering architecture in the most inclusive of terms from the design of religious and institutional buildings, to community development projects and social housing, as well as area conservation and heritage restoration. Concurrently established at MIT and Harvard, the patron's own alma mater, the Aga Khan Program for Islamic Architecture was also to sponsor some of the brightest of the next generation of developing world architects, including many Indian architectural graduates, to pursue further study and scholarship in richly resourced institutions overseas but with a non-Western architectural and urban design focus.

Initiatives such as these gave new critical credence to notions of regionally and culturally specific approaches to modernity, and the following years witnessed a conspicuous rise in discussion among influential architects, critics and clients alike about a necessary balancing of the transforming forces of modernity with an increasingly recognized need for some degree of social continuity and cohesion as well – conditions that were seemingly inherent in traditional cultures of building, if not reproducible through them. Arguments for and against such views prompted a number of timely and topical international seminars devoted to the discussion of regionalism in the contemporary architecture and urbanism of the developing world, and a growing tide of new internationally distributed English-language publications.⁵

Of course, many of the putatively novel aims and ideals that informed this emerging cultural and regionalist turn in the discourse of the late 1970s had long been a cause for some architects. In the Middle East, for instance, radical experiments with neo-regionalist approaches, and ensuing debates, had been ongoing for decades already. While the influential Greek internationalist architect and planner Constantinos Doxiadis was

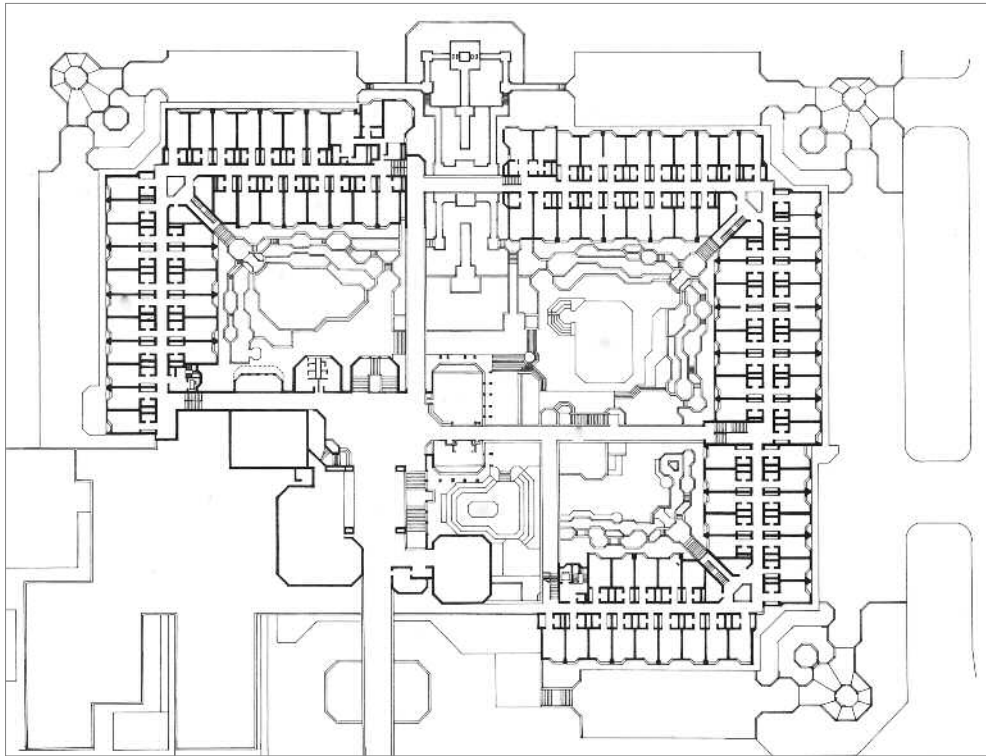
actively developing and deploying his rationalist social-scientific theory of human settlements, *Ekistics*, in projects across the region in the 1950s and '60s, it is notable that the work of the Doxiadis firm on the planning and architecture of various new towns and cities in Iraq in that period was, even then, conspicuously attentive to the idea of rationalizing and redeploying culture-specific elements and patterns within more universal standards. A crucial consultant working within Doxiadis's organization at the time was the Egyptian architect Hassan Fathy, who later returned home to continue his exploration of traditional settlement pattern and form from an alternative bottom-up perspective through experiments with vernacular architecture and relevant 'appropriate' building technologies.⁶ Fathy's genealogy of thought and practice, among others, had already clearly argued the case for reincorporating regional identity into the practices of modern architecture and planning. This work, however, was widely published for the first time only in the early 1970s.⁷ The establishment of the Aga Khan Award for Architecture and associated programmes and publications provided powerful new institutional support on a pan-regional basis to legitimize such isolated and disparate efforts as Fathy's. This served to articulate the case for a viable contemporary traditionalism and connect these with the work of other sympathetic voices as an increasingly influential new constituency within late modern architectural discourse.

As this shift and eventual rupture in the architectural thinking of the developing world was beginning to unfold in the 1970s, architectural developments in India remained largely under the dominance of prevailing socialist politics and the universalist ideals and modernist forms to which most architects and their clients were still unquestioningly attached. From time to time, as has been seen, the work of some of the most original architects in postcolonial India offered intriguing glimpses of possible regionalist turns that their own increasingly personal takes on modernism could make. To sway the larger majority of the modern profession from the received paths of rote functionalist and Brutalist responses to the question of appropriate architectural design, however, would require a more direct encounter with the emerging international discourse on regionalism. Equally important would be the rising influence over the next decade of a growing and diversifying private sector in India in which individual, corporate and non-governmental institutional clients were to return to the fore as the more open and eager patrons for formally engaging architectural ideas about culture, place and identity. Among other avenues, moreover, the external agency of the Aga Khan awards programme enabled Indian and other South Asian architects to appreciate how the neo-regionalist propensities of contemporary architecture in the

subcontinent were being reflected in the awards process, and attracting the praise of international peers and critics. Significantly, the Aga Khan Program for Islamic Architecture was also strategic in engaging two of the most influential modernists in the South Asian region, Charles Correa and Muzharul Islam of Bangladesh, to become members of the programme's official steering committee from early on, with significant impact on the reception of its agenda and ideals among their peers.

While there would actually be relatively few Indian projects cited for the Aga Khan Award in the years to come, it is significant that one of the most substantial and influential of these was among the ten buildings worldwide that were selected in the very first cycle of the triennial awards, announced in 1980. The recently completed Mughal Sheraton Hotel in Agra was a large international resort hotel that had been inserted with unusual deference and sensitivity into the immediate environs of the Taj Mahal, which, for many, was the finest and most iconic of India's Islamic architectural treasures. With its award-winning status, this development was rapidly to become a paradigm-shifting new precedent for the architectural profession in India, the impact of which would soon be felt not only across the growing hotel and tourism industry but in new corporate and institutional architecture as well.

Designed by a consortium of Canadian and Indian architects and landscape architects, the Mughal Sheraton was an unusual hybrid of local and global ideas. Under the category of 'continuation with history', the building was described in its Aga Khan Award citation as expressive of 'the culture and rich architectural tradition of the region with an entirely contemporary vocabulary of forms derived from functional needs. Its design and construction make full use of the available regional materials and technology, the abundant labour force and traditional crafts, for a creativity which is free from so-called Muslim architectural symbols'.⁸ The 'contemporary vocabulary of forms' actually reflected the novel planning and massing of an innovative rooftop garden hotel that the Canadian partners had designed in Montreal a decade earlier. The Brutalist concrete rendering of the earlier hotel, however – which, ironically, had been critically praised for its regionalist affinity with the raw Precambrian geology of the eastern Canadian wilderness – was deftly transposed into exposed brick at Agra. Here the affinity of the collaborating Indian architects, Ajoy Choudhury and Ranjit Sabikhi, for the local building materials and technology of the Agra region resulted in particularly refined brickwork that exploited the delicate proportions and bonding patterns of the underlying brick construction of the Taj and other nearby monuments, such as the abandoned Mughal palace-city of Fatehpur Sikri. The more iconic marble and red sandstone identified with these historic



ARCOP Design Group,
Mughal Hotel, Agra,
1974-7, plan.

Mughal Hotel, Agra,
view of Mughal-style
landscape garden.





Distinctive Mughal-style sandstone architecture at Fatehpur Sikri, near Agra.

buildings were incorporated in the formal geometry and paving of the internal landscaped courtyards designed by Ravindra Bhan.⁹ Soon this notion of functionalist forms and traditional material, especially red sandstone – ‘the building block of Fatehpur Sikri’ – became a new standard to aspire to, influencing the work of many leading modernists in India, including Charles Correa.

Correa’s landmark office building in New Delhi for the Life Insurance Corporation (LIC), the design for which was started in 1975, would have undoubtedly followed in the line of his exposed concrete high-rise projects of the same period, such as the Kanchanjunga Apartments in Bombay and the Visvesvaraya Tower in Bangalore, had it been built directly. By the time it was finally completed in 1986, however, more than a decade later, the building as it was ultimately constructed reflected the relative sea change in thinking about architectural identity and place that had occurred in the interim. Following from the example of the Mughal Sheraton and the work of other emerging innovators in the vein of a modern Indian regionalism such as Uttam Jain, questions of local and regional context were becoming important.¹⁰ Conveniently, however, for architects steeped in the modernist tradition, for whom rationality in the specification of construction materials and technique remained



Sandstone-clad Life Insurance Corporation (Charles Correa) and State Trading Corporation (Raj Rewal) buildings, New Delhi, as shot by the influential architectural photographer Madhan Mehta, from nearby Jantar Mantar, late 1980s.

paramount, it could be argued that the exquisite traditional building stones of India were still a more appropriate choice than concrete from the standpoints of both technical performance and actual cost in a labour-intensive economy. When the LIC project was completed it had, therefore, been clad in sandstone. Far from an isolated instance, however, the shift to sandstone cladding and still cheaper stone grit-finished renders as tactics for marrying enduring modernist geometries with burgeoning regionalist tastes and aesthetics was soon to become a new norm for many, and the defining approach in the mature work of some, such as the leading Delhi-based architect in this period, Raj Rewal.

Working at the geographical centre of the former Mughal Empire and the principal patron of the original red sandstone building tradition of North India, Rewal had made some experiments with stone cladding previously, and had always been drawn to the earthy red of brick in his residential work. Until then, however, his large-scale work in exposed concrete had only emulated the monumental architectural legacy of the past indirectly, through the sheer scale and geometric order of those mega-structural projects. But the design development and construction of the State Trading Corporation (STC) building, through the course of the 1980s, was to be a turning point. Rewal had been commissioned to produce the building after winning an initial design competition back in 1976. The original design, with its expressed Vierendeel trusses, had clear affinities with the megastructural visions that had been propagated by the Japanese Metabolists, among others, a decade earlier. The completed building was expected, therefore, to have had a raw finish of roughly striated concrete, consistent with the fashion of the day.¹¹ By the time that it was finally completed in 1989, however, it too reflected the changed ethos of the 1980s, and had acquired a thick sandstone cladding in keeping

MIMAR
ARCHITECTURE
IN DEVELOPMENT

A circular architectural drawing, possibly a floor plan or a cross-section of a dome, rendered in white lines on a dark background. The drawing shows a complex, radial structure with many small, repeating elements, suggesting a large-scale architectural project.

MIMAR | 1981



This seemingly abrupt transformation of attitude by the mid-1980s was not only apparent in the buildings that emerged, but was also clearly articulated in the associated architectural discourse. Correa's critique in the early 1970s of Fatehpur Sikri as part of a 'series of monumental, cruel and wasteful happenings,' for instance, was magically reversed in a lecture he delivered to the Royal Society of Arts in London in 1983, in which he now described the famous Mughal palace complex, among other traditional buildings of India, as an exemplary alternative to the Western tradition of the post-war 'box'.¹² Indeed, such a revised view was yet another outcome of the architectural initiatives that Correa himself had assisted the Aga Khan Program to pursue since the late 1970s, including the launching of the influential journal *Mimar*.

279 Identity and Difference

of both graphic design and editorial ambition in significantly expanding the readership for the issues it addressed. Soon this forum would not only enable 'third world' architecture to reach a wider readership of interested 'Northerners', but it also encouraged architects to start publishing and debating their work through other new outlets and forums of discourse that were beginning to emerge regionally and locally as well. In 1985, for instance, *Mimar* began to publish a parallel series of monographs entitled 'Architects of the Third World', the first of which focused, significantly, on Charles Correa. This book appeared almost simultaneously with the first issues of *Architecture + Design (A+D)*, a new Delhi-based architectural magazine with a glossy design and layout that aspired to the international presentation standards of *Mimar*, far exceeding the production values of any previous architecture or design periodicals published in India.

Regionalism and Culture in the Political Arena

While this regionalist shift in the focus of work and debate within the architectural field between the late 1970s and the mid-1980s clearly had an international dimension, issues of regional identity developing along different ethnic and religious lines were also becoming an integral part of the internal political evolution of India in the same period. In 1977, when the Janata Party came to power, it was loosely based on the unifying power of J. P. Narayan and his desire to consolidate the spirit of the nation in a Gandhian vision of democracy. The coalition of poor and backward classes on the one hand and the religiously inclined elite on the other, however, was an odd mix that had been brokered hurriedly and opportunistically at the end of the emergency era. Not surprisingly, it had not proved to be very stable, and with J. P. Narayan's death in 1979 the coalition had soon begun to fall apart. Led by the Bharatiya Jana Sangh (BJS, or Jan Sangh) – the political arm of the hard-line Hindu social service organization, Rashtriya Swayamsevak Sangh (RSS) – the religious and fiscally conservative right-wing factions within the coalition presented an increasingly firm ideological opposition to the ideas of secularism and the controversial policy of 'reservation' in particular. Championed by the other relevant minor parties, this was a form of legally mandated positive discrimination in schooling and hiring that aimed to advance the welfare of India's traditionally disadvantaged underclasses, but which also raised the already daunting challenge, in a context of underdevelopment and overpopulation, for ordinary middle-class Indians to gain access to good education and jobs themselves.¹³ This deepening division within the Janata coalition led to its demise, with the return to power of Indira Gandhi in the elections of 1980. Arguments, however, for a more Hindu-centric

set of national priorities that would reflect the will of the democratic majority better had begun to gain traction. From their power bases outside the political centre, the conservative parties were to resume the process of regional fragmentation and reaggregation through which the right was to influence and ultimately reclaim the national political stage by the end of the 1980s.

The return of Indira Gandhi in 1980 saw her maintain her forceful consolidation of power in the centre and continue with her previous agenda of centralized and socialist politics in order to gain a pro-poor image. In fact, her basic strategy for winning the election had been a singular focus on the need to stabilize the centre. This attitude led to a further fragmentation within the regions, where the now mobilized rural and economically backward classes took to ethnic and caste-based politics in their demand for regional autonomy. Soon after the election, the BJS had been succeeded by the Bhartiya Janta Party (BJP) in a bid to integrate the lower castes and tribals towards a Hindutva ideology, and while the explicit role of the BJP in Indian politics would not be cast until the late 1980s, the spirit of regional dissent was active in the background with a proliferation of smaller state-based and even local parties in this period.¹⁴ By the beginning of 1983 Indira Gandhi's government was already facing strong opposition in Assam and Punjab, among other areas, and an unprecedented rise in communal violence. In Assam conflict between indigenous Assamese and hegemonic Bengali interests and identities had been provoked by the influx of Bengali refugees and immigrants from Bangladesh in the aftermath of the war of 1971. In Punjab there was mounting religious friction between Sikhs and Hindus. Exacerbated by the much earlier partition of Punjab and Haryana on linguistic grounds, tension in Punjab was shortly to take a dramatic and dangerous secessionist turn that was to culminate in 1984 in Indira Gandhi's assassination.

Other places in India were also facing religious conflicts between Hindus and Muslims fuelled by the rise in activity of hard-line cultural organizations such as the RSS, Vishwa Hindu Parishad (VHP) and Arya Samaj on one side and Jamaat-e-Islami and Majlis-e-Ittehadul Muslimeen on the other. Indira Gandhi's struggle to deal with these religious identity issues had a specific impact on Indian politics and associated cultural production, which will be discussed in detail later, but even outside religious concerns there was regionalist dissent against her government. In Andhra Pradesh the rise of Telugu Pride allowed N. T. Rama Rao's Telugu Desam Party (TDP) to defeat Congress in assembly elections, while in Karnataka the Congress faced defeat at the hands of the Janata-led front. While such communal dissent had been a part of Indian politics for a

long time, by the early 1980s these dissenting factions were engaging in debate to form a united opposition to the Congress, and the basis of coalition was 'regional autonomy'. Also in 1983 these various different parties came together in four national conclaves to discuss their common interests and to raise a call 'for greater autonomy for the states' as a likely theme for opposition unity. Thus, in politics as in architectural discourse – albeit in substantively different forms – regionalism had become a dominant ideal in the India of the 1980s.

The two separate debates on regionalism highlighted here – the cultural debate on regional craft practices encompassing the greater region of both South Asia and the Middle East, and the internal socio-political and religious dissention between the various regions of India – prompted the government of India to formulate a unique programme of cultural diplomacy, the so-called Festivals of India. This would aim to cultivate an international image for India as a stable national identity composed of a mosaic of distinctive yet cohesive regional subcultures, languages and ethnicities. Simultaneously, it was anticipated that the programme would build national pride that could mitigate the dissent and factionalism within.

The idea of the festivals had germinated in 1978, when, in the wake of the state of emergency, the British High Commissioner to India, Sir John Thompson, had proposed the notion of a festival to reinvigorate India's image in the United Kingdom.¹⁵ The first Festival of India was launched accordingly in London, in 1982, with the inauguration by Indira Gandhi attracting the desired media attention and positive publicity. But instrumental in the organization of the event was the appointed chair of the festival in Britain, Pupul Jayakar.¹⁶ Jayakar had been involved with the National Planning Committee since the time of Jawaharlal Nehru and had been Indira Gandhi's cultural adviser ever since she took on the Congress leadership in 1966. While criticisms of Pupul Jayakar's arrogance abound, her contributions in bringing the regional crafts to the fore was indisputable and it was with her help that Indira Gandhi sought to formulate her own diplomatic programme regarding the 'discovery' of India, just like her father had done in his time.¹⁷ Consequently, a series of cultural programmes and institutions were developed that aimed to consolidate the various crafts of India into one single identity of 'Indianness'.

This idea of developing a stronger national identity through cultural diplomacy would take a more significant place in Indira Gandhi's administration in 1984. The year began with the establishment of the Indian National Trust for Art and Cultural Heritage (INTACH), an organization aimed at raising awareness and thereby affecting the conservation of India's natural and cultural heritage.¹⁸ Spearheaded by Pupul Jayakar,

the organization was yet another outcome of the cultural diplomacy programme. The establishment of INTACH would also be a vehicle to bring into the public eye Indira Gandhi's second son, Rajiv – a commercial airline pilot by profession, who had stayed well clear of politics before the untimely accidental death in 1980 of his well-known brother, Sanjay. Rajiv was appointed as the trust's first chair, circumstantially underpinning the conspicuous cultural turn that would inflect his future policies as the national leader that he was quite unexpectedly propelled to become, by other dramatic events that were shortly to unfold.

Even as Charles Correa was being applauded at the RIBA awards, Indira Gandhi was preparing to dispatch the orders for Operation Bluestar, the heavy-handed military intervention through which the political centre had resolved to quell the secessionist bid of Sikh rebels in Punjab, and for which she would presently pay the ultimate price with her own assassination on 31 October 1984.¹⁹ With Indira's sudden demise it was almost an inevitability among the Congress party faithful that the next generation of the Nehru-Gandhi lineage would be advanced to fill the leadership void. Assuming the role of acting prime minister, Rajiv Gandhi was to resume and pursue the programme of global cultural diplomacy and outreach that his mother had initiated, with a particular sense of conviction. In architecture, as in other associated fields of design and craft, it was the rhetoric of 'Indianness' exacted by the development of this national programme that would become a primary driver behind developments in India in the later 1980s.

In December 1984 Rajiv Gandhi had his prime-ministerial mandate confirmed, winning the eighth general election for the Congress Party by an unprecedented margin. The assassination of his mother, and the further brutal communal violence that this had temporarily unleashed – in this case against the Sikh minority – had been somehow cathartic for the nation. Rising again from the conflagration, the Nehru-Gandhi family name had succeeded once more to offer a new direction, this time towards what promised to be the new freedom of a progressively less regulated economic landscape that might put aside, for a time, the destructive forces of religion and caste that had come to dominate and fragment Indian politics again in recent years. Mitigating some of the more divisive implications of his mother's populist focus on the welfare of the poor, Rajiv Gandhi's new deal aimed to be at least as attentive to the aspirations of the rapidly growing urban middle classes and an emerging new elite of worldly, technologically savvy professionals and business entrepreneurs, with whom the former airline pilot was most familiar.

Upon her return as prime minister in 1980, Indira Gandhi had resumed her political strategy of developing a pro-poor socialist economy

consolidated at the centre. As a result of this the early 1980s had seen the implementation of an economic policy where the larger industries and financial institutions were limited to the public sector, thereby restricting the growth of the private sector. This socialist pattern of development had always received criticism from the political opposition, and considering the rapid growth now being experienced in Southeast Asia and even China, due to those countries shifting to market-driven modernization models, there was a demand for greater liberalization. When Rajiv Gandhi came to power, the next Five-Year Plan for the period 1985–90 was already due, and the budget for the year 1985–6 put forward by his finance minister, V. P. Singh, pointed to the direction that this new government would propose. The budget did not mention ‘socialism’ even once and allowed for greater private participation in high-technology industries along with tax concessions for corporations and the urban upper-middle class.

On the international scene at this time, socialist orthodoxies were also coming into question. With the rise of Mikhail Gorbachev as the General Secretary of the Communist Party of the Soviet Union, in March 1985, the need to rethink the Soviet economy had been identified as his immediate priority. Two months later Gorbachev had already heralded widespread reforms, and by February 1986 the Perestroika process had been initiated. In similar but simpler terms, Rajiv Gandhi’s government was spearheading the political and economic changes in the region that would subsequently contribute to the thawing of the geopolitical Cold War that had indirectly influenced the development of postcolonial nations worldwide. Although this significant change in direction prompted bitter accusations from many socialists and traditionalists within his party’s own ranks that Rajiv’s government was pro-rich, it clearly established an intent that an era of greater liberalization and power for the urban elite was in the making.

Even during his mother’s reign, as the inaugural INTACH chair, Rajiv Gandhi had already started taking an active part in the programme for the conservation and development of the architectural heritage. His further interest in the cause of the urban elite, possibly due to the conditions of his own upbringing and education, led him to direct significant new attention to the problems of urbanization facing the country. The year 1985 also saw the establishment, therefore, of the National Commission on Urbanisation. With Charles Correa as its chair, this ambitious new central body made design and planning recommendations for no fewer than 329 towns and cities, commenting on various aspects of infrastructural investment, taxation policies and political accountability. This national initiative had overarching powers over the planning work undertaken by

the various metropolitan authorities, most of which had already exceeded their twenty-year planning cycles set out in the early 1960s, and desperately needed to be reviewed.

In Delhi the National Capital Region Planning Board was instituted in 1985 to update the master plan until the year 2001.²⁰ The board allowed for the requisite coordination with the state governments of Haryana, Uttar Pradesh and Rajasthan to offer a consolidated development plan that tied the development of Delhi more thoroughly with that of the neighbouring satellite towns of Faridabad, Gurgaon, NOIDA (New Okhla Industrial Development Authority), Greater NOIDA and Ghaziabad. What is of particular interest here is that the presence of INTACH and Rajiv Gandhi's personal interest in the cause of heritage conservation ensured that the plan showed a rare sensitivity to the implications of new development in the Old Delhi region. Not only were the important monuments to be conserved, but also 'architectural style, skyline and street picture' were to be treated with equal sensitivity in the rebuilding and renovation of the buildings of the old walled city.²¹

This change in attitude from the infrastructure-driven development patterns of the 1970s also saw the Back Bay reclamation in Bombay come to an end with greater focus now accorded to the development of the New Bombay townships of Vashi, Belapur and Kalamboli. The debate in Bombay was furthered by a proliferation of privately funded not-for-profit organizations such as the Urban Design Research Institute (UDRI), the Heritage Society Mumbai (1988) and the Mumbai Conservation Group (1990), which reflected the renewed confidence and sense of civic and cultural pride that the urban elite were experiencing under Rajiv Gandhi's administration.²²

Another longer-term factor that had contributed to this cultural turn in pride and focus since the 1970s was a significant rise in international tourism to India. In a bid to attract much-needed foreign exchange, the Indian Government had sought to develop tourism as a means to attract this international flow of capital and further encouraged private investment. Both regional identity and cultural heritage had thus become valuable economic commodities, of which a plethora of new hotels among other commercial and cultural complexes designed during the early 1980s were to take full advantage. Exemplary were Correa's Cidade de Goa (1982), Satish Grover's Oberoi Hotel in Bhubaneswar, Orissa (1983), and the Oberoi Udaivilas Hotel in Udaipur (1985-) by Zhaveri and Patel, which made colourful and explicit references to local culture and architectural heritage. In Correa's case such references were even overtly theatrical, reminiscent of the propensity for witty pastiche characteristic of the contemporary work of American postmodernists

such as Charles Moore and Michael Graves. But these projects nevertheless celebrated the belated economic benefit that tourism was now bringing to under-industrialized regions such as Orissa, Goa and Rajasthan.

While on the one hand the architectural commodification of culture allowed the tourism industry to enable these backward regions to gain a place in the national economy, on the other it also helped to attract further investment in the conservation of surviving architectural heritage. Departing from long-standing conservation biases upheld since the colonial era by the Archaeological Survey of India, the growing appreciation of architectural heritage as an economic commodity was also beginning to allow for the surviving colonial edifices of the British Empire to be accorded new recognition and value as part of the diverse and rich cultural history of India.²³

In leading the country down this new path of liberalization with a view to the conservation of architectural and urban heritage as some of India's most substantive, iconic and value-adding cultural assets, Rajiv Gandhi also started to reinvigorate the cultural diplomacy programme developed during his mother's reign. While Pupul Jayakar continued to play a pivotal role in developing the new rhetoric of Indianness, the programme got a significant boost with the investment of the urban elite. Fuelled by this new monetary support, as well as the political need to strengthen the image of the nation, a new series of festivals and international workshops were launched in 1985, rebooting Indira Gandhi's earlier initiative, to promote the living cultural heritage of India to the world. The largest of these endeavours was the eighteen-month touring Festival of India, which was unveiled in the United States during the month of May and was intended to take the arts and crafts of India all over America. The festival was a clear reflection of Pupul Jayakar's intent to develop an image of India based on both heritage crafts and modern advancements in science and technology, described by one author as 'contemporaneously exotic'. This event was accompanied by a smaller festival, Aditi, which displayed Indian folk culture and was coordinated by yet another important figure in the Indian design scene, Rajeev Sethi. Sethi eventually went on to develop a larger project, Golden Eye, launched in the United States in 1986, which invited eleven world-renowned designers to develop products with the traditional materials and skills still available in India. While some of these other experimental exhibitions attracted controversy for their commercial focus on taking 'culture to the marketplace',²⁴ the major contribution of the programme of festivals abroad still remained in projecting the image of national cohesion and solidarity, both within and outside India. Towards this end, the more relevant events included the festival of 1985, Mela, in France, as

well as the Festival of India in the Soviet Union, Sweden and Switzerland launched in 1987.

Having received lavish financial support from private investors as well as government, the scope and extent of the festivals were so substantial that one publication declared 1985 the 'Year of India.' Such positive media coverage overseas further nurtured a sense of national solidarity back home. Rajiv Gandhi's personal presence at the launch of the festivals in the United States, France and the Soviet Union ensured that the still relatively new and only recently widely accessible mass medium of Doordarshan, India's national television network, was exploited fully. Reports of India's rapturous reception in the field of global culture were thereby received and witnessed alongside the international triumphs of Indian cricketers.²⁵

In terms of architecture, the festivals in France and the Soviet Union were of particular significance. For the festival in France a special exhibition on architecture was planned under the guidance of Delhi's School of Planning and Architecture. This exhibition offered both a historical survey of architectural precedents in India, curated by the architect Raj Rewal,²⁶ and an insight into contemporary architectural practice in the country, curated by Ram Sharma and Malay Chatterjee. A major catalogue resulting from the exhibition, published by Electa Moniteur in Paris, thereby became the first book-length publication to offer an overview of contemporary 'Architecture in India.' This significant first step was followed by a second exhibition on architecture, this time for the festival in the USSR. Entitled *Vistara*, this was developed by a Bombay-based team led solely by Charles Correa. While both shows drew, inevitably, on many of the same historical and contemporary icons of Indian architecture, Correa's was a more tightly coordinated and curated attempt to resume and develop arguments about 'Indianness' in the spatial practices and architectural art of the subcontinent that he had posited as early as the seminal Architectural Seminar of 1959 in his first contributions to the national discourse within the profession in India. Neither of these impressive exhibitions, however, nor the sumptuously illustrated publications that recorded them, were expressly conceived as statements of excellence in the architectural production of the moment, or as forums for rigorous critical discussion about the state and future priorities of the discipline in modern India.

But the development of these historical overviews for popular consumption abroad did allow for two significant realizations for the architects involved. First, the rhetoric of a unique regional and national identity meant that the curators had to take into account an architectural heritage that extended well beyond the socialist concerns of the 1970s and was strongly rooted in the region's history. Second, developed as a component

of a more generic festival representing India, these exhibitions had to represent architecture as part of a complex network of Indian crafts traditions. These two separate realizations led to the special condition where the rationalities unique to the discipline were intermixed with folklore, craft and mythology and, for many Indian architects who had imbibed the norms and assumptions of twentieth-century architectural modernism unquestioningly in their earlier careers, a new understanding of their vocation and art was emerging.

Describing his experiences of developing the *Vistara* exhibition in an article for *Mimar* the following year, Correa wrote explicitly of his introduction to the mythic values of India's past, from the Vedic 'analog of Cosmos' to the more recent 'myths of Rationality, Science, Progress'. 'To understand architecture as history,' he claimed, 'is to search out the mythic beliefs which have generated the built form around us.' Developing *Vistara* had been a struggle that had led him to the realization that 'these patterns have been generated by an age-old deep structure of more explicit myths: the *yantra*, the *mandala*, the *charbagh*'.²⁷ Indeed, the entire *Mimar* issue was dedicated to the 'spiritual in architecture'. A rising trend in rationalizing religious symbolism was evident.

This tendency to mix myth and rationality to develop a unique rhetoric of a 'contemporaneously exotic' Indianness was also evident in the conceptualization of the IGNCA international architectural competition. Soon after Indira Gandhi's assassination, Rajiv Gandhi and other members of the Congress had determined to create a major new institution in her memory, and the Indira Gandhi National Centre for the Arts (IGNCA) was established accordingly. On the occasion of Indira Gandhi's next birthday, in November 1985, Rajiv Gandhi officially launched the new institution and simultaneously announced a major international architectural competition to build a corresponding campus for the IGNCA in the very heart of Lutyens's New Delhi.²⁸

The launch of the competition was already a massive event for architecture in India since it was the first international competition since Independence, and with 684 registered competitors from across the globe, the largest yet to be staged in a non-Western context. This unprecedented success in attracting such a large field was partially due to the participation of several leading international architects of the moment – Fumihiko Maki, James Stirling and Geoffrey Bawa – as members of the competition jury. Serving alongside these international figures were senior Indian counterparts – Achyut Kanvinde, Habib Rahman and B. V. Doshi – who were also thereby conveniently removed from the competition, opening the field to serious wider contention by younger generations of up and coming Indian architects. What is of equal interest

here, however, is the nature of the brief prepared for this competition and circulated to the numerous participants all over the world.

This time, the task of mythologizing modern India, set out in the earlier efforts of Pupul Jayakar, were taken up anew by another doyen of the arts scene in India, and close associate of Jayakar's, Kapila Vatsyayan. After setting out a rational five-part programme for the institution, the 'concept' was overlaid with symbolism of various kinds including a sculpture of 'five rocks from five major rivers' to act as a reminder of the 'antiquity of Indian culture and the sacredness of her rivers and her rocks,' and the planting of five trees 'most significant in Indian civilization' to represent the five principles of the five divisions, or the playing of an ancient musical instrument made of five metals and five drumheads symbolizing the 'five faces of Shiva or the five activities of creation, action, destruction, stillness and movement,' among others.²⁹ Indeed, all these multifarious symbols were tied into a single vision of Indira/India where Indira Gandhi in her search for 'that basic thread of Indianness which joins us together' was recognized as 'art' herself.

Such a conflation of myth and rationality to represent Indira Gandhi's idea of India in aesthetic terms was comparable, for many, to her methods for dealing with religious and regional politics, the consequences of which we will return to later. But it was the way that these threads were taken up in the shifting architectural discourse in and about India over the next few years that needs to be discussed first.

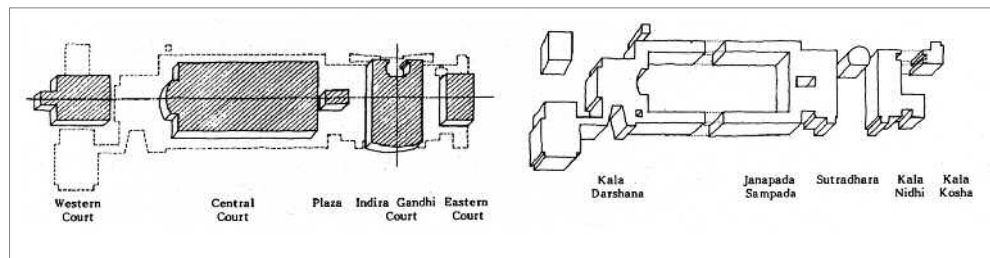
Indianness

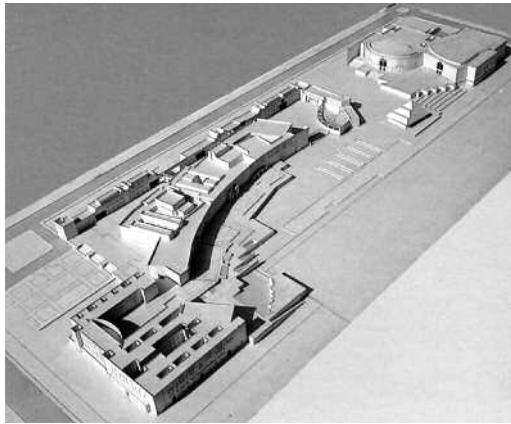
The responses received to the IGNC competition brief were overwhelming, not only in their volume and extent, but also in the concerted effort demonstrated by both the national and the many international participants to incorporate this new rhetoric of 'Indianness' into their design. The winning entry from the American architect Ralph Lerner incorporated the narrative of the five elements, the five rivers and the five trees into an architectural solution of five courts and five components combined under a symbolic narrative of the sun's daily procession across the major east-west axis of New Delhi.³⁰ This response to Lutyens's Delhi also helped achieve what Swati Chattopadhyay has described as using the colonial edifice to show how "foreignness" could be subsumed under the projected view of Indianness.³¹ The second entry by a young Indian architect, Gautam Bhatia, further incorporated the use of various elements like *ghats*, *rangshalas* and *maidans*, which he described as being elements 'central to India's spirit'.³² This attitude was reflected in many other projects, with participants from the furthest reaches of the globe trying to

Ralph Lerner, Indira Gandhi National Centre for the Arts, New Delhi, 1986.



Indira Gandhi National Centre for the Arts, winning competition entry by Ralph Lerner showing the five-part planning concept.





Indira Gandhi National Centre for the Arts, model of second-place scheme by Gautam Bhatia.

define the essence of India through a reflection on *chowks* or *chajjas* or even *mandalas*.³³ Following the jury decision in 1986, the entries were displayed in an exhibition and covered in the media, having a significant impact on the profession in the country, with many of these threads taken up in other projects that developed during this period.

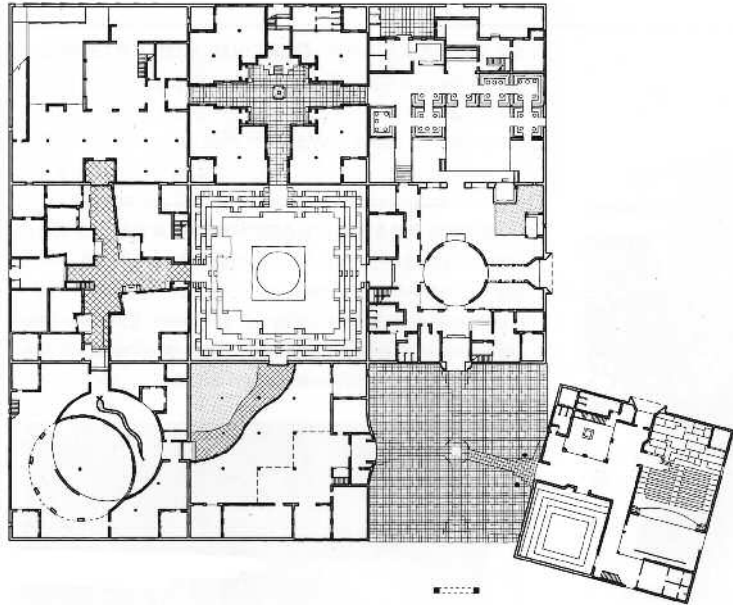
The predisposition of prominent modernists like Raj Rewal and Charles Correa to adapt their designs to suit the regionalist debate has already been discussed. Their further involvement in the production of

the architecture exhibitions for the Festivals of India and the changing nature of the discourse only increased this predilection. On the one hand, Rewal extended the new-found vocabulary of red sandstone cladding over a concrete structure into a fully fledged essay rationalizing the North Indian architectural traditions of the Mughal Empire. This was pursued with vigour in a series of major projects produced by his practice in and around Delhi in the late 1980s. Two of the largest and most distinctive of these were the fortress-like government office complex for SCOPE (Standing Conference of Public Enterprises), and the rambling, picturesque campus of the National Institute of Immunology.

Correa, on the other hand, built on his experiences with the *Vistara* exhibition to incorporate the notions of mythology more overtly into his subsequent projects. In the design of the Jawahar Kala Kendra, a small gallery, museum and performing arts centre in Jaipur, this inspired a plan in which the *navgraha mandala* and the *vastu purusha mandala* are superimposed upon a nine-square representation of the plan of the model seventeenth-century city of Jaipur itself and its distinguishing narrative of topographical emplacement.³⁴ A similar layering of iconographic and spatial orders was explored in the ritualistic design of the pathway of foreign encounters symbolized through the *shunya bindu* and the banyan tree mural, by the British artist Howard Hodgkin at the British Council in Delhi.

While not all were so literal or confident in their embrace of this new tendency, such explicit references to traditional built form and cultural symbolism by influential modernists like Rewal and Correa – as critics were already noting – were paving the way for a stronger focus on aesthetic concerns and symbolic criteria in contemporary Indian architectural design and discourse, the likes of which had not been indulged in since

Charles Correa,
Jawahar Kala Kendra,
Jaipur, 1986–92, plan.



Raj Rewal,
National Institute of
Immunology, New
Delhi, 1983–90, view
of typical cluster
of staff housing.



opposite: Charles Correa,
Jawahar Kala Kendra,
Jaipur, 1986–92, view
into central court.



the debates with the revivalists four decades earlier.³⁵ For Romesh Khosla – one of the newest voices just joining the discussion at this time through new platforms like *A+D* and other more esoteric journals, as well as the polemical novelty of his own earliest buildings – such conflation of rationality and myth in the work of senior peers was eminently defensible. Indeed, it was ‘totally pluralistic, completely open-ended and yet an inseparable part of the Indian tradition.’³⁶ Khosla’s own Venturi-esque experiments with signs and meaning in architecture, such as his School for Spastic Children in Delhi, incorporated different sources of endogenous meaning including cave temples and the womb, harking back to the primordial archetypes from which India’s earliest architectural traditions were born.

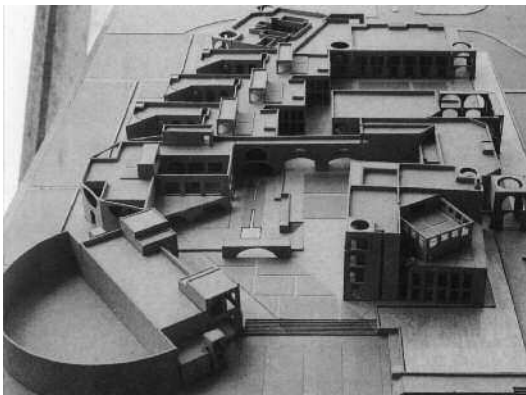
While the above examples seemed to mark the end of the era for modern architecture in India, amid the growing theoretical literacy and concomitant sense of concerns about the ‘modern project’ in what was more and more consciously a ‘postmodern’ context of design-thinking (if not building), this was not the case for all. Ahmedabad in the 1980s remained still a bastion of the particular local tradition of modernism that the architectural culture of that city had fostered since the 1940s. Within that context the impact of Louis Kahn’s austere reverence for brick had left a lasting legacy of modernist ideals, albeit embellished with the rhetoric of the spirit of materials. Indeed, a whole generation of practitioners in Ahmedabad had worked with Kahn and their work continued to wear this pedigree.

Anant Raje’s dutiful additions to the IIM campus that he had been entrusted to complete after Kahn’s death demonstrated genuine mastery of his mentor’s idiom, albeit almost intentionally shy of originality. But a series of small institutional buildings and campuses that Raje was subsequently commissioned to design in the rocky environs of Bhopal in Central India presented opportunities for a much richer and more lyrical talent

to be expressed. Raje’s Indian Institute of Forest Management (IIFM) outside Bhopal employed Kahn’s notion of ‘wrapping ruins around buildings’ to reapply spatial qualities and textures derived from medieval Deccan palace ruins as a form of quasi-urban fabric that stitches together the discrete components of a small academic campus.

Closer to the source of inspiration, Bimal Patel’s design for the Entrepreneurship Development Institute outside Ahmedabad re-presented Kahn’s invented

Anant Raje, Indian Institute of Forest Management, Bhopal, Madhya Pradesh, 1984–9, model.

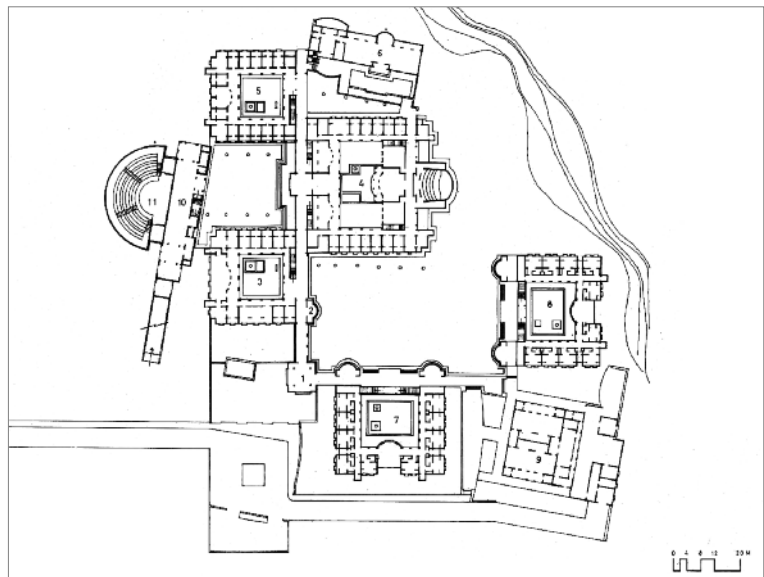


Anant Raje, Indian
Institute of Forest
Management, Bhopal,
Madhya Pradesh,
1984–9.



tradition of exposed brick and concrete construction in a seamless weave with the pre-existing traditions of Ahmedabad's colonial-era brick mills and PWD-constructed institutional buildings, and the rich spatial patterns of local mosque and palace complexes with their linking terraces and courts. While these examples too incorporated polemics about primordial encounters, they were not interpreted through an aesthetic dependent upon symbolism, but rather through a pursuit of the singular timelessness of an institutional type based on Kahn's rhetoric.³⁷

Bimal Patel,
Entrepreneurship
Development
Institute of India,
Ahmedabad, 1985-7,
plan and view.



Within the same context of practice and precedent, other architects who had not been directly involved with Kahn continued to maintain a modern aesthetic while incorporating traditional knowledge through experiments in scale and materiality. A pertinent example is the Nehru Centre for Environmental Education by Neelkanth Chhaya and Kallol

Joshi. While continuing with the exposed brick vocabulary, the complex offered a stimulating sequential experience of different spaces. In other instances experimentation extended to materiality and tectonics, as in the work of Leo Pereira, whose purist aesthetic and sense of joinery in the taught composition of architectural elements and materials were consistent with Kahn's Ahmedabad tradition, but also reflected Pereira's post-graduate architectural training in Denmark. Chhaya too acknowledged a stronger impact of the Scandinavian tradition that followed from the return to Ahmedabad from Africa, via Finland, of his colleague and incoming head of the Architecture School, Kurula Varkey, in 1986. We will return to those pedagogical developments a little later, but what is relevant to reiterate here is Chhaya's belief that while the changing nature of discourse in other parts of the country did not debase the modernist practice of Ahmedabad, it did seem to have 'loosened up the Ahmedabad tightness' inherited from the austere aesthetics of Kahn.³⁸ Indeed, it was probably this sort of regional adaptation of modern architecture that the RIBA medal of 1984 was trying to encourage, before it was subsumed by the new fascination with Indian mythology.

Interestingly, while Ahmedabad played host to experiment and reflection on the lessons of the Scandinavian tradition of modernism for Indian architecture, two Norwegian architecture students, Jan Olav Jensen and Per Christian Brynildsen, were busy interpreting the notions of a 'paradise garden' within the limited material resources and the harsh climate of the central Indian plateau. Their design for a Leper Hospital near Chopda Taluka, which would go on to win an Aga Khan Award, is a fine example of the possibilities inherent in the use of local materials and the stark simplicity of minimal form. These were tendencies notable in the work of other relevant practitioners of the period as well, including Uttam Jain, architect of the University of Jodhpur campus, whose smaller projects in this period in regional Rajasthan, such as the Balotra City Hall, continued to make an uncommonly direct and pragmatic yet formally distinctive use of stone and concrete in equal measure. These themes were taken up by others such as Kulbhushan and Meenakshi Jain in Ahmedabad, and Vasanth and Revathi Kamath in Delhi, who paved the way for the next generation of 'sustainable architecture' through their use of locally available material to develop simple yet effective architectural spaces.

Meanwhile, many of these same practitioners were also active in the expanding print media dedicated to architectural design and debate in India in the 1980s, through which new directions were being charted for the education of the next generation of architectural professionals.

Writing and Re-thinking Architecture in 1980s India

The launch of *Architecture + Design (A+D)* in 1984 had marked the arrival of the first new home-grown periodical of any critical substance or impact on the Indian scene in almost three decades. *Design* had served that role since the 1950s under the leadership of Patwant Singh. By the time *A+D* had published its first issue in late 1984, however, the political ramifications of Operation Bluestar on the Sikh community had diverted Singh's attention from his editorial concerns, and he was to spend his remaining years publishing primarily on Sikh history and identity. In the absence of an equivalent contender, and with the renewed interest in issues of architecture and urbanization under Prime Minister Rajiv Gandhi, *A+D* quickly became the preferred new site for the Indian architectural profession to take stock of current trends and issues. Thus, in spite of criticism over the presumed regional bias of the magazine's Delhi- and Bombay-based editorial board, *A+D* was to play an important role in shaping the outlook of a new generation of Indian architects who would define the profession and its evolving agenda in the coming decades.³⁹

As a commercial publication, *A+D* was never intended to serve the role of a scholarly academic journal.⁴⁰ But the editors were clear from the outset that the magazine would be a forum through which the profession could seek to consolidate its voice and its values nationally, beginning with the theme of 'Indianness' in architecture.⁴¹ With this ambitious higher aim of defining the future agenda of 'Indian' architecture, the magazine sought, to begin with, to take stock of what was actually being achieved. To do this it took a two-pronged approach, focusing on comprehensive features of the work of selected individual architects, on one hand, and nation-wide surveys of representative examples of contemporary building types, on the other. While inevitably reflecting the tastes and biases of the editorial board, this approach also served to identify and introduce into the discourse a number of relatively unknown architects, some of whom were to have an influence in later discussions and developments.

The direction in which the new magazine would attempt to lead was marked in its choices of what to highlight from the plethora of architectural work and talent across India. This was already declared clearly in the inaugural issue featuring Uttam C. Jain, whose distinctive work in Rajasthan was not yet widely known, as what it defined as a 'Modern Traditionalist'. Not insignificantly, Jain was also a member of the magazine's editorial board. Along with other board members, including Mansingh M. Rana and B. V. Doshi, who would also be featured in later issues, Jain represented a tendency that sought to incorporate regional

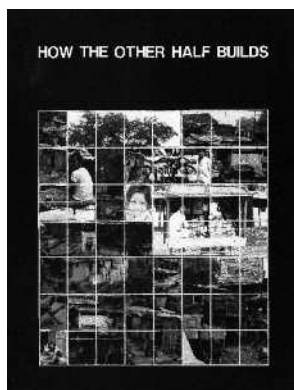
and traditional elements towards the re-crafting of a modern architecture that could be defined as distinctively 'Indian'. Subsequent issues displayed a selection of other practitioners from different regions of the country who were relatively unfamiliar nationally, but whose work appeared to address the themes of modernity and tradition in equal measure. These included Satnam and Namita Singh in Chandigarh, Dulal Mukherjee in Calcutta, Shirish Beri in Kolhapur, Sarto Almeida in Goa, and Chandavarkar and Thacker in Bangalore.

Revealing and reinterpreting the work of this maturing middle generation of the regions to serve *A+D*'s agenda were the writers of these articles, who were also building their profile with the readers as the critical thinkers and teachers of the next generation of the profession. These included Miki and Madhavi Desai, Rajnish Wattas, Avani Parikh, Swati Chattopadhyay, Abhimanyu Dalal, Sanjay Prakash, K. T. Ravindran, and Kulbhushan and Meenakshi Jain. The new magazine also attracted international contributors to the debate on contemporary architecture, including Indian practitioners and academics settled abroad such as Sunand Prasad and Anupam Banerji, as well as visiting foreign critics such as Roger Connah.⁴²

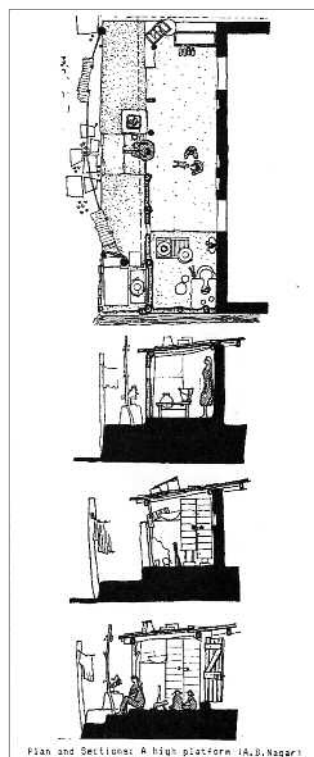
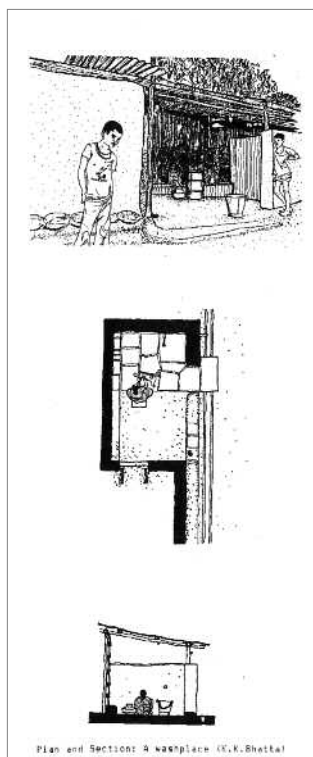
While early issues focused resolutely on the discussion of tradition versus modernity, other events on the world stage directed the discourse in a different direction than the editorial board had initially intended. The result was a new understanding for many Indian architects concerning the future role of the profession.

Within a year of the launch of *A+D*, the announcement by the United Nations Centre for Human Settlements (UN Habitat) that 1987 would be the International Year of Shelter for the Homeless (IYSH) had galvanized many of this emerging new generation of Indian architects with the imperative of addressing that huge challenge. At the government level, a National Centre for Human Settlements and Environment (NCHSE) was established in Bhopal along with an agenda for India's participation in the cause. And by 1986 a wave of new publications had appeared on what increasingly were to be regarded as the allied issues of low-cost housing for the urban poor and energy conservation in buildings. These included a seminal analysis of Indian casework by the influential Centre for Minimum Cost Housing at McGill University in Montreal – where one of Doshi's earliest students, Vikram Bhatt, was now an established academic and an internationally recognized research leader in the field. Closer to home, a conference on Energy and Habitat held at IIT New Delhi in 1982 had since published an influential volume of the proceedings.⁴³

Issues of low-cost housing and energy conservation were, of course, hardly novel in the contemporary Indian discourse on architecture.⁴⁴



McGill University
Minimum Cost
Housing Group and
Vastu Shilpa
Foundation, extract
from publication *How
the Other Half Builds*,
1985.



Differing from the independent actions of housing activists and AT enthusiasts in the 1970s, however, the two objectives were projected as a single consolidated vision for the future of the profession in India when *A+D* organized a seminar on ‘The Architect and the Built Environment’ on the eve of the IYSH in December 1986. This attracted some of the most important names in the profession and served as the basis for defining the contribution that the practice and teachings of these individuals would make over the coming years.

The seminar was divided into four major sessions, of which both the themes and several significant participants would subsequently prove to be influential. The first session entitled ‘Alternative Building Materials’ included inputs from the acknowledged doyen of the field, Laurie Baker, and K. T. Ravindran and Revathi Kamath among the leaders of the next generation, as well as representatives of concerned bodies such as ASTRA (Application of Science and Technology in Rural Areas) and Development Alternatives (DA). While ASTRA had been established more than a decade earlier, Development Alternatives, represented at the seminar by Aromar

Revi and Sanjay Prakash, was a new venture, launched in 1983, to promote sustainable development, that would subsequently take a leading role in India in the investigation of alternative building materials. Over the coming years participants in this session would work concertedly to shift the vocabulary of the Indian construction industry from 'cement, brick and glass' – materials they saw as symbols of modernization – to local alternatives such as bamboo and mud.

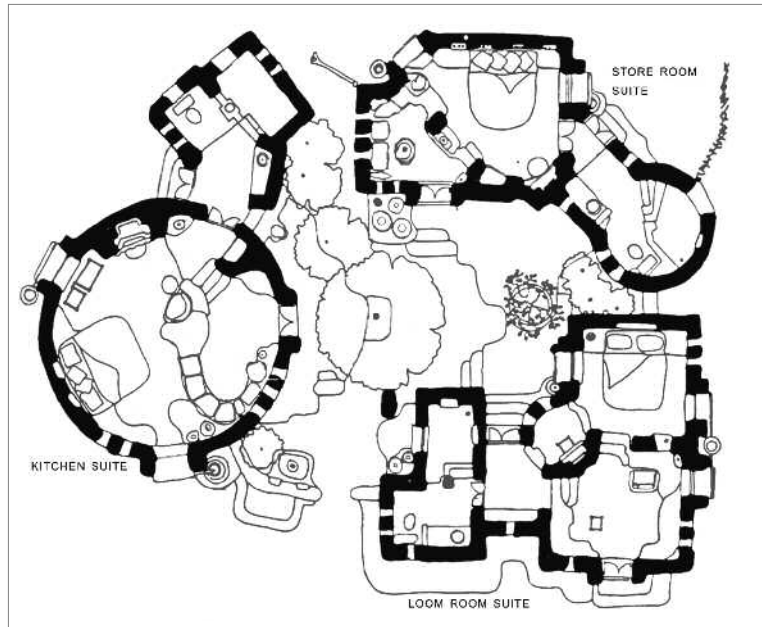
Revathi Kamath's contribution drew in part on the experience she and her husband, Vasant Kamath, had gathered in designing the Tourist Village in Mandawa, Rajasthan. Although built primarily for the consumption of foreign tourists, this project had presented an opportunity to revive the traditional methods of the region for building in mud. The project offered additional lessons about the need for advocacy and awareness-raising among patrons and the broader public, since the client had ultimately backed away from sun-dried mud-brick construction, forcing the architects to use partially burnt country bricks and mud plaster in lieu.

A more systemic approach to change in building culture and practice was launched by Development Alternatives, which aimed for the large-scale dissemination of Earth Architecture as the alternative for housing in India. The ongoing effort to build DA's own multi-storey headquarters building in Delhi in earth, led by a recent School of Planning and Architecture (SPA) graduate, Neeraj Manchanda, as job architect, were to achieve wide international recognition and remained for the next few years (until its completion in 1988) the prototype and reference point for DA's arguments for mud in an urban context.

In the months following the seminar almost all the papers from this session were published in separate issues of *A+D*, placing Mud Architecture firmly on the agenda. Indeed, the pages of *A+D* were littered with references to Mud Architecture from various other sources as well, including the Government of India initiative to organize an international conference on 'Mud Architecture' in November 1987, and the work of the French organization CRA Terre from the Grenoble School of Architecture. Finally, the decision to grant the first National Habitat Award to Laurie Baker in 1987 further encouraged growing popular demand for alternative building materials and principles.

Among the other sessions of the *A+D* seminar, the session on 'Energy Conservation' echoed the rising sense of need to engage alternative building materials and technologies, and the organizations represented in this session such as the Housing and Urban Development Corporation (HUDCO), the Tata Energy Research Institute (TERI) and IIT continued to provide the requisite institutional and technological support to these

Revathi and Vasant
Kamath, mud-brick
Tourist Village,
Mandawa, Rajasthan,
1984.



initiatives in the coming years. Much of this discussion about alternative methods was coloured by the demands of the upcoming 19SH. These were most specifically addressed in the session on 'Human Health, Habitat and Environment', which focused on the environmental concerns underpinning this demand for alternative methods. This session extended the debate to a larger geographical level, including participants from the Town and Country Planning Organisation (TCPO), and various public administration and social research bodies, addressing the questions of resource management and urban planning that were crucial to the rapidly expanding urban population and the growing needs of the Indian cities.

Rising concern about rapid urbanization was no longer limited, by this time, to environmental impact alone. The value and the challenges of conserving the country's architectural heritage from the pressures of urban development were now increasingly on the radar as well. The establishment of INTACH in 1984 had already done much to initiate and inform awareness on issues of heritage conservation, and an important part of its programmes had been an array of studies that looked at important sites across India. By the close of the decade INTACH had accomplished documentation of places as varied as Udaipur in the west, Pondicherry in the south, Bhubaneswar in the east and Mathura and Leh in the north. Under the direction of emerging new critical practitioners in the field, such as Nimish Patel, Deborah Thiagarajan, A.G.K. Menon, K. T. Ravindran and Romesh Khosla, these studies offered a series of recommendations that would define a new path for heritage conservation in India.

These studies had been instigated following recommendations set out by the senior British heritage expert, Sir Bernard Feilden, in an INTACH-commissioned manual published in 1986.⁴⁵ But the developments following the *A+D* seminar and the inputs of the group Greha considerably altered subsequent attitudes to conservation. Indeed, the discussions on the conflict between 'conservation and development' brought forth during the seminar found a new life in *A+D*. Subsequent issues of the magazine would include two new dedicated sections, respectively, 'Heritage' and 'Cities in India.' These provided additional arenas for resolving the apparent divergence between policies involving existing heritage and new development.

These issues of heritage conservation were more specifically discussed in the fourth and final session of this seminal *A+D* seminar entitled 'Continuing Living Traditions.' The curious title of the session arose out of the fact that the problem of conservation was addressed by defining two types of tradition: visible and invisible. While the 'visible' tradition consisted of the usual range of heritage structures and environments such as temples and bazaars, which formed part of the general debate on heritage

conservation, the novel understanding of an 'invisible' tradition was defined as the continuing beliefs and practices of the 'marginalised and poor sections of society'. This unconventional notion of heritage, and the contributions made by the chair for the session, M. N. Ashish Ganju, merit further explanation.

Ganju, a leading member of the group Greha, established in the early 1970s, was already involved through Greha with issues of user participation in designing housing for the urban poor.⁴⁶ Since their earlier engagement in the national housing policy debate in the 1970s, the group – which included Ashok Lall, A.G.K. Menon, Ramu Katakam and K. L. Nadir, among others – had moved away from the socialist agenda of their early work, looking at 'non-conventional approaches to shelter the urban poor'. Along the way they had developed an understanding of user participation as a critical connection to traditional practices, especially where these were still a 'continuing tradition'. These ideas had become further established with the growing interest in heritage conservation, and *Greha* soon became a consultant on issues of conservation and urban design for major establishments such as the National Commission on Housing, HUDCO and INTACH.

In 1987 Greha produced a paper for HUDCO entitled 'Innovative Approach to Urban Development' and by 1989 had articulated a new set of 'Guidelines for Conservation' for INTACH. Significantly, these guidelines challenged the Western model of preservation and authenticity as espoused in the Venice Charter and proposed a different model for India based on 'continuity of a living tradition'.⁴⁷ The considerable influence of the members of this group, then, not only had a significant impact on national policies for heritage conservation and urban planning, but also charted new directions for architectural education that would have an important bearing on the future course of the profession as well.

In 1986 Greha was registered as a charitable society to reconsider the future of the architectural profession in India. In its manifesto for change it proposed to increase the level of institutional exchange by facilitating new publications and organizing seminars, and to use these platforms to consolidate a new vision on both education and professional conduct. Architectural education was already gaining strong support throughout the nation, and no fewer than a dozen new programmes in architecture had been instituted since the start of the decade in various parts of the country.⁴⁸ As a general course of development, however, these programmes remained part of established university schools of engineering, and discontent was growing within the profession once again towards the engineer-driven system. Indeed, more than a century after John Lockwood Kipling and fellow Crafts lobbyists had first raised concerns about the

PWD system and its implications for technical and artistic training in colonial India, engineers still seemed to have the upper hand over the architect, in the studio as well as the building site.⁴⁹ In response to this crisis, a new type of architectural school was proposed by Greha that would be grounded in an environmental philosophy, and would be consistent, furthermore, with the 'traditions, indigenous technology and the social and economic needs of the people, especially the poor'.⁵⁰

This concept for a multidisciplinary school based on the apprenticeship model attracted the support of INTACH and HUDCO, and what was to have been called the Delhi School of Design was proposed as early as 1986. Implementation, however, took longer than expected and some of the guiding objectives were necessarily altered when a new National Housing Policy was announced in 1988. This game-changing policy called for a shift in the role of government authorities from the builders of public housing projects to the facilitators of independent housing processes. This entailed parallel shifts in professional agency that only increased the need to rethink an architectural curriculum that would compel students to reflect on 'Indian lifestyle and needs of the community'.⁵¹ Accordingly, Greha organized a study group and submitted a proposal for restructuring technical education under what it defined as 'Habitat Schools'.⁵² Taking as its model HUDCO's effort to develop the Human Settlement Management Institute, in 1985, Greha put forward a proposal for ten new schools across the country based on this format, which would develop their course structures around 'Settlements and Human Habitat', supported by 'Environmental Engineering'. Accordingly, in 1990 the TVB School of Habitat Studies (TVBSHS) was launched under the directorship of M. N. Ashish Ganju with Greha members A.G.K. Menon, Ashok Lall and K. L. Nadir playing other crucial administrative and academic roles.

The TVB School of Habitat Studies was only one in a series of new schools that had been established by the end of the decade. Others included the Sushant School of Art and Architecture (SSAA) in Gurgaon, started with the initiative of the group more closely related to *A+D*, and the soon to follow Rizvi College of Architecture in Mumbai under the leadership of another Greha affiliate, Akhtar Chauhan. The transformation in direction for architectural education in India was also reflected in certain established schools such as CEPT in Ahmedabad, where the new director, Kurula Varkey (1987–2001), brought a haptic sensibility to the teaching of architecture influenced by the phenomenological and regionalist tendencies in Scandinavian architectural theory and practice of the later twentieth century, in which he had been immersed through postgraduate studies in Helsinki.⁵³

Religion Rises Again

While these developments in architectural advocacy and education reflected the wider drive within Indian modernity for greater social equity, the impending time bomb of regionalist and religious politics, which had temporarily been put to rest by the arrival of Rajiv Gandhi on the scene, was about to explode again. In 1987 Gandhi was accused of taking a bribe on a major defence contract with the Swedish arms manufacturer Bofors, an allegation of serious corruption that was to undermine public trust in the rapidly prospering new urban elite personified by the jet-set prime minister. Exposed by his own finance minister, V. P. Singh, the principal architect of the revolutionary move away from the protectionist economic regulation of the past, this distrust of the urban elite became prime political leverage for Singh himself. He had been dismissed from the government in 1987 and provoked into floating a new opposition party, Jan Morcha, which sought to revive the issue of reservations for the so-called backward classes first proposed by the Janata Party government at the end of the 1970s.⁵⁴ Reintroducing the issue of lower-caste rights won Jan Morcha the support of various former Janata Party allies and other regionalist parties in Tamil Nadu, and Andhra Pradesh, all of which subsequently came together under a single banner as the National Front.⁵⁵ Such was the distrust of the urban elite that the conflict between the lower caste representatives of the Jan Sangh and the upper caste followers of BJP's Hindutva ideology, which had allowed for the return of Indira Gandhi in the early 1980s, was momentarily reversed, since the National Front gained the support of both the BJP and the Communist Party to overthrow the Congress government in 1989, and install V. P. Singh as the new prime minister. The next few years were to be the most turbulent, politically, since the Partition era, and many of the regionalist and religious themes that had been laid aside since Indira Gandhi's assassination came to the fore once again.

Religion had always been an important consideration in India, but since the start of the decade it had played an increasingly explicit role in shaping the country's political environment. In the 1970s the socialist policies of Indira Gandhi's government had done much to limit the role of religion in Indian politics. Her strong front against religious dissenters, however, and the repeated call for secularism belied her own strong religious leanings, which were kept hidden from the public eye.⁵⁶ After the accidental death of Sanjay Gandhi, her eldest son and closest adviser who had died in a plane crash in 1980, Indira Gandhi had become emotionally distraught and less and less concerned to disguise her own religious activities.⁵⁷ In light of this transformed attitude she no longer maintained

an iron fist against the religious factions in Indian politics but instead conceded to a kind of compromise where she redefined her idea of secularism as the 'equality of all religions'.⁵⁸ This change in the political environment further allowed regionalist factions of various religious bearings to gain stronger political grounds, and questions of religion continued to colour the imagination of the people.⁵⁹

This concession to religious expression had a considerable consequence for architecture in India because the design of new religious buildings helped to open up a pathway for the return of cultural imagery. During the early 1980s religious buildings such as temples and mosques gained a kind of popularity that had not been seen since Independence. The designs of these buildings posed a different kind of challenge, since it was not only a matter of disciplinary tastes and values, but also had to take into account the desires of the common public who frequented these structures and sought the safety and comfort of recognizable imagery and forms. Accordingly, many of the religious structures designed during this period, although still exploring the structural expressionist vocabulary of the 1970s, sought more explicitly to create a link to existing cultural precedents. Relatively modest examples of this tendency to evoke relevant cultural imagery and associations while still operating within a framework of modernist construction methods were the Kalibari Temple (1982) in Delhi designed by Sumit and Suchitra Ghosh, and the contemporary Mahmoodia Library (1986) by Asema Architects. The design by the Iranian architect Fariborz Sahba for the spectacular Lotus Temple

Fariborz Sahba,
Baha'i House of
Worship (Lotus
Temple), New Delhi,
1986.



built in New Delhi in 1986 as the base for the Baha'i faith in South Asia can be seen in the same light. The form had no architectural precedent in India, and the ingenuity of the structural system adopted was remarkable in its own right, but the decision to engage the imagery of a lotus flower had clear populist religious connotations and appeal.

By the late 1980s the issue of religion had permeated the political psyche of the nation once again. Rajiv Gandhi's arrival on the political scene in 1984 had temporarily managed to divert attention to the prospects of radical liberalization in India's future economic policy and international trade, but political inexperience led him to make a series of controversial concessions to competing religious factions that were soon to undo initial popular support for his platform of change, simultaneously reinforcing the resurgence of religious politics. In 1985, less than a year into his term in office, Rajiv Gandhi chose to intervene in a precedent-setting divorce case that would have had significant implications for Muslim Personal Law in India.⁶⁰ Upholding the minority view of conservative Muslim clerics, Gandhi exercised his prime-ministerial privilege to reverse the decision of the Supreme Court. But the fact that he had resorted to his mother's definition of secularism as 'equality of all religions' to justify this extraordinary executive intervention was quickly taken up by the VHP to put forward what they regarded as equivalent demands on behalf of the Hindu right.

One of the major issues raised by the VHP was access to the long-disputed site of a historic mosque in the North Indian city of Ayodhya. The fifteenth-century Babri Masjid, dating from the reign of Babur, the first Mughal emperor of India, was believed to have been built from the rubble of an earlier temple demolished by the conquering Mughals on the site that many Hindu devotees venerated as the Ram Janmabhoomi, or birthplace of the god, Lord Ram. The mosque site had, therefore, been a periodic focus of communal tension for centuries, and had been fenced off since the colonial era to allay further violence, under the disinterested guardianship of the Archaeological Survey of India. Eager to appease and balance the opposing forces of potential communal dissent in the wake of the Shah Bano divorce case, however, Rajiv Gandhi made the fateful decision to bow to the seemingly reasonable demand of the VHP for equitable access to the mosque site. But Gandhi's evident inability to stand up to popular pressure was soon exploited further by the VHP and their support base among conservative Hindu clerics and followers, who now agitated to demolish the existing mosque structure and build a monumental new Hindu temple on the site. Aided by nationwide media interest and sympathetic regional politicians, the rapidly escalating Babri Masjid-Ram Janmabhoomi controversy was destined, therefore, to

become a core issue in the national elections of 1989 in which the National Front, with the crucial support of the BJP, ultimately managed to overthrow the Congress government.

For the BJP, the promise of a new temple at Ayodhya became the mantra for the dramatic rise of the political party itself, with the proposed neo-traditional design for the monumental structure furnishing the iconic imagery for the party's entire election campaign. Over the next three years, the issue of constructing this temple would be the flashpoint for communal tensions right across the country, and would bring India to the brink of political and civil rupture. While religion was the ostensible core issue that had, once again, risen to put the ideals of secular modernism to the test, not since Nehru had championed the design and building of Chandigarh four decades earlier had architecture also taken such a prominent place in the political and popular imagination of everyday Indians.

It was the modern architectural profession's attempts to deal with the Ayodhya crisis that would mark the beginning of the most recent chapter in the architectural history of India, and the epilogue to the unreconstructed idea of 'Modern India' to which at least some surviving members of India's first generation of post-Independence modernist architects remained still deeply committed.



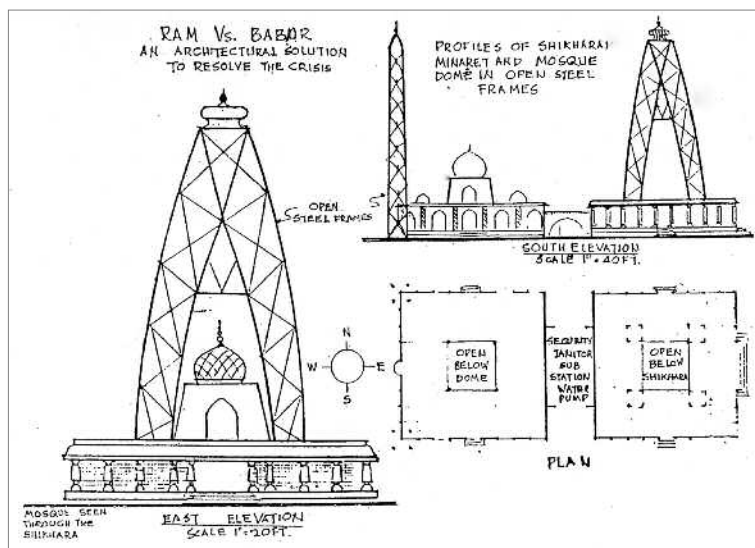
Towards the ‘Non-modern’: Architecture and Global India since 1990

Months after the tumultuous general election of November 1989, Ayodhya continued to command the headlines as tensions in that North Indian hotspot of religious communalism steadily escalated. Readers of *The Statesman*, one of India’s major English-language dailies, were no doubt a little relieved, therefore, and possibly even amused, one hot day late in July 1990 to behold a simple hand-drawn architectural sketch clambering for attention amid the familiar slew of grisly reports that crowded the pages of their morning paper. As the supporting text explained, the drawing outlined the basic concept for an alternative ‘architectural solution to resolve the crisis.’¹ This would be both a more constructive and a much more feasible scheme to execute equitably upon the disputed site, it argued, than the controversial bid to build a monumental new Ram temple in place of the historic Babri Masjid. The alternative proposal called for a comparatively modest set of new structures to be added onto and adjacent to the existing mosque. But neither a temple nor a mosque, it would be a ‘spiritual centre of all faiths’ that would function as a school for comparative religious studies.

The author of this humble appeal to tolerance and reason was Habib Rahman, the retired former chief architect of the Central Public Works Department, who was now 76. The simple sketch featured what appeared to be cartoon-like references to traditional religious architecture, and many readers were likely to have dismissed it as just a cynical joke on the part of the former government architect. On closer consideration, however, the seemingly superficial doodle belied the deeper-seated modernist convictions that drove Rahman’s ‘solution’. Notable was the distinctly non-historicist treatment and sheer scale of the open-web steel structures proposed, and the clearly instrumental manner in which the iconic forms implied – minaret, dome and *shikhara* (tower or spire-like element of a Hindu temple) – were subordinated, through the diagrammatic plan, to the stated function of the scheme. The design anticipated that these iconic profiles would frame each other from different points of view,

Model of the proposed temple for Ram Janmabhoomi, Ayodhya, on parade in a religious procession, 6 December 2014.

Habib Rahman's proposed 'architectural solution to resolve the crisis' at Ayodhya, *The Statesman* (28 July 1990).



enabling (literally) transparent comparisons between the architectural cultures of different, seemingly incommensurable, religious belief systems. Particularly telling of the functionalist underpinning of the design was the understated in-between element that bridged the central, interstitial gap of the bilateral composition. This was the sanctuary of the impartial technicians – the janitors, security guards and building services engineers – who would ensure the orderly operation and maintenance of the complex. 'Naive and utopian' by Rahman's own admission, he noted that his syncretic design proposal would require the patronage of 'a leader with a grand vision' and the sincerity and political will to realize it. Rahman's lament at the dearth of such leadership in the current gridlock of 'democratic' India's electoral politics was hardly concealed.

The scheme itself was a putative solution through the medium of architecture to the much bigger problem that the political architects of the Ayodhya controversy had sought to expose. This was the unresolved tension between the cherished idea of the modern secular state of India – synonymous still with Nehru, in Rahman's view, as the political leader who had championed Rahman's rationalist architectural contributions to the building of modern India in the 1950s and '60s – and the reality of a postcolonial society that was still, by the early 1990s, profoundly disaggregated as a cultural entity. After almost half a century of accelerating but increasingly inequitable economic development and social change since Independence, atavistic factionalist ideals of communal holism were once again offering a politically galvanizing alternative to the

unrequited yearning for the reassurance of a compelling collective identity as a 'modern nation'.

Rahman's unsolicited foray into the Ayodhya debate was particularly revealing for an architect who had devoted his career to the building of public works. Not only did it articulate his own obvious professional conviction that architecture mattered, but also his evident belief that contemporary Indian society in general, not least the opportunistic populist political and religious leadership of the day, had once again come to share this conviction, for better or for worse. It was Rahman's prerogative, as a 'public' architect, to emerge from retirement and restate the half-forgotten modernists' case for architectural design as a medium for problem solving that could thereby bring about constructive change in culture and society. Such a technocratic approach still had the merit, above all, of its utility. It could, pragmatically, bypass the ostensible problem of right architecture versus wrong architecture that the looming essentialism of postmodern cultural politics in the 1990s was poised to articulate so destructively, in India, as elsewhere, in the months and years that followed. Rahman, no less than the wily politicians who had contested the general elections of 1989, sensed that the disputed site of the Babri Masjid-Ram Janmabhoomi at Ayodhya was where the final symbolic battle for modernism in India would be played out.

Counter-modernism

By 1990 the litany of scandals and extenuating factors leading up to the recent electoral debacle, and the tenuous alliance of ideologically polarized new parties that had emerged temporarily victorious over Rajiv Gandhi's Congress Party, had resulted in a state of political stalemate. The essential impasse between the social and cultural agendas of the centre was complex and contradictory, to say the least, and Indian voters would soon have to return to the polls to resolve this. But there was little doubt that the rapidly growing popular support for the Ram temple-building campaign was indicative of more than just a symbolic protest against the liberal excesses of the recently ousted government, or mere nostalgia for the pre-modern past. Indeed, the counter-modernism inherent in the temple project, and the uncompromisingly traditional design that was proposed for the monumental new temple structure in particular, was as clear and calculated as its popularity was astonishing.

When the Ram Temple's political patrons sought an appropriate designer, it is telling that they had not approached anyone recognized as a qualified architect by relevant contemporary professional bodies in India or abroad. Rather, the commission was entrusted to a leading member of

a specific Brahmin caste of master builders who continued to practise and pass down, generation to generation, the traditional craft of temple design and construction in strict accordance with the Hindu scriptures. The selection of this particular master, Chandrakant Sompura, was additionally significant in the political dimension of the project, because he was the grandson of one of the previous most distinguished temple builders of India in modern times. The elder master, Prabhashankarbhai Oghadbhai Sompura, had led the reconstruction of the monumental Somnath Temple in Varaval, Gujarat, in the early years of India's independence. That had also been a project of considerable political controversy at the time, where substantial resources and political capital were invested in the cause of rebuilding another auspicious Hindu temple demolished by earlier Muslim invaders. Championed by Sardar Valabhbhai Patel, Nehru's Gujarati deputy prime minister and ideological rival as a leader of the conservative Hindu faction within the Indian National Congress, the Somnath Temple restoration had been undertaken with great zeal in the immediate aftermath of Partition in 1947, and was substantially completed by the time the work at Chandigarh began in 1951. It had, therefore, been one of the earliest developments to focus concern about the persistence of religious revivalism and communalism within the political culture of the newly independent nation, and the threat that these posed to the secular and socialist agendas for modernization to which Nehru was committed.²

Chandrakant Sompura's design for the proposed Ram Temple in Ayodhya was a close variant of the Somnath Temple itself, which had spawned several others of the type in neighbouring regions in the intervening years. Following the Nagari or North Indian style, the temple was to be built entirely out of interlocking blocks of stone and would boast 212 intricately carved stone pillars representing divine scenes. While some machinery would be used in the initial process of rough cutting the stone blocks, the final sculpting of the individual interlocking pieces, as well as the intricate carvings, was to be executed manually by a small army of stonemasons. These were to be drawn from other traditional guilds that had continued to be engaged with Sompuras in the design and construction of religious buildings in the minor towns and villages of regional India, with relative autonomy from the norms and methods of the modern, metropolitan-based, architecture, engineering and construction industries.³

Pervez Dumasia and Chandrakant B. Sompura, Global Vipassana Pagoda, Mumbai, completed 2011.





Chandrakant B. Sompura, proposed temple for Ram Janmabhoomi, Ayodhya, 1990, model.

The Somnath pedigree was further emphasized, with dramatic political effect, when a large model of the proposed temple was paraded across the Hindu heartlands of Central and North India in September and October 1990 in the media-commanding spectacle of a *ratha yatra* (chariot journey), a traditional religious procession in which temple idols are periodically taken on a ritual voyage among their devotees. Departing from the Somnath Temple, the procession was planned and orchestrated by the BJP leadership with the intention of carrying the model, and a growing legion of ‘volunteers’ along with it, all the way to Ayodhya to begin the work of preparing the site for the new temple. Although thwarted on that occasion by local allies of the centrist parties, the fast-changing political landscape, in which the Hindu majoritarian BJP was progressively conquering regional India at the state government level, was soon to enable very different outcomes.⁴

Two years later, a throng of more than 150,000 zealous volunteers had again been assembled at the contested site in Ayodhya to press for the temple project to proceed. Impatient with the seemingly endless prevarications of the politicians, however, several thousands of their number took matters in their own hands on 6 December 1992, and, having overwhelmed the feeble security at the site, proceeded to demolish the historic stone mosque in a matter of hours using nothing but simple tools and their bare

hands. In the fury and recklessness of this extraordinary act of physical and symbolic violence directed at a humble architectural artefact of cultural history, several of the extremists were accidentally killed themselves. The deadly repercussions of the deed were felt far more widely, however, since an estimated 2,000 more people were to die in major communal riots that erupted almost immediately, thanks to intensive media coverage, in Calcutta, Mumbai and other major urban centres across the country.

Official condemnation of this national calamity, and a formal judicial inquiry that was to take the next several years thoroughly to investigate the events of December 1992 and their antecedents, ensured that the construction of the Ram Temple would now be put on hold indefinitely. But this could not quash the religious pride and fervour that had been renewed among large segments of the general public throughout the long course of the Babri Masjid-Ram Janmabhoomi controversy. It was no real surprise, therefore, that the next two decades would witness a sharp rise in the volume and ambition of new religious building projects across India, most of which were unabashedly antique in their formal inspiration, though often unprecedented in scale and extravagance at the same time.

Among the grandest examples of such recent developments were the two expansive Akshardham Temple complexes built by and for the wealthy charismatic sect of followers worldwide of the modern Hindu saint, Swaminarayan (1781–1830). Larger (but only slightly) than its predecessor in Gandhinagar, Gujarat, the Akshardham Temple in New Delhi was completed in 2005, encompassing a vast 42-hectare site on the floodplain of the nearby Yamuna river. The spiritual head of the sect, Pramukh Swamiji Maharaj, drew on older Hindu monuments and scriptures to model and govern the architectural concept, working in consultation with a core group of other *sadhus* responsible for design development and the coordination of the thousands of artisans as well as unskilled volunteers who ultimately participated in the construction. The main building, with its monumental footprint of more than 8,500 square metres, sits on a 2-metre-high plinth adorned with a sculptural frieze containing more than 20,000 elephants and *sadhus* depicting the culture of Vedic life. Following similar construction principles and theories to those employed at Somnath, and the unbuilt Ram Temple design for Ayodhya, the entire structure was developed out of interlocking pieces of stone without the use of concrete or steel. More than 200 ornately carved sandstone pillars support nine white marble domes, every surface ornately carved by hand.

Considering the epic logistical and technical implications of this commitment to work exclusively with stone in contemporary projects of such scale, it is clear that this is not just a quaint idiosyncrasy of an

anachronistic building culture, but one of the more distinctive and richest architectural manifestations of the inherent counter-modernist agenda of these recent developments. In this sense of an alternative endogenous discipline with respect to materials and methods, to which these contemporary temple builders and their patrons have so emphatically returned, this tendency also differs in its degree of fundamentalist certainty and rigour from the earlier revivalism of Sris Chandra Chatterjee and other advocates for 'Modern Indian Architecture' in the 1940s and '50s, who were prepared to exploit the strength and plasticity of reinforced concrete and other modern materials in their unapologetically hybrid attempts to bring back Indian forms and figures into the evolving architecture of modern India. The strict adherence to stone in these contemporary temples reflects a more puritan conviction and approach in which modern materials such as steel and concrete are specifically proscribed from the construction of sacred buildings, since these are believed to interfere with the devotee's experience of the divine.⁵

Significantly, however, the capacity of contemporary master masons to innovate structurally and formally within this esoteric stone-working tradition is undiminished by their counter-modern principles and beliefs, as Chandrakant Sompura, the Ram Temple designer, has demonstrated himself in the quite unprecedented stone structures he has assisted other religious patrons to build more recently, both within and outside the Hindu spiritual community. The 100-metre tower of the colossal Global Vipassana Pagoda, for example – a rare Buddhist temple in modern-day India, completed in suburban Mumbai in 2011 – is supported by an extraordinary stone-vaulted meditation space at its base, 85 metres in diameter, which was built entirely without shuttering under Chandrakant Sompura's technical guidance.⁶

Unable to realize the Ayodhya project, through which his reputation and talents had become widely known, Chandrakant Sompura was recruited to consult on a number of other major projects in India, and even overseas, over the following two decades. Indeed, some of the greatest moral and financial support for the neo-traditional Ram and Akshardham Temple projects was attracted from the increasingly wealthy, and often equally nostalgic, Indian diaspora abroad. Through these same patronage networks, Chandrakant and his team were subsequently engaged to construct the Swaminarayan Temple in Neasden, London, in the mid-1990s. This was another complex of considerable scale and ambition that would have the distinction of being the largest Hindu temple in the world, outside India. The project was also unusual and necessarily innovative from a logistical perspective. With Chandrakant Sompura's commitment to the exclusive use of stone and sophisticated stereotomical techniques, it was

only feasible economically to engage and occupy the large numbers of skilled Indian artisans required, in India. Nearly 5,000 tonnes of stone were therefore transported to India to be cut and carved before being returned to the UK for assembly on the temple site in Neasden.⁷

Late in the twentieth century, ironically, it was the overseas financing and the export of the craftsmanship and design expertise needed to produce such spectacular counter-modern exemplars of contemporary Indian architecture as the Swaminarayan Temples that pioneered some of the first and most sophisticated transnational networks through which India's design and building worlds have inevitably become more global since the 1990s. As both local and international demand for such work continues to grow in the early twenty-first century, ever larger numbers of traditional artisans have been finding gainful employment in India's bustling stone-working yards. In the meantime, a burgeoning new industry of para-professional *Vastu*-consultants now competes for design fees with the architectural profession. But this trend is also creating new demand for more rigorous expertise and training in the *Vastu Shastras* (the canonical Vedic scriptures on building), which long-established institutes for instruction in traditional technology such as the College of Architecture and Sculpture in Mahabalipuram, Tamil Nadu – previously disregarded by many conventionally trained architects as a provincial anachronism – are in an increasingly esteemed position to provide.

Within the bounds of conventional professional practice in India in this period, most architects of modernist training have struggled fully to comprehend this changing landscape of patronage and procurement, and few choose to adapt to it with any earnestness. Particularly intriguing, therefore, was another major temple project of the 1990s that was undertaken, in this case, by one of India's most respected modernists of the first generation, Achyut Kanvinde. Completed in 1998, the commission to design an iconic temple in Delhi for the International Society for Krishna Consciousness (ISKCON), including a small campus of ancillary support buildings, was to be the final significant project of Kanvinde's long career. Like his close friend and contemporary Habib Rahman, the venerable functionalist evidently felt he had a prerogative to step out of his comfort zone and seize this timely opportunity to apply the skill and the wisdom of his experience to the burning issue of the day. Kanvinde's joyously figurative, yet innovative design solution for the temple departed equally from orthodox temple design tradition and his own previous work to address the problem of framing vitally present religious beliefs and practices within a sympathetic architecture that was also a product of the contemporary building culture and urban context in which it was to be built.



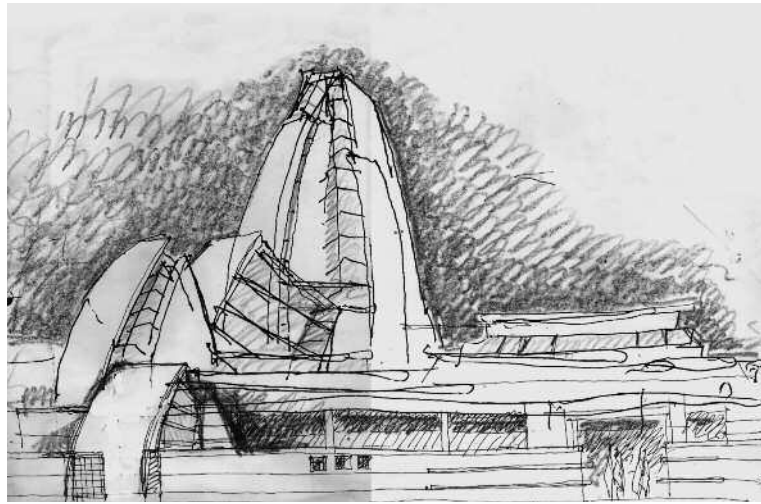
Achyut Kanvinde,
ISKCON (International
Society for Krishna
Consciousness)
Temple, New Delhi,
completed 1998.

One of the most distinctive features of Kanvinde's temple design was the porous treatment of its three monumental *shikharas*, which, contrary to the solid masonry tradition, were framed out in reinforced concrete clad with sandstone and marble, like somewhat heavy ornamental birdcages. This approach simultaneously exaggerated the iconographic character of the temple, while transforming the experience of the inner sanctum – which tends to be dark and cramped in conventional temples – with the penetrating light.

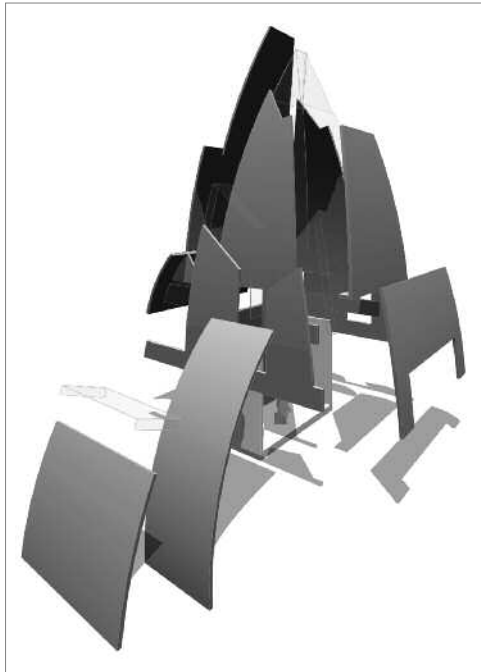
A more pronounced focus on light as an architectural medium was the driving force behind a further unconventional temple project designed in 2007 by the Bangalore-based practice of the architect Sanjay Mohe for another wealthy charismatic sect with both a local and a significant global following. Deconstructing the *shikhara* form, in this case, as a partially dilapidated assemblage of floating shells between which daylight is diffused to the open audience and prayer spaces below, the designers of the Sai Mandir sought to negate the perception of constrained space associated with traditional Hindu temples.⁸

Such a creatively interpretive, if not counter-traditional, approach to received architectural conventions and types is also evident in the recently completed Virasat-e-Khalsa (Khalsa Heritage Centre) at Anandpur Sahib, Punjab, designed by the celebrated Israeli-Canadian architect Moshe

Sanjay Mohe and
Mindspace, Sai
Mandir, Bangalore,
hand-drawn sketch
and computer model.



Safdie, in association with the Delhi-based practice of Ashok Dhawan. Here, a synthesis of types and references drawn from both the religious and the civil architecture of the Sikhs is echoed but abstracted in a monumental, landscape-cum-fortress-like composition that cannot help but be compared at the same time with the rhetorical grandeur of the modernist capitol complex at nearby Chandigarh.



The critical distancing and interpretation reflected in each of these architect-designed temples and cultural centres is what still seems to distinguish their designers, unequivocally, as 'modern' architects. There is no mistaking their critical traditionalism for the counter-modern return to traditional building methods and forms as such.

Also notable is the dimension of cultural distance inherent in transnational design consultancies such as Safdie's, as in a pair of comparable overseas commissions for contemporary Ismaili cultural centres and mosques undertaken in Toronto and Lisbon by Charles Correa and Raj Rewal, respectively, in the same period.⁹ In the aftermath of the violent suppression of Sikh regionalism



Moshe Safdie in association with Ashok Dhawan, Virasat-e-Khalsa (Khalsa Heritage Centre), Anandpur Sahib, Punjab, 1999–2011.

in the 1980s, the contemporary architectural reinterpretation of Sikh culture and religion that a foreign consultant of Safdie's stature could offer – with his experience of working in historically and culturally sensitive environments in the Middle East – underscored the redemptive, as opposed to the divisive, function that architecture could play in contexts of communal conflict.

Apart from earlier government projects and international aid-supported programmes, the possibility of engaging notable international architectural consultants to work in India on such substantial independent projects had only become feasible again with the further opening up of India's economy to world trade in the early 1990s. The reciprocal export of Indian professional expertise would rarely be so high-profile or direct. Nevertheless, distinct new possibilities for transnational exchanges in architectural design and associated professional services and technologies that had begun to be explored as early as the 1970s – primarily by enterprising Indian engineering and construction firms engaged in projects in the Middle East and Soviet Central Asia – were now being developed much more dynamically and expansively. At the same time, a new generation of architectural clients composed of India's entrepreneurial business and professional elites was also embarking into this wider new world of global capital and cultural flows and seeking new architectural shapes and signs to serve their aspirations. Much of this new demand clearly opposed the counter-modernism of the traditional temple builders and their patrons. But it was also becoming apparent that the exponentially

expanding range of formal and technical possibilities that the contemporary global culture of consumption encouraged these new clients and their architects to explore was also tending to complicate and confuse the once confidently distinctive architectural signature of modern India.

The Global Turn

The fundamental changes in economic policy that had been initiated by the government of Rajiv Gandhi following his mother's assassination in 1984 were only fully realized, structurally, after the Congress Party was returned to government with a working majority in 1991. In the wake of the sea change in fiscal policies and development ideologies in most of the major industrial nations since the early 1980s, and under mounting pressure from the International Monetary Fund (IMF), the opening up of India's economy was perhaps inevitable sooner or later. But the complex dynamics of India's internal political struggle between centrist and regionally based ideals of nationhood had as much to do with the timing and the rationale for the comprehensive deregulation of the centrally planned and protected economy that was finally implemented over the course of the next five years, while the Congress Party remained in power.

Rajiv Gandhi himself had been assassinated in the early days of the election campaign of 1991 by a suicide bomber aligned with the Tamil separatist movement in Sri Lanka and South India. The succession of a senior South Indian Congress Party politician, P. V. Narasimha Rao, as prime minister had therefore been calculated to appease the disenchantment of the South, among other regions, with the centre. Indirectly, the removal of stifling bureaucratic controls on industry would also serve the same end, particularly in the new information technology (IT) sector, which was already tied closely to the development of fast-growing South Indian cities such as Bangalore, Mysore and Hyderabad.

Arising in parallel with international tourism in the 1980s, the IT industry was another area of conspicuous growth in the private sector that had not been anticipated in the grand designs of post-Independence economic planners for the development of a modern economy based, classically, on heavy industry. With the effective abandonment of that model by the 1990s, however, IT was now poised to catapult India to recognition as a crucial niche of innovation and potential leadership in the global economy of the late twentieth century.

The rise of computers in the 1970s had already sparked a few entrepreneurs to start exploring India's potential to develop and export competitive IT services.¹⁰ But with the dramatic growth in the consumer culture of the West in the following decade the need for affordable IT

expertise and technical support had stimulated dramatic new development across India's IT sector.¹¹ By the end of the century, the leading Indian IT corporations were accessing exponentially expanding international markets for their innovation and value in the core business of software design and development. Importantly, IT-savvy Indian entrepreneurs and professionals were also taking a lead in innovating digitally enabled new business practices and services – so-called business process outsourcing (BPO) – that would soon spawn the now ubiquitous phenomenon of the Indian 'call-centre' in the worlds of global telemarketing, communication and technical support services.

Meanwhile, the unprecedented volume and sources of international investment that these growth industries were attracting to India provided capital and incentive to commission a wave of trend-setting new architectural designs, from both local and international architectural firms, to house and brand the expansive new facilities required. Typically concentrated in extensive but exclusive campuses on the outskirts of major IT hub-cities, the architecture of these IT parks and related developments, including new airports, hotels and luxury housing, was among the more conspicuous indexes that international commentators and investors began to watch closely as they charted and tested predictions of the rise of global India as an economic powerhouse in the twenty-first century.

In various flagship projects commissioned since the late 1990s, Tata Consultancy Services (TCS), for example, sought to represent its outward-looking yet firmly grounded stance as the IT arm of one of India's longest

Mario Botta,
office block for Tata
Consultancy Services,
Hyderabad, 2003.



established and most powerful global brands by commissioning internationally renowned designers recognized for their particular sensibilities for the craft and tectonics of construction. These included the New Yorkers Tod Williams and Billie Tsien, and the Swiss architect Mario Botta, whose striking office building for TCS in Hyderabad, completed in 2003, featured characteristically bold Platonic geometry clad in an exceptionally well-tailored sandstone veneer. Standing apart from the generic iterations of early twenty-first-century corporate modernism that typically cloaked these suburban IT enclaves, Botta's design answered the client's brief for a trophy building of international stature that also resonated – not unlike Safdie's Sikh centre at Anandpur – with a hint of almost nostalgic longing for a moment not yet forgotten in India's recent architectural history, when its multiple traditions of monumental masonry construction, both historic and modern, had been combined so poetically in the work of Indian contemporaries like Doshi and Raje, with whom Botta could identify as a fellow disciple of Le Corbusier and Kahn.

Doshi himself had contributed one of his most important works in that historically nuanced modernist tradition to Bangalore, the other crucial centre of future IT development in the South, where he had designed a southern campus for the Indian Institute of Management, completed in the mid-1980s. This had been an important precedent for some of the early R&D facilities designed for fledgling Indian software corporations in the following decade by local firms such as the Bangalore-based practice Chandavarkar & Thacker. But with the spectacular growth and success of their corporate clientele on the global stage, these architects were soon compelled to abandon these tendencies towards cultural and regional introspection, and engage alternatively, and in a relatively less critical manner, with current fashion in contemporary global architecture. Indeed, local architects were relatively powerless to guide in this intense demand-driven market, since Indian IT corporations and their international investors were generally intent on procuring architectural outcomes consistent with the norms and styles of the latest facilities in the USA and elsewhere in the highly competitive worldwide IT industry.

The work of the Mumbai-based firm of architect Hafeez Contractor for the maverick Infosys software corporation illustrates how 'impatient' such capital could be.¹² In a series of large-scale commissions for software development and training facilities designed in the early 2000s, Contractor experimented with a diverse array of forms, styles and newly available building materials. While the generic corporate globalism of California's Silicon Valley was the benchmark, these designs ranged dramatically from the wilder hi-tech exhibitionism of the Infosys Software Development Block 4 in Mysore to the ersatz neo-colonial classicism of the Infosys

Hafeez Contractor, facilities for Infosys, Mysore, 2005–6. Contrasting, simultaneously developed designs for the hi-tech style Software Development Block 4 (top), and the neoclassical style Global Education Center (bottom).



Global Education Center, also in Mysore – which, with its \$65.4 million price tag, was the largest IT training facility in the world at the time of its completion in 2005.

Beyond their boundary-pushing stylistic explorations and promiscuity, however, these developments had significant technical and logistical implications as well. On the one hand, the new palette of higher-tech building materials and systems required new construction methods and technologies to assemble them. On the other, a shortage of appropriately experienced architectural firms in India with the capacity to implement such large and sophisticated projects efficiently would oblige the development or importation of additional project management expertise. Hafeez Contractor's prolific Mumbai practice was an exception, with a staff of more than 300, including a team of professionally qualified associate architects and a host of digital draughting technicians, site supervisors and other in-house support staff. Another was the large commercial practice of C. P. Kukreja Associates in Delhi, which was playing a crucial role in the design and construction of the Delhi metro system in the first decade of the new century, in collaboration with Japanese and Australian partners. Through such associations with local practices, large and small, a growing list and range of fashionable foreign 'starchitects' – from Safdie and Botta, to Herzog & de Meuron, and Robert A. M. Stern – along with large multinational architecture and planning firms such as HOK and SOM were playing a new and conspicuous role in India in the design of prestigious new commercial and infrastructure projects.¹³ In less high-profile developments, however, large corporate practices based in advanced Asian business centres such as Singapore, Kuala Lumpur, Taipei and Shanghai were also being engaged with increasing frequency to provide both international architect-designed cachet and the project-management support that the associated Indian firms required. At the same time, a growing trend among younger architects returning from overseas studies

and work experience has been to establish more nimble corporate style practices from the outset, in collaboration with international partners.¹⁴

Despite ostensible similarities between these transnational professional collaborations in the early twenty-first century, and the cosmopolitan internationalism of India's modern architectural scene in the 1950s and '60s, however, both the conditions and the prospects for broader developmental outcomes from this exchange are substantially different. With the effective demise of significant state patronage and the former grand ideals of a nation-building project, under neo-liberal policy, the Indian architectural profession now serves the requirements of an open market of private, corporate and institutional clients no longer confined or necessarily aligned within local or national frameworks. Buoyed by the transnational flows of new, and newly distributed, capital, less and less is their design thinking bound by the economic means, if not the needs, of local communities and environments, or challenged creatively by such constraints. Imported processes and materials address immediate market desires and construction exigencies but do not yet arise from or engage local building resources and practices that are known to be 'sustainable' in the long term, in the fuller environmental, social and economic dimensions of that overarching concern of the global architectural profession today.

Ironically, some of the most direct efforts by architects and their clients to engage with global environmental concerns illustrate the increasingly worrying rupture of this fast-evolving catch-up culture of global-focused contemporary design and construction from its local and regional contexts. Exploiting the progressive symbolism of hi-tech approaches to the design of an environmentally responsive architecture for the India of the future, and typically measured by international standards such as the American LEED rating scheme, the aspiration for ever 'greener' building credentials is another marketable and growing trend in Indian corporate architecture. The bias for hi-tech solutions, however, with the formal allure and techno-rationalist assumptions that underpin it, needlessly overlooks the extensive experience in developing passive low-cost strategies for the design of energy-efficient buildings and cities that so many of the key players have incorporated into India's own modern architectural tradition over the past half-century.

In a similarly disjunctive manner, the hi-tech allure and monetary rewards of working in the growing architectural sector of India's globe-straddling, digitally based business process outsourcing industry is at risk of effectively exporting a growing proportion of the best home-grown technical talent in the Indian profession into 'virtual' foreign service. Pioneering architectural BPOs such as Delhi-based Satellier mirrored

some of the commercial success of the Indian IT industry itself. In the first five years after its launch in 2001, focusing exclusively on providing online design development and documentation services to the global architecture, engineering and construction industry, Satellier was engaged on several hundred major projects under design and construction on five continents and within five years of its establishment in 2001 it had grown from just three to more than three hundred employees. Yet such spectacular international engagement and impact from a quasi-professional standpoint had almost no direct connection with, or impact on, the architecture that was actually being built in India in that same period.¹⁵

Regional-Cosmopolitanism

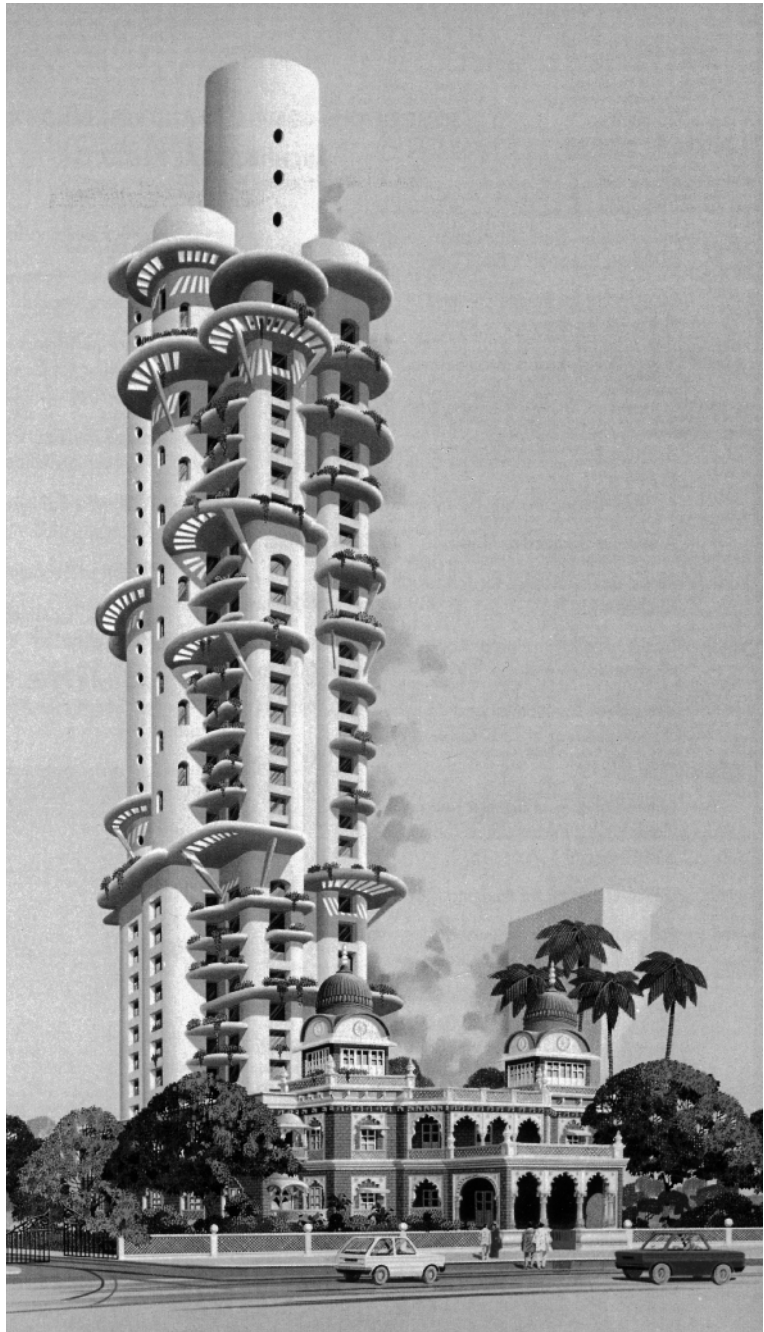
‘Region’ is the many-dimensional notion that ultimately and inevitably seems to provide the anchorage in which the technical, aesthetic and ethical concerns of modern architecture are still demonstrably being pursued in the India of the early twenty-first century.

While the problematic disconnection with region inherent in contemporary global architecture is perhaps epitomized, in the case of India, by Hafeez Contractor’s futuristic designs for Infosys, quite the opposite can be argued about that prolific architect’s sense of connection with the metropolis and urban region of Bombay/Mumbai, in which he has built the large majority of his work over the past three decades. Exercising intimate local social and technical knowledge, with a knack and sense of panache most comparable in the local Bombay tradition to the work of I. M. Kadri a generation earlier, Contractor has been remarkably successful in realizing the aspirational fantasies of his Bombay clients for stylish high-rise residential and office towers – modernist, ‘pop’-modernist or ‘post’ – in a manner that still distinctly situates them in their very particular urban context.

This palpable sense of ‘glocal’ tension and play, between the global and the parochial, was emphasized, tellingly, when Contractor’s ubiquitous towers were appropriated as a readymade film set for the Academy Award-winning feature film *Slumdog Millionaire* (2008). In this gritty rags-to-riches fable set in post-liberalization Mumbai, the film-makers staged the human drama and the colliding dreams and iniquitous ambitions of its characters within the architectural frame of a half-constructed apartment building with the competing styles and profiles of other Contractor-designed buildings crowding the skyline rising in the backdrop.

To draw a further analogy between architecture and cinema that may be helpful in discerning the particular character of regionalism that

Hafeez Contractor,
proposal for high-rise
residential tower in
Colaba, Mumbai,
c. 1996, rendered
perspective drawing.



Mathew & Ghosh
Architects, RRM
2 @ B8 house,
Bangalore, 2009.

Studio Mumbai,
Palmyra House,
Nandgaon,
Maharashtra,
2007.



defines this work, Contractor's brash yet masterfully assured brand of popular Mumbai architectures could best be compared with the larger-than-life films produced by Mumbai's own 'Bollywood' film studios. Extending this analogy to the broader scene of contemporary architectural practice in Mumbai, on the other hand, the work of sophisticated smaller practices such as Rahul Mehrotra Associates, Shimul Javeri Kadri, Quaid Doongerwala and the eponymous Studio Mumbai, could be seen as the counterpart to the so-called parallel cinema associated with India's more artistically esoteric film makers. For these architects, region is a more conscious object of design focus compared to Contractor's immersive metropolitanism, yet interpreted from a cosmopolitan cultural standpoint that inherently distances them from that object at the same time. Situating themselves between but apart from the other seemingly contradictory spheres of current global exchange within Indian architecture – where the new glass-clad temples of corporate India rise adjacent to the export-revived temple stone yards of old – these self-consciously critical practitioners strive creatively to work against the current of such global flows, with the patronage of other like-minded elites and NGOs. Yet, both architects and clients are global individuals themselves who tend to move fluidly between India and other parts of the world, where their professional advocacy engages them and their work with different audiences.

Rahul Mehrotra's career is not untypical. A graduate of CEPT who subsequently studied at Harvard, he initially worked with Charles Correa before establishing his own practice in Mumbai in the early 1990s. In the early 2000s he began to teach as well, and now divides his time between the Mumbai practice and a professorial appointment at Harvard's



Anagram
Architects, South
Asian Human Rights
Documentation
Centre, New Delhi,
2005, detail.

Aniket Bhagwat,
Devi Art Foundation,
Gurgaon, Haryana,
2008, detail.

GSD. Focusing consistently on small residential, commercial and institutional commissions, primarily in the region of Mumbai, the practice had evolved a distinctly chaste yet picturesque aesthetic by the end of its first decade, in which spatial and tectonic innovation continued to be mediated by the materials and the climate of the place, and the labour-intensive modes of production by which most buildings are still constructed in India today.

Similar histories and sensibilities inform the work of fellow regional cosmopolitans based in other established and emerging centres of architectural education and practice in India. In Delhi and Ahmedabad, where the practice of regional modernism had flourished a generation earlier, patterns and principles carried forward from the work of Rewal, Doshi and Raje, among others, are infused and renewed with newer materials, forms and techniques to continue interpreting the poetic possibilities of a regional cosmopolitanism in the India of today. Outside the urban centres, the legacy of Laurie Baker is carried forward in regional and rural localities where activist-practitioners such as Yatin Pandya in Gujarat and Anupama Kundoo in Tamil Nadu resist the thrall of global norms by redeploing waste materials and vernacular methods in novel ways, and by engaging the unskilled labour of local communities in

design/build processes that posit alternative models for a more sustainable way of building and dwelling in connection with place. Limited primarily to smaller private and NGO-funded institutional commissions, however, this aesthetically refined and ethically minded avant-garde have rarely had significant opportunities to make an impact on the development of public space and infrastructure more broadly.¹⁶

Since the 1990s the languages of modern architecture that continued to be practised in India with such poetry and sensitivity by these sophisticated new generations of architects have seemingly lost the capacity, if not the ethical intent, to embrace and shape community to the same degree that the generation of their teachers had so eloquently articulated in their work and their words for almost half a century previously. For

Rahul Mehrotra
and associates,
accommodation
for the Tata Institute
of Social Sciences,
Tuljapur, Maharashtra,
2000.

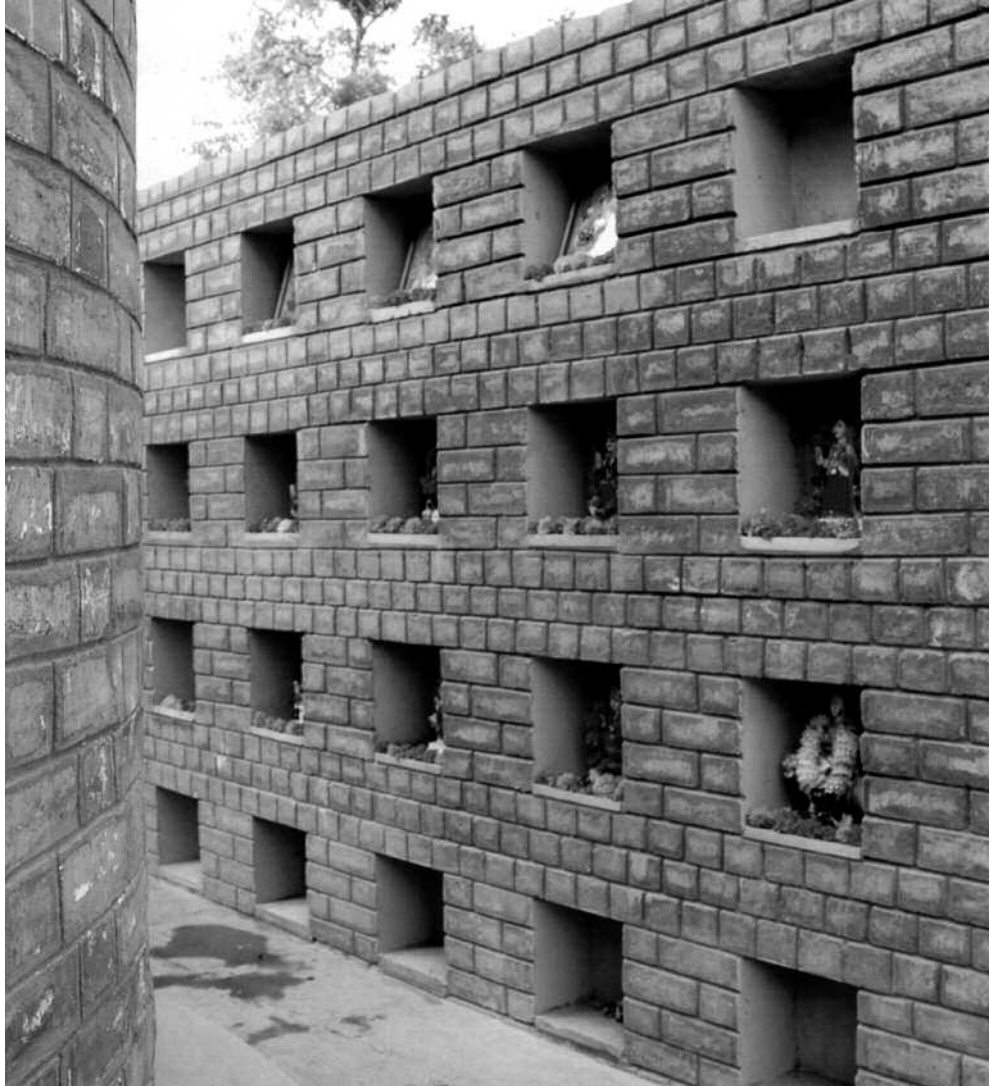


those, like Mehrotra, who had made a point from early in their careers to consider this more carefully and critically than most, and who were now assuming the leadership of the discipline in architectural education and critical discourse, it appeared that modern architecture in India had become a distinct tradition in its own right, with its own history and its own increasingly exclusive taste community.¹⁷ But it also seemed to be tacitly conceded that modern architecture was at best only equal, if not irrelevant, to the new rhetoric and images of community, faith and culture offered by the neo-conservative architectures of *Hindutva* on the one hand, and the slick corporate-style globalism of the new world economic order on the other.

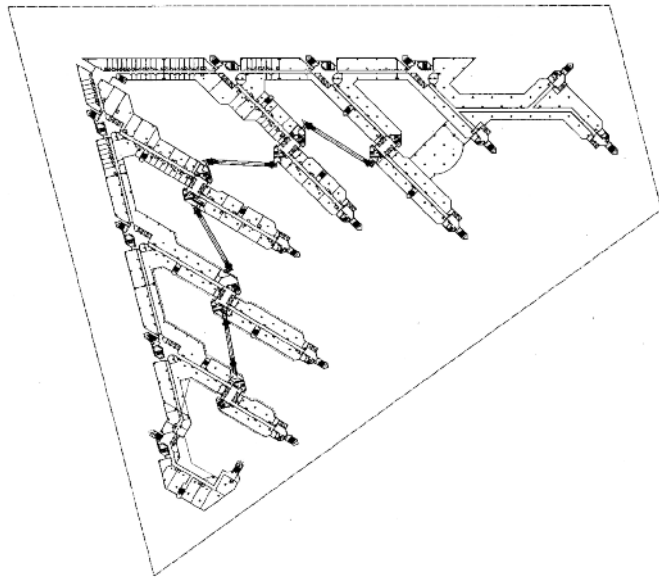
A rare project in this period that boldly attempted not just to command the cosmopolitan middle ground between these opposing poles of cultural affinity and orientation, but also to transcend them in a triumphantly original synthesis, was the extraordinary complex for the Bharat Diamond Bourse that Balkrishna Doshi and his Ahmedabad practice designed and substantially constructed in Bombay in the mid-1990s. As much as a third of the global diamond trade is controlled by a tight-knit guild of traders and couriers who have traditionally circulated between Bombay and a clandestine network of smaller towns and villages in rural Gujarat where most of the world's precious diamonds are cut and polished. For the doyen of Gujarat's modern architects, now in his late 60s, the commission to consolidate this worldly yet reclusive regional industry in a single urban complex in the heart of India's largest metropolis presented a fascinating new challenge to deal with urbanism at a density and scale unprecedented in his earlier work. Simultaneously, it allowed him to confront the ostensibly new phenomenon of 'globalism' through a uniquely local cultural lens. A further motivation in accepting

Yatin Pandya
and Vastu Shilpa
Foundation, Manav
Sadhna Activity
Centre, Ahmedabad,
2005–6, detail of
shrine wall built of
concrete blocks made
with recycled fly ash.

this unlikely commercial commission, for the veteran township and institution builder, was an opportunity to engineer broader social outcomes through an extraordinary architectural scheme whose 25-acre footprint was conceived to be a catalyst and model for an integrated urban design for the whole 120-hectare site of the Bandra-Kurla complex of reclaimed development land on which it would be built. But, with a brief that called for more than 300,000 square metres of floor area and close to 4,000



B. V. Doshi and associates, Bharat Diamond Bourse, Mumbai, 1993–7, view and plan of partially constructed scheme.



individual offices, it was a truly colossal undertaking for what had been a small atelier-style regional practice.¹⁸

Doshi's involvement in the Bourse project was cut short in 1998, when construction was halted, for financial reasons, at an advanced stage. Once completed by others several years later, however, the craggy profiles of the complex had been hermetically sealed and secured and the outcome appeared more like the fortified bastion of commerce that it was – yet another exclusive enclave of wealth and privilege seemingly besieged by

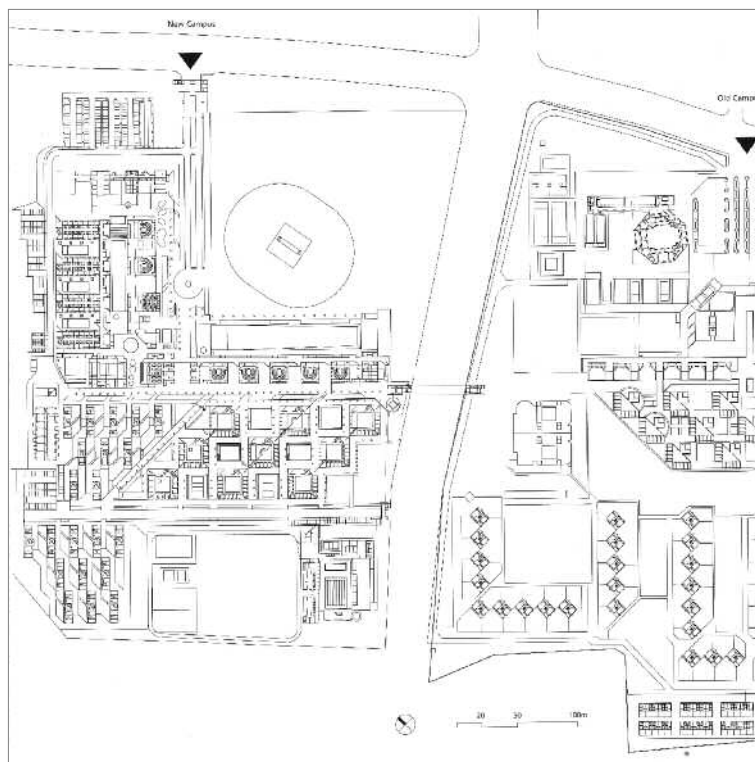


Ship-breaking at
Alung, Gujarat, 1986.

the city that its designers had conceived it to enrich, and the barbarous forces of the disenfranchised urban slum-dwellers at its gates.¹⁹ In the arrested state that the original architects were compelled to leave it, the transcendental force and promise of the project was perhaps more potent.

Among the multiple analogies that had informed the design concept for the Bourse was a parallel that Doshi and his team had drawn between the local/global networking and connectivity of India's diamond-processing industry and the extraordinary local resourcefulness but global dimensions of its informal waste-recycling industries, one of the main nodes of which was centred in the slums adjacent to the project. Another crucial site was the extraordinary ship-breaking and recycling industry that was concentrated at Alung on Gujarat's eastern shore, just a few kilometres from some of the unassuming Gujarati villages where a large percentage of the world's diamonds are cut and polished. At any one time literally hundreds of supertankers and other giant ocean-going ships that once fed the industrialized world are being cannibalized and recycled into steel and other precious materials with which global India's new developments are being built. The formal analogy between the broken hulks of the ships at Alung and the brave new urbanism that Doshi and his team were attempting to build in the reclaimed backwaters of inner-city

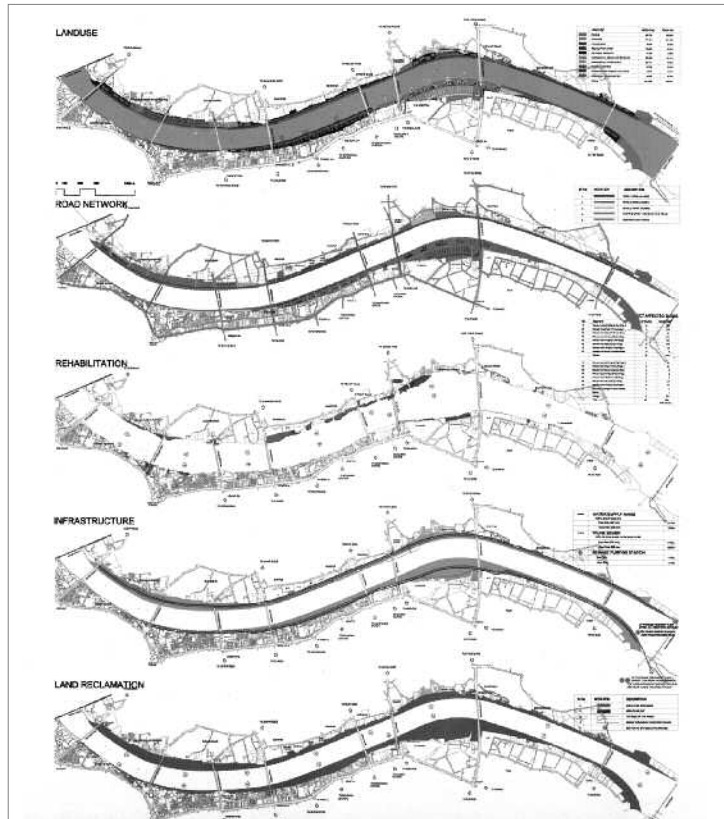
Bimal Patel and
HCP Design, Planning
and Management,
campus extension
for Indian Institute
of Management,
Ahmedabad, 2001–9,
overall plan showing a
portion of the original
campus on the right,
and image of new
campus building.



Mumbai was clear, compelling and, somehow, strangely inspiring as well.

If the ill-fated Bharat Diamond Bourse project could be regarded as a swansong for the modernist ethos in contemporary Indian architecture, which was still striving passionately to innovate and evolve in the final years of the twentieth century, the extension to the original campus for the Indian Institute of Management that was completed in Ahmedabad ten years later by the emerging leader of the next generation of Ahmedabad's architectural aristocracy, Bimal Patel, was a project that represented in no uncertain terms the marked changes in the economic and the cultural landscapes of India that were already unfolding in the new century. In this cool and compact concrete annexe to Kahn's and Rajé's original masterwork – analogous in plan to a smarter, smaller micro-chip-like

Bimal Patel and HCP,
Sabarmati Riverfront
Development,
Ahmedabad,
1997-ongoing,
plans and partially
constructed
embankment,
photo 2011.



reduction of the formalisms and comparatively spacious layout of the older brick campus – Patel deftly homogenized and repackaged the modernist traditions of both Le Corbusier and Kahn in Ahmedabad in an astonishingly crisp and clean synthesis. Somehow, however, the result was mute, if not soulless: a respectful eulogy to past masters and their legacies, whose poetry no longer seemed to inspire.

Where Patel's own passion and abiding credentials as a modernist rationalist were more demonstrably expressed was in his simultaneous operations on the fabric of Ahmedabad itself in his capacity as a consulting planner and urban designer. Major infrastructure projects, such as the Sabarmati River Embankment development designed and implemented by Patel and his urban design team in the thriving multidisciplinary corporate practice that his father, Hasmukh C. Patel, had been growing in Ahmedabad since the 1960s, were transforming the cultural and the economic relationships of the city to water, and creating vast acreages of prime new commercial property into the bargain. These were the architectural and civic faces of even larger-scale mega-projects of environmental and social engineering, such as the Narmada Big Dams project, completed since the 1990s, that were contributing locally to what was increasingly described with pride or envy as the Gujarat model of regional development under neo-liberal economic policies.

From Temples to Toilets

Built and projected images of the Gujarat miracle – not least the fresh and decisive yet still almost comfortingly familiar contemporary architecture and urbanism of Bimal Patel – were important planks in the platform of Narendra Modi, the controversial former chief minister of Gujarat, who led the right-wing BJP party to a landslide victory in the national election of May 2014. Claiming government with an outright majority for the first time, it was only just two decades since the same party had led its *ratha yatra* across India to rouse the counter-modern passion of the nation's regions against the secular modern culture and values that still dominated the political centre. The regions had finally claimed the centre for themselves, but this time they had ridden on a promised wave of economic development that would sweep the nation as a whole, as it had already graced Gujarat. But even as the former Hindutva champion and prospective new leader was working his way to New Delhi on his electoral campaign, Modi beseeched his supporters to 'Build toilets first and temples later'. The rhetoric was already shifting away from cultural chauvinism to the prerogatives of social development and change. As both Gandhi and Nehru had understood, and Indira Gandhi in her time too, gross social

inequity was unsustainable. Before genuine economic take-off was possible, it was still the obligation of true leaders to address basic development – the struggle for basic human dignity and the right to good health and essential needs and amenities – first.²⁰

India is poised to confirm its place on the world stage as one of the largest of the new economic powers that is recentring the global economy in Asia in the early twenty-first century. But, in contrast to postcolonial India's critical early encounter with the Eurocentric mastery of mid-twentieth-century international modernism, global India's long-anticipated moment of economic take-off is already engaging Indian architects and builders in a very different constellation of transnational competition, influences and exchange. What substantive architectural legacies will emerge from the mirage of present prospects and possibilities are, as yet, uncertain.

To draw the present narrative to a close, we will conclude this necessarily cursory discussion of the present and the very recent past with what seems to us to be an exemplary statement of the continuing place and relevance of modern architecture in India today. The Ashwinikumar Crematorium, built on the banks of the Tapti River in Surat, Gujarat, at the turn of the present century, was one of the first significant commissions designed by Gurjit Singh Matharoo, a product of CEPT and the local professional design culture of Ahmedabad. Matharoo's visceral work still

Gurjit Singh
Matharoo,
Ashwinikumar
Crematorium, Surat,
Gujarat, 1996–9.



has a strong, unapologetic sense of pedigree in the Corbusian tradition of postcolonial Indian architectural modernism. More so than most of his contemporaries, however, Matharoo's commissions have enabled him also to bring architecture into the realm of institutional facilities and infrastructure that have rarely been touched by a socially engaged and responsive designer.²¹ In this crematorium, the struggle between reason and rhetoric that we have recounted across the previous century and a half seems to have arrived at a dead heat. On one hand, this pyral infrastructure is an example of the continuing thread of rationalist/utilitarian design thinking in modern Indian building and public works since the mid-nineteenth century. But, simultaneously, it is an equally ingenuous expression of the 'non-modern' thread of resurgent religious beliefs and cultural practices that have redefined the recent political past in India, with the model of recent seemingly transformative development in Gujarat poised for redeployment nationwide. In this historically and culturally specific context, the crematorium has an almost dangerous beauty about it, precisely because it addresses death so boldly and directly through its Brutalist modernist language, as an everyday fact of the cycle of life in a Hindu world view. It is quite free, therefore, from the connotations and associations one might make of such a building in the context of modern European history. With rare exceptions, it seems, modern India has not been absorbed in the cult of memory and its embodiment in the architecture of the memorial to the same degree as have modern Europe and so many other modern nations that emerged from prior European domination in the postcolonial era. Arising equally from the creative responses of architects to the competing aspirations for social change and cultural cohesion of modern India, modern architecture still remains a vital conduit through which other forms of contemporary cultural production and practice continue to be played out and tested – a project that is, as yet, unfinished.

References

Introduction

- 1 Quoted in Vikramaditya Prakash, *Chandigarh's Le Corbusier: The Struggle for Modernity in Postcolonial India* (Seattle and London, 2002), p. 9.
- 2 See, for instance, Alison Smithson and Peter Smithson, 'The Function of Architecture in Cultures-in-Change', *Architectural Design* (April 1960), pp. 149–50.
- 3 C. Correa, 'Programmes and Priorities', *Architectural Review* (December 1971), pp. 329–31; C. Correa, 'Mulk Raj Anand at 100', in *Mulk Raj Anand: Shaping the Indian Modern*, ed. Annapurna Garimella, special issue of *Marg*, LV1/4 (June 2005), pp. 66–73.
- 4 Prakash, *Chandigarh's Le Corbusier*, pp. 19–20.
- 5 Jawaharlal Nehru, 'Speech at the Seminar and Exhibition of Architecture', New Delhi (1959), in *Jawaharlal Nehru's Speeches*, vol. IV: 1957–1963 (New Delhi, 1964), p. 176. As cited in S. Khilnani, *The Idea of India* (New Delhi, 1997), p. 135.
- 6 Prakash, *Chandigarh's Le Corbusier*, pp. 10–20.
- 7 The growing literature on the postcolonial architecture of India includes several more or less comprehensive surveys, in addition to monographs on individual architects. There is a comparatively larger literature on the architecture and urban design of British colonial India, although little of this deals in any depth or detail with the final decades of colonial-modern building and development. This includes well over twenty book-length works to date wholly or substantially focused on the architecture and urbanism of colonial South Asia: see Select Bibliography.
- 8 K. R. Sitalakshmi uses the term 'differential modernities' to characterize the multifactorial nature of the architectural developments observed in a close-grained study of the architectural history of Madras (Chennai) since the nineteenth century: K. R. Sitalakshmi, 'Architecture of Indian Modernity: The Case of Madras', PhD thesis, Anna University, Chennai, 2008. We wish to adopt this apposite term here to describe what earlier might have been deemed as a 'dialectical' phenomenon but which also captures the important nuances of 'difference' so central to subsequent postcolonial debates about the situated nature of cultural production and its politics.
- 9 As quoted in the permanent exhibition of Gandhi's life and work, Gandhi Smarak Sangrahalaya, Ahmedabad. Transcribed by P. Scriver, January 2008.
- 10 M. K. Gandhi, 'Talk with Press Correspondents, 28 May 1946', *Harijan* (23 June 1946), in *Collected Works of Mahatma Gandhi*, vol. LXXXIV (Ahmedabad, 1981), p. 226. As cited in S. Khilnani, *The Idea of India* (New Delhi, 1997), p. 127.
- 11 See, for example, W. R. Curtis, *Le Corbusier: Ideas and Forms* (London, 1986); and Vikram Bhatt and Peter Scriver, *After the Masters: Contemporary Indian Architecture* (Ahmedabad and New York, 1990).
- 12 For a critical and theoretical discussion of conceptual, methodological, organizational and sociological dimensions of these colonial patterns, beyond the scope of the present study, see Peter Scriver and Vikramaditya Prakash, eds, *Colonial Modernities: Building, Dwelling and Architecture in British India and Ceylon* (London, 2007).
- 13 See Khilnani, *The Idea of India*, for a concise study of Nehru's ideals.
- 14 India's exchange with the Soviet Union was, however, more critical and selective than has

often been supposed: Khilnani, *The Idea of India*, pp. 76–7. See also Ramachandra Gupta, *India after Gandhi: The History of The World's Largest Democracy* (London, 2007), pp. 201–26.

- 15 For the 'kinetic' versus the 'static' dimensions of contemporary Indian urbanism, in the case of Mumbai, see Rahul Mehrotra, *Architecture in India since 1990* (Mumbai, 2011).
- 16 Bruno Latour and Catherine Porter, *We Have Never Been Modern* (New York, 1993).

chapter one: Rationalization: The Call to Order, 1855–1900

- 1 Respectively, these were the so-called Permanent Settlement of Bengal enacted in 1793 and Thomas Macaulay's seminal Minute on Education of 1835. The contexts and consequences of both these reforms have spawned a huge specialist literature. For a concise critical overview, see Sugata Bose and Ayesha Jalal, *Modern South Asia: History, Culture, Political Economy* (London and New York, 1998), pp. 67–87.
- 2 Ernest B. Havell, *Encyclopaedia of Architecture in the Indian Subcontinent*, vol. 11: *Medieval and Later* (New Delhi, 2000), p. vi. This volume is a reprint of Havell's *Indian Architecture: Its Psychology, Structure, and History from the First Muhammadan Invasion to the Present Day*, first published in London in 1913.
- 3 Opposing poles of this debate are argued in classic studies such as D. K. Fieldhouse, *The Colonial Empires: A Comparative Survey from the Eighteenth Century* (London, 1966), for the affirmative view; and K. M. Panikkar, *Asia and Western Dominance: A Survey of the Vasco da Gama Epoch of Asian History, 1898–1945* (London, 1953), for the revisionist nationalist account. See S. Sarkar, *Modern India, 1885–1947* (New Delhi, 1983), for a later, more balanced appraisal of the Indian experience in particular.
- 4 Governor General's Minute of 12 July 1854. Home (Public) 'A' Proceedings, 11 August 1854, no. 51.
- 5 As will be discussed in more detail later in this chapter, the prescriptive fostering of specific quasi-traditional types and classifications of labour was a crucial mode of such economic control that was manifested in the fields of building and design. See Arindam Dutta, "Strangers within the Gate": Public Works and Industrial Art Reform, in *Colonial Modernities: Building, Dwelling and Architecture in British India and Ceylon*, ed. P. Scriver and V. Prakash (London and New York, 2007), pp. 93–114.
- 6 Bose and Jalal, *Modern South Asia*, pp. 48–56.
- 7 A final damage assessment report was published in the PWD Proceedings in August 1860, compiled on the basis of detailed surveys carried out by the provincial works departments of Bengal, the North Western Provinces and the Punjab. PWD (General) 'A' Proceedings, 31 August 1860, nos. 160–64.
- 8 E. Stokes, *The Peasant and the Raj* (Oxford, 1978).
- 9 Thomas Metcalf, *The Aftermath of Revolt* [1961] (New Delhi, 1990), pp. xiii, 62; Bose and Jalal, *Modern South Asia*, pp. 88–96.
- 10 Percival Spear, *A History of India*, vol. 11: *From the Sixteenth Century to the Twentieth Century* (London, 1978), p. 144. The veins of Utilitarianism in the British Indian polity ran deep. During the first half of the nineteenth century the utilitarian philosophy had been directly infused into the civil service of the Company by various well-placed exponents of that distinctly English tangent of Enlightenment thought. Operating at different levels of the administrative hierarchy, these included at least one Governor General with close links to Jeremy Bentham, as well as John Stuart Mill himself, who joined the London Offices of the Company as a political correspondent in 1823. The classic study of this important philosophical thread in the political and institutional histories of colonial India is: Eric Stokes, *The English Utilitarians and India* (Oxford, 1959).
- 11 Stokes, *The English Utilitarians and India*, p. xvi.
- 12 This influential view has been argued extensively by the historian Thomas Metcalf, including the case for architecture as one of the more pervasive and affective ideological

representations of the imperial regime. See: Metcalf, *The Aftermath of Revolt*; Metcalf, *An Imperial Vision: Indian Architecture and Britain's Raj* (London, 1989); Metcalf, *The New Cambridge History of India*, vol. III, part 4: *Ideologies of the Raj* (New Delhi, 1995), although more recent scholarship has raised the cautionary criticism that it possibly over-represents the political intentionality and potency of the colonial regime while overlooking the role of indigenous agendas and agency in the production and appropriation of the colonial built environment. See Mrinalini Rajagopalan and Madhuri Desai, 'Introduction: Architectural Modernities of Imperial Pasts and Nationalists Presents', in *Colonial Frames, Nationalist Histories: Imperial Legacies, Architecture and Modernity*, ed. Mrinalini Rajagopalan and Madhuri Desai (London, 2012), pp. 27–46.

- 13 James Fergusson, *A History of the Modern Styles of Architecture: Being a Sequel to the Handbook of Architecture* (London, 1862). In this work, which was first published fourteen years earlier than his definitive *History of Indian Architecture* (London, 1876), Fergusson devoted the better part of a chapter to the topic of European colonial architecture in India. His appraisal of the respective built legacies of the Portuguese, Spanish, Dutch, French and British was not altogether disapproving, but framed within a taxonomic and encyclopedic account of the global diffusion of modern 'European' tendencies that tacitly precluded any idea that these buildings could also be regarded as 'Indian' architecture. See also Peter Scriver, 'Stones and Texts: The Architectural Historiography of Colonial India and its Colonial-modern Contexts', in *Colonial Modernities*, ed. Scriver and Prakash, pp. 27–50.
- 14 'East India Revenue Accounts', *Hansard (Commons)*, CLXXXIV (19 July 1866), pp. 1079–137.
- 15 *Ibid.*, pp. 1091–2.
- 16 Shanti Jayewardene-Pillai, *Imperial Conversations: Indo-Britons and the Architecture of South India* (New Delhi, 2007), pp. 95–8.
- 17 D. R. Headrick, *The Tentacles of Progress: Technology Transfer in the Age of Imperialism, 1850–1940* (New York and Oxford, 1988), pp. 175–6.
- 18 The more straightforward task of extending the canal across the dry plains of the Ganges was to be the job of locally recruited assistant engineers who were brought to the works at Roorkee for a basic course in civil engineering and hands-on training in hydraulics. The wider need for such a course was quickly recognized, and a permanent college was proposed in 1847, formally admitting its first students the following January. Despite the dominance of the civil and mechanical engineering professions in the technical development of nineteenth-century Britain, professional training back 'home' was still firmly rooted in the practical apprenticeship tradition. Arun Kumar, 'Colonial Requirements and Engineering Education: The Public Works Department, 1847–1947', in *Technology and the Raj: Western Technology and Technical Transfers to India, 1700–1947*, ed. R. MacLeod and D. Kumar (New Delhi, 1995), pp. 216–32; K. V. Mital, *History of Thomason College of Engineering* (Roorkee, 1986).
- 19 Gurdial Singh Khosla, *A History of Indian Railways* (Allahabad, 1988), pp. 6–12; Sir Penderel Moon, *The British Conquest and Dominion of India* (London, 1989), p. 661.
- 20 *Professional Papers in Indian Engineering*, 1/2 (February 1864); William L. Glover, *Making Lahore Modern: Constructing and Imagining a Colonial City* (Minneapolis, MN, 2008), pp. 23–4, 209, n. 79.
- 21 V. T. Oldenburg, *The Making of Colonial Lucknow, 1856–1877* (Princeton, NJ, 1984), pp. 42–8.
- 22 For buildings as 'classifying devices', and the emergence of the 'modern' institutional building types of the late eighteenth and early nineteenth centuries that were subsequently diffused throughout the colonial empires of Europe, see T. Markus, ed., *Order in Space and Society: Architectural Form and its Context in the Scottish Enlightenment* (London, 1982); and T. Markus, *Buildings and Power* (London, 1993).
- 23 Major R. Strachey RE, 'Report on the Proposed New Civil and Military Stations at Allahabad, Calcutta, April 18, 1858' (Calcutta, 1858), IOR (India Office Records) MSS

Eur F127/165. Richard Strachey was an interesting exemplar of the PWD executive in this period: a soldier-technocrat whose family had served India for several generations. Richard's father, Edward Strachey, was a close colleague of the utilitarian philosopher John Stuart Mill in the Home Judicial Department of the East India Company. Richard and his brother John – the most powerful member of the Indian Civil Service in the 1870s – were thus a direct conceptual link between the philosophic radicalism of their father's generation of colonial functionaries in the service of the Company and the more pragmatic, technocratic vein of Utilitarianism that was ultimately applied forthright in the administration and development of India under Crown rule. With the all-rounder academic and technical education that British military engineers typically gained in their officers' training academies, Richard was a veritable Victorian renaissance man with consuming professional interests parallel to his engineering career in both the arts and the sciences. H. M. Vibart, *Addiscombe: Its Heroes and Men of Note* (London, 1894).

- 24 For the social impact of the railways on Indian urbanism, see A. D. King, *Colonial Urban Development: Culture, Social Power and Environment* (London, 1976); Oldenburg, *The Making of Colonial Lucknow*; and Naryani Gupta, 'Military Security and Urban Development: A Case Study of Delhi, 1857–1912', *Modern Asian Studies*, v (1971), pp. 61–7.
- 25 See in particular chapter 2: 'The City Must be Safe', in Oldenburg, *The Making of Colonial Lucknow*, pp. 27–61.
- 26 Quoted in Norma Evenson, *The Indian Metropolis: A View toward the West* (New Haven, CT, and London, 1989), p. 114.
- 27 Philip H. Davies, *Splendours of the Raj: British Architecture in India, 1660 to 1947* (London, 1985), pp. 155–64; S. Dwivedi and R. Mehrotra, *Bombay: The Cities Within* (Mumbai, 1997).
- 28 Jayewardene-Pillai, *Imperial Conversations*, pp. 194–5. For a useful comparative discussion of the planning histories of the three rival metropolises, see Evenson, *The Indian Metropolis*, pp. 113–56.
- 29 Indeed, economic independence evidently emboldened Governor Frere's administration and its wealthy Parsee and Hindu partners to ignore the more laborious and potentially restrictive procedures for design approval and budget sanction that public projects would usually be required to follow, up through the PWD hierarchy in Calcutta and back. Jayewardene-Pillai, *Imperial Conversations*, p. 237.
- 30 Davies, *Splendours of the Raj*, pp. 155–64. William Burges was another celebrated London architect who had aspirations for the colonial expansion of his practice, but his design for the Bombay School of Art (c. 1865) was evidently never built. Gavin Stamp, 'British Architecture in India, 1857–1947', *Journal of the Royal Society of Arts*, CXXXIX (May 1981), pp. 357–79.
- 31 J. G. Medley, 'Anglo Indian Architecture', *Professional Papers in Indian Engineering*, 1 (May 1864).
- 32 Jayewardene-Pillai, *Imperial Conversations*, p. 194.
- 33 T. R. Smith, 'Architectural Art in India', *Journal of the Royal Society of Arts*, XXI (7 March 1873), pp. 278–87.
- 34 Smith had gone out to India in the winter of 1864–5 to supervise the construction of his winning design, but the current status of any building he may have constructed in Bombay is unclear. As one of the very few professionally accredited architects actually to have practised in India in that period, even briefly, Smith was for many years to be regarded as the reigning expert on 'modern' Indian architecture in professional circles back home. See Smith, 'Architectural Art in India', pp. 278–87; Stamp, 'British Architecture in India, 1857–1947', p. 358; Christopher W. London, 'The Prag Mahal and Henry St Clair Wilkins' Architecture', *Marg*, L1/4 (June 2000), pp. 40–57.
- 35 For a detailed outline of Wilkins's work and career, see London, 'The Prag Mahal'. See also Davies, *Splendours of the Raj*.
- 36 In Britain, the initial report of the Royal Commission on the Sanitary Condition of the

- Army published in 1858 had been followed up by the General Report of the Commission appointed for 'Improving the Sanitary Condition of Barracks and Hospitals' published in 1861. Both these commissions were driven behind the scenes by Florence Nightingale. Jeremy Taylor, *Hospital and Asylum Architecture in England, 1840–1914: Building for Health Care* (London, 1991), pp. 78–84. A similar report on the Indian Army followed two years later: Report of the Commissioners Appointed to Enquire into the Sanitary State of the Army in India, Parliamentary Papers xix, 1 (1863). A synopsis and excerpts of the final Royal Commissioners' report was published in 'Sanitary State of the Army in India', *The Builder*, xxviii/1178 (2 September 1865), pp. 623–4.
- 37 These regular troops and officers of the British Army were to serve rotations in India, supplementing the far more numerous Indian troops and British officers of the restructured Indian Army. This was the largest concentration of British troops outside the United Kingdom in the second half of the nineteenth century. Radhika Ramasubban, 'Imperial Health in British India', in *Disease, Medicine and Empire*, ed. Roy McLeod and Milton Lewis (New York, 1988), p. 38.
- 38 Jayewardene-Pillai, *Imperial Conversations*, p. 279.
- 39 Peter Scriver, 'Rationalization, Standardization and Control in Design: A Cognitive Historical Study of Architectural Design and Planning in the Public Works Department of British India, 1855–1901', PhD thesis, Technische Universiteit Delft, 1994, pp. 352–86.
- 40 J. G. Medley, 'Indian Barracks', *Professional Papers on Indian Engineering*, ii/7 (May 1865).
- 41 A catalogue of the holdings of the Thomason College Library, published some years later, lists several titles on sanitary engineering published in the first half of the nineteenth century that may also have been available to Medley. These include: W. S. Inman, *Ventilation, Warming and Transmission of Sound: Abstract of Parliamentary Report* (London, 1836); N. Arnott, *On Warming and Ventilating* (London, 1838); C. Tomlinson, *Warming and Ventilation of Buildings, Mines and Ships* (London, 1850); C. J. Richardson, *On Warming and Ventilation of Buildings*, 3rd edn (London, 1856); A. Morin, *Etudes sur la ventilation*, 2 vols (Paris, 1863). See *Catalogue of the Central Library of Thomason Civil Engineering College* (Roorkee, 1913), s.v. 'sanitary engineering'.
- 42 John M. Weiler, 'Army Architects: The Royal Engineers and the Development of Building Technology in the Nineteenth Century', PhD thesis, University of York, Institute of Advanced Architectural Studies, 1987; J. Weiler, 'Colonial Connections: Royal Engineers and Building Technology Transfer in the Nineteenth Century', *Construction History*, xii (1996), pp. 3–18.
- 43 Anthony D. King, *Colonial Urban Development: Culture, Social Power and Environment* (London and Boston, MA, 1976), p. 108.
- 44 Crommelin cannot be credited for inventing the two-storey barrack prototype. A standard plan for such had been issued in 1858, but few exemplars had yet been constructed pending the deliberations of the Sanitary Commission and Crommelin's own design appraisals. PWD (Military Works) Proceedings, 12 March 1858, nos 152–4. The zymotic theory was later abandoned, along with such lofty and uncomfortably breezy space standards, when an officer of the Indian Medical Service recognized the common mosquito as the actual vector of disease transmission in the case of malaria.
- 45 Writing long before Michel Foucault and others were to make their bleak interpretations of Bentham's 'Panopticon' and its legacy to nineteenth-century penal and institutional architecture in general, the British Indian historian Eric Stokes was provoked to comment on this rather ironic fashion in which Bentham's utilitarian ideals for social advancement were to triumph most visibly in India, 'his ghost presiding as the tutelary deity of the Punjab prison system'. Stokes, *The English Utilitarians and India*, pp. 245–6.
- 46 A. P. Howell, *Note on Jails and Jail Discipline in India, 1867–68* (Calcutta, 1868).
- 47 Waltraud Ernst, 'Madness and Colonial Spaces: British India, c. 1800–1947', in *Madness, Architecture and the Built Environment: Psychiatric Spaces in Historical Context*, ed. L. Topp, J. E. Moran and J. Andrews (New York, 2007), pp. 227–8.
- 48 See, for example, the proposal and commentary of the Bengal Sanitary Commission for

- a standard plan for lunatic asylums in India, PWD Circular no. 90 of 1866: G. of I. PWD (Civil Works – Buildings) Simla, 17 October 1866.
- 49 Markus, *Buildings and Power*.
 - 50 Glover, *Making Lahore Modern*, p. 42.
 - 51 PWD Circular (Civil Works – Buildings), Fort William, 14 January 1869: re 'jails in India'.
 - 52 Glover, *Making Lahore Modern*, pp. 42–8.
 - 53 R. Kipling, 'Among the Railway Folk', in Rudyard Kipling, *From Sea to Sea: Letters of Travel*, 2 vols (New York, 1899), pp. 251–2.
 - 54 The applicability of Michel Foucault's concept of 'heterotopia' to the institutional complexes of colonial-modern India has been observed by various writers. In addition to Glover, *Making Lahore Modern*, p. 66, see David Arnold, *Colonizing the Body: State Medicine and Epidemic Disease in Nineteenth-century India* (Berkeley, CA, 1993); Waltraud Ernst, *Mad Tales from the Raj: The European Insane in British India, 1800–1858* (London and New York, 1991); Stephen Legg, 'Governing Prostitution in Colonial Delhi: From Cantonment Regulations to International Hygiene (1864–1939)', *Social History*, xxxiv/4, pp. 447–67.
 - 55 The sociologist Pierre Bourdieu offered the term 'habitus' to describe this notion of a habitual stance or position in a particular field of social relationships and action. For a fuller theoretical discussion of behavioural, spatial and conceptual interrelationships in the design of the typical British Indian built environment, see Peter Scriver, 'Empire-Building and Thinking in the Public Works Department of British India', in *Colonial Modernities*, ed. Scriver and Prakash, pp. 69–92.
 - 56 P. Tombesi, B. Dave and P. Scriver, 'Routine Production or Symbolic Analysis?: India and the Globalization of Architectural Services', *Journal of Architecture*, viii/1 (Spring 2003), pp. 63–94.
 - 57 William H. White, 'On Government Architects in Bengal', *Transactions of the Royal Institute of British Architects* (1873–4), pp. 151–2.
 - 58 The former East India Company administration had opened new avenues of employment, as draughtsmen, surveyors and cartographers, for traditionally trained artists of the various regional schools of painting patronized in the past by the Indian princes and nobility. As Mildred Archer has described, European members of the colonial community became quite enamoured of the distinctive way of seeing of these native artists in their application of Western drawing techniques to Indian architectural subjects, and a lucrative market for such so-called Company paintings had developed in the first half of the nineteenth century. M. Archer, 'Company Architects and their Influence in India', *RIBA Journal* (August 1963), pp. 317–21.
 - 59 William Glover, 'Making Indian Modern Architects', in *Colonial Frames, Nationalist Histories*, ed. Rajagopalan and Desai, pp. 27–46. For a thorough account of contemporary critiques of the PWD and its methods, see G.H.R. Tillotson, *Tradition of Indian Architecture: Continuity, Controversy and Change since 1850* (London, 1989).
 - 60 These included the Royal Botanical Gardens at Kew, the British Library and Museum, and the neighbouring Imperial College, which was the academic hub of Britain's engineering and technological know-how in the colonial arena.
 - 61 Arindam Dutta, *The Bureaucracy of Beauty: Design in the Age of its Global Reproducibility* (London and New York, 2007).
 - 62 Ibid.; and Dutta, '“Strangers within the Gate”: Public Works and Industrial Art Reform', in *Colonial Modernities*, ed. Scriver and Prakash, pp. 93–114.
 - 63 Vikramaditya Prakash, 'Between Copying and Creation: The Jeypore Portfolio of Architectural Details', in *Colonial Modernities*, ed. Scriver and Prakash, pp. 115–26.
 - 64 Ibid.; Dutta, *The Bureaucracy of Beauty*; Vibhuti Sachdev, 'In a Maze of Lines: The Theory of Design of Jaalis', *South Asian Studies*, ix/3 (2003), pp. 141–55.
 - 65 This new school, founded in 1897, was named the Jubilee Academy after Queen Victoria's Diamond Jubilee of the same year. Evenson, *The Indian Metropolis*, p. 88.
 - 66 The currency and vitality of such 'native' patronage in late nineteenth-century India, and the 'modern' Indian building works it continued to procure, were later amply documented

in a somewhat polemical publication well used to promote the aims of the Crafts lobby in India, compiled by the Archaeological Survey of India: Gordon Sanderson, *Types of Modern Indian Buildings* (Allahabad, 1913). For a more recent reappraisal of the situated modernity of such patronage, see also Maduri Desai, 'In Search of the Sacred and the Antique in Colonial India', in *Colonial Frames, Nationalist Histories*, ed. Rajagopalan and Desai, pp. 47–72.

- 67 Early in the era of Crown rule, the enthusiasm of Anglophiles among the Indian intelligentsia for the benefits of British civilization was often expressed at the expense of their own. Bholanauth Chunder was an early indigenous traveller, in the course of his official duties, in the burgeoning post-Rebellion British Indian Empire. As he observed: 'The Public Works of a people embody the forms and pressure of their age. The public works of the Hindoos were royal roads, rows of trees, canals and bridges, topes of mango and peepul, tanks and wells, rest-houses for the night, durmshalas or inns, hospitals, bathing ghauts, and temples – all public works for the comforts only of the physical man. The Mohomedans nearly trod in the footsteps of their predecessors. Their reservoirs, aqueducts, canals, gardens, serais, and mosques, exhibit but the same cares for the material well-being of a people, without any progress made by humanity towards the amelioration of its moral condition. Far otherwise are the public works of the English. Their schools and colleges, literary institutes, public libraries, museums, and botanic gardens, are proofs of a greater intellectual state of the world than in any preceding age'. Bholanauth Chunder, *The Travels of a Hindoo to Various Parts of Bengal and Upper India* (London, 1865), as quoted in *Delhi and Agra: A Traveller's Companion*, ed. M. Alexander (New York, 1987). See also Desai, 'In Search of the Sacred and the Antique in Colonial India'.
- 68 Jayewardene-Pillai, *Imperial Conversations*, p. 60.
- 69 For the case of Bombay, see Preeti Chopra, *A Joint Enterprise: Indian Elites and the Making of British Bombay* (Minneapolis, MN, 2011).
- 70 Jayewardene-Pillai, *Imperial Conversations*, p. 274
- 71 The twelve Indian members of the 60-seat University Senate in 1869 included progressive royals and senior ministers from South India's autonomous princely states. Jayewardene-Pillai, *Imperial Conversations*, p. 262.
- 72 Ibid., pp. 267–9, 284.
- 73 See Jon Lang, Madhavi Desai and Miki Desai, *Architecture and Independence: The Search for Identity, 1880–1980* (New Delhi, 1997); Tillotson, *Tradition of Indian Architecture*; Metcalf, *An Imperial Vision*; Glover, 'Making Indian Modern Architects'; Jayewardene-Pillai, *Imperial Conversations*. Muir College in Allahabad, completed around the same time as Chisholm's Senate House to a design by William Emerson, took a comparably eclectic and pan-geographic approach to the inclusion of exotic Islamic architectural precedents, but these were far more literal and loosely composed as a picturesque tableau, whereas Chisholm evidently made a more genuine attempt at a compositional and conceptual fusion.
- 74 This prejudice was represented in Fergusson's unequivocal critical dismissal of earlier experiments with hybrid architectural styles, such as the 'Euro-Indian' classicism of the Lucknowi Nawabs, in his *History of Indian Architecture*, first published in 1876.
- 75 The 'non-regulation' hybrid building efforts in the districts of provincial Upper India by the non-conformist colonial civil servant F. S. Growse have been widely discussed elsewhere: see Marukh Tarapor, 'Growse in Bulandshahr', *Architectural Review*, CLXXII (September 1982), pp. 44–52. Tillotson, *Tradition of Indian Architecture*; and Metcalf, *An Imperial Vision*. The recalcitrant rebel, Growse, was an exemplar of the antipathy between the paternalistic romantic-conservative values of the ICS and the Macaulay-esque 'philistinism' of the PWD. Havell, *Encyclopaedia of Architecture in the Indian Subcontinent*.
- 76 Even at the height of its political and military dominance, the colonial state of British India encompassed little more than half the actual geographic territory of the Indian subcontinent. Marbling the map were extensive tracts, primarily landlocked in the interior, in which power and administrative authority still resided directly with the local 'princes'.

More than 600 of these ostensibly 'traditional' rulers were formally recognized by the British Crown as loyal vassals of its Indian Empire, but in a strict order of precedence carefully regulated by viceregal protocol. The size and significance of their realms varied accordingly. Hyderabad and Mysore in central South India commanded relatively vast domains as large as France and Germany, respectively, while some of the minor principalities were no more than a few square kilometres in extent. With varying degrees of British political oversight, however, each was still regarded as an autonomous state responsible for its own internal government, laws and development. For the architecture of late colonial Hyderabad, see G.H.R. Tillotson, 'Vincent J. Esch and the Architecture of Hyderabad, 1914–36', *South Asian Studies*, ix (1993), pp. 29–46.

- 77 For the rarely acknowledged legacy of professional training and empowerment that derived from Jacob's otherwise well-known and widely documented role in the architectural history of colonial India, see Vibhuti Sachdev and G.H.R. Tillotson, *Building Jaipur: The Making of an Indian City* (London, 2002), pp. 117–27; and G.H.R. Tillotson, 'The Jaipur Exhibition of 1883', *Journal of the Royal Asiatic Society*, third series, xiv/2 (July 2004), pp. 111–26.
- 78 Thomas Holbein Hendley, the resident British surgeon and part-time director of the Jaipur Exhibition and museum, was a sympathetic supporter of the DSA's mission in India, and J. L. Kipling's drawing-centred methods in particular. Under royal patronage, however, it has been argued that the Jaipur art school had more success than Kipling in upholding a broader commitment to the applied arts and industries because its student body was drawn largely from the traditional artisan classes, in contrast to the unintentionally elitist metropolitan schools in British India. Sachdev and Tillotson, *Building Jaipur*, pp. 98–102; Prakash, 'Between Copying and Creation'.
- 79 Not, that is, in honour of the Queen Empress's late husband, Albert, Prince Consort and the commissar of the original Great Exhibition of 1851, after whom so many other public halls built in this era throughout the British Empire had been named. Sachdev and Tillotson, *Building Jaipur*, p. 103, note 22.
- 80 Samuel Swinton Jacob, *The Jeyapore Portfolio of Architectural Details*, 12 vols (London, 1890–1913).
- 81 G.H.R. Tillotson, 'George S. T. Harris: An Architect in Gwalior', *South Asian Studies*, xx (2004), pp. 9–24. Harris had served under a regency administration during most of his tenure in Gwalior, but was evidently dismissed soon after the ascension to the throne of the young new maharaja who was eager to make a more overtly progressive mark on his state than Harris's seemingly backward-looking architecture connoted. Harris went next, via Ajmer, to Madras, where he concluded his Indian career as one of the vanguard of consulting architects to government who, for the first time, were to be uniformly incorporated into the PWD system throughout British India in the early years of the twentieth century.
- 82 Sachdev and Tillotson, *Building Jaipur*, p. 108.
- 83 Response of Lionel Jacob KCSI to a paper read before the RIBA on 19 February 1923, by H. V. Lanchester, 'Architecture and Architects in India', *RIBA Journal*, xxx (24 March 1923), pp. 293–308. Jacob (apparently no relation to Colonel S. S. Jacob of Jaipur fame) was a retired engineer and former Secretary to the Government of India in the Department of Public Works.

chapter two: Complicity and Contradiction in the Colonial Twilight, 1901–1947

- 1 William L. Glover, *Making Lahore Modern: Constructing and Imagining a Colonial City* (Minneapolis, MN, 2008), p. 201.
- 2 John Begg, 'Architecture in India', *RIBA Journal*, xxvii (29 May 1920), p. 337; Louise Campbell, 'A Call to Order: The Rome Prize and Early Twentieth-century British Architecture', *Architectural History*, xxxii (1989), p. 132.

- 3 With the exception of the Government of Madras, which, beginning with R. F. Chisholm, had employed a 'civil architect' in its service throughout most of the second half of the nineteenth century, and several short-lived consultancies to the governments of Bengal and Bombay in the 1860s, the colonial administration had not previously retained architects on a permanent, salaried basis in any responsible post.
- 4 J. Ransome, 'Preliminary Note on Modern Architecture Suitable for India', PWD Technical Paper no. 127, Enclosure no. 6 to Public Works Despatch no. 42 of 1903; reprinted as PWD (General) Proceedings, September 1903, no. 34/6, National Archives of India, New Delhi.
- 5 Ibid., p. 5.
- 6 The two men began colliding almost from the start. For an interesting case in point, see the collection of correspondence pertaining to Ransome's series of proposed designs for the Chief Court Building in Rangoon. PWD (C.W.-B.) Proceedings, December 1903, nos 21-38, National Archives of India, New Delhi.
- 7 Ransome, 'Preliminary Note on Modern Architecture Suitable for India', p. 3.
- 8 Ransome was almost relieved of his post within a matter of months of taking office in 1903. On leave to England in the winter of 1904-5, during which Curzon was to retire from India himself, however, Ransome appears to have weathered the wrath of the imperious viceroy successfully and returned to his post for a further two years of service. A collection of correspondence pertinent to the initial appointment and proposed dismissal of Ransome is compiled in PWD (General) Proceedings, September 1903, nos 32-4/1-5, National Archives of India, New Delhi.
- 9 Paul Rabinow introduces the notion of a 'middling', or normative, modernism in his study of modern social engineering in the French colonial empire. In the discourses of modern social technicians such as the powerful technocrats who administered the colonies, he argues, 'society became its own referent, to be worked on by means of technical procedures which were becoming the authoritative arbiters of what counted as socially real. Discursively, both norms and forms were becoming increasingly autonomous.' Paul Rabinow, *French Modern: Norms and Forms of the Social Environment* (Cambridge, MA, 1989), p. 13. By the early twentieth century the once distinctive differences between the colonial norms and practices of the various European powers had diminished considerably, since each resorted in the end to very similar tactics of representation, to delude and delay admission of their inevitable demise.
- 10 John Begg, *Annual Report on Architectural Work in India, 1908-09* (Calcutta, 1911).
- 11 *Public Works Department Reorganization Committee Report: Minutes of Evidence* (1917). Evidence of John Begg: Appendix: 'Outline of Suggested Measures', vol. III, p. 289, para. 4,840.
- 12 Campbell, 'A Call to Order'; See also Mark Crinson, *Modern Architecture and the End of Empire* (Aldershot, 2003).
- 13 At the height of the imperial age in modern British cultural history, in the first decade of the twentieth century, the Byzantine Revival style had also become fashionable with British architects back home. John Francis Bentley's Roman Catholic Westminster Cathedral, completed in 1903, was among the first and most influential instances of the Byzantine Revival in Edwardian architecture. See Alastair Service, *Edwardian Architecture and its Origins* (London, 1975).
- 14 'Joseph Fearis Munnings ARIBA', *Architecture* [Australia], xxvi (1 November 1937), pp. 234-5. Munnings's brief period of work with the prominent London practice of Leonard Stokes had a notable influence on his subsequent work, particularly in India. Munnings's work in India has been largely overlooked in previous scholarship on the architecture and urbanism of colonial India, and its substance and significance has been examined comprehensively only recently. See Heulwen Mary Roberts, 'Architect of Empire: Joseph Fearis Munnings, 1879-1937', MA dissertation, University of Canterbury, New Zealand, 2013.
- 15 Joseph Munnings had actually gained his original appointment in India thanks to the Bengal partition, as consulting architect to the (short-lived) Government of East Bengal and Assam. With the reunification of Bengal in 1911, however, he had been fortuitously

- reassigned to the new amalgamated province of Bihar and Orissa. In Munnings's initial posting in Dacca (Dhaka), 1910–11, he had been responsible for completing work on several significant buildings intended for the new provincial capital that had been designed by the recently retired James Ransome. Roberts, 'Architect of Empire', pp. 52–3.
- 16 Barbara D. Metcalf and Thomas R. Metcalf, *A Concise History of Modern India* (Cambridge, 2006), pp. 155–62.
 - 17 Robert G. Irving, *Indian Summer: Lutyens, Baker and Imperial Delhi* (New Haven, CT, and London, 1981), pp. 39–48.
 - 18 The petition was reproduced in full in the appendix to Ernest B. Havell, *Encyclopaedia of Architecture in the Indian Subcontinent*, vol. 11: *Medieval and Later* (New Delhi, 2000), pp. 251–4. This volume is a reprint of Havell's *Indian Architecture: Its Psychology, Structure, and History from the First Muhammadan Invasion to the Present Day*, first published in London in 1913.
 - 19 Lutyens fought an uphill battle from the start, as a succession of viceroys and the king himself made clear their preference for the inclusion of Indian elements and 'spirit', if not prescribed historical styles. See Irving, *Indian Summer*, pp. 101–6.
 - 20 See Crinson, *Modern Architecture and the End of Empire*. Echoes and affinities with Shoosmith's church, and the New Delhi style more generally, were particularly pronounced in contemporary work in British Mandate Palestine. See Ronald Fuchs, 'Public Works in the Holy Land: Government Buildings under the British Mandate in Palestine, 1917–48', in *Twentieth Century Architecture and its Histories*, ed. L. Campbell [Special Millennial Issue of the Society of Architectural Historians of Great Britain] (2000), pp. 275–306; and R. Fuchs and G. Herbert, 'Representing Mandatory Palestine, Austen St Barbe Harrison and the Representational Buildings of the British Mandate in Palestine, 1922–37', *Architectural History: Journal of the Society of Architectural Historians of Great Britain*, XLIII (2000), pp. 281–333.
 - 21 Begg, 'Architecture in India', pp. 333–49.
 - 22 Begg's retrenchment was one consequence of a much larger departmental move to decentralize the whole PWD system further to the recommendations of a major review and report of 1917 on the 'Re-Organization of the PWD', and incoming Indianization policies in the colonial civil service that would be framed officially in the Montague-Chelmsford reforms of 1921.
 - 23 Partha Mitter, *The Triumph of Modernism: India's Artists and the Avant-garde, 1922–1947* (New Delhi and New York, 2007), pp. 15–18, 65–78. A number of other foreign intellectuals and aesthetes residing in India early in the century who were close to Tagore and the artistic circle in Calcutta and Santiniketan were drawn into the crafts debate and the rhetorical tactics of the emerging nationalist movement. These included Patrick Geddes, Stella Kramrisch, C. F. Andrews and Romain Rolland.
 - 24 It was during his early career as an Oxford-educated barrister practising in British South Africa that Gandhi had forged the principles and tactics of non-violent resistance that were to define the final stages of the freedom struggle in British India.
 - 25 For a discussion of how the Tagore group was placed within the existing ideological spectrum of the Moderates and the Extremists, see Sumit Sarkar, *The Swadeshi Movement in Bengal, 1903–1908* (New Delhi, 1973), p. 33.
 - 26 Ananda Kentish Coomaraswamy, *Art and Swadeshi* (Madras, 1911).
 - 27 Mitter, *The Triumph of Modernism*, pp. 68, 78–81.
 - 28 Andrew Robinson, 'A Poet's Vision: The Houses of Rabindranath Tagore', in *Architecture in Victorian and Edwardian India*, ed. Christopher M. London (Bombay, 1994), pp. 117–30. Architecture was one art form in which the prodigiously multi-talented poet laureate Rabindranath Tagore did not presume to practise directly.
 - 29 Jon Lang, Madhavi Desai and Miki Desai, *Architecture and Independence: The Search for Identity, 1880–1980* (New Delhi, 1997), p. 125.
 - 30 The authors wish to thank Vaishali Makim for sharing her original research on these formal and critical innovations in Gandhi's design. See Vaishali Makim, 'Discourse on Indian

Modernity in the Context of Three Specific Instances: Hriday Kunj, 111 Kanpur and 111D, diploma diss., School of Architecture, Centre for Environmental Planning and Technology, Ahmedabad, 2006, pp. 14–22.

- 31 Shanti Jayewardene-Pillai, *Imperial Conversations: Indo-Britons and the Architecture of South India* (New Delhi, 2007).
- 32 John Wilton-Ely, 'The Rise of the Professional Architect in England', in *The Architect*, ed. Spiro Kostof (New York, 1977), pp. 180–208; Crinson, *Modern Architecture and the End of Empire*, p. 34.
- 33 Rahul Mehrotra, 'Responses to a Tradition: A Study of Architectural Attitudes during the British Intervention in India, 1857–1947', diploma dissertation, School of Architecture, Centre for Environmental Planning and Technology, Ahmedabad, 1985; Crinson, *Modern Architecture and the End of Empire*, pp. 34, 43–7; Lang, Desai and Desai, *Architecture and Independence*, pp. 142–3; Norma Evenson, *The Indian Metropolis: A View toward the West* (New Haven, CT, and London, 1989), pp. 164–6.
- 34 There was only one other Government-recognized architectural programme established in India before Independence, at the Delhi Polytechnic, which began to admit its first students only in 1941.
- 35 Peter Scriver, 'Complicity and Contradiction in the Office of the Consulting Architect to the Government of India, 1903–1921', in *Loyalty and Disloyalty in the Architecture of the British Empire and Commonwealth*, ed. J. Willis and P. Goad (Melbourne, 1997), pp. 93–101.
- 36 Lang, Desai and Desai, *Architecture and Independence*, p. 145.
- 37 Claude Batley, *Design Development of Indian Architecture* (Bombay, 1934); Claude Batley, 'Architectural Education in India', *Journal of the Indian Institute of Architects*, vi/3 (September 1940), pp. 382–5; Lang, Desai and Desai, *Architecture and Independence*, p. 143.
- 38 Pierre d'Avoine joined the partnership in 1935, Kumar Ramsinh in 1936, and D. R. Chowdhari in the mid-1940s following the retirement of Gregson. Lang, Desai and Desai, *Architecture and Independence*, p. 145.
- 39 Although Calcutta was yet to establish a comparable course of formal architectural education, the J. J. School of Art in which Batley's programme was nested regarded itself as the arch-rival of Havell's former institution, the Government School of Art and Craft in Calcutta. Opposing the alterity and primitivism with which the artists and designers of the Bengal School had declared their avant-garde status, the Bombay school had staunchly upheld the methods and romantic-realist vision of the Western art academy. Mitter, *The Triumph of Modernism*, pp. 183–5.
- 40 This 'double-end' had been officially enshrined by 1915 in the influential Liverpool University curriculum, on which many RIBA-affiliated schools accredited over the following three decades, including those in India, were to be effectively modelled. With the further development of its post-professional diploma course in Town and Regional Planning, the Liverpool School had a very significant impact, directly and indirectly, on India and the wider imperial network of colonial-modern architecture and planning norms and forms during the final years of empire. Crinson, *Modern Architecture and the End of Empire*. See also Campbell, 'A Call to Order', for the classicism/modernism debate in early twentieth-century British architectural education.
- 41 Farhan Karim, 'Domesticating Modernism in India, 1920–1950', PhD thesis, University of Sydney, 2012. The authors wish to thank Farhan Karim for permission to consult his unpublished research. See also Samita Gupta, 'Sris Chandra Chatterjee: The Quest for a National Architecture', *Indian Economic and Social Review*, xxviii/2 (1991), pp. 187–201; Jon Lang, *A Concise History of Modern Architecture in India* (New Delhi, 2002), pp. 27–9; Lang, Desai and Desai, *Architecture and Independence*, pp. 131–5.
- 42 S. C. Chatterjee, *Magadha: Architecture and Culture* (Calcutta, 1942).
- 43 Gupta, 'Sris Chandra Chatterjee', p. 187. In addition to *Magadha* (1942), Chatterjee's major publications included *Architects and Architecture Then and Now: An Essay on Human*

Planning (Calcutta, 1948); and *India and the New Order: An Essay in Human Planning* (Calcutta, 1954).

- 44 Lang, Desai and Desai, *Architecture and Independence*, p. 133.
- 45 A number of the princely states had sought to retain the limited sovereignty they had enjoyed under British rule, but were to come under mounting pressure to join the Indian union after Independence. Chitale's professional relationship with the royalty of Rajasthan evidently derived from his earlier association with the independent consulting British architect Henry Vaughan Lanchester, whom Chitale had assisted with the project for the new Umaid Bhawan Palace of the Maharaja of Jodhpur, designed and constructed between 1929 and 1944. S. L. Chitale, interview by P. Sriver, January 2008; K. R. Sitalakshmi, 'Architecture of Indian Modernity: The Case of Madras', PhD thesis, Anna University, Chennai, 2007, pp. 97–8.
- 46 The colonial regime had little cause to encourage the development of heavy industries in India that would compete with British export interests. Impressed with the power and entrepreneurial independence of the U.S. steel industry, however, Jamsetji Tata engaged American geologists to assist in identifying a suitable site in India to develop a comparable industry. The Tata Steel Company was duly established in 1907 at Jamshedpur in the coal- and iron ore-rich Chota Nagpur Plateau, 260 km west of Calcutta. The company town of Jamshedpur, which was designed along with the engineering works for the new plant by the Pittsburgh-based firm of Julian Kennedy and Axel Sahlin, was the first of several iterations of modern town planning for the growing steel town over subsequent decades that went against the grain of typical PWD norms and forms. Rahul Mehrotra, ed., *World Architecture: A Critical Mosaic, 1900–2000*, vol. VIII: *South Asia* (New York and Vienna, 2001), pp. 78–9.
- 47 Sitalakshmi, 'Architecture of Indian Modernity', pp. 86–96.
- 48 G.H.R. Tillotson, *The Tradition of Indian Architecture* (London, 1989); Lang, Desai and Desai, *Architecture and Independence*, p. 168.
- 49 Sharada Dwivedi and Rahul Mehrotra, *Bombay: The Cities Within* (Bombay, 1995), pp. 239–41.
- 50 Ibid., pp. 226–35; Lang, Desai and Desai, *Architecture and Independence*, pp. 157, 164–5.
- 51 Dwivedi and Mehrotra, *Bombay: The Cities Within*, p. 235.
- 52 Farhan Karim, 'Chapter 2: Idealizing the Domestic Modernism of Bombay, 1920–1930', in Karim, 'Domesticating Modernism in India'; Evenson, *The Indian Metropolis*, pp. 132–6; Nikhil Rao, *House But No Garden: Apartment Living in Bombay's Suburbs, 1898–1964* (Minneapolis, MN, and London, 2013).
- 53 Mustansir Dalvi, 'Domestic Deco Architecture in Bombay: G. B.'s Milieu', in *Buildings That Shaped Bombay: Works of G. B. Mhatre FRIBA, 1902–1973*, ed. Kamu Iyer (Mumbai, 2000), pp. 14–21.
- 54 Rao, *House But No Garden*, pp. 235–40.
- 55 Kamu Iyer, 'G. B. Mhatre: The Man and his Work', in *Buildings That Shaped Bombay*, ed. Iyer, pp. 22–9.
- 56 Lanchester's building was poorly received by critics at the time, and still frequently classified incorrectly as 'Indo-Saracenic' in style, but he was uncommonly diligent in the design of the Indic detailing, which was authentically regional in source and execution, drawing on the Jain and Hindu building traditions of Rajasthan, not that of the Mughal Empire. Tillotson, *The Tradition of Indian Architecture*, pp. 56–9.
- 57 Sylvie Raulet, *Maharajahs' Palaces* (London, 1996), pp. 234–53.
- 58 The maharaja had earlier recruited the German architect and horticulturalist G. H. Krumbiegel to head the horticulture department and consult occasionally with the Mysore PWD on architectural projects. Krumbiegel had arrived in Mysore as early as 1908, having served for more than a decade previously in the princely state of Baroda, and was evidently still in Mysore when Koenigsberger arrived in 1939. A further German architect, U. G. Exener, had also served briefly in Mysore immediately before Koenigsberger, beginning in 1936. Vandana Baweja, 'A Pre-history of Green Architecture: Otto Koenigsberger and

- Tropical Architecture, from Princely Mysore to Post-colonial London,' PhD thesis (Architecture), University of Michigan, 2008, pp. 28–9.
- 59 R. W. Liscombe, 'In-dependence: Otto Koenigsberger and Modernist Urban Resettlement in India,' *Planning Perspectives*, xxi (April 2006); Rachel Lee, 'Constructing a Shared Vision: Otto Koenigsberger and Tata & Sons,' *ABE Journal*, ii (2012): <http://dev.abejournal.eu> (accessed 28 December 2013). For a comprehensive study of the significance of Koenigsberger's early career in India for his later agency as a global authority in architectural education on tropical architecture and development studies, see Baweja, 'A Pre-history of Green Architecture'.
- 60 Paul Kruty, 'Creating a Modern Architecture for India,' in *Beyond Architecture: Marion Mahony and Walter Burley Griffin in America, Australia and India*, ed. Anne Watson (Sydney, 1998), pp. 138–59.
- 61 Tillotson, *The Tradition of Indian Architecture*, p. 57; Lang, Desai and Desai, *Architecture and Independence*, pp. 168–71.
- 62 Arriving back in the USA, Nakashima was then promptly interned as a potential 'enemy-alien.' Derek E. Ostergard, *George Nakashima: Full Circle* (New York, 1989).
- 63 Jaqueline Tyrwhitt, ed., *Patrick Geddes in India* (London, 1947).
- 64 Glover, *Making Lahore Modern*, pp. 151–7.
- 65 Irving, *Indian Summer*, p. 318.
- 66 Ganesh Bhikaji Deolalikar (1894–1979) was a fully qualified architect who had gained his RIBA Associate membership in London in 1928 while still serving as a senior draughtsman in the Delhi Branch of the evolving PWD system, from 1920 to 1937. This was the highest employment grade open to Indian architects in government service before Independence. Deolalikar was seconded from 1937 to 1947 to the newly created local government agency, the Delhi Improvement Trust, by his sympathetic British boss, Robert Tor Russell, where he was able to take on a senior executive role. B. G. Deolalikar, son of G. B. Deolalikar, interviewed by P. Scriver, New Delhi, 6 March 1991; Achyut Kanvinde, 'My Association with Annasaheb', C. G. Pendse, 'Esteemed Annasaheb', and V. M. Pundlik, 'My Reminiscences', privately published testimonials in honour of G. B. Deolalikar on the occasion of his 75th birthday (Delhi, 1969).
- 67 Jyoti Hosagrahar, *Indigenous Modernities: Negotiating Architecture and Urbanism* (London, 2005). See also S. Legg, *Spaces of Colonialism: Delhi's Urban Governmentalities* (Oxford, 2007).
- 68 Evenson, *The Indian Metropolis*, pp. 108–9.
- 69 John Ruskin, *Unto This Last*. As cited in Evenson, *The Indian Metropolis*, p. 109.
- 70 As quoted in Irving, *Indian Summer*, p. 351.
- 71 Jawaharlal Nehru, 'Speech on the Granting of Indian Independence, 14 August 1947', Internet Indian History Sourcebook, <http://legacy.fordham.edu/halsall/india/indiasbook.asp>, retrieved 10 June 2015.

chapter three: Nation Building: Architecture in the Service of the Postcolonial State, 1947–1960s

- Both Pakistan and India were initially constituted as Dominions of the British Commonwealth. India reconstituted itself as a republic in 1950, and Pakistan officially became the Islamic Republic of Pakistan in 1956.
- Ramachandra Guha, *India after Gandhi: The History of the World's Largest Democracy* (New York, 2007), pp. 25–34; Sugata Bose and Ayesha Jalal, *Modern South Asia: History, Culture, Political Economy* (London and New York, 1998), pp. 190–200.
- For Le Corbusier's favourable response to New Delhi, see William Curtis, *Le Corbusier: Ideas and Forms* (New York, 1986), p. 190. We also know that shortly before receiving the Chandigarh commission, Le Corbusier had been acquainted with the distinctive plan of the colonial Australian city of Adelaide, which bears some intriguing formal similarities

- to his own plan for Chandigarh. Anthony Moulis, 'Transcribing the Contemporary City: Le Corbusier, Adelaide and Chandigarh', in *Panorama to Paradise: Scopic Regimes in Architectural and Urban History and Theory: xxivth Annual Conference of the Society of Architectural Historians*, ed. Stephen Loo and Katharine Bartsch (Adelaide, 2007), CD-ROM. Established in 1836, Adelaide was well known to some of the founding theorists of the Garden City and town-planning movements, including Ebenezer Howard, as one of the most successfully realized iterations of the ideal plan for a colonial town that had been propagated throughout the expanding British colonial empire since the early seventeenth century. R. Home, *Of Planting and Planning: The Making of British Colonial Cities* (London, 1996); R. Cheesman, *Patterns in Perpetuity* (Adelaide, 1986), pp. 67–134.
- 4 Rahman had direct professional contact with Gropius, as well as Buckminster Fuller, as a draughtsman in the design office of the General Panel Corporation under Konrad Wachsmann, Gropius's wartime collaborator in the development of prefabricated housing systems. He had also encountered Erich Mendelsohn while they were both working briefly in the New York office of Ely Jacques Kahn in the final year of the Second World War. Like many of his generation who were trained in America in the 1940s, Rahman had also been impressed by the unfettered progress of modern architecture and urbanism in Brazil during the war years (i.e., pre-Brasilia), and Oscar Niemeyer in particular as a role model of a heroic modernist designer working outside the Euro-American arena. Habib Rahman, interview by Peter Scriver, New Delhi, 4 September 1990.
 - 5 Habib Rahman, 'An Interview with Habib Rahman', interview by Mina Singh, *Inside Outside* (October 1987); reprinted in *Architecture + Design* (March–April 1996), p. 70.
 - 6 Habib Rahman, 'Gandhi Memorial', *Architectural Forum* (December 1948).
 - 7 While rarely so overtly exposed in the major corpus of Rahman's later work for the CPWD, this struggle for synthesis – to accommodate cultural and personal identity within the framework of a more universal language of modern construction and spatial planning – was a recurring tension that marked a series of later designs by Rahman for other small monuments, as well as an unbuilt design for the Indian pavilion at the New York World's Fair of 1964. The quintessential example was what Rahman himself regarded as the defining work of his career, the Rabindra Bhavan, the headquarters and central gallery of the Lalit Kala Akademi (National Academy of Art), which was built in New Delhi 1961 in honour of the Nobel Prize-winning Bengali poet and humanist Rabindranath Tagore.
 - 8 Erich Mendelsohn was one of several modernist luminaries (including Gropius and Fuller) who had deeply influenced and inspired Rahman through his direct professional contact with them as a graduate trainee in the USA in the mid-1940s (Rahman, interview, 1990). In light of that connection it is tempting to note a certain gestural affinity between the asymmetrical profile of Rahman's Gandhi Ghat composition and Mendelsohn's Einstein Tower of 1919. But more significant, perhaps, were the parallels between the idealistic intentionality that informed each of these career-launching essays in monumentality at the post-war dawning, in both instances, of hopeful new democratic states committed to the liberating ideals of secularism, scientific reason and political freedom. In form and style, Rahman's approach had still stronger affinities with the ambiguous syncretism of Mendelsohn's more recent work of the late 1930s in colonial-modern Palestine, where the pioneering modernist had gone against the grain of rote International Style functionalism to attempt a modern 'semitic' synthesis. For Mendelsohn in Palestine, see Alona Nitzan-Shifan, 'Contested Zionism, Alternative Modernism: Erich Mendelsohn and the Tel Aviv Chug in Mandate Palestine', *Architectural History*, xxxix (1996), pp. 147–80; see also Kathleen James, *Erich Mendelsohn and the Architecture of German Modernism* (Cambridge, 1997).
 - 9 Rahman, 'Gandhi Memorial'.
 - 10 Department of Industries and Labour, Notification no. E-61, 16 April 1930, in File no. G-10 of 1930, Proceedings no. 704, Collection no. 220, National Archives of India, New Delhi. See also 'History of CPWD', in Central Public Works Department Manual (2013), pp. 1–11.
 - 11 Deolalikar had spent a year at University College, London, in 1928, preparing for his RIBA

Part 3 exams, which he passed successfully before returning to India the same year. C. G. Pendse, 'Esteemed Annasaheb', and Achyut Kanvinde, 'My Association with Annasaheb', privately published testimonials in honour of G. B. Deolalikar on the occasion of his 75th birthday (Delhi, 1969).

- 12 As Zareer Masani relates in his oral-historical memoir of the late imperial Raj, the 'survivors . . . were . . . a small and dwindling band of Indian(s) . . . who grew up under the Raj, received an Oxbridge education, and remain unashamedly anglophile in their accents and lifestyle'. Zareer Masani, *Indian Tales of the Raj* (Berkeley, CA, 1987), p. 51.
- 13 The institutional history and cognitive dimensions of the PWD's agency are examined more fully in Peter Scriver, 'Empire Building and Thinking in the Public Works Department of British India', in *Colonial Modernities: Building, Dwelling and Architecture in British India and Ceylon*, ed. P. Scriver and V. Prakash (London, 2007).
- 14 The normative nature of buildings produced by the CPWD in the context of the 'differential modernity' of postcolonial architectural tendencies in Tamil Nadu is examined in K. R. Sitalakshmi, 'Architecture of Indian Modernity: The Case of Madras', PhD thesis, Anna University, Chennai, 2007.
- 15 Sunil Khilnani, *The Idea of India* (London, 1997).
- 16 Guha, *India after Gandhi*, p. 211.
- 17 B. Metcalf and T. Metcalf, *A Concise History of Modern India* (Cambridge and New York, 2006), p. 243.
- 18 Guha, *India after Gandhi*, p. 209.
- 19 M. R. Warerkar, 'Formulation of National Policy', in *Proceedings of the 'Seminar on Architecture': Lalit Kala Academy, Jaipur House, New Delhi, March 17–21, 1959* (New Delhi, 1959), pp. 5–9.
- 20 Jawaharlal Nehru, prefatory remarks dated 25 October 1953, in the exhibition souvenir, *International Exhibition on Low Cost Housing*, January–March 1954 (New Delhi, 1954), p. 8.
- 21 Rachel Lee, 'Constructing a Shared Vision: Otto Koenigsberger and Tata & Sons', *ABE Journal*, 11 (2012): <http://dev.abejournal.eu> (accessed 28 December 2013).
- 22 R. W. Liscombe, 'In-dependence: Otto Koenigsberger and Modernist Urban Resettlement in India', *Planning Perspectives*, xxi (April 2006), p. 159.
- 23 The notion of the 'neighbourhood unit' was first proposed by the American educationist and social planner Clarence Perry in the 1920s, but had become well known in wider modern planning circles in the 1930s through Clarence Stein's and Henry Wright's celebrated variations on this principle in schemes such as Radburn and Baldwin Hills Village. Adopted into British town-planning pedagogy and the emerging planning doctrines of CIAM through the 1930s and '40s, the concept had become a precept of universal modernist planning thought by the post-Second World War era and was equally well embraced and applied by architects and planners in socialist and communist states. Sanjeev Vidyarthi, '"Inappropriate" Appropriations of Planning Ideas: Informalizing the Formal and Localizing the Global', PhD thesis, University of Michigan, 2008. See also Sanjeev Vidyarthi, 'Inappropriately Appropriated or Innovatively Indigenized?: Neighborhood Unit Concept in Post-independence India', *Journal of Planning History*, ix/4 (2010), pp. 260–76; and Duanfung Lu, *Remaking Chinese Urban Form: Modernity, Scarcity and Space, 1949–2005* (London and New York, 2006), pp. 19–46, for a related discussion of the rationale for neighbourhood unit planning in post-revolutionary China.
- 24 Ravi Kalia, *Bhubaneswar: From a Temple Town to a Capital City* (New Delhi, 1994), pp. 118–55; Liscombe, 'In-dependence', pp. 157–78; Jon Lang, Madhavi Desai and Miki Desai, *Architecture and Independence: The Search for Identity, 1880–1980* (New Delhi, 1997), pp. 174, 200–201; Vidyarthi, '"Inappropriate" Appropriations', p. 90.
- 25 Vidyarthi, '"Inappropriate" Appropriations', p. 90.
- 26 Vikramaditya Prakash, *Chandigarh's Le Corbusier: The Struggle for Modernity in Postcolonial India* (Seattle, 2002).
- 27 Farhan Karim, 'Domesticating Modernism in India, 1920–1950', PhD thesis, University of Sydney, 2012.

- 28 Neighbourhood unit planning had evidently been high on the agenda of the Punjab PWD from the earliest programming stages in the conception of Chandigarh, and well in advance of hiring the various international planning and architectural consultants who were eventually to bring the project into form. See Prakash, *Chandigarh's Le Corbusier*, pp. 33–9.
- 29 Among many commentators, Sunil Khilnani is particularly discerning in his reading of what Nehru perceived as the cognitive shock-power of Chandigarh: 'The design of Chandigarh manifested an important strain in Nehru's complex idea of modern India: the sense that India had to cut loose from the contradictory modernity introduced by the British Raj – a modernity deformed by the weight of colonialism – just as it had also to free itself from a disabling nostalgia for a (selectively remembered) indigenous past . . . The city's radical meaning lay in its cultural and physical unfamiliarity, its brazen assertion of the new and other . . . Just as the English language placed all Indians – at least in principle – at a disadvantage of equal unfamiliarity, so too Chandigarh did not lend itself to easy seizure or possession by any one group. Even those Indian elites who were familiar with colonial building idioms, with the bungalow and the verandah, were going to have to learn from scratch how to find their way around this brave new world of brise-soleils and reinforced concrete.' Sunil Khilnani, 'The India Project', in *Made in India*, ed. K. Ashraf, special issue of *Architectural Design*, LXXVII/6 (November–December 2007), pp. 12–15.
- 30 See Karim, 'Domesticating Modernism in India, 1920–1950'.
- 31 Exhibition souvenir, *International Exhibition on Low Cost Housing*, p. 34.
- 32 Ibid., pp. 138–41.
- 33 See Liscombe, 'In-dependence'; Karim, 'Domesticating Modernism in India, 1920–1950'; Vandana Baweja, 'A Pre-history of Green Architecture: Otto Koenigsberger and Tropical Architecture, from Princely Mysore to Post-colonial London', PhD thesis (Architecture), University of Michigan, 2008.
- 34 Liscombe, 'In-dependence'; Lang, Desai and Desai, *Architecture and Independence*.
- 35 L. G. Toye, interview by Peter Scriver, New Delhi, 17 January 1991.
- 36 Mark Crinson, *Modern Architecture and the End of Empire* (Aldershot, 2003); Jiat-Hwee Chang, 'Building a (Post)Colonial Technoscientific Network: Tropical Architecture, Building Science and the Tropical Building Division', in *The Scaffolding of Empire*, ed. Peter Scriver (Adelaide, 2007).
- 37 Guha, *India after Gandhi*, pp. 212–15.
- 38 Delhi Development Authority, 'Delhi Master Plan, 1962' (New Delhi, 1962), pp. 185–7.
- 39 Norma Evenson, *The Indian Metropolis: A View Toward the West* (New Haven, CT, and London, 1989), p. 184.
- 40 B. G. Deolalikar, son of G. B. Deolalikar, interviewed by Peter Scriver, New Delhi, 6 March 1991. A traditional term of respect, meaning 'Mr' or 'Master', the Bengali word *babu* had come into common colonial usage in reference to the native clerks in the employ of the British administration, specifically those who could speak and write English. By the second half of the nineteenth century the term had gathered a distinctly derogatory connotation as the baboo came to embody, for the colonial British establishment, the unsettling modern challenge of class conflict and social change they thought they had left behind in Britain. H. Yule and A. C. Burnell, *Hobson-Jobson: A Glossary of Colloquial Anglo-Indian Words and Phrases* (London, 1903), s.v. 'Baboo'.
- 41 Deolalikar, interview, 1991.
- 42 V. M. Pundlik, 'My Reminiscences', and Achyut Kanvinde, 'My Association with Annasaheb', privately published testimonials in honour of G. B. Deolalikar on the occasion of his 75th birthday (Delhi, 1969). Since the abolishment of the autonomous Department of Public Works in the Government of India in 1923, responsibility for public works and buildings had migrated through a succession of other government departments. Following Independence, central government housing and other public works and buildings came under the new Ministry of Works, Housing and Supply, whereas a separate and temporary Ministry of Rehabilitation was established to deal with the refugee crisis. See Evenson, *The Indian Metropolis*, p. 184.

- 43 Scriver, ed., *The Scaffolding of Empire*.
- 44 Rahman, interview, 1990.
- 45 These clerks' quarters, now largely demolished, were concentrated in the sector northwest of the central secretariat known today as Gole Market, and the in-between zone north of the railway line that separates Connaught Place and New Delhi from the old city to the north. They were designed by the newly established Delhi Branch of the PWD under its first chief architect, William Henry Nicholls, during his short wartime tenure from 1913 to 1917. See Robert G. Irving, *Indian Summer: Lutyens, Baker and Imperial Delhi* (New Haven, CT and London, 1981), p. 101. See also Nicholls's quarters for members of the Legislative Assembly on Feroze Shah Road. Peter Serenyi, 'From Lutyens to Young Indian Architecture', *Techniques and Architecture* (August–September 1985), pp. 56–63.
- 46 Clarence S. Stein, *Toward New Towns for America* [1950], revd edn (New York, 1957).
- 47 Vidyarthi, "'Inappropriate' Appropriations", p. 87; see also Dipesh Chakrabarty, 'Of Garbage Modernity and the Citizens Gaze', in *Habitations of Modernity: Essays in the Wake of Subaltern Studies* (Chicago, IL, 2002), p. 66.
- 48 To our knowledge a rigorous scholarly examination of the demography and dwelling practices of these New Delhi housing colonies has yet to be conducted by architectural and planning historians in the manner, for example, of recent work on Old Delhi and on colonial and transitional-modern Calcutta. One challenge, of course, is that official census data does not tend to capture 'informal' settlement. For Old Delhi, see Jyoti Hosagrahar, *Indigenous Modernities: Negotiating Architecture and Urbanism* (London, 2005). For Calcutta, see Swati Chattopadhyay, *Representing Calcutta: Modernity, Nationalism and the Colonial Uncanny* (London and New York, 2005).
- 49 As various others have also noted, this is a major issue that merits a much fuller critical examination than the limitations of space and focus of the present text permit. See Evenson, *Indian Metropolis*, pp. 184–5; A.G.K. Menon, 'Imagining the Indian City', in *Proceedings of the Conference Theatres of Decolonization: Chandigarh, January 6–10, 1995*, ed. V. Prakash (Seattle, WA, 1997).
- 50 Deolalikar, interview; Ram Rahman, 'Notes on Design', *Architecture + Design* (March–April 1996), p. 20.
- 51 Evenson, *Indian Metropolis*; DDA, *Master Plan for Delhi*, prepared by the Delhi Development Authority under the Delhi Development Act, 1957 (Delhi, 1962). Funded by the American Ford Foundation, the preparation of the Delhi Master Plan of 1962 was a seminal project for the adaptation and translation of the next generation of international planning concepts into the hybrid Indian-modern norms that would be institutionalized in subsequent practice, transcending the received wisdom of the pre-war British planning schools that had so far dominated town-planning thought within the CPWD; see chapter 4 in Vidyarthi, "'Inappropriate' Appropriations'.
- 52 S. Chattopadhyay, 'Blurring the Boundaries: The Limits of "White Town" in Colonial Calcutta', *Journal of the Society of Architectural Historians*, LIX/2 (2000), pp. 154–79.
- 53 Raj Rewal, 'Vying with the Raj: An Indian Architect vs. the Public Works Department', *UIA: International Architect*, 11/1 (September 1982), p. 2.
- 54 J. Nehru, 'Inaugural Address by Shri Jawaharlal Nehru, Prime Minister', in *Proceedings of the 'Seminar on Architecture'*, pp. 5–9.
- 55 Ibid., p. 9. See also Vibhuti Chakrabarti, *Indian Architectural Theory: Contemporary Uses of Vastu Vidya* (London, 1998), pp. 170–73; and Sarbjit Bagha, Surinder Bagha and Yashinder Bagha, *Modern Architecture in India: Post-Independence Perspective* (New Delhi, 1993).
- 56 A. P. Kanvinde, 'Architectural Expression and the National Policy', in *Proceedings of the 'Seminar on Architecture'*, pp. 19–22.
- 57 Piloo Mody, 'Architectural Expression and the National Policy', in *Proceedings of the 'Seminar on Architecture'*, pp. 23–5.
- 58 S. K. Joglekar, 'Architectural Expression', in *Proceedings of the 'Seminar on Architecture'*, pp. 36–42.

- 59 C.S.H. Jhabvala, 'A Plea for Freedom', in *Proceedings of the 'Seminar on Architecture'*, pp. 43–7.
- 60 C. M. Correa, 'Architectural Expression', in *Proceedings of the 'Seminar on Architecture'*, pp. 48–50.
- 61 *Ibid.*, p. 49.

chapter four: Regionalism, Institution Building and the Modern Indian Elite, 1950s–1970s

- 1 In both the reports of the States Reorganisation Commission and the following special panel of Jawaharlal Nehru, Vallabhbhai Patel and Pattabhi Sitaramayya, better known as the JVP report, it was deemed against national interest to allow for a re-division of states along linguistic grounds. Still some ground was acceded to the formation of states like Andhra Pradesh, and following the linguistic arguments of pre-Independence Congress the demand for such a linguistic-based reorganization was high. Joan V. Bondurant, *Regionalism versus Provincialism: A Study in Problems of Indian National Unity*, Indian Press Digests: Monograph Series 4 (Berkeley, CA, 1958).
- 2 Jon Lang, *A Concise History of Modern Architecture in India* (New Delhi, 2002), pp. 46–7.
- 3 Many years later Griffin's rejected design for the Ahmedabad Town Hall was re-badged and submitted (unsuccessfully) by his widow, Marion Mahony, to the international competition for the new Opera House in Sydney, where the American architect couple had lived and worked in the 1920s and '30s.
- 4 Reyner Banham, *The New Brutalism: Ethic or Aesthetic?* (London, 1966).
- 5 William Curtis, *Balkrishna Doshi: An Architecture for India* (Ahmedabad, 1988), pp. 12–17.
- 6 Ramchandra Guha, *India after Gandhi: The History of the World's Largest Democracy* (New York, 2007), pp. 327–9.
- 7 Eugene S. Staples, *Forty Years: A Learning Curve: The Ford Foundation Programs in India, 1952–1992* (New Delhi, 1992); also see Frances Stonor Saunders, *The Cultural Cold War: The CIA and the World of Arts and Letters* (New York, 2001).
- 8 The Ford Foundation made its first grant of \$3.7 million to projects in India in 1951. Staples, *Forty Years*, pp. 6–7. Hoffman moved on from Ford in 1953 to become the director of the United Nations Development Program.
- 9 Law and management were also the focus of major Ford Foundation-commissioned studies at the time. Heald, who remained president until 1965, clearly defined the changes in the Ford Foundation's funding pattern over this period. In the late 1950s, 81.5 per cent of Ford Foundation funding was still going to central government programmes, 77.3 per cent directed at agriculture. But within less than a decade as much as 46.1 per cent of all Ford Foundation funding in India was directed at autonomous regional institutions of higher education. *Ibid.*, pp. 78–9.
- 10 Stein's important but little-known work outside India is comprehensively documented in Stephen White, *Building in the Garden: The Architecture of Joseph Allen Stein in India and California* (New Delhi and New York, 1993).
- 11 It was during a public audience in the gardens of Birla's New Delhi residence in April 1948 that Gandhi was assassinated.
- 12 This seminal institutional collaboration was seeded in 1959 when the Ford Foundation awarded MIT a \$9 million grant to develop a new curriculum that might serve as a model for analogous science and technology institutes. When Birla had approached the Ford Foundation for possible assistance with his venture, in 1962, the MIT president and Ford Foundation trustee Julius Stratton had ultimately conferred with Birla to negotiate a direct arrangement with MIT. Stuart W. Leslie and Robert Kargon, 'Exporting MIT: Science, Technology and Nation-Building in India and Iran', *Osiris*, xx1/1 (2006), pp. 110–30.
- 13 The Kanpur Indo-American Programme (KIAP, 1962–72) was a locally targeted aid

package that attempted to make some limited amends to India's waning political relationship with the West since the mid-1950s. In fact, at the White House on 11 November 1961, President John F. Kennedy told Jawaharlal Nehru that he hoped Nehru would consider the bilateral agreement on KIAP a 'souvenir' of his visit to the United States. At IIT Kanpur the KIAP-directed technical assistance to the new institute from a consortium of nine leading universities in the USA (namely MIT; University of California, Berkeley; California Institute of Technology; Princeton University; Carnegie Institute of Technology; University of Michigan; Ohio State University; Case Institute of Technology and Purdue University). Under the programme, faculty members from these institutions assisted the Institute in the setting up of the academic programmes and development of laboratories for instruction as well as research. Robert O. Blake Jr, 'U.S.-India Partnership: Kanpur Indo-American Program and Beyond', 9 July 2010, www.state.gov. Also see Devesh Kapur, 'Indian Higher Education', in *American Universities in a Global Market*, ed. Charles T. Clotfelter (Chicago, IL, 2010), pp. 305-34.

- 14 Stein also remained a close friend and colleague of the eminent Californian landscape architect Garrett Eckbo, with whom he collaborated in 1965 on the design of the Ford Foundation gardens and the landscaping of the adjacent Lodhi Park.
- 15 Benjamin Polk, *Building for South Asia: An Architectural Autobiography* (New Delhi, 1993).
- 16 Ray's neo-realist film *Pathar Panchali* was the winner of the Best Human Documentary award at the Cannes Film Festival of 1955.
- 17 Deborah Baker, *A Blue Hand: The Beats in India* (Noida, 2008).
- 18 Among the most influential South Indian 'gurus' in the export of such esoteric spiritual knowledge were B.K.S. Iyengar (Karnataka), a student of Krishnamacharya, who published *Light on Yoga* in 1966; Swami Vishnu-devananda (Kerala), who travelled to Quebec in 1961; K. Pattabhi Jois, who set up his centre in Mysore in 1964; and Swami Satchidananda (Tamil Nadu), who started a yoga centre in New York in 1966 and opened the Woodstock festival in 1969.
- 19 The design was not entirely their own, in fact, since the Chitale office had been engaged to downscale an even taller scheme that the client had initially commissioned a London architect to design, but which had failed to get planning approval. K. R. Sitalakshmi, 'Architecture of Indian Modernity: The Case of Madras', PhD thesis, Anna University, Chennai, 2007, pp. 170-71.
- 20 Ibid.
- 21 Ibid., pp. 172-5.
- 22 Jon Lang, Madhavi Desai and Miki Desai, *Architecture and Independence: The Search for Identity, 1880 to 1980* (New Delhi, 1997), p. 230.
- 23 Piloo Mody studied with Erich Mendelsohn at the University of Southern California, and Bajpai worked with Alvar Aalto. Lang, *A Concise History*, p. 44.
- 24 IIT Bombay was established with the cooperation and participation of UNESCO, using the contribution of the USSR government. The Institute received substantial assistance in the form of equipment and expert services from the USSR through UNESCO from 1956 to 1973. It received several experts (59) and technicians (14) from several reputed institutions in the USSR. UNESCO also offered a number of fellowships (27) for the training of Indian faculty members in the USSR. Under the bilateral agreement of 1965, the USSR government provided additional assistance to supplement the Aid Program already received by the Institute through UNESCO. IIT Bombay, 'History of IIT Bombay': www.iitb.ac.in (accessed 1 May 2014). For further details, see Sabil Francis, 'The IITs in India: Symbols of an Emerging Nation', in *South Asia Chronicle*, ed. Michael Mann et al. (Berlin, 2011), pp. 293-326.
- 25 Navin Ramani, *Bombay Art Deco Architecture: A Visual Journey, 1930-1953* (Mumbai, 2006).
- 26 Italian architects who were engaged in India at this time included Ettore Sottsass, who learned about ceramics in India and was later associated with Superstudio, Archizoom and

Memphis Design, as well as Enrico Peressutti, associated with Ernesto Rogers as founder of BBPR. Grace Lees-Maffei and Kjetil Fallan, eds, *Made in Italy: Rethinking a Century of Italian Design* (London, 2014). Also, Lang, *A Concise History*, p. 71.

- 27 Mulk Raj Anand, 'Postscript to Contemporary Architecture in India', undated typescript, as quoted in Mustansir Dalvi, 'Mulk and Modern Indian Architecture', in *Mulk Raj Anand: Shaping the Indian Modern*, ed. A. Garimella (Mumbai, 2005), pp. 56–65.
- 28 Rachel Lee and Kathleen James-Chakraborty, 'Marg Magazine: A Tryst with Architectural Modernity', *ABE Journal*, 1 (2012), <http://dev.abejournal.eu> (accessed 27 December 2013).
- 29 Kaiwan Mehta, *The Architecture of I. M. Kadri* (forthcoming, 2015). The authors are grateful to Kaiwan Mehta and Shimul Javeri Kadri for permission to preview this forthcoming monograph in manuscript.
- 30 In his later career Kadri played a major role in developing a distinctive architectural character for the Taj and Oberoi Hotel groups, but in a vein of freestyle formalism towards which some of his earliest projects were already inclining that hovered between the modernist typologies of the day and the historical revivalism and eclecticism that was still current in his youth in Ahmedabad and Delhi in the final years of the colonial era in the works of Atmaram Gajjar, Claude Batley and Karl Malte von Heinz. Heinz was the émigré Austrian architect of the elite Jamia Millia Islamia College in Delhi, where Kadri had completed his schooling. Such heresies, compounded by their evident appeal and success with clients and the wider public, earned Kadri scant praise from his peers. But these have eventually attracted the critical interest and appreciation of a younger generation of Indian architects ready to reappraise the variety of modes with which contemporary Indian architecture has sought to redress the perennial questions of cultural and regional identity within the frame of its postcolonial modernity. Mehta, *The Architecture of I. M. Kadri*.
- 31 The New York-based firm of John Burgee and/or his erstwhile partner Philip Johnson have been attributed authorship for the design of the Air India tower by some previous commentators, but their putative collaboration with the local architect of record, Pheroze Kudianavala, has not been corroborated by the present authors. See Sharada Dwiwedi and Rahul Mehrotra, *Bombay: The Cities Within* (Mumbai, 1997), pp. 285, 288.
- 32 The National Centre for the Performing Arts (NCPA) was established in 1969 as the premier performing arts complex in the country. The first phase, including the 1,100-seat Tata Theatre, was built in the 1970s and designed by the New York firm of Philip Johnson and John Burgee, with Cyril Harris as consulting acousticians, in association with the local firm of Patell, Batliwala and Associates. The chief partner, Rustom Patell – who, like Gautam and Gita Sarabhai, had trained in the U.S. as a Taliesin fellow – is credited with a variety of other projects associated with the family of the NCPA's principal patron and Tata chairman, Jamshed Bhabha. These include the Bhabha Atomic Energy Plant in Bombay named after Jamshed's brother Homi Bhabha, the celebrated nuclear physicist. CSA Partners, 'Tata Theatre': www.csa-partners.com (accessed 1 May 2014). Keller and Associates, the Hong Kong-based interior design firm of expatriate Americans Dale and Patricia Keller, had a major stake in the pioneering phase of luxury tourism market development by international hotel chains across postcolonial Asia between the 1960s and 1980s. These included the design of many of the interiors for both the aspirational Oberoi chain and its principal competitors in India, the Tata-owned Taj Group. Amit Srivastava and Peter Scriver, 'Australians and Africans in a Post-colonial Asian Empire: Transnational Operations of the Oberoi Hotel Group in the 1960s–70s', paper presented at 'Mobilities of Design: Transnational Transfers in Asian Architecture and Urban Planning, 1960–Present', Future Cities Laboratory, Singapore, 20–21 November 2013.
- 33 Roberto Rossellini's film *India: Matri Bhumi* (1959) can be used to engage his distinction of the Indian paradigm as 'draped' and the Western paradigm as 'tailored'. Cutting as a metaphor joins filmmaking and tailoring, but as Claude Lévi-Strauss' comment on the Red Fort reveals, also architecture. Delhi's Red Fort, Lévi-Strauss observed (1974), was 'like a collection of tents, erected in a hard material . . . derived from the textile arts'. Paola Colaiacono and Vittoria C. Caratozzolo, 'The Impact of Traditional Indian Clothing on

Italian Fashion Design from Germana Marucelli to Gianni Versace', *Fashion Theory*, xiv/2 (2010), pp. 183–214.

- 34 National Institute of Design, *Annual Report, 1968–69* (Ahmedabad, 1970); *Annual Report, 1970–71* (Ahmedabad, 1971); and *NID Report, 1963–69* (Ahmedabad, 1969).
- 35 The ambiguities of the engagement had evidently been overlooked in anticipation of a potentially even larger commission for Gandhinagar, the proposed new state capitol for Gujarat, which Kahn – who was then already engaged on preliminary designs for comparable major government complexes in both West and East Pakistan – had some expectation of securing. See Amit Srivastava, 'Encountering Materials in Architectural Production: The Case of Kahn and Brick at IIM', PhD thesis, University of Adelaide, 2009; and Kathleen James-Chakraborty, 'Louis Kahn and Edward Durrell Stone in South Asia', in *Building America: eine grosse Erzählung*, ed. Anke Köth et al. (Dresden, 2008), pp. 169–82.
- 36 Eric Mumford, *The CIAM Discourse on Urbanism, 1928–1960* (Cambridge, MA, 2000), p. 204.
- 37 William J. R. Curtis, *Balkrishna Doshi: An Architecture for India* (New York, 1988), p. 174.
- 38 O. Koenigsberger, 'India, Pakistan and Ceylon', in *New Buildings in the Commonwealth*, ed. James M. Richards (London, 1961), pp. 181–92.
- 39 RIBA accreditation of architectural curricula was just one component of the neo-colonial hegemony of new institutional frameworks that defined and controlled the 'modern' ex-colonial building world. These included the new Commonwealth Association of Architects, and the transnational propagation of Modern Tropical Architecture and associated building technologies through the new global system of Building Research Stations (BRS) and new graduate programmes in Tropical Architecture, which were developed at the Architectural Association School in London in the 1950s by Otto Koenigsberger together with Maxwell Fry and Jane Drew. See G. A. Atkinson, 'Part 2: The Tropical Territories: Introduction', in *New Buildings in the Commonwealth*, ed. Richards, pp. 96–102.
- 40 Koenigsberger, 'India, Pakistan and Ceylon', pp. 181–3; Parallels with the postgraduate programme of the University of Liverpool have also been noted: Mark Crinson, *Modern Architecture and the End of Empire* (Aldershot, 2003), p. 50.
- 41 Joan Draper, 'The Ecole des Beaux-Arts and the Architectural Profession in the United States: The Case of John Galen Howard', in *The Architect: Chapters in the History of the Profession*, ed. S. Kostoff (New York and Oxford, 1977), pp. 180–208.
- 42 Regardless of his relative distance from the site of this seminal modernist work in India, however, Anand's critical position was hardly detached or impartial since he had been one of the first to moot the idea of engaging Le Corbusier. Dalvi, 'Mulk and Modern Indian Architecture', p. 61.

chapter five: Development and Dissent: The Critical Turn, 1960s–1980s

- 1 Zareer Masani, *Indira Gandhi: A Biography* (New York, 1976), p. 250.
- 2 *Congress Forum for Socialist Action, Two Years of CFSa, Decisions and Resolutions* (New Delhi, 1971).
- 3 Jawaharlal Nehru's early book, *The Discovery of India* (1946), a passionate but largely speculative cultural history that was largely written from his prison cell as a young freedom fighter, had been a popular inspirational tract for the freedom struggle.
- 4 Brian Brace Taylor, *Raj Rewal* (London, 1992).
- 5 Rebecca Brown, *Art for Modern India, 1947–80* (London, 2009), pp. 122–7. Bruce A. Scholten, *India's White Revolution: Operation Flood, Food Aid and Development* (London, 2010). Prajakta Sane, 'Dudhsagar Dairy at Mehsana, India (1970–73): Achyut Kanvinde and the Architecture of White Revolution', in *Proceedings of the Society of Architectural Historians, Australia and New Zealand*, 30: 'Open', ed. Alexandra Brown and Andrew Leach (Gold Coast, 2013), vol. 1, pp. 355–64.

- 6 The scope and significance of Kanvinde's work in the modern architectural history of India is widely acknowledged, but has been the focus of surprisingly little in-depth scholarship published to date. The authors wish to thank Prajakta Sane for several valuable discussions of her forthcoming doctoral thesis on Kanvinde. The argument for the critical significance of the Dudhsagar project was first posited in Vikram Bhatt and Peter Scriver, *After the Masters: Contemporary Indian Architecture* (Ahmedabad, 1990), pp. 28–35. Returning to the project in the present text, our discussion reflects the valuable extension and critical interpretation of the argument in the wider context of contemporary Indian cultural debates and aesthetics that is developed in Brown, *Art for Modern India*, pp. 122–7. Kanvinde's and Chowdhury's professional relationship with the dairy industry was to be developed in a further two significant commissions for the National Dairy Development Board, including a distinctive residential hostel block and tower at the NDDB's training college at Anand Gujarat (1971–3) and the NDDB office building in New Delhi (completed in 1983).
- 7 Charles Correa, 'Programmes and Priorities', *Architectural Review* (December 1971), pp. 329–31.
- 8 See discussion in Norma Evenson, *The Indian Metropolis: A View Toward the West* (New Haven, CT, and London, 1989), p. 239; also see Patwant Singh, 'The Ninth Delhi', *Journal of the Royal Society of Arts*, CXIX/5179 (1971), pp. 461–75.
- 9 Sudhir Diwan and Kannaiya Vakhariya, cited in Evenson, *The Indian Metropolis*, p. 245.
- 10 This corresponds to the doughnut-like development along the outer regions of Delhi and the dormitory suburbs of northern Bombay.
- 11 For the Habitat debate, see Eric Mumford, *The CIAM Discourse on Urbanism, 1928–1960* (Cambridge, MA, 2000).
- 12 For Singh and housing innovation in Delhi in this period, see Peter Serenyi, 'From Lutyens to Young Indian Architecture: Sixty Years of Housing in New Delhi', *Techniques et architecture*, 381 (August–September 1986), p. 58.
- 13 An impressive range and volume of housing, both directly designed by and curated by HUDCO, had been built by the mid-1990s, as documented in the retrospective survey M. N. Joglekar and S. K. Das, eds, *Contemporary Indian Architecture: Housing and Urban Development* (New Delhi, 1995).
- 14 Allen G. Noble and Ashok K. Dutt, eds, *Indian Urbanization and Planning: Vehicles of Modernization* (New Delhi, 1977).
- 15 Calcutta Metropolitan Planning Organisation, *Basic Development Plan, 1966–1986* (Calcutta, 1966). Also see discussion in Tridib Banerjee, 'Understanding Planning Cultures: The Kolkata Paradox', in *Comparative Planning Cultures*, ed. Sanyal Bishwapriya (New York, 2005). The UCOPAN (Universal Concrete Panel System) building system was developed at Sir George Williams University, Montreal, by Dr Zenon A. Zielinski, who had spent four years in India as Ford Foundation consultant on low-cost housing and structural design.
- 16 Charles M. Correa, Pravina Mehta and Shirish B. Patel, 'Planning for Bombay', *Marg*, XVIII/3 [special issue: *Bombay: Planning and Dreaming*] (1965).
- 17 Charles Correa, 'New Bombay', *Architectural Review*, CL/898 (1971), pp. 335–8.
- 18 Madras Metropolitan Development Authority, *Madras Metropolitan Plan, 1971–1991* (Madras, 1973). The Madras plan was developed under the coordination of the chief planner, Thiru S. Parthasarathy.
- 19 Calcutta Metropolitan Planning Organisation, *Basic Development Plan, 1966–1980* (Calcutta, 1966). Also see Jayasri Ray Chaudhuri and Ray Chaudhuri, *An Introduction to Development and Regional Planning: With Special Reference to India* (Kolkata, 2001).
- 20 Charles Correa, *The New Landscape* (Bombay, 1985), p. 132.
- 21 The Bill was the result of the efforts of architect-turned-parliamentarian Piloo Mody, who as a member of the Swatantra Party represented the largest opposition in the Lok Sabha after the elections of 1967.
- 22 Mody had previously been a partner in the practice of Bajpai and Mody, architects of the

- flagship International Style Oberoi Hotel in New Delhi. He later published his political ideas: P. Mody, *Democracy Means Bread and Freedom* (New Delhi, 1979).
- 23 Noteworthy here was the pioneering slum-upgrading advocacy work of former CEPT student Kirtee Shah and his Ahmedabad Study Action Group (ASAG).
 - 24 G. S. Ramaswamy, *Design and Construction of Concrete Shell Roofs* (New York, 1968). Ramaswamy also published *Modern Prestressed Concrete Design* (London, 1976).
 - 25 Malay Chatterjee, 'The Evolution of Contemporary Indian Architecture', in *Architecture in India*, ed. Raj Rewal, Jean-Louis V  ret and Ram Sharma (Paris, 1985), pp. 124–35; Vikram Bhatt and Peter Scriver, *After the Masters: Contemporary Indian Architecture* (Ahmedabad, 1990), pp. 11, 24.
 - 26 Navi Radjou, Jaideep Prabhu and Simone Ahuja, *Jugaad Innovation: Think Frugal, Be Flexible, Generate Breakthrough Growth* (San Francisco, CA, 2012).
 - 27 Bipan Chandra, *In the Name of Democracy: JP Movement and the Emergency* (New Delhi, 2003).
 - 28 See Vinod Mehta, *The Sanjay Story* (New Delhi, 2013).
 - 29 Evenson, *The Indian Metropolis*, pp. 171.
 - 30 Specifically, the comparison of Indira Gandhi's 20-point economic programme to Hitler's 25-point programme as presented in David Selbourne, *Through the Indian Looking-Glass: Selected Articles on India, 1976–1980* (Bombay, 1982). Emma Tarlo, *Unsettling Memories: Narratives of the Emergency in Delhi* (London, 2003).
 - 31 'Memorandum Submitted by Young Architects: To the Prime Minister Smt. Indra [sic] Gandhi on 12th August, 1975', Greha Archives, <http://architexturez.net/col/greha>, accessed 10 June 2015.
 - 32 Newspaper article, *The Patriot* (13 August 1975).
 - 33 Newspaper article, 'Architects have Blueprint for Habitat', *New York Times* (8 June 1976).
 - 34 B. V. Doshi, 'Submission to the Aga Khan Trust', in *Sangath Project Summary*, ed. Aga Khan Award for Architecture (Geneva, 1983).
 - 35 Jaimini Mehta, 'Architectural Education in India, an Overview – Vadodara, 2006', <http://architexturez.net>, accessed 30 May 2015.
 - 36 This focus on using local materials from within a few kilometres of the village and the use of traditional building methods was also proposed by Mahatma Gandhi. See Mohandas K. Gandhi, *The Collected Works of Mahatma Gandhi* (Ahmedabad, 2011).
 - 37 For an example of such a collaborative approach to energy production in rural India, see David Fulford, *Running a Biogas Program: A Handbook* (New York, 1988). For an overview of Appropriate Technology in India see Debajani Dhal and Binay Kumar Pattnaik, 'Appropriate Technology Movement in India: An Emphatic Drift', *Sociology of Science and Technology*, III/4 (2012), pp. 73–115.
 - 38 Schumacher had previously met J. P. Narayan in the 1950s and came to India in the early 1960s to act as adviser for the planning commission. His experiences in the subcontinent greatly influenced his thinking and the shift from a Keynesian perspective to what he later dubbed as Buddhist Economics.
 - 39 Mohammad Mansurul Hoda, *Proposal for Development of Appropriate Technology in India* (Lucknow, 1980), p. 5.
 - 40 V. S. Naipaul, *India: A Wounded Civilisation* (London, 1977), p. 123.
 - 41 G.H.R. Tillotson, 'Architecture and Anxiety: The Problem of Pastiche in Recent Indian Design', *South Asia Research*, xv/1 (Spring 1995).

chapter six: Identity and Difference: The Cultural Turn, 1980s–1990s

- 1 HRH Prince Charles, 'A speech by HRH The Prince of Wales at the 150th anniversary of the Royal Institute of British Architects (RIBA), Royal Gala Evening at Hampton Court Palace', 30 May 1984, www.princeofwales.gov.uk, accessed 30 January 2015.
- 2 The notion that regionalism could be a salutary 'critical' stance, as opposed to just senti-

mental romanticism or kitsch, within the modern condition of architectural design and production in the second half of the twentieth century had recently been mooted by the architectural theorists Alexander Tzonis and Liane Lefaivre in their interpretation of distinctive tendencies in modern Greek architecture. See Alexander Tzonis and Liane Lefaivre, 'The Grid and the Pathway: An Introduction to the Work of Dimitris and Susana Antonakakis, with Prolegomena to a History of the Culture of Modern Greek Architecture', *Architecture in Greece*, 15 (1981), pp. 164–78. Kenneth Frampton's subsequent and distinctly different development of the concept of a 'critical regionalism' as a stance of resistance to universal civilization through a tectonically and topographically grounded architecture of place was to have wider reception and resonance in the international architectural discourses of the later 1980s, and would later be applied by Frampton himself, among others, in the critical appraisal of the modern 'Indian' architectures of Correa and others. See, for instance, Frampton's introductory essay to the second edition of Correa's monograph: K. Frampton, 'The Work of Charles Correa', in *Charles Correa* (Bombay, 1996), pp. 8–16.

- 3 Peter Murray, 'Correa: Architect in the Third World', *RIBA Journal* (February 1984), editorial.
- 4 Prince Shah Karim Al Hussaini Aga Khan (iv, b. 1936) is the hereditary Imam or leader of the Nizari Ismaili community of Shia Muslims, whose global followers today are estimated to be as many as 15 million in some 25 countries worldwide. When the twenty-year-old Karim became Imam in 1957, then an undergraduate student majoring in History at Harvard, he was following in the footsteps of his cosmopolitan grandfather, Sir Sultan Muhammad Shah, Aga Khan III, GCSI, GCMG, GCIE, GCVO, PC (1877–1957). The elder Aga Khan, Karachi-born and Eton- and Cambridge-educated, had been a much-decorated member of the British imperial peerage who accrued a substantial personal fortune primarily through his business interests with the Ismaili diaspora in British and German colonial East Africa. As one of the founders and first president of the All-India Muslim League, he had played a crucial early role in the long political process towards Indian and Pakistani independence, and had later represented British India at the League of Nations in Geneva (1934–7), of which he became the president in 1937–8. Over the past half century, the current Aga Khan has sustained and extended the international respect and influence of his predecessor through a multifaceted development programme privileging education and cultural development, including architecture, as keys to cultural dialogue and understanding in a plural world. Working to diminish the North–South divide in the postcolonial world, Aga Khan programmes support projects across Asia, Africa and the Middle East, as well as several countries in Europe and North America with significant Ismaili communities. Farhad Daftary, *The Ismailis: Their History and Doctrines*, 2nd edn (Cambridge, 2007).
- 5 In addition to *Mimar: Architecture in Development*, the glossy journal published by the AKPIA itself beginning in 1981, see, for example, *Architecture and Identity*, Kuala Lumpur, Malaysia (1983), *Reading the Contemporary African City*, Dakar, Senegal (1983), and *Regionalism in Architecture*, Dhaka, Bangladesh (1985).
- 6 For an analysis of Fathy's collaboration with Doxiadis in Iraq and elsewhere, see Panayioti Pyla, 'Hassan Fathy Revisited: Postwar Discourses on Science, Development and Vernacular Architecture', *Journal of Architectural Education*, LX/3 (2007), pp. 28–39. See also James Steele, *An Architecture for People: The Complete Works of Hassan Fathy* (London, 1997), pp. 109–23.
- 7 While Fathy had published several books and articles previously, his wider international fame and influence, initially with the alternative technology movement, was established with the American publication of *Architecture for the Poor: An Experiment in Rural Egypt* (Chicago, IL, 1973).
- 8 See Aga Khan Development Network, 'Aga Khan Award for Architecture: Awards, 1978–80': www.akdn.org, accessed 30 January 2015. See also Renata Holod and Darl Rastorfer, 'Mughal Sheraton Hotel', in *Architecture and Community* (New York, 1983).
- 9 'Red sandstone, the building block of Fatehpur Sikri, has been used extensively in the

hotel gardens, and white marble, from the same quarries that served the Taj Mahal, is used in the public areas. All materials and fabrics are Indian.' See Aga Khan Development Network, 'Aga Khan Award for Architecture: Awards, 1978–80'.

- 10 Uttam Jain's Jodhpur University was completed in 1979 and had received some attention since then. The place of Jain's work in the discourse of the 1980s will be discussed later in the chapter.
- 11 Brian Brace Taylor, *Raj Rewal* (London, 1992), p. 16.
- 12 Charles Correa, 'A Place in the Sun', Thomas Cubitt lecture, *Royal Society of Arts Journal* (May 1983).
- 13 See discussion in Francine R. Frankel, *India's Political Economy, 1947–2004: The Gradual Revolution* (New Delhi, 2005), p. 628.
- 14 For detail, *ibid.*, p. 630.
- 15 Simon Mark, 'A Comparative Study of the Cultural Diplomacy of Canada, New Zealand and India', PhD thesis, University of Auckland, 2008, p. 209.
- 16 Pupul Jayakar was also the chair of India's Handloom and Handicraft Export Corporation at the time.
- 17 Pupul Jayakar had been responsible for organizing the cultural festivals during the mid-1970s to help counter the negative publicity due to the state of emergency.
- 18 INTACH was launched on 27 January 1984 at Lodhi Gardens, New Delhi. The Festival of India directorate was also set up in 1984.
- 19 Indira Gandhi was assassinated by two Sikh members of her own elite military body-guard, who had been incensed by Operation Bluestar, the military operation she had ordered earlier that year violently to suppress a nascent Sikh secessionist movement by attacking the Golden Temple in Amritsar, Punjab, the holiest shrine of the Sikh faith, where the rebel leaders had taken refuge. Hundreds if not thousands of innocent Sikhs had subsequently been murdered in bloody riots that had erupted around India after the assassination.
- 20 See also discussion in Norma Evenson, *The Indian Metropolis: A View toward the West* (New Haven, CT, and London, 1989), p. 186.
- 21 Delhi Development Authority, *Master Plan of Delhi: 2001* (Delhi, 2001), pp. 44, 185–7.
- 22 A similar trend is evident in Calcutta with the establishment of the Centre for Preservation of Urban Traditional Values. Jon Lang, *A Concise History of Modern Architecture in India* (New Delhi, 2002), p. 178.
- 23 Swati Chattopadhyay, 'Expedient Forgetting: Architecture in the Late Twentieth-century Nationalist Imagination', *Design Book Review* (Fall 2000), p. 27.
- 24 Sunil Sethi, 'The Selling of India', *India Today* (August 1981).
- 25 Since the mid-1970s the launch of the Cricket World Cup had provided a platform for the members of the British Commonwealth to compete against the host nation. The growing popularity of the new one-day format was combined with the proliferation of television as a new medium, making it an important component in promoting national solidarity. India won the third tournament held in 1983, and amid the wave of nationwide celebrations was further chosen to be the host for the tournament to be held for the first time outside England in 1987.
- 26 Along with other members of the group called Architectural Research Cell.
- 27 Charles Correa, 'Vistara: The Architecture of India', *Mimar*, xxvii (March 1988), pp. 24–6.
- 28 It was decided that the site along the central vista of Lutyens's plan for Delhi, which was reserved for the National Theatre, would now serve as the site for such an Arts Centre as envisaged in the original plan.
- 29 See Razia Grover, *Concepts and Responses: International Architectural Design Competition for the Indira Gandhi National Centre for the Arts* (Ahmedabad, 1992).
- 30 *Ibid.*, p. 45.
- 31 Chattopadhyay, 'Expedient Forgetting', p. 27.
- 32 Grover, *Concepts and Responses*, p. 56.
- 33 For reference to *mandalas*, see the competition entry by John Bradley Stokes of Australia

in Grover, *Concepts and Responses*, p. 90.

- 34 See discussion in Vibhuti Chakrabarti, *Indian Architectural Theory: Contemporary Uses of Vastu Vidya* (Richmond, Surrey, 1998), p. 126.
- 35 Vikram Bhatt and Peter Scriver, *After the Masters: Contemporary Indian Architecture* (Ahmedabad, 1990).
- 36 Romesh Khosla, *Journal of Arts and Ideas* (April–June 1985).
- 37 Gautam Bhatia, 'Indian Archetypes: Institutional Architecture in India', *Architectural Review*, CXCVII/1179 (May 1995), pp. 74–7.
- 38 Neelkanth Chhaya, in discussion with A. S., February 2010.
- 39 The argument outlined in this section draws on the critical study of *A+D* and its role in the development and diffusion of architectural thinking and practice in India in the 1980s by Shaji K. Panicker, 'Indian Architecture and the Production of a Postcolonial Discourse: A Study of *Architecture + Design*, 1984–1992', PhD thesis, University of Adelaide, 2007.
- 40 Mimar's lead in addressing issues of regional architectural identity relevant to Asia at an international level had raised the commercial interest of a Thailand-based publisher, Media Transasia, in launching a new Indian architectural magazine. The architect C. P. Kukreja, a personal friend of the publisher and principal of a large and successful commercial practice, was invited to spearhead the proposal, while Kukreja approached Satish Grover, another Delhi architect and published author on the architectural history of India, to be his collaborator and initial editorial adviser.
- 41 See Manjulika Dubey, 'Editorial', *Architecture + Design*, 1/1 (November–December 1984). As noted by Shaji Panicker, 'The editorial was mostly driven by Satish Grover, since neither Manjulika Dubey nor Razia Grover were directly associated with architectural professions'; Panicker, 'Indian Architecture and the Production of a Postcolonial Discourse', p. 193 n. 12.
- 42 Roger Connah had arrived in India to assist the celebrated Finnish architect Reima Pietila with the design and construction of the Finnish Embassy, but decided to stay on for an extended period, during which he had contributed several articles to *A+D*.
- 43 Both publications, Witold Rybczynski's and Vikram Bhatt's *How the Other Half Builds* and Vinod Gupta's edited volume *Energy and Habitat* (based on the proceedings of the IIT conference), came out in 1984 (published in Montreal and New Delhi, respectively).
- 44 Especially B. V. Doshi's personal involvement with UN Habitat and the Vastu Shilpa Foundation's collaboration with McGill University on issues of housing the urban poor. There was also a training programme for architects organized on the issue of energy by CBRI Roorkee in 1982.
- 45 Bernard Feilden, *Guidelines for Conservation: A Technical Manual* (New Delhi, 1986).
- 46 Many members of Greha were included in the group of young architects that made a representation regarding these issues to the prime minister in 1975. This is discussed in detail in chapter Five.
- 47 For a brief discussion of their argument, see A.G.K. Menon, 'Conservation in India: A Search for Direction', *Architecture + Design*, VI/1 (1989), pp. 22–7.
- 48 Available from the Council of Architecture (COA) records, New Delhi.
- 49 See 'Editorial', *Architecture + Design*, III/1 (November–December 1986).
- 50 'Delhi School of Design', *Greha*, ed. M. N. Ashish Ganju (Delhi, 1986), at Greha Archives, <http://architexturez.net>, accessed 10 June 2015.
- 51 It is relevant to note that these changes correspond to the recommendations made by the young architects in their appeal to the prime minister in 1975. Since many of them were Greha members, this directly impacts the perceived importance of the group.
- 52 'Habitat Schools', *Greha*, ed. M. N. Ashish Ganju (Delhi, 1990), at Greha Archives, <http://architexturez.net>, accessed 10 June 2015.
- 53 Varkey's widely revered directorship was cut short by his untimely death in a road accident in 2001.
- 54 This corresponds to the recommendations of the Mandal Commission set out in 1980 but laid aside by the return of Indira Gandhi to power. V. P. Singh promised to implement

the recommendations if he came to power.

- 55 Jan Morcha was consolidated with the Janata Party, Lok Dal and Congress (s) on J. P. Narayan's birth anniversary to form the Janata Dal. Subsequently, Janata Dal gained the support of the DMK (Dravida Munnetra Kazhagam), TDP (Telugu Desam Party) and other regionalist parties to form the National Front.
- 56 Born into a Brahmin family, Indira Gandhi had always maintained a strong belief in spirituality and by the 1970s was deeply involved with the teachings of Swami Dharendra Brahmchari, who maintained close relations with the family. This side of Indira's personality had surfaced in the media in the late 1970s, and after the death of her son Sanjay she made even less effort to disguise this fact.
- 57 Accordingly, we have witnessed the articulation of these spiritual ideas as a part of Indira's mythology of the early 1980s, as articulated by her close friend and adviser Pupul Jayakar.
- 58 Indira Gandhi, *Selected Speeches and Writings of Indira Gandhi, January 1980–December 1981* (New Delhi, 1985).
- 59 The various religiously oriented political bodies included some that have already been encountered, such as the VHP (Hindu), Jammata (Muslim) and Akali Dal (Sikh).
- 60 For the Shah Bano divorce case and its political implications, see Zoya Hasan, 'Minority Identity, Muslim Women Bill Campaign and the Political Process', *Economic and Political Weekly*, xxiv/1 (7 January 1989), pp. 44–50; Nawaz B. Mody, 'The Press in India: The Shah Bano Judgment and its Aftermath', *Asian Survey*, xxvii/8 (August 1987), pp. 935–53.

chapter seven: Towards the 'Non-modern': Architecture and Global India since 1990

- 1 (Letter to the Editor), *The Statesman* (28 July 1990).
- 2 Ramachandra Gupta, *India after Gandhi: The History of the World's Largest Democracy* (London, 2007), pp. 127–33.
- 3 For details of the Ram Mandir project see Chandrakant B. Sompura's website, www.sompuracb.com.
- 4 Sujata Bose and Ayesha Jalal, *Modern South Asia: History, Culture, Political Economy* (London and New York, 1997), pp. 227–30.
- 5 The general reception of these ideas is available from popular news media; see Andrew Brown, 'Neasden: A New Home for the Gods', *The Independent*, 17 August 1995; Peter Conchie, 'Neasden's Divine Inspiration', *The Independent*, 9 May 1998. For a study of the impact of this religious diaspora, see John Zavos, 'Negotiating Multiculturalism: Religion and the Organisation of Hindu Identity in Contemporary Britain', *Journal of Ethnic and Migration Studies*, xxxv/6 (July 2009), pp. 881–900.
- 6 Rahul Mehrotra, *Architecture in India since 1990* (Mumbai, 2011), pp. 27–57.
- 7 'How it was Made – In Detail', at <http://londonmandir.baps.org/the-mandir>, accessed 17 April 2015.
- 8 'Sai Baba Mandir', *The INSIGMA Project*, 19 September 2013, www.theinsigmaproject.blogspot.com.au.
- 9 These were The Ismaili Centre and Aga Khan Museum, Toronto (2000–2014) by Charles Correa Associates, and the Ismaili Centre, Lisbon (2000) by Raj Rewal Associates. Other significant overseas commissions undertaken by these architects in this period were the MIT Brain and Cognitive Science Complex, Cambridge, Massachusetts (2000–2005) and the Champalimaud Centre for the Unknown, Lisbon (2007–2010), both by Correa; and the Indian Embassy, Beijing (2011) by Rewal.
- 10 These included Hindustan Computers Limited (HCL), established in 1971, and the Tata Group, initiators of the Santacruz Electronics Export Processing Zone (SEEPZ) in Mumbai, which had already become a major centre for the export of IT services by 1973.
- 11 Significant Indian IT corporations include Wipro Technologies, set up in 1980, and Infosys

Technologies, founded in 1981. By the time that economic liberalization was fully implemented in 1991, India was, therefore, already well positioned in the IT sector to leapfrog conventional industrialization and fully embrace the new knowledge economy as a primary engine for growth.

- 12 Rahul Mehrotra applies the apposite notion of 'impatient capital' in his fuller critical overview of these recent developments in Mehrotra, *Architecture in India since 1990*.
- 13 HOK and SOM have been significantly involved in the redevelopment of the major international airports in the country, including the IGIA Terminal 3 at New Delhi (HOK) and Chatrapati Shivaji International Terminal at Mumbai (SOM). Other regional airports such as Chennai and Vadodara are being developed by Gensler and Frederic Schwartz, while CPG Consultants of Singapore are responsible for the new facility at Ahmedabad.
- 14 For example, consider Sudhir Jambhekar, with FXFOWLE Architects, New York; Kapil Gupta, with Serie Architects, London; and Pankaj Vir Gupta, with Vir Mueller Architects, New Delhi.
- 15 Paolo Tombesi, Bharat Dave and Peter Scriver, 'Routine Production or Symbolic Analysis? India and the Globalization of Architectural Services', *Journal of Architecture*, VIII/1 (Spring 2003), pp. 63–94.
- 16 Other practices representing this cohort include Sanjay Mohe and Mindspace, Chandravarkar & Thacker, and Mathew & Ghosh in Bangalore; Anagram Architects, ABRD Architects and DADA Studio in Delhi; Samira Rathod and Sandeep Khosla in Mumbai; and Rajeev Kathpalia, Aniket Bhagwat, Bimal Patel and Gurjit Singh Matharoo in Ahmedabad. Joining their ranks is a new generation of resident expatriate practitioners, including Stephane Paumier in Delhi and Klaus Peter Gast and Dominique Dube in Kerala, whose modernist formalisms display keen regional sensibilities as well in the tradition of Joseph Stein, Laurie Baker and Roger Anger.
- 17 Mehrotra, *Architecture in India since 1990*.
- 18 Balkrishna Doshi, *Paths Uncharted* (Ahmedabad, 2011), pp. 324–7.
- 19 The Bandra-Kurla Complex overlooks a tidal creek on its southern and eastern boundaries with the sprawling slum area known as Dharavi. With an estimated population of more than 500,000, Dharavi is one of the largest and most famous informal urban settlements in Asia, which has been the focus of numerous documentary and dramatic films, including *Slumdog Millionaire*.
- 20 'Build Toilets First and Temples Later, Narendra Modi Says', www.timesofindia.com, 2 October 2013.
- 21 Mehrotra, *Architecture in India since 1990*, pp. 130–31.

Select Bibliography

- Ameen, Farooq, ed., *Contemporary Architecture and City Form: The South Asian Paradigm* (Mumbai, 1997)
- Bagha, Sarbjit, and Surinder Bagha, *Le Corbusier and Pierre Jeanneret: Footprints on the Sands of Indian Architecture* (New Delhi, 2000)
- , Surinder Bagha and Yashinder Bahga, *Modern Architecture in India: Post-Independence Perspective* (New Delhi, 1993)
- Belluardo, James, and Kazi Ashraf, eds, *An Architecture of Independence: The Making of Modern South Asia: Charles Correa, Balkrishna Doshi, Muzharul Islam, Achyut Kanvinde* (New York, 1998)
- Bhatia, Gautam, *Punjabi Baroque and Other Memories of Architecture* (New Delhi, 1994)
- , ed., *Eternal Stone: Great Buildings of India* (New Delhi, 2000)
- Bhatt, Vikram, and Peter Scriver, *After the Masters: Contemporary Indian Architecture* (Ahmedabad and New York, 1990)
- Brown, Rebecca M., *Art for a Modern India, 1947–1980* (Durham, NC, 2009)
- Chakrabarti, Vibhuti, *Indian Architectural Theory: Contemporary uses of Vastu Vidya* (Delhi, 1999)
- Chattopadhyay, Swati, *Representing Calcutta: Modernity, Nationalism and the Colonial Uncanny* (London and New York, 2005)
- Chopra, Preeti, *A Joint Enterprise: Indian Elites and the Making of British Bombay* (Minneapolis, MN, 2011)
- Correa, Charles, *Balkrishna Doshi: An Architecture for India* (Ahmedabad, 1988)
- , *Housing and Urbanisation* (Mumbai, 1999)
- , *The New Landscape: Urbanisation in the Third World* (Bombay, 1989)
- , and Kenneth Frampton, *Charles Correa* (Mumbai, 1996)
- Crismon, Mark, *Modern Architecture and the End of Empire* (Aldershot, 2003)
- Davies, Philip, *Splendours of the Raj: British Architecture in India, 1660 to 1947* (London, 1985)
- Desai, Madhavi, Miki Desai and Jon Lang, *The Bungalow in Twentieth-century India: The Cultural Expression of Changing Ways of Life and Aspirations in the Domestic Architecture of Colonial and Post-colonial Society* (Farnham and Burlington, IN, 2012)
- Doshi, Balkrishna, *Paths Uncharted* (Ahmedabad, 2011)
- Dutta, Arindam, *The Bureaucracy of Beauty: Design in the Age of its Global Reproducibility* (London and New York, 2007)
- Dwivedi, Sharada, and Rahul Mehrotra, *Bombay: The Cities Within* (Mumbai, 1997)
- Evenson, Norma, *The Indian Metropolis: A View toward the West* (New Haven, CT, and London, 1989)
- Garimella, Annapurna, ed., *Mulk Raj Anand: Shaping the Indian Modern* (Mumbai, 2005)
- Gast, Klaus-Peter, *Modern Traditions: Contemporary Architecture in India* (Basel and Boston, MA, 2007)
- Glover, William, *Making Lahore Modern: Constructing and Imagining a Modern City* (Minneapolis, MN, 2008)
- Gupta, Samita, *Architecture of the Raj: Western Deccan, 1700–1900* (New Delhi, 1985)
- Home, Robert, *Of Planting and Planning: The Making of British Colonial Cities* (London, 1997)
- Hosagrahar, Jyoti, *Indigenous Modernities: Negotiating Architecture and Urbanism* (London, 2005)

- Irving, Robert Grant, *Indian Summer: Lutyens, Baker, and Imperial Delhi* (New Haven, CT, and London, 1981)
- Iyer, Kamu, ed., *Buildings that Shaped Bombay: Works of G. B. Mhatre FRIBA* (Mumbai, 2000)
- Jayewardene-Pillai, Shanti, *Imperial Conversations: Indo-Britons and the Architecture of South India* (New Delhi, 2007)
- Joshi, Kiren, *Documenting Chandigarh: The Indian Architecture of Pierre Jeanneret, Edwin Maxwell Fry and Jane Beverly Drew* (Ahmedabad and Chandigarh, 1999)
- Kalia, Ravi, *Bhubaneswar: From a Temple Town to a Capital City* (Delhi, 1994)
- King, Anthony D., *The Bungalow: The Production of a Global Culture* (London, 1984)
- , *Colonial Urban Development: Culture, Social Power and Environment* (London, 1976)
- Kruty, Paul, and Paul E. Sprague, *Two American Architects in India: Walter B. Griffin and Marion M. Griffin, 1935–1937* (Urbana and Champaign, IL, 1997)
- Lang, Jon, *A Concise History of Modern Architecture in India* (New Delhi, 2002)
- , Madhavi Desai and Miki Desai, *Architecture and Independence: The Search for Identity, 1880–1980* (New Delhi, 1997)
- London, Christopher, ed., *Architecture in Victorian and Edwardian India* (Bombay, 1994)
- Mehrotra, Rahul, *Architecture in India since 1990* (Mumbai, 2011)
- , et al., eds, *World Architecture: A Critical Mosaic, 1900–2000*, vol. VIII: *South Asia* (New York and Vienna, 2001)
- Metcalf, T. R., *An Imperial Vision: Indian Architecture and Britain's Raj* (London, 1989)
- Mitter, Partha, *The Triumph of Modernism: India's Artists and the Avant-garde, 1922–1947* (New Delhi, 2007)
- Morris, Jan, with S. Winchester, *Stones of Empire: The Buildings of the Raj* (New York, 1983)
- Mumtaz, Kamal Khan, *Architecture in Pakistan* (Singapore, 1985)
- Nilsson, Sten, *European Architecture in India, 1750–1850* (London, 1968)
- Pandya, Yatin, *Concepts of Space in Traditional Indian Architecture* (Ahmedabad, 2005)
- Pelizzari, Maria Antonella, ed., *Traces of India: Photography, Architecture and the Politics of Representation, 1850–1900* (Montreal, 2003)
- Polk, Benjamin, *Building for South Asia: An Architectural Biography* (New Delhi, 1993)
- Prakash, Vikramaditya, *Chandigarh's Le Corbusier: The Struggle for Modernity in Postcolonial India* (Seattle and London, 2002)
- Rajagopalan, Mrinalini, and Madhuri Desai, eds, *Colonial Frames, Nationalist Histories Imperial Legacies, Architecture, and Modernity* (Farnham and Burlington, VT, 2012)
- Raje, Amita, and Shubhra Raje, eds, *Anant Raje Architect: Selected Works, 1971–2009* (Ahmedabad, 2012)
- Rewal, Raj, Jean-Louis V  ret and Ram Sharma, eds, *Architecture in India* (Paris, 1985)
- Sachdev, Vibhuti, and Giles H. R. Tillotson, *Building Jaipur: The Making of an Indian City* (London, 2002)
- Scriver, Peter, *Rationalization, Standardization, and Control in Design: A Cognitive Historical Study of Architectural Design and Planning in the Public Works Department of British India, 1855–1901* (Delft, 1994)
- , and Vikramaditya Prakash, eds, *Colonial Modernities: Building, Dwelling and Architecture in British India and Ceylon* (London, 2007)
- Steele, James, *The Complete Architecture of Balkrishna Doshi: Rethinking Modernism for the Developing World* (Mumbai, 1998)
- Tadgell, Christopher, *The History of Architecture in India; from the Dawn of Civilization to the End of the Raj* (London, 1994)
- Taylor, Brian Brace, *Raj Rewal* (London, 1992)
- Tillotson, Giles H. R., *The Tradition of Indian Architecture: Continuity, Controversy and Change since 1850* (New Haven, CT, and London, 1989)
- White, Stephen, *Building in the Garden: The Architecture of Joseph Allen Stein in India and California* (Delhi, 1993)

Acknowledgements

This book was not quickly accomplished and, in multiple ways, reflects decades of collective work on the topic, not limited to the original scholarship of the two authors. We wish to thank our editor, Vivian Constantinopoulos, for the honour of the original invitation to contribute to her remarkable series, and we are equally grateful to her and her team at Reaktion, Aimee Selby and Harry Gilonis in particular, for their professionalism and infinite patience in enabling us – with the invaluable assistance of our colleague Namrata Joshi-Vishwasrao at the Australian end of the process – to bring this many-faceted volume to completion.

Our account of the long history of modernity and architecture in India's recent past has been shaped profoundly by the direct contact, and professional mentorship in a handful of cases, that the authors were privileged to gain over the past three decades with some of the most influential architects and architectural engineers in India in the second half of the twentieth century. These include S. L. Chitale, Morad Chowdhuri, Balkrishna Doshi, I. M. Kadri, Hasmukh Patel, Mahendra Raj, Raj Rewal, Ranjit Sabikhi, and an ever longer list of other doyens who are now no longer with us. We wish to remember in particular the late Habib Rahman, Achyut Kanvinde, Joseph Allen Stein, Laurie Baker, M. N. Rana, Anant Raje and Charles Correa – the news of whose passing has only just reached us as these final words are being penned. Our special thanks to Ram Rahman, Sanjay Kanvinde, Ethan Stein, Rohit Raj Mehndiratta, Amita and Shubhra Raje and Nondita Correa for providing further insight into their personal family histories.

The development of the modern architectural profession and its pedagogy in India is one of the threads of this history that we have endeavoured to follow with particular care and critical attentiveness. We are grateful to the following champions, former teachers and fellow pedagogues for sharing their experience and insight: Christopher Benninger, Jai Ratan Bhalla, Vikram Bhatt, Akhtar Chauhan, H. D. Chhaya, Neelkanth Chhaya, M. N. Ashish Ganju, Ashok Iyer, Sen Kapadia, A. G. Krishna Menon, Murali Murugan, K. L. Nadir, Yatin Pandya, K. T. Ravindran, Rajat Ray, Balwant Singh Saini, Joy Sen, Nalini Thakur and the late Kurula Varkey.

To Anthony King, Alexander Tzonis, Liane Lefaivre and the late Joop Doorman and Peter Collins; and to Antony Radford and Adrian and Judith Snodgrass we are equally grateful for inspiration and mentorship at other stages of our careers that continue to frame key questions that have informed our approach.

The list is long of the many other colleagues, friends, acquaintances and contemporaries in academe and practice, both within and outside India, to whom we are indebted for sharing and testing many of the ideas developed in these pages and, not least, for producing some of the most compelling original design work and scholarship with which our narrative has attempted to engage. We sincerely wish to thank: Kazi Khaled Ashraf, Manon Asselin, Uday Athavankar, Shachi and Umesh Atree, Sangeeta Bagga, Durganand Balsavar, James Belluardo, Shirish Beri, Riyaz Bhada, Aniket Bhagwat, Prabhakar Bhagwat, Gautam Bhatia, Anand Bhatt, Rebecca Brown, Himanshu Burte, Stephen Cairns, Prem Chandavarkar, Jaideep Chatterjee, Malai Chatterjee, Sonmoy Chatterjee, Swati Chattopadhyay, Anuraag Chowla, Randy Cohen, Hafeez Contractor, Anne Cormier, Nondita Correa, Mark Crinson, Shilpa Das, Sambit Datta, Sonal Dave, Madhavi Desai, Miki Desai, Quaid Doongerwala, Radhika Doshi, Arindam Dutta, Ronald Fuchs, Blair Gardiner, Soumitro Ghosh, William Glover, Debashish Guha, Amit Gulati, Richard Harris, Jyoti Hosagrahar, Ranjit Hoskote, Robert Grant Irving, Kathleen James-Chakraborty, Michael Jansen, Shimul Jhaveri Kadri, Revathi Kamath, Rajeev Kathpalia, Sabir Khan, Puneet Khanna, Malini

Kochupillai, Jeevan Kothari, P. T. Krishnan, Dikshu Kukreja, Johan Lagae, Chee Kien Lai, Ashok Lall, Jon Lang, Stephen Legg, Duanfang Lu, Smita Makeeja, Neeraj Manchanda, Meena Mani, Nisha Mathew, Rahul Mehrotra, Raja Menon, Thomas Metcalf, Thomas Mical, Shruti Narayan, Yatin Pandya, Anuradha Parikh, Bimal Patel, Nimish Patel, Daniel Pearl, Anoma Pieris, Vikramaditya Prakash, Kanishka Prasad, Arun Rewal, Smriti Rajgarhia, Madhav Raman, Vibhuti Sachdev, M. S. Satsangi, Mriganka Saxena, P. S. Seshadri, Sylvia Shorto, Manu Sobti, Giles Tillotson, Riyaz Tayyibji, Paolo Tombesi, Gajanan Upadhyay, Paul Walker, Stephen White, Rhodri Windsor-Liscombe, Parul Zaveri and the late Bharat Dave.

We also owe our sincere thanks to the following former students and other emerging scholars whose parallel research on aspects of the history explored in this book enriched our understanding of the content and issues: Vandana Baweja, Runit Chhaya, Farhan Karim, Manu Khanna, Lakshmi Krishnaswamy, Namrata Joshi-Vishwasrao, Vaishali Makim, Wayne Mullen, Shaji Panicker, Deepak Rawat, Prajakta Sane, K. R. Sitalakshmi and Sanjeev Vidyarthi.

We are additionally grateful to the following publishers and architectural photographers for their original vision in capturing and shaping the discourse on modern architecture in India – as it happened – that we have attempted to revisit in this book: The late Patwant Singh, founding editor/publisher of *Design* magazine, and his widow, Meher; C. P. Kukreja, the late Satish Grover, and Razia Grover, founding publisher and editors, respectively, of *Architecture + Design*; Malika Sarabai and Bipin Shah, founder publishers of Mapin, the pioneering Indian art, architecture and design press; the late Madan Mahatta, doyen of Indian architectural photographers in the second half of the twentieth century, and his curator, Devika Daulet-Singh; and last but not least, Ram Rahman – photographer, artist, activist and raconteur extraordinaire.

To the Australian Research Council, and to the Faculty of Professions and the School of Architecture and Built Environment of the University of Adelaide we are indebted for a number of grants, large and small, over the past several years that have supported different strategic and tactical aspects of the research that underpins this book. Our thanks extends, moreover, to the leadership and professional staff in the School of Architecture and Built Environment for their logistical support, and to our research students and colleagues Samer Akkach, Katharine Bartsch and Mizanur Rashid in the Centre for Asian and Middle Eastern Architecture (CAMEA) for their forbearance and belief in the worthiness of our prolonged preoccupation with this project.

Last but not least, we have dedicated this volume to our long-suffering but ever-supportive family members, partners and fellow-travellers on the long road to its completion. To the no longer ‘little’ girl who once gazed quizzically at Mumbai’s unfamiliar skyline, we are delighted to declare that ‘*that*’ book is finally finished!

Photo Acknowledgements

The author and publishers wish to express their thanks to the below sources of illustrative material and/or permission to reproduce it. (Some information not placed in the captions for reasons of brevity is also given below.)

Courtesy Anagram Architects: p. 330 (top); courtesy Anant Raje Foundation: pp. 225, 294; courtesy Architect Hafeez Contractor: pp. 325, 328; courtesy Architectural Association Archives, London (Otto Koenigsberger Collection): p. 152; courtesy Archives of the Aditya Prakash Foundation, Chandigarh: pp. 126, 146, 149; collection of the authors: p. 98; courtesy Avery Architectural & Fine Arts Library, Columbia University: p. 117; courtesy Benjamin Polk Collection, Environmental Design Archives, UC Berkeley: pp. 154, 188; photos courtesy Vikram Bhatt: pp. 199, 300; courtesy Vikram Bhatt and Peter Scriver, from Bhatt and Scriver, *After the Masters: Contemporary Indian Architecture* (Ahmedabad: Mapin Publishing Pvt Ltd, 1991) pp. 262 (top), 266, 276 (top); photo Enrico Cano, courtesy Studio Architetto Mario Botta: p. 323; Central Public Works Department, Delhi: pp. 120, 136, 156, 159; Central Public Works Department Library, Delhi: p. 80, 121; courtesy Chitale & Son: pp. 104, 105, 201, 202, 248; courtesy Charles Correa Associates: pp. 173, 237, 292 (top); from *Design* magazine, courtesy Meher Patwant Singh: pp. 140, 143, 203, 205, 218 (left); courtesy Ashok Dilwali (photographer) and Vir Mueller Architects: p. 118; courtesy Sharada Dwivedi and Rahul Mehrotra, from *Bombay: The Cities Within* (Bombay: India House, 1995): pp. 36 (top), 39, 107, 109, 111, 112, 208, 231, 238; from *Exhibition Souvenir: International Exhibition on Low Cost Housing* (New Delhi, 1954): pp. 150, 151 (bottom); courtesy The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art/Avery Architectural & Fine Arts Library, Columbia University, New York): p. 176; courtesy M. N. Ashish Ganju: p. 255; photo courtesy Derham Groves: p. 262 (foot); from E. B. Havell, *Indian Architecture, its Psychology, Structure, and History from the first Muhammadan Invasion to the Present Day* (London: John Murray, 1913): p. 61; courtesy HCP Design Planning & Management Pvt Ltd: pp. 296, 323, 336; from Thomas H. Hendley, *Handbook of the Jeypore Museum* (Delhi: The India Museum, 1896): p. 65 (foot); *The Imperial Gazetteer of India* 'New Edition, vol. xxvi, Atlas (Oxford: The Clarendon Press, 1931): pp. 26, 37, 54, 83; courtesy Indira Gandhi National Centre for the Arts: pp. 290 (foot), 291; courtesy Kamu Iyer and the Kamla Raheja Vidyandhi Institute of Architecture and Environmental Studies, Bombay: pp. 112, 114; courtesy Kadri Consultants: pp. 204, 206, 207, 249; courtesy Kamath Design Studio: p. 302; courtesy Sanjay Kanvinde: pp. 152, 189, 190, 227, 245; from Otto H. Koenigsberger, 'New Towns in India', *The Town Planning Review*, xxiii/2 (July 1952), reproduced courtesy Liverpool University Press: pp. 142, 147; Maharashtra State Archives: pp. 51 (Bombay Archives Map No. 4687), 52 (Bombay Archives Map No. 5371); courtesy The Marg Foundation, Mumbai: p. 208 (right); courtesy Matharoo Associates: p. 338; courtesy Mathew & Ghosh Architects: p. 329 left; courtesy Rahul Mehrotra, RMA Architects: pp. 94, 179 (top), 181, 213 (foot), 331; photo Madan Mehta, reproduced courtesy Mahatta & Co.: pp. 186, 191, 192, 227, 292 (bottom), 233, 246, 247, 250, 278; courtesy Sanjay Mohe and Mindspace: p. 320; Narinder Naanu/Getty Images: p. 310; photo courtesy Joshua Nash: pp. 217, 319; National Archives of India: pp. 48 (Enclosure to PWD Circular No. 7, 6 February 1868), 50 (Enclosure to PWD Circular No. 46 of 1865), 76 (PWD (C.W.-B.) Proceedings, December 1903); courtesy Yatin Pandya and Vastu Shilpa Foundation: p. 332; *Professional Papers in Indian Engineering* (first

series): pp. 32 (vol. iii/13, November 1866), 34 (vol. i/2, February 1864, 43 (vol. i/5, November 1864), 46 (vol. i/3, May 1864), 47 (vol. ii/7, 1865), 53 (vol. iii/10, February 1866); photo Habib Rahman, reproduced courtesy Habib Rahman Archives, © Ram Rahman/Sukanya Rahman: pp. 10, 131, 133, 162, 163, 164, 227, 312; photo courtesy Ram Rahman: pp. 270, 293; courtesy Raj Rewal Associates: p. 251; courtesy riba Library Drawings & Archives Collections: p. 97; photo Gordon Sanderson: p. 61; Peter Scriver: pp. 8, 22, 31, 36 (foot), 41, 49, 52, 62, 63, 65 (top), 73, 76, 79, 85, 86, 87, 92, 94, 102, 106, 110, 123, 135, 136, 137, 138, 139, 144, 145, 148, 157, 158, 160, 161, 170, 172, 178, 179, 180, 193, 197, 204, 213 (top), 229, 235, 241, 259, 265, 277, 295, 333 (top); courtesy Chandrakant B. Sompura: pp. 314, 315; Amit Srivastava: pp. 70, 101, 140, 276 (foot), 290 (top), 307, 321, 330 (foot), 336; courtesy Studio Mumbai: p. 329 right; from Giles Tillotson, 'George S. T. Harris: An Architect in Gwalior', *South Asian Studies*, xx/1 (2004): p. 67 (foot); reproduced courtesy Giles Tillotson: p. 67; Time Life Pictures: pp. 6, 14, 15; unknown photographer, courtesy http://thadhagadhan.blogspot.com.au/2013_04_01_archive.html: p. 103; courtesy Vastu Shilpa Foundation: pp. 182–3, 184, 215, 230, 242, 244, 259, 333 (foot); courtesy Stephen White, *Building in the Garden: The Architecture of Joseph Allen Stein in India and California* (New Delhi: Oxford University Press, 1993): pp. 151 (top), 153, 195, 196, 246.

Index

Page numbers in *italic* indicate illustrations

- Aditi festival 286
- Aga Khan Award for Architecture (AKAA) 273, 274–5, 297
- Aga Khan Program for Islamic Architecture 216, 273, 275, 279
- Ahmedabad
 - Balkrishna Doshi's commissions 182–4, 182, 184, 212, 229, 230, 240, 241, 243, 324
 - Centre for Environmental Planning and Technology 214–15, 215, 216–17, 305
 - Louis Kahn's impact on 212–14, 294–7
 - National Institute of Design 211–12, 213, 264–5
 - regionalism and 171–3, 174–84, 330, 335–7
 - Town Hall 100, 101, 177
- Ahmedabad Textile Industry's Research Association (ATIRA) 152, 182, 182
- Ahmedabad Textile Mill Owners' Association (ATMA) Building 178–9, 179
- Air India Building 170, 208–9, 208
- Akshardham Temple 316, 317
- Albert Hall 65–7, 65
- All India Handloom Board 210
- Allahabad 37–8, 37, 53, 53
- Anagram Architects 330
- Anand, Mulk Raj 205, 206, 218, 219
- Anger, Roger 199, 265, 265
- Anglo-Indian bungalows 41
- Anna University 216
- apartment blocks 163, 207–8, 231, 231, 328
- Application of Science and Technology in Rural Areas (ASTRA) 300
- 'appropriate technology' 263–4
- Apsara Cinema 202
- archaeological digs, Indus Valley 103
- Archaeological Survey of India 29, 286, 308
- 'The Architect and the Built Environment' (seminar) 300–303
- architects
 - activist 255–7, 258
 - education of 35, 42, 47, 48, 58–60, 95–102, 155, 177, 196, 210–19, 245, 304–5, 318
 - in private practice 99, 102, 105, 140, 171
 - national registration of 239
 - Public Works Department/Central Public Works Department 71–2, 73–4, 77–8, 134–8, 162
- Architect's Act (1972) 239
- architectural drawing 66–7, 97, 98, 99
- architectural heritage conservation 218, 284, 285, 286, 303–4
- Architectural Seminar (1959) 166–9, 287
- Architecture + Design* (journal) 279, 280, 294, 298–9, 300–303, 305
- Ardalan, Nader 257
- Art Deco style 108, 115, 117, 203, 208
- artisans (traditional/native) 57, 59, 66, 88, 104, 267, 318
- Arts and Crafts movement 23–4, 59, 60, 84, 89, 97, 115–16
- Asema Architects 307
- Ashwinikumar Crematorium 338–9, 338
- asylums 54–5
- AT movement 263–4
- Atomic Power Project Township, Kota 226, 227
- Aurobindo Ashram 119, 199, 264
- Auroville 199–200, 264–6, 265
- Ayodhya crisis 308–16, 310, 312, 315, 317
- Babri Masjid–Ram Janmabhoomi controversy 308–16, 310, 312, 315, 317, 317
- Back Bay land reclamation scheme 109, 110, 237, 238, 285
- Baha'i House of Worship, New Delhi 307, 308
- Bajpai, Durga 202, 203, 203
- Baker, Herbert 85–7, 86, 88
- Baker, Laurie 261–3, 262, 300, 301, 330
- Band-town layout 142, 142
- Bank of India, Bombay 100, 102

- barracks 46–51, 46, 47, 48, 49, 50
 Batley, Claude 99–100, 101, 114, 177
 Bauhaus design school 90, 91
 Beaux-Arts 84, 101, 216
 Begg, John 77–8, 79, 82, 87–8, 96, 97, 100
 Benares 55, 61, 61
 Bengal Engineering College 155, 196, 216
 Bengal School 89, 90, 91, 103
 Benjamin, J. M. 204
 Bhadravati 141
 Bhagwat, Aniket 330
 Bhakra Nangal Dam 14
 Bhalla, Jai Rattan 197
 Bhan, Ravindra 277
 Bharat Diamond Bourse 331–4, 333
 Bhatia, Gautam 289, 291
 Bhatt, Vikram 299
 Bhawan, Udyog 135
 Bhedwar, Sorabji 109, 109, 112, 113–14, 114
 Bhilai 153
 Bhubaneswar 136, 138, 141–2, 142
 Birla, G. D. 188–9
 Birla family 104
 Birla Institute of Technology and Science (BITS) 188, 188, 189–91
 Bollywood 109, 198, 205, 329
 Bombay
 Back Bay land reclamation scheme 109, 110, 237, 238, 285
 British Indian Empire period 27
 fort precinct redevelopment 38–40
 high-rise developments 231
 need for planning solutions 235
 New Bombay 236–7, 237, 240, 254, 285
 regionalism and 174, 190, 202–9, 217–18, 327–30, 331–4
 training of architects and 95–6
 Bombay, Baroda & Central India Railway 36
 Bombay City Improvement Trust 111, 112
 Bombay Mutual Insurance Company 108
 Bose, Nandalal 89, 90, 91
 Bose, Sri Aurobindo 199
 Botta, Mario 323, 324
 Brazilian-inspired Indian design 203
 brick kilns 214
 Brighton Apartments 207
 British Indian Empire (British Raj) 23–30, 26
 Brunton, William 34, 35
 Brutalism 100, 173, 182, 184, 191–2, 194, 226, 228, 229, 230, 275
 Brynildsen, Per Christian 297
 Buckminster Fuller, Richard 18
 Building Research Station 17, 151
 Byzantine style 78
 Cable, Robert 99
 Calcutta
 British Indian Empire period 27
 New Delhi replaces as the imperial capital 81, 82, 132
 planning in the 1970s 235–6, 238
 regionalism and 198
 urban redevelopment 40
 Calcutta Metropolitan Planning Organisation (CMPO) 198, 236, 238
 Calico Mills office building (proposed) 175–7, 176
 ‘canal colonies’ 55
 cantonments 27, 38, 41, 46
 caste system 95, 104, 113, 142, 281, 306
 Causticization Plant, Rourkela 154
 Central Electronics Engineering Research Institute (CEERI) 189, 190
 Central Government Accountant General office building, Bhubaneswar 138
 Central Government Officers’ Quarters, Bhubaneswar 136
 central jail design 53, 53
 Central Public Works Department (CPWD)
 architects 134–8, 162
 civil service (‘babu’) housing 121, 136, 155–61, 156, 157, 158, 159, 160, 232
 engineer dominated 134
 exhibition on low-cost housing 147
 government housing 162–5, 162, 163, 164, 232
 National Building Organisation 151
 Public Works Department reconstituted as 122, 129, 134
 rehousing of Partition refugees 155, 157
 West Bengal 130–34
 Centre for Development Studies 262, 263
 Centre for Environmental Planning and Technology (CEPT) 214–15, 215, 216–17, 305
 Centre for Minimum Cost Housing, McGill University 299, 300
 Chandavakar and Thacker Architects 299, 324
 Chandigarh
 Albert Mayer as initial planner 142–3
 as a ‘new town’ 17, 129
 Balkrishna Doshi’s commissions 183
 capitol complex 8, 144, 144, 145
 design team led by Le Corbusier 8, 9, 140–41, 143–7, 146, 147, 206, 219
 influence on development of New Delhi 192
 Jawaharlal Nehru as advocate for 8, 9, 16, 143–4, 167, 171

- Charles, Prince 271, 272
 Chatterjee, Binoy K. 154, 155, 188, 194, 197, 197–8
 Chatterjee, Malay 287
 Chatterjee, Sris Chandra 103–4, 103, 317
 Chattopadhyay, Swati 289, 299
 Chauhan, Akhtar 305
chawls 111, 111
 Chennai *see* Madras
 Chhaya, H. D. 255
 Chhaya, Neelkanth 296–7
 Chimanbhai, Chinubhai 177
 Chisholm, Robert Fellowes 62–3, 62, 63, 64, 78
 Chitale, L. M. 104–5, 104, 105, 200, 201–2
 Chitale, S. L. 105, 200, 201, 202, 202, 246, 248
 Choudhury, Ajoy 193, 226, 232, 275
 Chowdhury, J. K. 146, 191–2, 191
 Chowdhury, Morad 226, 243, 245
 Chunder, Bholanauth 61
 Cidade de Goa 285–6
 cinemas 108–9, 202
 CIRUS reactor, Trombay 15
 City and Industrial Development Corporation (CIDCO) 236, 238
 ‘City Beautiful’ movement 84, 89, 113
 City Museum (Sanskar Kendra) 178, 178
 civil lines 38
 civil service (*babu*) housing 50–51, 121, 136, 155–61, 156, 157, 158, 159, 160, 232
 climate-responsive design 33, 44, 45, 46, 47, 75, 79, 100, 113, 146, 196, 199, 202
 collectorates (cutcheries) 51
 College of Architecture and Sculpture 318
 colonial-modern India 12, 16–17, 23–30, 40–56
 Congrès International d’Architecture Moderne (CIAM) 144–5, 147, 149, 206, 214, 215, 228, 232
 ‘Construction of Low-cost Community Centres’ (Ganju) 255
 Coomaraswamy, Ananda 89, 91
 Correa, Charles
 Aga Khan Program for Islamic Architecture and 275, 279
 apartment blocks 207–8
 Cidade de Goa 285–6
 commission for the Ismaili community 320
 contributions to *Marg* 205
 featured in *Mimar* 280
 Gandhi Smarak Sanghralaya 171–3, 172, 173, 184
 interest in low-cost housing 254, 255
 Jawahar Kala Kendra 270, 291, 292, 293
 Kanchanjunga Apartments 229, 229
 Life Insurance Corporation (LIC) building 200, 277, 278, 278
 national architectural style issue and 168–9
 National Commission on Urbanisation and 284
 New Bombay 236–7, 237, 240, 254, 285
 on architecture in India 230, 231, 232, 238–9, 279
 RIBA Gold Medal 271–2
 structural expressionism 243
 Vistara exhibition 287, 288, 291
 Council for Scientific and Industrial Research (CSIR) 152, 190
 Council of Architecture (COA) 239
 counterculture 198–9, 264–5
 courthouses 52, 53, 76
 C. P. Kukreja Associates 325
 craft traditions 210, 282, 286, 288
 Cranbourne, Viscount 30
 Crimean War (1854–6) 44–5
 Crommelin, W. A. 46, 48
 culture in the political arena 280–89
 Curzon, Lord 74, 75–7, 81, 88
 Curzon Road Hostel 165
 cutcherries (collectorates) 51
 Dabral, Satish 255
 Dadar tram terminus 112, 113
 dairy industry 228
 Dale Keller & Associates 209
 Dalhousie, Governor-General 24–5
 Dargapur 153, 153, 155
 Delhi
 architectural heritage conservation 285
 during the ‘emergency’ 253
 high-rise developments 231
 metro system 325
 National Capital Region Planning Board 285
 planning in the 1970s 235
 regionalism and 191, 192–6, 217–18, 330
 see also New Delhi
 Delhi Cloth Mills 243, 245
 Delhi Development Authority (DDA) 232
 Delhi Improvement Trust (DIT) 122–3, 157–9
 Delhi Urban Arts Commission 227, 239
 Dengle, Narendra 255
 Deolalikar, Ganesh B.
 1954 low cost housing exhibition and 162
 at the Central Public Works Department 134–5, 155–9
 at the Delhi Improvement Trust 123, 123

- 'city of *babus*' concept 165
 Department of Science and Art (DSA) 58–9
 Desai, Morarji 223, 260
Design (journal) 9, 140, 205, 217–18, 218, 219, 298
 Development Alternatives (DA) 300–301
 development funding from international sources 185–6
 see also Ford Foundation
 Development Planning Unit, University College 151
 Devi Art Foundation 330
 Dharma, B. L. 98
 Dhawan, Ashok 320, 321
 diamond industry 331–4
 Diplomatic Enclave, New Delhi 136
 Doshi, Balkrishna V.
 Ahmedabad commissions 182–4, 182, 184, 212, 229, 230, 240, 241, 243, 324
 Architecture + Design and 298
 Bharat Diamond Bourse 331–4, 333
 Centre for Environmental Planning and Technology 214–15, 215, 216–17, 305
 Chandigarh commissions 183
 George Nakashima and 119
 housing projects 240–41, 242, 257
 as IGNCAs competition juror 288
 Joseph Stein and 197
 Kuwait National Assembly building 229, 243, 244
 Sangath studio and office 258–60, 259
 structural expressionism 243
 Doxiadis, Constantinos 273–4
 draughtsmen (Indian) 58, 66
 Drew, Jane 8, 145–6, 146, 148, 150, 206, 214
 Dudhsagar Dairy complex 222, 226, 228, 229
 Dudok, Willem 108
 Dumasia, Pervez 314, 317

 Eames, Charles 18, 210–11
 Eames, Ray 210–11
 East India Company 23, 26–9, 33, 42, 44
 East Indian Railway township 55–6
 Ecochard, Michel 226–8, 232
 economically weaker sectors and housing 183, 234–5, 240, 304
 see also low-cost housing
Ekistics 274
 Electricity House 100
 Electronics Corporation of India Ltd (ECIL) township 240, 242
 elite, the, as patrons of architecture 61–2, 93, 104, 106, 114, 174–84, 220
 'emergency', the, and architecture 252–61
 Emerson, William 73, 75, 78

 energy conservation 263–4, 299, 301–3
 engineers, Public Works Department
 dominated by 24, 30–31, 37, 38, 42, 43, 44, 46, 57, 72, 74, 77, 134
 Entrepreneurship Development Institute 294–5, 296
 environment and sustainability
 Auroville 199–200, 264–5, 265
 design responsive to 326, 330, 332
 development and 263–5, 301, 303, 330
 energy conservation 263–4, 299, 301–3
 see also climate-responsive design
 Eros Cinema 109, 109
 Escorts Industrial Campus 246
 European General Hospital (competition entry) 43, 43
 'exemplary milieus' 55–6
 External Affairs Hostels 164, 165
 Eyck, Aldo van 172, 215

 Fatehpur Sikri 230, 275, 277, 277, 279
 Fathy, Hassan 274
 Feilden, Bernard 303
 Fergusson, James 29–30, 60, 63
 Festivals of India 282, 286–8, 291
 Five-Year Plans 18, 139, 153, 187
 Fletcher, Banister 96
 Ford Foundation 18, 186–90, 194–6, 198, 216, 236
 office complex 186, 187
 foreign architectural consultants 8, 17–18, 114–19, 212, 321
 Frere, Henry Bartle 39
 Fry, Maxwell 8, 145–6, 146, 206, 214
 funicular shell roofs 245, 246, 246

 Gandhi, Indira
 Festival of India inaugurated by 282
 IGNCA established in her memory 288–9
 religion in politics and 306–7
 return to power 280–81, 283–4
 revival of socialist agenda 223–5
 state of 'emergency' 252–3, 254, 257, 260, 267–8
 Gandhi, Mohandas
 ideology of and role in building modern India 13–16, 93, 128, 142, 147, 149, 175, 183, 189, 260–61, 263, 264, 265, 267
 Sabarmati Ashram 93–5, 94, 172
 view of New Delhi 124
 Gandhi, Rajiv
 architectural heritage interests 284, 285, 298
 cultural diplomacy programme 286, 287
 IGNCA launched by 288

- loss of power 306, 313
 middle class India and 283
 opening of the Indian economy and 322
 religion in politics and 308
 Gandhi, Sanjay 253, 283, 306
 Gandhi Ghat 130, 131–2, 131, 133
 Gandhi Smarak Sanghralaya 171–3, 172, 173, 184
 Ganges Canal 32, 34–5
 Ganju, M. N. Ashish 255, 255, 304, 305
 Garden City planning 84, 112, 120, 160, 163
 Garden Theatre complex 108
 Garstin, John 31, 33, 48
 Geddes, Patrick 38, 120
 George, Walter 86–7, 87
 ghats 61, 130, 131–2, 131, 133
 Ghosh, Bijit 205
 Ghosh, Suchitra 307
 Ghosh, Sumit 307
 Gilbert, Alan 209
 Girard, Alexander 210
 Global Vipassana Pagoda 314, 317
 Golconde House 118, 119
 Golden Eye festival 286
 Goldfinch Apartments 112, 113
 Government College of Art and Craft 23, 60, 89, 101
 government housing 162–5, 162, 163, 164, 232
 government role in town planning 140
 granaries 31, 33
 Great Exhibition (1851) 58, 66
 Great Mutiny *see* Indian Rebellion (1857–8)
 Gregson, Batley & King (GBK) 99, 100, 101, 101, 102
 Greha group 256, 257, 303, 304–5
 Griffin, Marion Mahony 116–18, 117, 119
 Griffin, Walter Burley 116–18, 117, 119, 177
 Gropius, Walter
 Bauhaus design school 90, 91
 Harvard graduate programme 152, 201, 226
 influence on other architects 130–31, 191, 209
 Maxwell Fry and 145
 Grover, Satish 285
 Gujarat State Fertilizer Company (GSFC) 240
 Gujarat state guesthouse 226, 227
 Gujral, Satish 209
 Gupta, Vinod 255

 'Habitat' 147, 232
 Habitat Bill of Rights 257
 Habitat Schools 305
 Hafeez Contractor 8, 324–5, 325, 327–9, 328

 Harris, George S. T. 67, 67
 Havell, Ernest 23–4, 59–60, 82, 89, 101, 103
 Heald, Henry 187
 high-rise developments 163, 207–8, 231, 231, 328
 Hodgkin, Howard 291
 Hoffman, Paul G. 186–7
 hospital and medical research complex, Ranchi (proposed) 152, 152
 hospitals 53–4
 hotels 170, 202, 203, 209, 275–7, 285–6
 housing
 apartment blocks 163, 207–8, 231, 231, 328
 civil service ('babu') 50–51, 121, 136, 155–61, 156, 157, 158, 159, 160, 232
 economically weaker sectors 183, 234–5, 240, 304
 exhibition in Delhi (1954) 140, 147–50, 150, 151, 162
 government 162–5, 162, 163, 164, 232
 industrial 154–5
 low-cost 140, 147–52, 151, 162, 240, 241, 254–7, 261, 299
 low-rise medium-density 51, 113, 232
 middle income 232–4, 233, 240
 railway 22, 51, 51
 sites and services 234–5, 235, 240, 254
 townships for industry 240–41, 242
 Housing and Urban Development Corporation (HUDCO) 234, 240, 301–3, 304, 305
 Howard, Ebenezer 120
 see also Garden City planning
 Husainiya Collection Library (proposed) 117–18, 117
 Hutheesing, Surettam 179–80
 Hutheesing-Shodhan Villa 178, 179–80, 180
 hybrid architectural expression 64, 78, 100, 101, 123, 132, 183
 Hyderabad House 115

 Imperial, The, residential towers 8
 Independence of India 12, 127
 India International Centre (IIC) 194, 195
 India Report (Eames) 210–11
Indian Express offices 209
 Indian Farmers Fertiliser Cooperative (IFFCO) 240
 Indian Institute of Architects 96, 114
 Indian Institute of Forest Management 294, 294, 295
 Indian Institute of Management (IIM) 212, 213, 214, 226, 324, 335, 335–7
 Indian Institute of Science 116

- Indian Institutes of Technology (IITS) 190,
264, 301–3
Bombay 190, 202–3, 204
Delhi 191, 191
Kanpur 190, 190, 191, 226
Kharagpur 190, 216
- Indian National Trust for Art and Cultural
Heritage (INTACH) 282–3, 284, 285, 303,
304, 305
- Indian Overseas Bank (IOB), Madras 200
- Indian Pavilion for New York's Fair (1964)
(proposed) 164, 166
- Indian Rebellion (1857–8) 27–8, 29, 30, 33,
35, 44, 45, 53
- Indian Statistical Institute (ISI) 225, 226
- Indianness 282, 283, 286, 287, 288, 289–97,
298
- Indira Gandhi National Centre for the Arts
(IGNCA) 288–91, 290, 291
- Indo Deco style 108, 115, 117, 208
- Indo-Saracenic style 63, 79, 101
- Indore, Maharaja of 115
- Indus Valley archaeological digs 103
- industrial towns 153–5, 240
- information technology sector 322–5, 327
- Infosys software corporation 324–5, 325, 327
- infrastructure 139–40, 153
- Institute of Indology 183–4, 184, 258
- institution building 171–3, 175, 177–9, 182–4,
187, 188–93
- insurance industry 106–8
- Inter-state Bus Terminal, Delhi 193, 193
- international architectural consultants 8,
17–18, 114–19, 212, 321
- international development funding 185–6
see also Ford Foundation
- International Exhibition on Low-cost
Housing, New Delhi (1954) 140, 147–50,
150, 151, 162
- International Society for Krishna
Consciousness (ISKCON) 318–19, 319
- International Style 78, 110, 129, 209
- International Year of Shelter for the Homeless
(IYSH) 299, 303
- irrigation schemes 32, 34–5, 55
- Irwin, Lord 124
- Islam, Muzharul 275
- Islam Gymkhana 203, 204
- Italian design inspired by India 210
- Italian-inspired Indian design 203–5, 209
- Jacob, Samuel Swinton 64, 65–8, 65, 101, 103
- jail complexes 53–5, 53
- Jain, Kulbhushan 297, 299
- Jain, Meenakshi 297, 299
- Jain, Uttam 118, 266, 267, 297, 298–9
- jain bania* businessmen 174, 175
- Jaipur 64–6
- Jamshedpur 141
- Jawahar Kala Kendra 270, 291, 292, 293
- Jayakar, Pupul 210, 211, 282–3, 286, 289
- Jeanneret, Pierre 146, 146, 148, 192, 214
- Jensen, Jan Olav 297
- Jeypore Portfolio* 67
- Jhabvala, Cyrus 168
- Jijibhai, Jamsethji 59
- Jivan Manek apartment tower 207–8, 207
- J. J. School 59, 96–100, 101, 177, 216
- Jodhpur, Maharaja of 115
- Joglekar, Shridhar Krishna 135, 137, 159, 160,
167–8
- Johnson, Philip 10, 209
- Joshi, Kallol 296–7
- judicial buildings 51–3, 52, 78, 79
- Kadri, Iftikhar M. 203, 204, 206–8, 206, 207,
246–8, 249, 327
- Kahn, Louis
as a teacher of architecture 216
Charles Correa and 172
George Nakashima and 119
impact on Ahmedabad 212–14, 294–7
influence on other architects 212, 226,
229, 294–7, 337
'Modern India' and 16
sponsored to work in India 18
- Kaka Nagar 158, 159, 159, 160
- Kalibari Temple 307–8
- Kamath, Revathi 118, 297, 300, 301, 302
- Kamath, Vasant 255, 297, 301, 302
- Kanchanjunga Apartments 229, 229
- Kanpur Indian Institute of Technology 190,
190, 191, 226
- Kanpur Indo-American Programme (KIAP)
191
- Kanvinde, Achyut
as IGNCA competition juror 288
Atomic Power Project Township, Kota
226, 227
Central Electronics Engineering
Research Institute 189, 190
Delhi Cloth Mills 243, 245
Dudhsagar Dairy complex 222, 226, 228,
229
early designs 152
featured in *Design* 219
Gujarat state guesthouse 226, 227
Indian Statistical Institute 225, 226
ISKCON temple 318–19, 319
Kanpur Indian Institute of Technology

- 190, 190, 191, 226
 national architectural style issue and 167
 proposed hospital and medical research complex 152, 152
- Kapadia, Chandrasen 212
- Kar, Surendranath 91–2, 92, 93, 104
- Karim Aga Khan IV, Prince 273
- Katakam, Ramu 304
- Khalsa Heritage Centre 319–20, 321
- Kharagpur Indian Institute of Technology 190, 216
- Khosla, Romesh 255, 294, 303
- King's College, London 96
- Kipling, John Lockwood 59, 60, 103, 304–5
- Kipling, Rudyard 55–6, 59
- Koenigsberger, Otto 115–16, 141–2, 142, 151, 152, 206, 261
- Kohn, Bernard 119
- Kolkata *see* Calcutta
- Kothari Buildings 200, 201
- Kudianavala, Pheroze 208
- Kumar, Rajinder 193, 193
- Kundoo, Anupama 330
- Kuwait National Assembly building (competition entry) 229, 243, 244
- Lahore, map of 54
- Lahore Railway Station 34, 35
- Lakshmi-Narayan Temple 103, 104
- Lalbhair, Sheth Kasturbhai 177, 183, 184
- Lalbhair Dalpatbhai Institute of Indology 183–4, 184, 258
- Lalbhair family 181
- Lall, Ashok 304, 305
- Lamb, Thomas W. 108
- Lanchester, Henry Vaughan 115
- land tenure reforms 23, 28
- Laroia, H. R. 204
- Laxmi Assurance Building 107, 108
- Le Corbusier
 Ahmedabad commissions 177–82
 Balkrishna Doshi works for 215
 Chandigarh architectural team led by 8, 9, 140–41, 143–7, 146, 147, 206, 219
 impressed by New Delhi 129
 influence on other architects 182, 184, 193, 201, 202, 226, 229, 337
 Legislative Assembly building 10, 140, 145, 220
 'Modern India' and 16
- Ledoux, Claude Nicolas 63
- Legislative Assembly building, Chandigarh 10, 140, 145, 220
- Lepers Hospital 297
- Lerner, Ralph 289, 290
- Life Insurance Corporation (LIC) building 200, 277, 278, 278
- Life Insurance Corporation (LIC) housing 240, 241
- Lighthouse Cinema 108
- local materials, use of 138, 184, 267, 275, 297
 see also stone
- Lodi Colony 159–60, 160, 187
- London Colonial and Indian Exhibition (1886) 65–6
- low-cost housing 140, 147–52, 151, 162, 240, 241, 254–7, 261, 299
- low-rise medium-density housing 51, 113, 232
- Loyola Graduate Women's Hostel 263
- Lutyens, Edwin 84–5, 85, 86, 87, 88, 115, 122
- McGill University 201, 299, 300
- Madras
 British Indian Empire period 27, 95
 planning in the 1970s 235, 238
 regionalism and 200–202
 Senate House 62–3, 63
 structural expressionism in 246
 urban redevelopment 40
- Maharaj, Pramukh Swamiji 316
- Mahmoodia Library 307
- Man Nagar 159, 160
- Manav Sadhna Activity Centre 332
- Manchanda, Neeraj 301
- Manickam, B. R. 137
- Mantrimandir 265, 265–6
- Marg* (journal) 9, 205, 206, 217–19, 218
- Master, C. M. 114
- Master, Sathe & Bhuta 106, 107, 108, 114
- Matharoo, Gurit Singh 338–9, 338
- Mathew & Ghosh Architects 329
- Mayer, Albert 142–3, 147
- Medd, Henry 86–7
- Medley, Julius George 42, 46–8, 47
- Mehrotra, Rahul 329–30, 331, 331
- Mehta, Pravina 229, 229, 236, 237
- memorial shrine, Travancore (proposed) 105, 105
- Mendelsohn, Erich 132, 187, 196
- Menon, A.G.K. 303, 304, 305
- mentally ill housed in jail complexes 54
- Merchant, Yahya 202, 203
- Metro Cinema, Bombay 108
- Mhatre, G. B. 112, 113–14, 114
- middle-income housing 232–4, 233, 240
- military buildings 45–50, 46, 47, 48, 49, 50
- Mimar* (journal) 279, 279–80, 288
- Ministry of Commerce and Industry, New Delhi 135

- model settlements 55–6
 Model Town (residential colony) 120–22
 Modern Architecture Research Group (MARS)
 145, 205–6, 214
 ‘Modern India’ 12–18
 Modi, Narendra 337
 Mody, Piloo 167, 202, 203, 239
 Mohe, Sanjay 319, 320
 Morris, William 59
 Morvi, crown prince of 115
 mud-brick construction 301, 302
 Mughal Empire 23, 26, 27, 63, 64, 82
 Mughal Sheraton Hotel 275–7, 276
 Mumbai *see* Bombay
 Munnings, Joseph Fearis 78–81, 80
 Muthesius, Eckart 115
 Muthesius, Hermann 115
 Mysore 115–16
- Nadir, K. L. 304, 305
 Naipaul, V. S. 264
 Nakashima, George 118, 119, 177
 Napier, Lord 62, 63, 64, 83
 Napier Museum 63
 Narayan, Jai Prakash 252–3, 260–61, 268, 280
 national architectural style issue 166–9
 National Building Organisation (NBO) 151
 National Capital Region Planning Board 285
 National Centre for Human Settlements and
 Environment (NCHSE) 299
 National Centre for the Performing Arts 209
 National Commission on Urbanisation 284–5
 National Cooperative Development
 Corporation (NCDC) offices 245, 247
 National Institute of Design (NID) 211–12,
 213, 264
 National Institute of Immunology 291, 292
 Nehru, Jawaharlal
 as advocate for Chandigarh 8, 9, 16,
 143–4, 167, 171
 G. D. Birla and 189
 Habib Rahman and 163, 312
 international relations 185, 187, 224
 national architectural style issue and
 166–7, 184, 192, 200
 political landscape after his death 219–21
 Pupul Jayakar and 210
 regionalism and 174
 role in building modern India 13, 16, 17,
 18, 128, 139, 140–41, 142, 154, 223–5
 Somnath Temple and 314
 Sris Chandra Chatterjee and 103, 104
 view of New Delhi 124
 visit to Aditya Prakash project 126
 Nehru Centre 206, 246–8, 249
- Nehru Centre for Environmental Education
 296–7
 neighbourhood unit model 142, 147, 160–61
 Neutra, Richard 18, 187, 194, 196, 202
 New Bombay 236–7, 237, 240, 254, 285
 New Delhi
 civil service (‘babu’) housing 155–61,
 156, 157, 158, 159, 160
 Diplomatic Enclave 136
 housing designed by Habib Rahman
 162–5, 162, 163
 Indian leadership’s view of 124
 institution building 192–4, 195
 Le Corbusier impressed by 129
 planning and building of 81–8, 83, 89
 replaces Calcutta as the imperial capital
 81, 82, 132
 New India Assurance Building 106–8, 106
 New Patna 78–81, 80
 New Secretariat building, Calcutta 6, 132–4,
 133
 new town planning 17, 122, 129, 141–2, 160,
 196
 Nicholls, W. H. 88
 Niemeyer, Oscar 202, 203
 Noguchi, Isamu 18
 North African housing projects 147, 228, 232
 Nowicki, Matthew 143, 143, 147
 Nowshera 46, 46
- Oberoi Hotels 170, 202, 203, 209, 285
- palaces 114–15
 Pandya, Yatin 330, 332
 Panjab University auditorium 148
 Partition of India 127–8, 129, 174
 rehousing of refugees 128–9, 141, 155,
 157, 198, 235, 236
 Patel, Bimal 294–5, 296, 335–7, 335, 336
 Patel, Hasmukh C. 337
 Patel, Nimish 285, 303
 Patel, Sardar Valabhbbhai 314
 Patel, Shrish 236, 237
 Patell, Rustom 209
 Patki, P. G. 209
 patrons/philanthropists *see* elite, the, as
 patrons of architecture
 Paxton, Joseph 66
 peons’ quarters 148, 150, 160, 161, 162, 183
 Pereira, Leo 297
 Physical Research Laboratories (PRL) 152, 182
 Pilani 188–9
 Pithavadian, Bennett 201–2, 246
 police stations 52, 67
 politics and Indian architecture *see* British

- Indian Empire; East India Company;
Gandhi, Indira; Gandhi, Mohandas;
Gandhi, Rajiv; Narayan, Jai Prakash;
Nehru, Jawaharlal
- Polk, Benjamin 154, 154, 155, 188, 197–8, 197
- Ponti, Gio 209
- Post and Telegraph Building, New Patna 80
- Pragati Maidan exhibition complex 248–52, 250
- Prakash, Aditya 126, 146, 149
- Prakash, Sanjay 299, 301
- Prasad, Shrivath 192–3, 192
- prefabricated housing 151, 152
- Premabhai Hall 229, 230, 243, 244
- property laws 225
- Public Works Department (PWD)
architects 71–2, 73–4, 77–8
architectural education and 96
civil service housing 50–51
engineer dominated 24, 30–31, 37, 38, 42, 43, 44, 46, 57, 72, 74, 77
establishment of 24–5, 27
homogeneity of buildings 41–2
judicial buildings 51–3, 52, 78, 79
military buildings 45–50, 46, 47, 48, 49, 50
Railway Branch 35
rationalization of design and production 25, 30–33, 44, 45, 56, 68
Renaissance revival style 100
resistance and reaction to system of 56–69
scope of building and construction 40–41
see also Central Public Works Department (CPWD)
- racial segregation 36, 38, 50, 55, 160
- Rahman, Habib
as IGNC competition juror 288
at the Central Public Works Department 6, 130–34, 131, 133, 137, 138, 162, 162–5, 163, 164, 232
Babri Masjid-Ram Janmabhoomi controversy and 311–13, 312
featured in *Design* 219
Jawaharlal Nehru and 163, 310
national architectural style issue and 166
work with Walter Gropius 152
- Rai, Shaikat 152
- railways
colonies 55–6
development of 35–8
housing 22, 51, 51
stations 34, 35–7, 36, 38
- Raj, Mahendra 243, 245, 248–52, 250–51
- Raje, Anant 212, 225, 226, 294, 294, 295
- Ram Janmabhoomi *see* Babri Masjid-Ram Janmabhoomi controversy
- Rama Krishna Puram 162, 162–3, 163, 165
- Ramaswamy, G. S. 245
- Ramsinh, Kumar 100
- Rangoon Courthouse design competition 76
- Ransome, James 74–7, 76, 84
- Rao House 113
- Ravindran, K. T. 299, 300, 303
- Raymond, Antonin 116, 118–19, 118
- refugees, rehousing after Partition 127–8, 141, 155, 157, 198, 235, 236
- regionalism
Ahmedabad 171–3, 174–84, 330, 335–7
architectural education and 210–19
architecture of developing India and 272, 273–80
Auroville 199–200
Bombay/Mumbai 174, 202–9, 217–18, 327–30, 331–4
Calcutta 198
Delhi 192–6, 217–18, 330
in the political arena 280–89
Indian Institutes of Technology and 190
Madras 200–202, 201
Pilani 188–9
religious buildings 103, 307–8, 314–19, 319
religious conflicts 281, 306–9
see also Ayodhya crisis; Partition of India
religious tourism 60–61
Renaissance revival style 75, 100
research institutions 152–3
Revi, Aromar 300–301
revivalist cause 102–5, 317
- Rewal, Raj
commission for the Ismaili community 320
early commissions 226–8
Festival of India exhibition 287
high-rise developments proposed by 231
low-rise medium-density housing 232
National Institute of Immunology 291, 292
structural expressionism 193, 245, 248–52, 250–51
use of sandstone 278–9, 291
- Rizvi College of Architecture 305
- road development 38
- Rourkela 153, 154, 155
- Royal Engineers Corps 48
- Royal Institute of British Architects (RIBA) 96, 99, 216, 271–2, 297
- RRM 2 @ B8 house 329

- Ruskin, John 124
 Russell, Robert Tor 88, 121, 122, 123
- Saارين, Eiel 196
 Sabarmati Ashram 93–5, 94, 172
 Sabarmati River Embankment development 336, 337
 Sabarmati Thermal Power Station 139
 Sabhiki, Ranjit 193, 226, 232, 275
 Safdie, Moshe 232, 257, 319–20, 321, 321
 Sahba, Fariborz 307–8, 307
 Sai Mandir 319, 320
 St Martin's Garrison Church 70, 86
 St Stephen's College, University of Delhi 87
 sandstone 267, 275–7, 277, 278–9, 291, 316–18
 Sangath studio and office 258–60, 259
 sanitation 38, 45, 48, 111
 Sanskar Kendra (City Museum) 178, 178
 Sanskrit School, Auroville 199
 Sarabhai family 93, 175, 184
 Sarabhai, Gautam 176, 211
 Sarabhai, Gira 176–7
 Sarabhai, Manorama 180
 Sarabhai, Vikram 177
 Sarabhai Villa 180–82, 181
 Satellier 326–7
 Satsangi, M. S. 212
 School of Architecture *see* Centre for Environmental Planning and Technology (CEPT)
 School of Planning and Architecture (SPA) 216–17, 217, 287
 School of Tropical Architecture, Architectural Association 151
 Schumacher, E. F. 263, 264
 Scott, George Gilbert 39, 40, 44
 Secretariat building, New Delhi 85, 86
 Secretariat for East Bengal (proposed) 76
 Senate House, University of Madras 62–3, 62
 Sethi, Rajeev 286
 Sevagram Ashram 93, 149
 Sewa Nagar 160, 161
 sewer development 38
 Sharma, Ram 287
 ship-breaking and recycling 334, 334
 Shivsagar Estates 206, 206
 Shodhan, Shyamubhai 180
 Shoosmith, Arthur G. 70, 86–7
 Shri Ram Centre 192, 193
 Shyamali 92–3
 Silva, Minette de 206
 Singh, Kuldeep 193, 231, 232, 233, 245, 247
 Singh, Patwant 218, 219, 298
 Singh, V. P. 284, 306
- Sir Jamsethji Jijibhai School of Art *see* J. J. School
 sites and services housing projects 234–5, 235, 240, 254
Slumdog Millionaire (film) 327
Small is Beautiful (Schumacher) 263
 Smith, T. Roger 42–3
 Smithson, Alison 215
 Smithson, Peter 215
 social class and space 17, 36–7
 socio-economic gap in India 19
 Solani Aqueduct 32, 34–5
 Somnath Temple 314, 315
 Sompura, Chandrakant 314–15, 314, 315, 317
 Sompura, Prabhshankarbhai Oghadbhai 314
 Sonmarg Apartments 207–8
 Sottsass, Ettore 210
 South Asian Human Rights Documentation Centre 330
 Sri Venkateswara University auditorium 202, 202, 246, 248
 State Legislative Assembly Building, Bangalore 137
 State Trading Corporation building 251, 278, 278–9
 steel industry 139, 153
 Stein, Joseph Allen
 attraction to India 261
 Delhi commissions 186, 187, 194–6, 195, 196
 Escorts Industrial Campus 246
 Ford Foundation office complex 186, 187
 India International Centre, New Delhi 195
Indian Express offices 209
 industrial housing 154–5
 International Exhibition on Low-Cost Housing entry 151
 neighbourhood unit, Dargapur 153
 professional partnerships 197
 Triveni Kala Sangam 196
 stone 193–4, 267, 275–7, 277, 278–9, 291, 316–18
 Strachey, Richard 37–8, 37
 Structural Engineering Research Centre (SERC) 245
 structural expressionism 193, 243–52, 307
 Studio Mumbai 329, 329
 suburbanization 110, 113
 Suraj Pole Gate (proposed) 104, 105
 Sushant School of Art and Architecture (SSAA) 305
 sustainability *see* environment and sustainability

- swadeshi* ideology 91, 93, 106, 175
 Swaminarayan Temple, London 317–18
- Tagore, Rabindranath 89–93
 Tagore Group 91
 Tagore Memorial Hall 243
 Tagore Theatre 149
 Taj Mahal 7, 75
 Taliesen West 176, 177
 Tata, Jamshedji 106
 Tata Consultancy Services (TCS) 323–4, 323
 Tata Energy Research Institute (TERI) 301–3
 Tata Group 106, 141, 205, 207, 208
 Tata Institute of Social Sciences 331
 Tata Steel Plant 15
 Taylor, E. S. 46, 46
 Team 10 collective 215, 232, 241
 textile arts 210
 Thiagarajan, Deborah 303
 Thomas, E. Montague 88
 Thomason College of Engineering 35, 42, 47, 48, 245
 Thompson, John 282
 tourism 60–61, 285–6, 301, 322
 Tourist Village project 301, 302
 town/urban planning 119–23, 140–41, 235–9, 303, 304
 see also new town planning
 Triveni Kala Sangam 196
 Trubshawe, James 39, 40
 TVB School of Habitat Studies (TVBSHS) 305
 Tyrwhitt, Jaqueline 147–9, 150
- Umaid Bhavan Palace 115
 University of Bombay, Library and Convocation Hall 39, 40
 University of Jodhpur 266, 267
 University of Liverpool 96
 Urban Arts Commissions 239
 urban planning *see* new town planning;
 town/urban planning
 urban redevelopment 38–40, 110–14
 urbanization 128–9, 284–5
 Utkal University Library 197
- Varkey, Kurula 297, 305
Vastu Shastras 318
 Vastu-Shilpa Architects 240–41, 242
 Vastu-Shilpa Foundation for Studies and Research in Environmental Design 258, 300, 332
 Vatsyayan, Kapila 289
 Venetian Gothic style 44
- Viceroy's House, New Delhi 85, 85, 124
 Victoria, Queen 29, 73
 Victoria Memorial Hall, Calcutta 73, 75, 88
 village centre model (Tyrwhitt) 147–9, 150
 Virasat-e-Khalsa 319–20, 321
 Vistara exhibition 287, 288, 291
 Visva-Bharati University 89, 91–3, 92
- White, William 57–8
 Wilkins, Henry Saint Clair 43–4, 43
 Wittet, George 78, 82, 96, 97, 97, 100
 Woods, Shadrach 147, 172, 232
 Wright, Frank Lloyd 116, 118, 119, 132, 175–7, 176, 181
- Zaveri, Parul 285